



# Submissions Report

Rail infrastructure, stations, precincts and operations



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# Acknowledgement of Country

Sydney Metro respectfully acknowledges the Traditional Custodians of the Sydney Metro West corridor, the Burramattagal, Wangal and Gadigal. Westmead and Parramatta are situated on Burramattagal Country, which extends from Rosehill to Prospect. Sydney Olympic Park to The Bays is situated on Wangal Country, which stretches across the southern shore of the Parramatta River between Burramattagal Country and Gadigal Country. Pyrmont and the Sydney CBD is situated on Gadigal Country, which runs from the south side of Port Jackson, extending from South Head to Darling Harbour. We recognise the importance of these places to Aboriginal peoples and their continuing connection to Country and culture. We pay our respect to Elders past and present.

Many of the transport routes we use today – from rail lines, to roads, to water crossings – follow the traditional Songlines, trade routes and ceremonial paths in Country that our nation's First Peoples followed for tens of thousands of years.

Sydney Metro is committed to honouring Aboriginal peoples' cultural and spiritual connections to the land, waters and seas and their rich contribution to society.



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## Executive summary

### Overview

Sydney is expanding and the NSW Government is working hard to deliver an integrated transport system that meets the needs of customers now and in the future. The delivery of Sydney Metro West is critical to keeping Sydney moving and is identified in key strategic planning documents including the *Greater Sydney Region Plan: A Metropolis of Three Cities – connecting people* (Greater Sydney Commission, 2018), *Building Momentum: State Infrastructure Strategy 2018–2038* (Infrastructure NSW, 2018), and the *Future Transport Strategy 2056* (Transport for NSW, 2018).

Sydney Metro is Australia's biggest public transport program. Services between Rouse Hill and Chatswood started in May 2019 on this new stand-alone metro railway system, which is revolutionising the way Greater Sydney travels.

Sydney Metro's program of work includes:

- Sydney Metro North West – opened in May 2019
- Sydney Metro City & Southwest – currently under construction with services to begin in 2024
- Sydney Metro West (this project) – currently under construction and due to open in 2030
- Sydney Metro – Western Sydney Airport – currently under construction and due to open when the airport opens for passenger services.

The planning process for Sydney Metro West is being assessed as a staged infrastructure application under section 5.20 of the *Environmental Planning and Assessment Act 1979*.

The Sydney Metro West Concept and Stage 1 of the planning approval process – *Sydney Metro West Environmental Impact Statement – Westmead to The Bays and Sydney CBD* (Sydney Metro, 2020a), which includes major civil construction for Sydney Metro West between Westmead and The Bays, was approved on 11 March 2021.

Stage 2 of the planning approval process – *Sydney Metro West Environmental Impact Statement – Major civil construction between The Bays and Sydney CBD* (Sydney Metro, 2021) – included all major civil construction including station excavation and tunnelling between The Bays and Sydney CBD, and is currently under assessment.

Stage 3 of the planning approval process (this proposal), which this Submissions Report relates to, includes tunnel fit-out, construction of stations, ancillary facilities and station precincts, and operation and maintenance of the Sydney Metro West line.

### Sydney Metro West benefits

Sydney Metro West would deliver the following benefits:

- double the rail capacity between Greater Parramatta and the Sydney CBD
- relieve the congested T1 Western Line, T9 Northern Line, and T2 Inner West & Leppington Line
- significantly boost economic opportunities for Greater Parramatta
- support new residential and employment zones along the Greater Parramatta to Sydney CBD corridor, including at Sydney Olympic Park and The Bays – providing improved transport for the additional 420,000 new residents and 300,000 new workers forecast to be located within the corridor over the next 20 years
- allow customers fast and easy transfers with the T1 Western Line at Westmead, T9 Northern Line at North Strathfield, the Sydney Trains suburban rail network and Sydney Metro in the Sydney CBD
- allow for transfers with the future Parramatta Light Rail Stage 1 at Westmead and Parramatta, and the planned Parramatta Light Rail Stage 2 at Sydney Olympic Park
- create an anticipated 10,000 direct and 70,000 indirect jobs during construction (based on Sydney Metro analysis).

## Consultation on the Environmental Impact Statement

*Sydney Metro West Environmental Impact Statement – Rail infrastructure, stations, precincts and operations* (Sydney Metro, 2022a) (the Environmental Impact Statement) was placed on public exhibition by the Department of Planning and Environment for an extended period, from 23 March to 4 May 2022. This provided stakeholders and the community with additional time to review the information, have their questions answered by Sydney Metro and, if they chose, prepare and make a submission to the Department of Planning and Environment.

Consultation activities during public exhibition included virtual community engagement via an interactive portal and a virtual community engagement room, in-person community information sessions, stakeholder briefings, phone calls, emails and a dedicated 1800 phone number for community enquiries. Sydney Metro place managers engaged with the community, addressing concerns and providing accurate and transparent information to deepen the community's understanding of this proposal and any relevant impacts. A range of tools and materials were developed to engage with stakeholders and support the exhibition of the Environmental Impact Statement including newspaper advertisements, videos from project experts, phone calls and emails, e-newsletter alerts to the project mailing list, letterbox drops, and virtual meetings.

Public authorities, NSW government agencies and other key stakeholders were briefed via emails, phone calls, virtual meetings and presentations throughout the exhibition period to ensure they received the relevant information to make a submission.

Further information on consultation carried out is provided in Chapter 3 (Stakeholder and community engagement) of this Submissions Report.

### Purpose of this report

This Submissions Report presents responses to submissions received during the exhibition of the Environmental Impact Statement. In addition, Chapter 2 (Environmental Impact Statement clarifications) of this Submissions Report presents clarifications on some of the information presented in the Environmental Impact Statement and the potential environmental impacts of those clarifications where relevant. This Submissions Report also provides revised mitigation measures as a result of the clarifications or issues raised in submissions (refer to Appendix C (Revised mitigation measures)).

### Overview of submissions

A total of 71 submissions were received by the Department of Planning and Environment in response to the Environmental Impact Statement during the exhibition period. This included submissions from seven public authorities, seven key stakeholders, and 57 submissions from the community, community interest groups and organisations. In addition, 11 government agencies provided advice to the Department of Planning and Environment during this time.

Key issues raised in public authority submissions included:

- placemaking and design, including recommendations for station design and entry points and requesting further details on station and precinct designs and the Design Guidelines
- future over and adjacent station development (subject to separate approval), generally requesting further detail
- stakeholder consultation, generally requesting ongoing consultation related to the detailed design of the stations and surrounding precincts
- potential traffic impacts during construction and operation, particularly related to parking around station precincts
- potential flooding impacts during operation, particularly for stations where proposed infrastructure is below the flood protection level
- potential contamination impacts, particularly requests for detailed site investigations
- potential business impacts during construction, related to transport, noise and vibration and air quality impacts
- potential non-Aboriginal heritage impacts and comments related to heritage interpretation in the design.

Key issues raised in key stakeholder submissions included:

- potential construction transport impacts, including property access and parking impacts
- potential operational transport impacts, including active transport connections and interface with existing developments
- potential construction noise impacts, including to specific sensitive receivers
- potential local business impacts during construction related to local amenity
- stakeholder consultation, related to consultation prior to exhibition of the Environmental Impact Statement and requests to be consulted going forward.

Key issues raised in government agency advice (which generally reflected their areas of responsibility) included:

- potential noise and vibration impacts during operation and construction, including queries or concerns about assessment methodology and level of construction impacts
- potential flooding impacts during operation, including concerns about the level of assessment, the use of flood barriers and emergency management at stations
- potential groundwater impacts, including request that impacts should be quantified further
- potential non-Aboriginal heritage impacts, including impacts to the Abattoir Heritage Precinct and White Bay Power Station
- placemaking and design, including related to alignment with master planning at Sydney Olympic Park metro station and The Bays Station
- stakeholder consultation, generally requesting ongoing consultation relating to construction impacts or design development.

Support for this proposal was received from 10 community submissions. Key issues raised most frequently by the community submissions included:

- transport – operation, including the following sub-issues:
  - **active transport** – generally including comments on active transport interchange elements (such as footpaths, pedestrian crossings, shared zones and bicycle routes), requests for additional active transport elements within station precincts and other measures to support pedestrian and cyclist movement
  - **integration with public transport or road network** – generally including requests and comments about interchange provisions between the metro stations and other transport modes (including rail, bus, light rail and private vehicles)
  - **parking and property access** – generally including comments on the availability of parking around metro stations, suggestions for commuter car parks, and concerns about potential restrictions to property access
- proposal description – operation, including the following sub-issues:
  - **placemaking and design** – generally including comments on the design process, station precinct and public domain areas, customer experience, accessibility, Design Guidelines, names of stations, and alignment with local and regional plans and strategies
  - **stations** – generally including comments on metro station infrastructure and elements which are common across stations, for example, entrances, vertical transport (lifts and escalators), bicycle parking and station services buildings
  - **proposed operations** – including comments on the service timetable, operational staff, train types and requests for express services

- issues that are beyond the scope of the Environmental Impact Statement, including the following sub-issues:
  - **other transport projects** – generally including requests and queries regarding other public transport projects, active transport projects, and other transport-network related suggestions outside of the proposal area
  - **other non-transport projects** – including comments on local council planning strategies, recommendations and concerns about future surrounding development and land use outside of the station precincts
  - **comments unrelated to the Environmental Impact Statement** – including a recommendation to protect memorials outside of the proposal area and a request for enforcement of road rules through police presence.

Further analysis of submissions received is provided in Chapter 4 (Analysis of submissions) of this Submissions Report. Chapter 6 (Community submissions), Chapter 7 (Public authority submissions), Chapter 8 (Key stakeholder submissions) and Chapter 9 (Government agency advice) of this Submissions Report present the issues raised in the advice and submissions and corresponding responses.

## Next steps

The Department of Planning and Environment will review the Environmental Impact Statement, submissions received and this Submissions Report.

Once the Department of Planning and Environment has completed its assessment, a draft Secretary's Environmental Assessment Report will be prepared for the Secretary of the Department of Planning and Environment, which may include recommended conditions of approval. The Secretary's Environmental Assessment Report will then be provided to the Minister for Planning.

The Minister for Planning will then decide whether to approve this proposal and identify any conditions of approval that would apply. The Minister's determination, including any conditions of approval and the Environmental Assessment Report, will then be published on the Department of Planning and Environment Major Projects website. If approved, Sydney Metro would continue to work with community members, government agencies and other stakeholders during further design development and construction to minimise potential impacts on the local and regional environment and the community.

## 1.0 Introduction

This chapter provides an overview of the tunnel fit-out, construction of stations, ancillary facilities and station precincts and operation and maintenance of Sydney Metro West (this proposal), as part of the broader Sydney Metro West project. The statutory planning context and the purpose and structure of this Submissions Report is also provided.

The Environmental Impact Statement for this proposal – *Sydney Metro West Environmental Impact Statement – Rail infrastructure, stations, precincts and operations* (the Environmental Impact Statement; Sydney Metro, 2022a) – was on public exhibition from 23 March to 4 May 2022. This Submissions Report presents responses to the submissions and government agency advice received during the exhibition period. This report also presents clarifications to some of the information presented in the Environmental Impact Statement.

### 1.1 Overview of Sydney Metro

Sydney is expanding and the NSW Government is working hard to deliver an integrated transport system that meets the needs of customers now and in the future.

Sydney Metro is Australia's biggest public transport program. Services on the Metro North West Line between Rouse Hill and Chatswood started in May 2019 on this new stand-alone metro railway system, which is revolutionising the way Greater Sydney travels. Sydney Metro's program of work is shown on Figure 1-1 and includes:

- Sydney Metro North West – Opened in May 2019 with driverless trains running every four minutes in the peak in each direction between Tallawong Station in Rouse Hill and Chatswood
- Sydney Metro City & Southwest – A new 30-kilometre metro line extending the metro network from the end of the Metro North West Line at Chatswood, under Sydney Harbour, through the Sydney CBD and south-west to Bankstown. It is currently under construction with services to begin in 2024 with capacity to run a metro train every two minutes each way under the centre of Sydney
- Sydney Metro West (this project) – A new 24-kilometre metro line that will connect Greater Parramatta with the Sydney CBD. Confirmed stations include Westmead, Parramatta, Sydney Olympic Park, North Strathfield, Burwood North, Five Dock, The Bays, Pyrmont and Hunter Street (Sydney CBD). This infrastructure investment will double the rail capacity of the Greater Parramatta to Sydney CBD corridor with a travel time target between the two centres of about 20 minutes
- Sydney Metro - Western Sydney Airport – A new metro rail line that will service Greater Western Sydney and the new Western Sydney International (Nancy-Bird Walton) Airport forming the transport spine of the Western Parkland City.

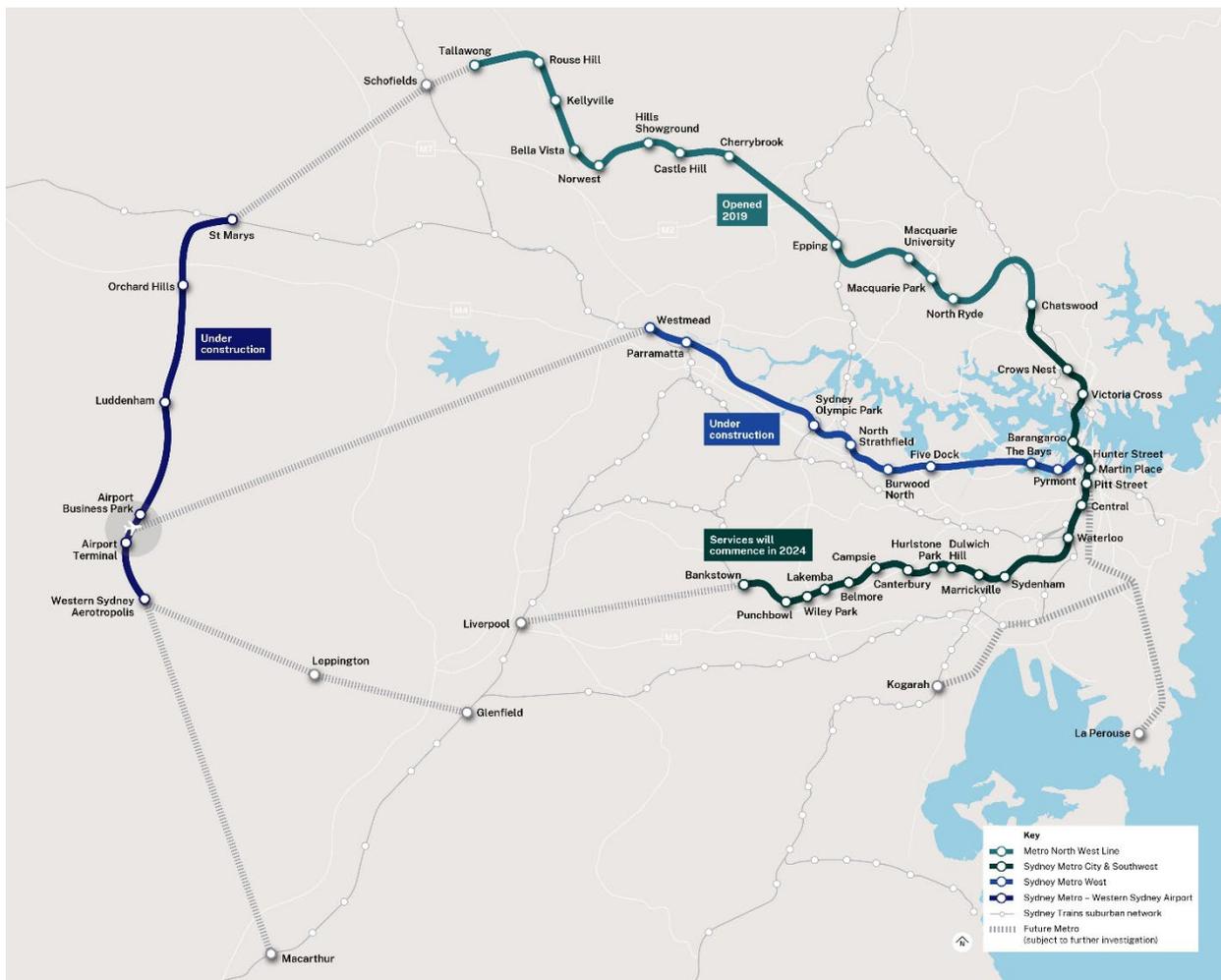


Figure 1-1 Sydney Metro network

## 1.2 Sydney Metro West

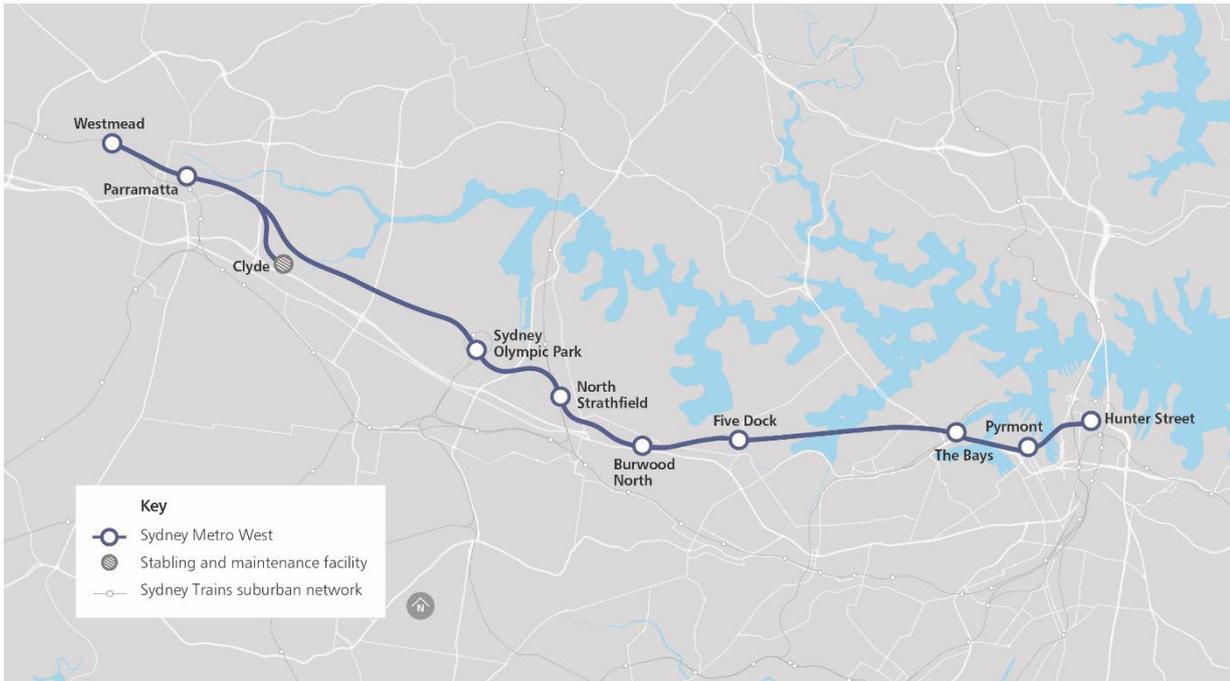
The delivery of Sydney Metro West is critical to keeping Sydney moving and is identified in key strategic planning documents including the *Greater Sydney Region Plan: A Metropolis of Three Cities – connecting people* (Greater Sydney Commission, 2018a), *Building Momentum: State Infrastructure Strategy 2018-2038* (Infrastructure NSW, 2018) and *Future Transport Strategy 2056* (Transport for NSW, 2020a).

Sydney Metro West will double rail capacity between Greater Parramatta and the Sydney CBD, transforming Sydney for generations to come.

Sydney Metro West will also:

- relieve the congested T1 Western Line, T9 Northern Line, and T2 Inner West & Leppington Line
- significantly boost economic opportunities for Greater Parramatta
- support new residential and employment zones along the Greater Parramatta to Sydney CBD corridor, including at Sydney Olympic Park and The Bays – providing improved transport for the additional 420,000 new residents and 300,000 new workers forecast to be located within the corridor over the next 20 years
- allow customers fast and easy transfers with the T1 Western Line at Westmead, T9 Northern Line at North Strathfield, and the Sydney Trains suburban rail network and Sydney Metro in the Sydney CBD
- allow for transfers with the future Parramatta Light Rail (Stage 1) at Westmead and Parramatta, the planned Parramatta Light Rail (Stage 2) at Sydney Olympic Park
- create an anticipated 10,000 direct and 70,000 indirect jobs during construction (based on Sydney Metro analysis).

The main elements of Sydney Metro West are shown in Figure 1-2.



**Figure 1-2 Sydney Metro West**

### 1.2.1 Staged planning approval

Sydney Metro West is being assessed as a staged infrastructure application under section 5.20 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The Concept and major civil construction work for Sydney Metro West between Westmead and The Bays (Stage 1 of the planning approval process, application number SSI-10038) was approved by the Minister for Planning and Public Places on 11 March 2021.

The Concept includes:

- construction and operation of new passenger rail infrastructure between Westmead and the central business district (CBD) of Sydney, including:
  - tunnels, stations (including surrounding areas) and associated rail facilities
  - stabling and maintenance facilities (including associated underground and overground connections to tunnels)
- modification of existing rail infrastructure (including stations and surrounding areas)
- ancillary development.

The previous Sydney Metro West planning application (Stage 1 of the planning approval process) includes major civil construction work between Westmead and The Bays, including:

- enabling works such as demolition, utility supply to construction sites, utility adjustments and modifications to the existing transport network
- tunnel excavation including tunnel support activities between Westmead and The Bays
- station excavation for new metro stations at Westmead, Parramatta, Sydney Olympic Park, North Strathfield, Burwood North, Five Dock and The Bays
- shaft excavation for services facilities
- civil work for the stabling and maintenance facility at Clyde.

These works commenced in 2021 and will continue through to the end of 2026.

An Environmental Impact Statement for major civil construction between The Bays and Sydney CBD (Stage 2 of the planning approval process) was exhibited from 3 November 2021 to 15 December 2021. A Submissions Report has been prepared for major civil construction between The Bays and Sydney CBD and was made publicly available on the Department of Planning and Environment's Major Projects website on 27 April 2022 (<https://www.planningportal.nsw.gov.au/major-projects/projects/sydney-metro-west-bays-sydney-cbd>).

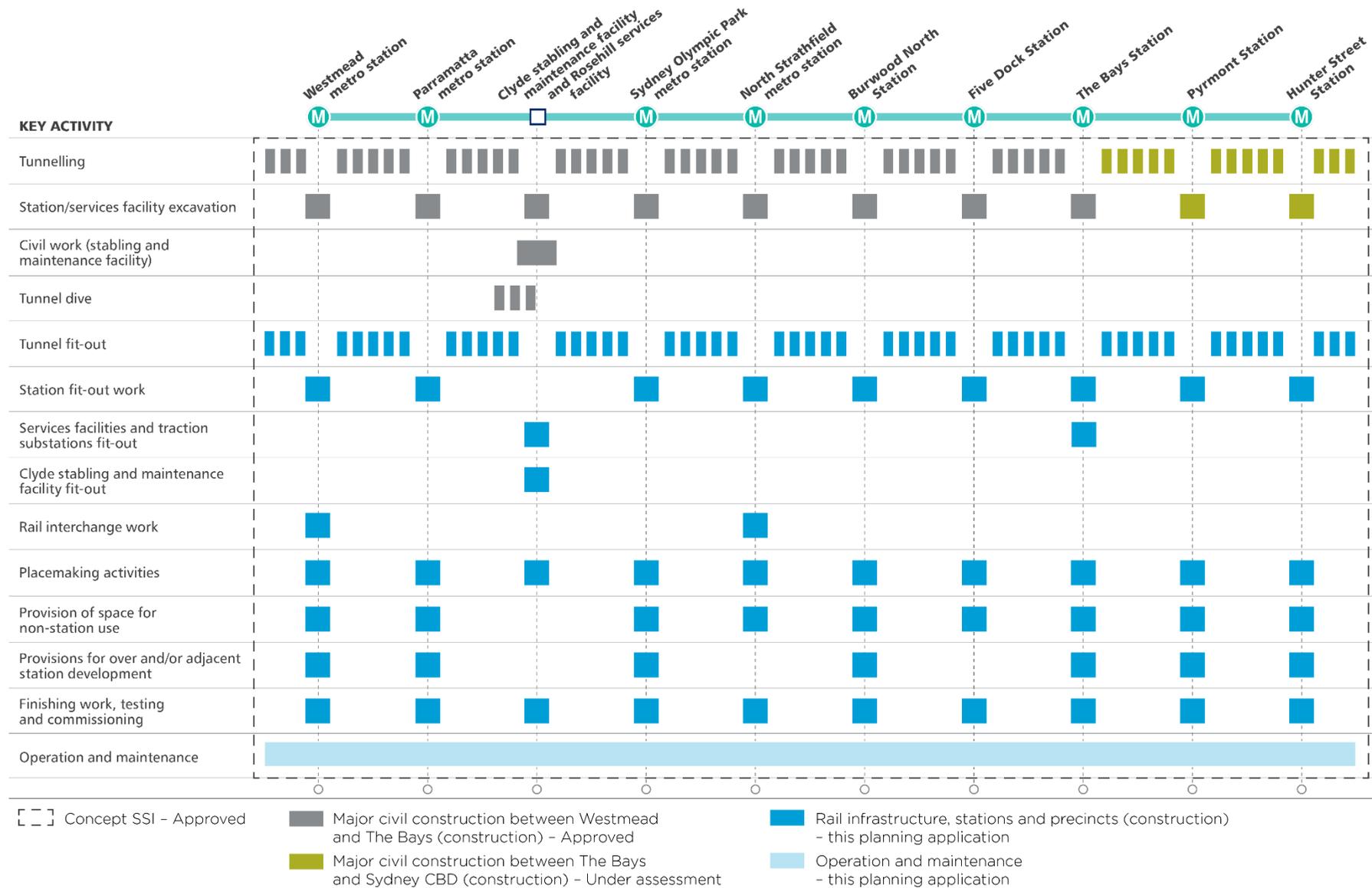
The previous Sydney Metro West planning application (Stage 2 of the planning approval process, application number SSI-19238057) includes major civil construction between The Bays and Sydney CBD, including:

- enabling works such as demolition, utility supply to construction sites, utility adjustments and modifications to the existing transport network
- tunnel excavation including tunnel support activities between The Bays and Sydney CBD
- station excavation for new metro stations at Pyrmont and Hunter Street (Sydney CBD).

Subject to planning approval, these works would commence in 2023 and would continue through to the end of 2025.

Stage 3 of the planning approval process, the subject of this Submissions Report, includes tunnel fit-out, construction of stations, ancillary facilities and station precincts, and operation and maintenance of the Sydney Metro West line (this proposal). The key features of this proposal are outlined in Section 1.2.2.

The planning approval stages for Sydney Metro West, including key elements that form part of each stage, are shown in Figure 1-3.



**Figure 1-3 Sydney Metro West planning approval stages**

### 1.2.2 Key features of this proposal

This proposal includes tunnel fit-out, construction of stations, ancillary facilities and station precincts and operation and maintenance of the Sydney Metro West line. Construction work for this proposal would commence in 2024 and would continue through to the beginning of 2030.

This proposal would involve:

- fit-out of tunnels including rail systems for metro train operations
- construction, fit-out and operation of:
  - metro station buildings and the surrounding metro precincts
  - a services facility and traction substations
  - a control centre, test track and stabling and maintenance facility at Clyde
- space for non-station uses at metro stations (e.g., retail, commercial and/or community facilities)
- provisions for over and/or adjacent station development within metro precincts
- rail interchange support works, including work to the existing T1 Western Line at Westmead and T9 Northern Line at North Strathfield
- transport network modifications such as new interchange facilities and changes to public transport networks to serve metro stations
- subdivision of sites
- operation and maintenance of the Sydney Metro West line.

Components of this proposal are subject to further design development and changes may be made during the ongoing design process that would take into account the outcomes of community and stakeholder engagement and environmental investigations.

Further details of this proposal are provided in Chapter 1 (Proposal description – operation) and Chapter 2 (Proposal description – construction) of Appendix B (Revised proposal description).

## 1.3 Statutory context and approval process

Sydney Metro West was declared as State significant infrastructure and critical State significant infrastructure under section 5.12(4) and 5.13 of the *Environmental Planning & Assessment Act 1979* on 23 September 2020. Schedule 5 of State Environmental Planning Policy (State and Regional Development) 2011 was amended to include Sydney Metro West as critical State significant infrastructure as a result of this declaration. These provisions are now in Schedule 5 of State Environmental Planning Policy (Planning Systems) 2021. The Sydney Metro West Concept was approved on 11 March 2021, under Part 5, Division 5.2 of the *Environmental Planning and Assessment Act 1979* as a staged State significant infrastructure application.

*Sydney Metro West Environmental Impact Statement – Rail infrastructure, stations, precincts and operations* (Sydney Metro, 2022a) was prepared to support Sydney Metro's application for approval from the Minister for Planning for tunnel fit-out, construction of stations, ancillary facilities and station precincts, and operation and maintenance of the Sydney Metro West line (this proposal). The Environmental Impact Statement was placed on exhibition by the Department of Planning and Environment for a period of six weeks from 23 March 2022 to 4 May 2022.

During the exhibition period, government agencies, key stakeholders and members of the community were able to review project information online via an interactive portal (including an interactive project map) and a virtual community engagement room (including videos from project experts). Community information sessions were also held at several locations along the Sydney Metro West alignment to enable the community to engage with the project team and ask questions about this proposal. Government agencies, key stakeholders and members of the community were also able to request further information from Sydney Metro regarding this proposal and make a submission to the Department of Planning and Environment for consideration in assessment of the application.

Further information on community and stakeholder consultation carried out during the exhibition period is included in Chapter 3 (Stakeholder and community engagement) of this Submissions Report.

An overview of the assessment and approval process is shown in Figure 1-4.



Figure 1-4 Assessment and approvals process for this proposal

## 1.4 Purpose and structure of this Submissions Report

During exhibition of the Environmental Impact Statement, 71 submissions were received from public authorities, the community and key stakeholders by the Department of Planning and Environment. In addition, 11 government agencies provided advice to the Department of Planning and Environment. The Secretary of the Department of Planning and Environment requested Sydney Metro to provide a Submissions Report that addresses issues identified in the submissions received and the advice from government agencies.

This Submissions Report presents responses to submissions received during the exhibition of the Environmental Impact Statement. In addition, Chapter 2 (Environmental Impact Statement clarifications) of this Submissions Report presents clarifications to some of the information presented in the Environmental Impact Statement and the potential environmental impacts of those clarifications (where relevant).

The structure and content of this report is outlined in Table 1-1.

**Table 1-1 Structure and content of this Submissions Report**

<b>Chapter</b>	<b>Description</b>
<b>Submissions Report</b>	
Chapter 1 Introduction (this chapter)	Outlines the key features of Sydney Metro West, the statutory context and approval process and outlines the purpose and content of this report.
Chapter 2 Environmental Impact Statement clarifications	Provides clarification on information presented in the Environmental Impact Statement, and further assessment where relevant, as well as changes to or additional mitigation measures where required.
Chapter 3 Stakeholder and community engagement	Outlines stakeholder and community engagement carried out to support Environmental Impact Statement exhibition and ongoing consultation and engagement activities.
Chapter 4 Analysis of submissions	Provides a summary of the submissions received during public exhibition of the Environmental Impact Statement including the number of submissions, types of submitters, and issues raised.
Chapter 5 Feedback on placemaking and design of stations and precincts	Provides an overview of how the design responds to placemaking and design feedback from submissions and agency advice, and/or how this feedback would be considered during further design development. This chapter also provides an overview of the process for further design development, including community and stakeholder consultation.
Chapter 6 Community submissions	Identifies issues raised in community submissions and provides responses to those issues.
Chapter 7 Public authority submissions	Identifies issues raised in local council submissions and provides responses to those issues.
Chapter 8 Key stakeholder submissions	Identifies issues raised in key stakeholder submissions and provides responses to those issues.
Chapter 9 Government agency advice	Identifies issues raised by government agencies (in agency advice) and provides responses to those issues.
Chapter 10 Conclusion and next steps	Provides a conclusion to this Submissions Report and outlines next steps in the approval process.
Chapter 11 References and terminology	Provides a list of references and defines key terms and abbreviations used throughout this Submissions Report.
<b>Appendices</b>	
Appendix A	Where to find responses to issues raised in submissions
Appendix B	Revised proposal description
Appendix C	Revised mitigation measures
Appendix D	Transport technical information
Appendix E	Noise and vibration technical information
Appendix F	Non-Aboriginal heritage technical information
Appendix G	Landscape and visual amenity technical information
Appendix H	Flooding technical information
Appendix I	Construction Environmental Management Framework
Appendix J	Construction Traffic Management Framework
Appendix K	Construction Noise and Vibration Standard
Appendix L	Heritage Interpretation Strategy

<b>Chapter</b>	<b>Description</b>
Appendix M	Design Guidelines
Appendix N	Overarching Community Communications Strategy
Appendix O	Social impacts – revised construction mitigation and management

## 2.0 Environmental Impact Statement clarifications

This chapter provides clarifications to information presented in the Environmental Impact Statement.

### 2.1 Overview

The purpose of this chapter is to clarify some of the information presented in the Environmental Impact Statement, including additional assessment of potential impacts, where relevant.

Since the preparation and exhibition of the Environmental Impact Statement, some elements of the design and construction methodology for this proposal have been refined as part of the design development process and to respond to stakeholder and community feedback. Additional information and further assessment of the potential environmental impacts (where required) for these refinements is provided in this chapter. Other clarifications presented in this chapter provide additional information on elements of this proposal, such as further assessment or updates on alignment with master planning for precincts. Table 2-1 outlines the clarifications and whether they required additional assessment as part of this Submissions Report.

Some design elements of this proposal would continue to be refined as part of the design development process. Design development would continue to be informed by the design objectives and principles, Design Guidelines (Appendix M), Design Quality Framework, design review process outlined in the Environmental Impact Statement and feedback from community and stakeholders.

**Table 2-1 Overview of proposed clarifications**

Precinct	Clarification	Relevant section	Additional assessment required?
Westmead metro station	Refinements to the exhibited station and precinct design to improve access and connectivity to the metro station, minimise potential impacts and respond to stakeholder feedback.	Section 2.2	Yes
	Further assessment of potential groundwater and ground movement impacts associated with the proposed underground concourse.	Section 2.3	Yes
Parramatta metro station	Refinements to the exhibited station box design and the layout of aboveground station infrastructure as a result of ongoing design development.	Section 2.4	Yes
	Further assessment of potential groundwater and ground movement impacts associated with proposed excavation for basement structures.	Section 2.5	Yes
Sydney Olympic Park metro station	Clarification regarding the ownership of land identified for adjacent station development near the intersection of Figtree Drive and Precinct Street A.	Section 2.6	No
North Strathfield metro station	Clarification regarding the classification of The McDonald College as a residential receiver for out of hours works activities due to feedback from The McDonald College advising that boarders sleep at the site during school terms.	Section 2.7	Yes
The Bays Station	An update on alignment of station and precinct design with ongoing master planning work as part of the <i>Bays West Place Strategy</i> (NSW Department of Planning, Industry and Environment, 2021a).	Section 2.8	No
Pymont Station	Revised construction haul routes to and from the construction sites to improve construction traffic outcomes and respond to stakeholder feedback.	Section 2.9	Yes
Hunter Street Station (Sydney CBD)	Revised construction haul routes to and from the construction sites to improve construction traffic outcomes and respond to stakeholder feedback.	Section 2.10	Yes

Precinct	Clarification	Relevant section	Additional assessment required?
Clyde stabling and maintenance facility and Rosehill services facility	Relocation of the operational water treatment plant from adjacent to James Ruse Drive to within the Rosehill services facility on Unwin Street to create a common precinct which houses several operational ancillary facilities at the Rosehill services facility.	Section 2.11	Yes
	An update on alignment with master planning for the Camellia-Rosehill precinct, including the future development of a landscape masterplan.	Section 2.12	No

Other minor clarifications and corrections outlined in this chapter (refer to Section 2.13) include:

- description of the heights of aboveground infrastructure in the Environmental Impact Statement
- minor text changes and factual corrections to information presented in the Environmental Impact Statement
- acknowledgement that Sydney Metro is reviewing the day to day and event mode function of station entries at Sydney Olympic Park metro station, in consultation with Sydney Olympic Park Authority
- clarity regarding the permanent and temporary parking impacts at each site
- revised Sydney Metro management frameworks, including the:
  - Construction Environmental Management Framework
  - Construction Traffic Management Framework
  - Construction Noise and Vibration Standard
  - Heritage Interpretation Strategy
  - Design Guidelines
  - Overarching Community Communications Strategy.

Section 2.14 also provides an overview of changes to or additional mitigation measures since exhibition of the Environmental Impact Statement.

## 2.2 Westmead metro station – station and precinct design refinements

### 2.2.1 Clarification description

#### Refinements to proposal description – operation

Since the exhibition of the Environmental Impact Statement, several refinements to the exhibited design for Westmead metro station and surrounding precinct have been identified through stakeholder consultation and as part of ongoing design development to improve access and connectivity to the metro station, improve amenity and minimise potential impacts. These changes include:

- a new metro station entry from Hawkesbury Road (to the south of Alexandra Avenue), which Cumberland City Council expressed support for and was raised in community submissions
- a minor reduction to the extent of the station canopy to the east of Hawkesbury Road
- additional pedestrian crossings on Alexandra Avenue and Bailey Street
- an additional bicycle parking location to the south of Alexandra Avenue, associated with the proposed southern entry
- other minor changes to transport interchange elements such as the location of kiss and ride, taxi and accessible parking facilities, and adjustments to the location of proposed bicycle routes
- minor changes to the location of public domain upgrades due to changes to transport interchange elements
- adjustments to the proposed bicycle route and public domain upgrades on the Hawkesbury Road overbridge
- relocation of bus stops to the west along Alexandra Avenue to support efficient interchange between the metro station and bus services
- regrading of the road surface of Alexandra Avenue (between Hawkesbury Road and Hassall Street) to enable an accessible connection between bus stops and the metro station entry.

The Environmental Impact Statement identified that improvements to the existing Hawkesbury Road overbridge would be undertaken to allow improved amenity, and pedestrian and cyclist accessibility across the rail corridor and between the existing Westmead Station, Westmead metro station and Parramatta Light Rail Westmead stop. The design of these improvements has since been further developed and the proposed bicycle route and public domain upgrades would now be located on the eastern side of Hawkesbury Road. This would reduce the extent of construction work required for Westmead metro station (and associated construction impacts, such as traffic lane closures) on the western side of Hawkesbury Road, while continuing to achieve the place and design outcomes. Adjustments to the proposed bicycle route also align with feedback from Cumberland City Council's submission (refer to Section 7.2 (Cumberland City Council) of this Submissions Report).

As noted in Chapter 7 (Westmead metro station) of the Environmental Impact Statement, Sydney Metro is continuing to investigate options for the layout and use of Alexandra Avenue between Hawkesbury Road and Hassall Street, including the potential for this section of road to be narrowed and used for bus and emergency services only. In this scenario, general traffic would be redirected via Hassall Street, Bailey Street and/or Priddle Street which may result in additional traffic and traffic noise impacts along these roads. These options have not been assessed as part of this Submissions Report and would be subject to further assessment if progressed.

Sydney Metro is also continuing to investigate opportunities to optimise the location of and provide additional kiss and ride facilities at Westmead metro station.

The exhibited layout and key design elements for Westmead metro station are shown in Figure 2-1. The revised layout and key design elements are shown in Figure 2-2.

In addition, Figure 7-1 of the Environmental Impact Statement identified a 'proposed pedestrian crossing' on Railway Parade (reproduced as Figure 2-1). Figure 2-2 has been corrected to clarify that this is an existing pedestrian crossing that would be retained.

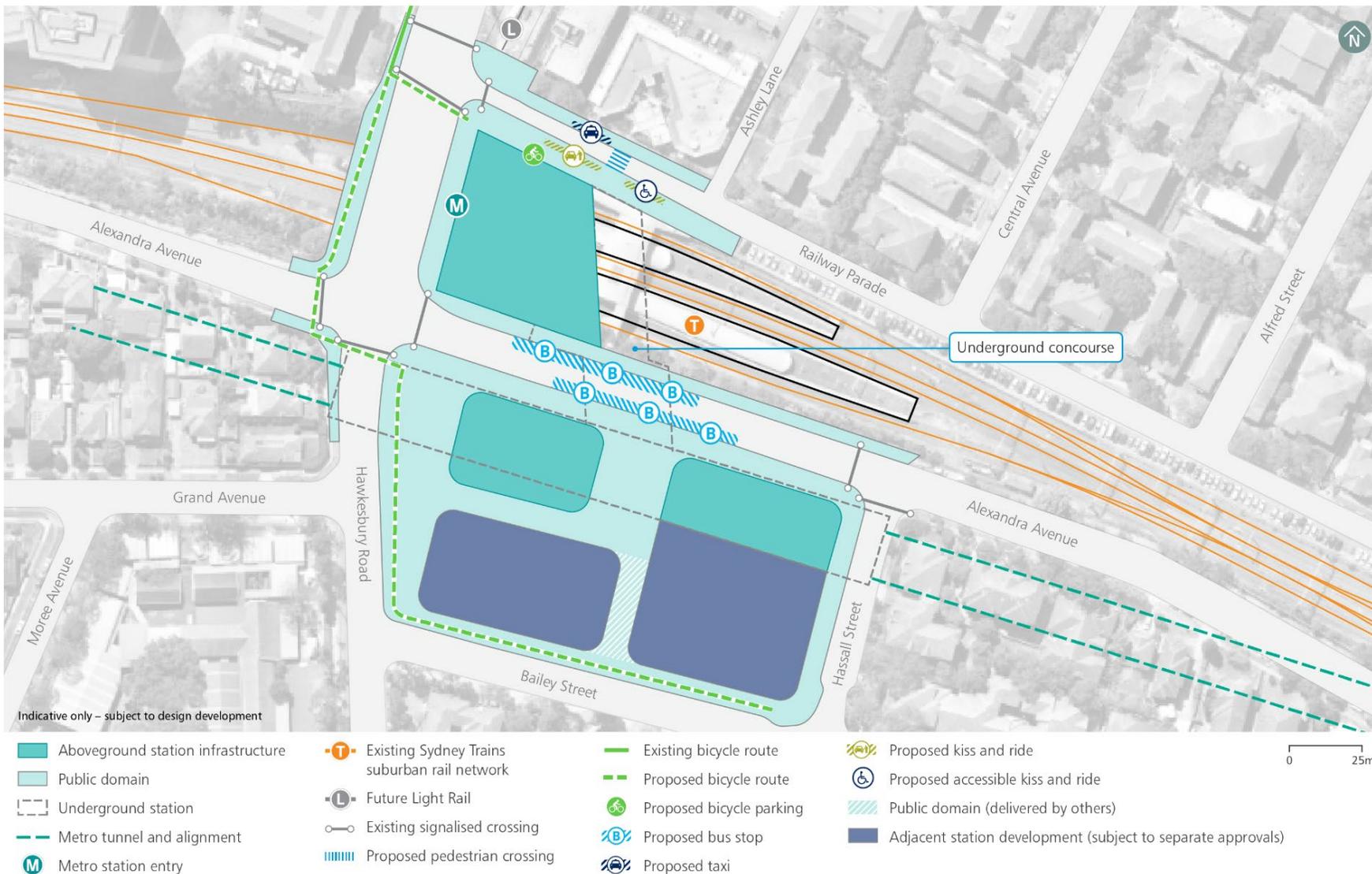


Figure 2-1 Exhibited indicative layout and key design elements – Westmead metro station (Figure 7-1 of the Environmental Impact Statement)

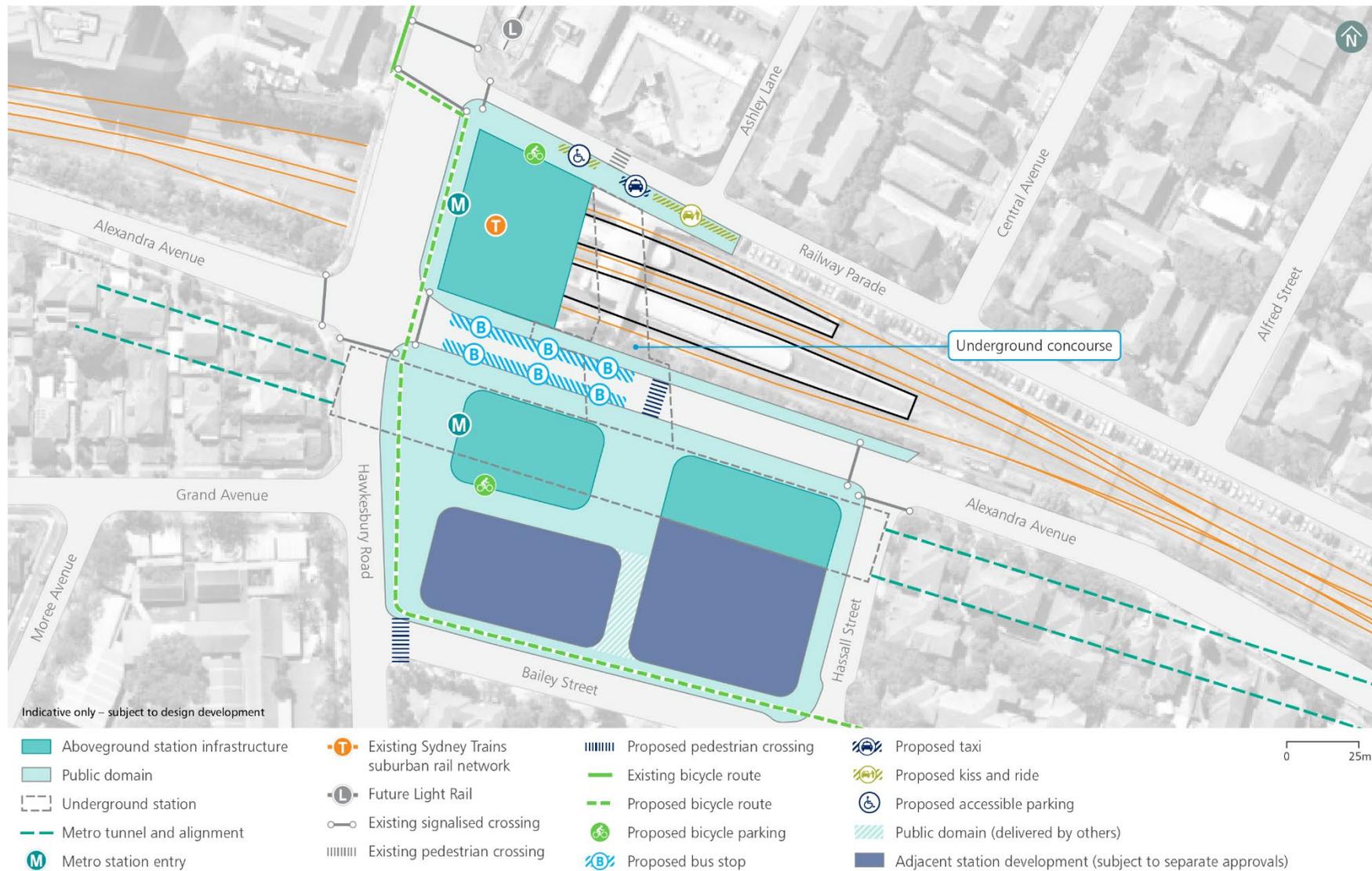


Figure 2-2 Revised indicative layout and key design elements – Westmead metro station

## Refinements to proposal description – construction

Section 7.4.2 of the Environmental Impact Statement provided an overview of the key construction work for this proposal at Westmead metro station.

Additional construction work associated with the Westmead metro station design refinements would include the regrading of Alexandra Avenue between Hawkesbury Road and Hassall Street to provide improved accessibility between the bus stops and metro station entry. This would involve filling of up to about three metres deep along the full width of the road, which would require around 6,200 cubic metres of fill.

This work would take place within the exhibited construction program, during the 12-18 month closure of Alexandra Avenue identified in the Environmental Impact Statement.

Due to the design refinements and the preference to locate the proposed bicycle route on the eastern side of the Hawkesbury Road overbridge, upgrade work to the western side of the overbridge (identified in Section 7.4.2 of the Environmental Impact Statement) would no longer be required.

### 2.2.2 Additional assessment

A review of the potential impacts associated with the proposed station and precinct design refinements at Westmead metro station identified that the issues requiring additional assessment are:

- construction noise and vibration
- non-Aboriginal heritage
- landscape and visual amenity
- flooding.

### Construction noise and vibration

Section 7.6.1 of the Environmental Impact Statement provides the baseline noise and vibration environment related to the Westmead metro station construction site. The proposed regrading of Alexandra Avenue would introduce a new noise scenario which was not assessed in the Environmental Impact Statement. The other refinements proposed at Westmead metro station would generally not result in changes from the impact assessment undertaken in the Environmental Impact Statement, however the reduction in the extent of construction work on Hawkesbury Road and Railway Parade may contribute to minor reductions in the predicted level of impact.

Appendix E (Noise and vibration technical information) provides further detail, including modelling results of the construction noise and vibration impacts resulting from the proposed refinements.

#### *Noise management level exceedances*

An assessment has been undertaken to predict the likely worst-case impacted receivers during the daytime as a result of the proposed work to regrade Alexandra Avenue. Worst-case impacted receivers during the daytime are located relatively close to the construction site and impacts are predicted to be 'moderate' to 'high', particularly when noise intensive equipment such as rockbreakers or concrete saws are being used for road work associated with the proposed refinements. The highest impact work, requiring rockbreakers or concrete saws is expected to occur intermittently over 10 weeks of the total construction period.

The noise levels during 'typical' work (when noise intensive equipment is not required), are generally predicted to comply with the noise management levels or result in only 'low' impacts at a small number of the closest receivers.

Some commercial and other sensitive receivers are predicted to be impacted during the road work 'peak' activities. 'High' or 'moderate' worst-case impacts are predicted at:

- Western Sydney University – Westmead Precinct ('high')
- Mounika's Family Day Care ('high')
- Westmead Public School ('high').

The 'peak' work scenario for the proposed refinements is predicted to result in slightly more impacted receivers compared to the other daytime scenarios at the Westmead metro station construction site presented in the Environmental Impact Statement. This is primarily due to the additional noise intensive equipment required for regrading along Alexandra Avenue, such as rockbreakers and concrete saws.

The number of receivers with impacts predicted is similar to, but slightly greater than, the 'peak' aboveground rail work presented in the Environmental Impact Statement, which includes slewing and rail tamping of the existing Sydney Train lines. The 'peak' noise intensive road work activities are expected to occur intermittently over a period of 10 weeks. Figure 2-3 below shows the number of receivers predicted to be affected by the 'peak' road work activities.

The impacts during 'typical' road work are predicted to substantially reduce and are generally consistent with the other 'typical' work scenarios assessed in the Environmental Impact Statement.

The anticipated impacts are based on all equipment working simultaneously in each assessed scenario. There would frequently be periods when construction noise levels are much lower than the worst-case levels predicted and there would be times when no equipment is in use and no impacts would occur.



**Figure 2-3 Worst case daytime airborne noise ('peak' road work) resulting from proposed refinements - Westmead metro station**

*Highly noise affected residential receivers*

Some of the nearest residential receivers on Alexandra Avenue, Railway Parade and Bailey Street with line of sight to the proposed road work area are predicted to be highly noise affected when rockbreakers or concrete saws are being used. Six highly noise affected receivers have been identified in NCA01 during the daytime, and 10 highly noise affected receivers have been identified for NCA02 during the daytime.

Some of the receivers predicted to be highly noise affected by the proposed refinements were not predicted to be highly noise affected by any of the work scenarios assessed in the Environmental Impact Statement. Figure 2-4 reflects the expected highly noise affected receivers as a result of the proposed refinements. The most noise intensive activity at Westmead metro station assessed in the Environmental Impact Statement was aboveground rail work, which would take place in the rail corridor north of Alexandra Avenue. The proposed refinement which would see road work on Alexandra Avenue has a comparatively higher 'peak' noise source level and a more direct line of sight to many of the surrounding receivers. However, the road work scenario would typically be undertaken during daytime construction hours, whereas the aboveground rail work assessed in the Environmental Impact Statement would occur during the daytime, evening and night-time period (during rail possessions).

Noise impacts would be managed in accordance with the Construction Environmental Management Framework (CEMF) (Appendix I) and Construction Noise and Vibration Standard (CNVS) (Appendix K). The CNVS identifies requirements for detailed noise and vibration impact statements once construction equipment and methodologies are confirmed to identify feasible and reasonable mitigation measures.

The CEMF provides a list of standard mitigation measures that would be implemented at construction sites, which includes measures such as prior notification of the works and monitoring of the impacts, and trigger levels for the implementation of additional mitigation measures. Refer to Chapter 5 of the CNVS (Appendix K) which identifies the additional measures which could be implemented to mitigate potential exceedances of construction noise and vibration management levels.



**Figure 2-4 Highly noise affected residential receivers resulting from proposed refinements – Westmead metro station**

**Vibration impacts**

An assessment has been undertaken to predict the likely vibration impacts as a result of the proposed refinements. The main sources of vibration generating equipment as a result of the proposed refinements are rockbreakers and vibratory rollers. The predicted impacts during vibration intensive road work associated with the proposed refinements are shown in Figure 2-5.

The predictions are representative of the highest vibration levels that would likely be experienced by the nearest receivers when work is proximal. The predictions represent a ‘worst-case scenario’ where a large vibratory roller or rockbreaker is in use at the boundary of the road work area and is in close proximity to the affected buildings. In reality, smaller equipment or alternative methodologies would likely be used as the work approaches adjacent structures, which would ultimately manage potential impacts.

An assessment during the worst-case scenario showed that the cosmetic damage screening criteria is predicted to be exceeded only at the existing Westmead metro station, directly adjacent to the work area. This is consistent with the impacts identified in the Environmental Impact Statement.

The assessment also showed that the human comfort criteria is predicted to be exceeded at four of the nearest residential buildings and the existing Westmead metro station, meaning occupants of affected buildings may be able to perceive vibration at times when vibration intensive equipment is in use nearby. These residential receivers were not previously predicted to be impacted in the Environmental Impact Statement. These impacts are primarily due to the proximity of the road work area and the use of a large vibratory roller.

The worst-case impacts are expected to be relatively short-term, with 'peak' work occurring intermittently over a period of 10 weeks. Vibration impacts would be managed in accordance with the CEMF (Appendix I) and CNVS (Appendix K). The CNVS identifies requirements for detailed noise and vibration impact statements once construction equipment and methodologies are confirmed to identify feasible and reasonable mitigation measures. The CEMF includes a list of standard construction noise and vibration mitigation measures to minimise impacts at the construction sites, relevant to this proposal as a whole. The CNVS includes requirements for vibration monitoring to inform the application of mitigation measures.



**Figure 2-5 Vibration impacts (daytime) resulting from proposed refinements - Westmead metro station**

**Non-Aboriginal heritage**

Section 7.7.1 of the Environmental Impact Statement describes the baseline non-Aboriginal heritage environment at Westmead metro station, including the location of non-Aboriginal heritage items and archaeological resources. Appendix F (Non-Aboriginal heritage technical information) includes further detail on the additional assessment of built heritage impacts as a result of the proposed refinements.

*Built heritage impacts*

Section 7.7.2 of the Environmental Impact Statement assessed the potential impacts of construction and operation of this proposal on the following built heritage items at Westmead metro station (shown on Figure 2-6):

- Westmead Public School, c1917 (Cumberland LEP Item No. I295; local significance)
- Western Sydney University, c1917 (Parramatta LEP Item No. I628; local significance)
- Victorian residence (in University of Western Sydney grounds) (Parramatta LEP Item No. I629; local significance).

The potential magnitude of impacts to the items during the operation and construction of this proposal were identified as neutral or negligible.

The proposed design refinements are minor in nature and are primarily limited to ground level adjustments. During operation, these changes would not be noticeable (when compared to the exhibited design in the Environmental Impact Statement) in relation to surrounding infrastructure. At the Westmead Public School (c1917), the reduction of the scale of aboveground station infrastructure (station canopy) to the north of Alexandra Avenue is considered a positive change, however this would not change the overall impact ratings identified for the item.

The refinements would be constructed within the exhibited Westmead metro station construction site, and construction activities associated with the proposed refinements (e.g. road work for regrading) would be considered negligible in relation to the overall scale of construction activities identified in the Environmental Impact Statement. As such, the potential temporary indirect (visual) impacts, and settlement and vibration impacts to heritage items during construction would be consistent with those assessed in the Environmental Impact Statement for the surrounding items.

Overall, the proposed design refinements would not result in changes to the non-Aboriginal heritage impacts at Westmead metro station identified in the Environmental Impact Statement.



**Figure 2-6 Heritage items within the study area – Westmead metro station (Figure 7-14 of the Environmental Impact Statement)**

*Archaeological impacts*

The proposed design refinements would involve minor additional works along Alexandra Avenue. This area has been identified as containing locally significant archaeological remains of a buried sandstone road surface (refer to Section 7.2.2 of the Environmental Impact Statement). However, the proposed design refinements are not expected to increase the overall excavation footprint at Westmead metro station. The proposed regrading along Alexandra Avenue would generally involve filling work rather than excavation. As a result, the proposed design refinements would not change the previously assessed impacts to archaeological resources.

Overall, construction activities for the Westmead metro station construction site would result in a minor impact to archaeological resources. This impact rating is unchanged from the Environmental Impact Statement.

## Landscape and visual amenity

Section 7.9.1 of the Environmental Impact Statement describes the baseline landscape and visual environment at Westmead metro station. Appendix G (Landscape and visual amenity technical information) includes further detail on the additional assessment of landscape and visual amenity at Westmead metro station as a result of the proposed refinements.

### *Landscape and public domain areas*

The potential landscape character impacts of the proposed refinements during operation would be consistent with those identified in the Environmental Impact Statement. The additional station entry and proposed regrading of Alexandra Avenue, together with the public domain improvements identified in the Environmental Impact Statement, would considerably improve the landscape quality and functioning of the precinct.

The potential landscape character impacts of the proposed refinements during construction would also be consistent with those identified in the Environmental Impact Statement. While the scale of construction activity would be reduced on the western side of the Hawkesbury Road bridge, the overall scale and extent of the works would remain and there would be a temporary reduction in the quality of these streetscapes and the publicly accessible areas of the station. Work to construct the new station entry, facing Alexandra Avenue, would not alter the character of the construction activity in this area.

### *Daytime visual amenity impact*

The daytime visual amenity impacts of the proposed refinements during operation, from the viewpoints shown in Figure 7-15 of the Environmental Impact Statement, would be consistent with those identified in the Environmental Impact Statement. Areas of public domain and two new contemporary station entrances rising about 10 metres above Hawkesbury Road would create new architectural focal points. Overall, there would be a noticeable improvement in the visual amenity at Westmead metro station.

The daytime visual amenity impacts of the proposed refinements during construction would generally be consistent with those identified in the Environmental Impact Statement. There would be less construction activity on the western side of Hawkesbury Road however the overall scale and extent of construction work would remain and result in a noticeable reduction in amenity in the vicinity of Westmead metro station construction site.

The proposed refinements have resulted in a change to the visual impact rating for representative viewpoint 4 (view south-west from Railway Parade near Ashley Lane). The extent of public domain works on the north of Railway Parade would be reduced from what was proposed in the Environmental Impact Statement. There would continue to be improvements to the public domain with the introduction of station architecture, however the impact rating would reduce from a moderate beneficial visual impact to a minor beneficial visual impact with the proposed refinements, due to the reduced extent of public domain works.

### *Night-time visual amenity impact*

The night-time visual amenity impacts during operation would be consistent with those identified in the Environmental Impact Statement. The additional station entry would be brightly lit to provide for customer safety, and the bus stops would be located further west, and adjacent to the new, second station entry, facing Alexandra Avenue. All lighting would be designed to minimise light spill and skyglow and the second station entry would be seen in the context of a developing urban setting.

There would be less lighting proposed on the western side of Hawkesbury Road with the proposed refinements, however residential areas on Alexandra Avenue and west of Hawkesbury Road would still experience minor adverse visual impacts from station lighting that would be somewhat filtered through garden and street trees. Overall, the proposed refinements would not perceptibly change the lighting levels at Westmead metro station.

The night-time visual amenity impacts during construction would be consistent with those identified in the Environmental Impact Statement. However, with the proposed refinements, there would be less lighting seen from Alexandra Avenue, west of Hawkesbury Road, as the construction works to the western side of Hawkesbury Road bridge are no longer proposed.

## **Flooding**

Section 7.11.1 of the Environmental Impact Statement describes the baseline flooding environment at Westmead metro station. The methodology and flooding criteria for the assessment of the proposed refinements is consistent with the methodology described in Technical Paper 8 (Hydrology, flooding and water quality) of the Environmental Impact Statement. The modelling carried out for this Submissions Report has been expanded to include the existing rail corridor and includes additional topographical survey information.

### *Operation*

As outlined in the Environmental Impact Statement, the flood protection levels for Westmead metro station are driven by the one per cent Annual Exceedance Probability (AEP) (with climate change) flood event (plus 0.3 metres of freeboard). These levels are 38.73 metres Australian Height Datum (AHD) at the entry south of Alexandra Avenue and 31.8 metres AHD at the entry north of Alexandra Avenue as the existing rail corridor is in a cutting at this location. The proposed surface levels at these station entries are around 37.6 metres AHD and 38.6 metres AHD, respectively. This indicates the design is marginally below the flood protection level at the southern entry, however the depth of flooding in this location is around 0.01 metres which can be readily mitigated by designing the final surface contours outside of the metro station entry to direct runoff away from the station entry. Design development would include further consideration of flood protection in accordance with mitigation measure EIS-HF1 (refer to Appendix C (Revised mitigation measures)).

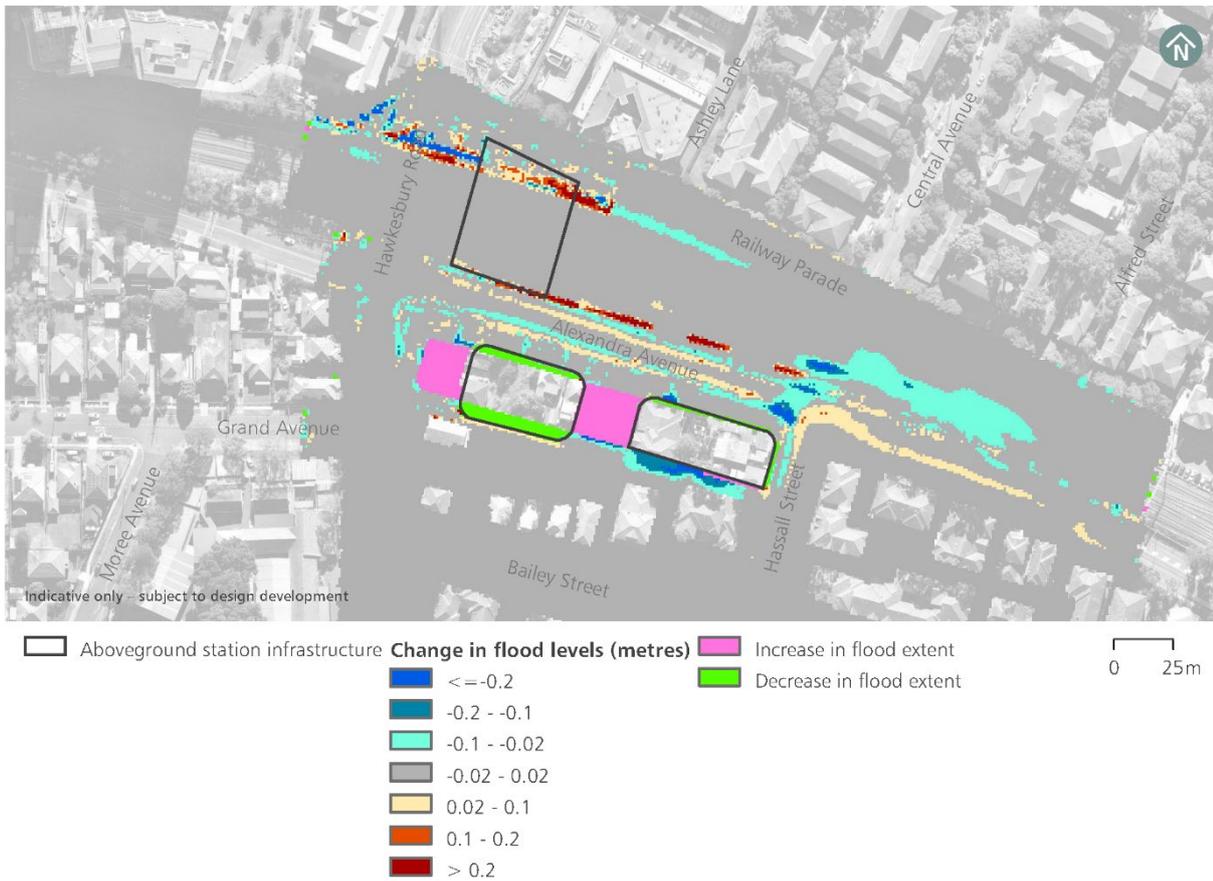
Assessment of potential flooding impacts at Westmead metro station from the design refinements and a comparison to the Environmental Impact Statement assessment is provided in Table 2-2. Figure 2-7 shows the revised potential change in flood levels (including the proposed design refinements) for the one per cent AEP (with climate change). Appendix H (Flooding technical information) includes the updated flood mapping at Westmead metro station as a result of the proposed refinements for a range of flood events.

**Table 2-2 Revised potential flooding impacts for the modelled one per cent AEP and PMF flood events – Westmead metro station**

Potential impact	Description in the Environmental Impact Statement	Revised description due to proposed refinements	Comparison to Environmental Impact Statement
Change in peak flooding levels	<ul style="list-style-type: none"> <li>flood modelling undertaken for the one per cent AEP and Probable Maximum Flood (PMF) events indicate this proposal would have limited localised impacts on flood levels, including increases in flood levels for the adjacent Alexandra Avenue</li> <li>a potential increase in flood depths of about 0.2 metres at the verge of the intersection of Alexandra Avenue and Hassall Street is predicted during the one per cent AEP and PMF events</li> <li>as set out in the mitigation measures (refer to Section Appendix C (Revised mitigation measures)), further design refinement would occur to manage potential local flooding impacts.</li> </ul>	<ul style="list-style-type: none"> <li>flood modelling undertaken for the one per cent AEP and PMF events indicate this proposal would have limited localised impacts on flood levels, including increases in flood levels for the adjacent Alexandra Avenue. This would extend to the east of Hassall Street</li> <li>revised modelling assumptions related to topographical survey result in more runoff being retained within the road reserves of Alexandra Avenue and Railway Parade rather than spilling into the rail corridor. Consequently, there is a slightly larger extent of flooding at the intersection of Alexandra Avenue and Hassall Street</li> <li>consistent with the Environmental Impact Statement, and as set out in the mitigation measures (refer to Appendix C (Revised mitigation measures)), further design refinement would occur to manage potential local flooding impacts</li> </ul>	Increase in some locations, however this is contained to road reserves.
Change in flood extent	<ul style="list-style-type: none"> <li>a slight increase in potential flood extent around the aboveground station infrastructure (located south of the existing rail corridor) is anticipated in both the one per cent AEP and PMF events. The increase in flood extent around the structures is anticipated as there would be open areas between the structures. This is shown in Figure 7-19 of the Environmental Impact Statement for the one per cent AEP event</li> <li>impacts to private properties due to the change in flood extent are not anticipated.</li> </ul>	<ul style="list-style-type: none"> <li>a slight increase in potential flood extent around the aboveground station infrastructure (located south of the existing rail corridor) is anticipated in both the one per cent AEP and PMF events. The increase in flood extent around the structures is anticipated as there would be open areas between the structures. This is shown in Figure 2-7 for the one per cent AEP event</li> <li>impacts to private properties due to the change in flood extent are not anticipated.</li> </ul>	No change

Potential impact	Description in the Environmental Impact Statement	Revised description due to proposed refinements	Comparison to Environmental Impact Statement
Compatibility with the flood hazard of the land	<ul style="list-style-type: none"> <li>flood risk and potential impacts during operation of this proposal would remain unchanged from the baseline environment conditions and therefore are considered compatible with the flood hazard of the site</li> <li>access and evacuation routes would be readily available via the adjacent streets for the events considered in this assessment with Hawkesbury Road a safer choice during the PMF flood event.</li> </ul>	<ul style="list-style-type: none"> <li>flood risk and potential impacts during operation of this proposal would remain unchanged from the baseline environment conditions and therefore are considered compatible with the flood hazard of the site</li> <li>there would be some areas of Alexandra Avenue that would slightly increase in flood hazard level, however access and evacuation routes would be readily available via the adjacent streets for the events considered in this assessment with Hawkesbury Road a safer choice during the PMF flood event.</li> </ul>	No change
Change in duration of inundation	<ul style="list-style-type: none"> <li>change in duration of inundation in all flood events would be negligible.</li> </ul>	<ul style="list-style-type: none"> <li>change in duration of inundation in all flood events would be negligible.</li> </ul>	No change
Potential property impacts	<ul style="list-style-type: none"> <li>there would be no newly flood-affected private properties as a result of this proposal.</li> </ul>	<ul style="list-style-type: none"> <li>there would be no newly flood-affected private properties as a result of this proposal.</li> </ul>	No change
Consistency with floodplain risk management	<ul style="list-style-type: none"> <li>Cumberland City Council has no floodplain risk management plan applicable to this area. Flood control mapping under the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 identifies that some sections of Alexandra Avenue are flood ways with flow conveyance largely within the road corridor. This is consistent with the mapping shown in Appendix A of Technical Paper 8 (Hydrology, flooding and water quality) of the Environmental Impact Statement.</li> </ul>	<ul style="list-style-type: none"> <li>Alexandra Avenue would continue to be a flood way with flow conveyance largely within the road corridor, consistent with flood control mapping for the area.</li> </ul>	No change

Potential impact	Description in the Environmental Impact Statement	Revised description due to proposed refinements	Comparison to Environmental Impact Statement
Potential impacts to critical infrastructure and emergency management arrangements for flooding	<ul style="list-style-type: none"> <li>no potential flooding impacts to the major road or rail transport routes identified in the <i>South West Regional Emergency Management Plan</i> (South West Metropolitan Regional Emergency Management Committee, 2017) would occur as a result of this proposal given the distance of the routes from the site.</li> </ul>	<ul style="list-style-type: none"> <li>no potential flooding impacts to the major road or rail transport routes identified in the <i>South West Regional Emergency Management Plan</i> would occur as a result of this proposal given the distance of the routes from the site.</li> </ul>	No change
Potential social and economic costs from flooding impacts	<ul style="list-style-type: none"> <li>given the generally low flood affectation at Westmead metro station and the expected low impact on flood behaviour on surrounding properties and infrastructure as a result of this proposal, the potential social and economic costs from flooding impacts are considered low.</li> </ul>	<ul style="list-style-type: none"> <li>given the generally low flood affectation at Westmead metro station and the expected low impact on flood behaviour on surrounding properties and infrastructure as a result of this proposal, the potential social and economic costs from flooding impacts are considered low.</li> </ul>	No change



**Figure 2-7 Revised potential change in flood levels (one per cent AEP event with climate change) - Westmead metro station**

Potential flood impacts during operation at Westmead metro station would be managed through the mitigation measures identified in the Environmental Impact Statement. No changes to, or additional, mitigation measures are required as a result of the changed flood impacts.

**Construction**

The design refinements at Westmead metro station are generally within the same construction footprint as identified in the Environmental Impact Statement. The potential impact on flood behaviour during construction would remain unchanged from those described in the Environmental Impact Statement.

**2.2.3 Changes to or additional mitigation measures**

The proposed refinements at Westmead metro station do not require any changes to, or additional, mitigation measures than those provided in the Environmental Impact Statement.

## 2.3 Westmead metro station – additional assessment of groundwater and ground movement impacts

### 2.3.1 Clarification description

As described in Section 7.2 of the Environmental Impact Statement, this proposal includes the construction and operation of a paid underground concourse beneath Alexandra Avenue and the existing rail corridor. The underground concourse, which would link the existing station with Westmead metro station, would be untanked (excavation that allows groundwater to flow into the structure).

Work carried out under the previous Sydney Metro West planning application will include the excavation of an untanked station box and a tanked crossover cavern (mined cavern constructed with an impermeable casing/membrane that minimises groundwater inflows to negligible rates) to the east of the station box.

Section 7.10 of the Environmental Impact Statement included an assessment of the potential groundwater impacts of the untanked station box, tanked crossover cavern and the proposed untanked underground concourse at Westmead metro station during construction and operation of this proposal. Groundwater predictive modelling carried out for the previous Sydney Metro West planning application was used as the basis for this assessment, with impacts from the underground concourse that would be excavated as part of this proposal assessed qualitatively.

It was identified in Section 7.10.2 of the Environmental Impact Statement that groundwater predictive modelling carried out under the previous Sydney Metro West planning application would be reviewed and updated to incorporate the scope of this proposal. Since the exhibition of the Environmental Impact Statement, further assessment (including groundwater modelling) has been carried out to assess the potential impacts to groundwater associated with the underground concourse.

Section 7.10 of the Environmental Impact Statement also included a preliminary assessment of potential ground movement impacts at the Westmead metro station construction site in accordance with the Rankin risk classification (Rankin, 1988), based on excavation volumes and predicted groundwater drawdown. Since the exhibition of the Environmental Impact Statement, further assessment has also been undertaken to quantify potential ground movement impacts at Westmead metro station.

### 2.3.2 Additional assessment

Additional assessment has been carried out for groundwater and ground movement.

#### **Groundwater and ground movement**

The additional assessment involved modelling of groundwater inflows and drawdown associated with the untanked underground concourse, and comparing the results with those predicted in the Environmental Impact Statement for the untanked station box and crossover cavern to identify potential changes in impacts. The additional assessment also involved modelling of potential ground movement impacts associated with the underground concourse.

Section 7.10.1 of the Environmental Impact Statement provides the baseline environment as relevant to groundwater and soils at Westmead metro station. Potential impacts to groundwater resulting from work carried out under the previous Sydney Metro West planning application (described in Section 2.3.1) were taken into account in the baseline environment for this proposal.

#### *Groundwater levels, inflows and flow patterns*

Section 7.10 of the Environmental Impact Statement identified that as a result of the work under the previous Sydney Metro West planning application, the levels and flow groundwater level within the immediate area around the station box is predicted to be drawn down by about 30 metres. The Environmental Impact Statement noted that the extent of groundwater drawdown in the immediate station area associated with this proposal is expected to be similar to, or reduced, in comparison to those identified for the previous Sydney Metro West planning application. Tanking the crossover cavern (under the previous Sydney Metro West planning application) would promote a partial recovery of groundwater level and associated inflows until a new long term groundwater level is achieved around Westmead metro station. The Environmental Impact Statement also identified that the overall regional flow pattern is expected to be consistent with that identified for the previous Sydney Metro West planning application.

The additional assessment indicates that the potential depth and lateral extent of groundwater drawdown due to the underground concourse would be considerably less than that predicted for the station box and crossover cavern. Groundwater drawdown is predicted to be about five metres immediately around the underground concourse (compared to up to 30 metres around the metro station box, as predicted in the Environmental Impact Statement), and the lateral extent would be limited to less than 50 metres (compared to several hundred metres around the metro station box, as predicted in the Environmental Impact Statement). As such, groundwater drawdown around the underground concourse would be contained within the potential drawdown depth and extent around the station box and the underground concourse would not change the overall groundwater drawdown levels, inflows or flow patterns presented in the Environmental Impact Statement.

The groundwater drawdown extent predicted around the underground concourse would not interact with any groundwater dependent ecosystems or groundwater users (for example, groundwater bores). As such, there would be no additional impact to these beyond the impacts identified in the Environmental Impact Statement.

Potential impacts associated with groundwater would be managed in accordance with the mitigation measures in Appendix C (Revised mitigation measures) and in the CEMF (Appendix I).

### *Ground movement*

The Environmental Impact Statement identified the potential for ground movement during construction of this proposal including due to excavation of the underground concourse. If not adequately managed, ground movement has the potential to cause damage to infrastructure, nearby buildings and other structures.

The preliminary assessment in Section 7.10.3 of the Environmental Impact Statement identified that the risk to buildings and structures due to ground movement associated with excavation of the underground concourse at Westmead metro station as part of this proposal, would be limited to the existing Westmead Station and would be slight (possible superficial damage which is unlikely to have structural significance, defined as 10 to 50 millimetres of maximum building settlement) to negligible (superficial damage unlikely, defined as less than 10 millimetres of maximum building settlement).

The additional assessment confirms that a maximum settlement of about 25 millimetres is predicted to occur from construction of the underground concourse. This is identified to occur around the centre of the underground concourse (generally within the area of the existing Westmead Station). This is due to the minimal rock cover above the underground concourse, and presence of poor-quality rock in this area. The overall risk to buildings and structures would continue to be up to 'slight' in this area, consistent with the impacts identified in the Environmental Impact Statement.

In accordance with the mitigation measure CEMF-GW2 (refer to Appendix I (CEMF)), the detailed geotechnical model developed prior to construction under the previous Sydney Metro West planning application would be adopted, as relevant, for this proposal and progressively updated during design and construction, including to determine the potential risk of damage to structures or subsurface elements through ground movement. Where building damage risk is rated as moderate or higher, a structural assessment of the affected buildings/structures would be carried out and specific measures implemented to address the risk of damage.

During detailed assessment, if ground movement impacts are predicted to exceed acceptable criteria for buildings and/or heritage items, a range of potential options are available to reduce impacts to acceptable levels such as changes to elements of the construction methodology, consideration of ground improvement options, and ground movement monitoring for identified sensitive areas of this proposal. These options have been successfully implemented to manage ground movement impacts on a number of other rail and road tunnelling projects in NSW.

### **2.3.3 Changes to or additional mitigation measures**

The proposed refinement would not require any changes to, or additional, mitigation measures than those provided in the Environmental Impact Statement.

## **2.4 Parramatta metro station – refinement to station box and aboveground station infrastructure**

### **2.4.1 Clarification description**

#### **Refinements to proposal description – operation**

Since the exhibition of the Environmental Impact Statement, further design development has been undertaken for Parramatta metro station. This has resulted in refinements to the location of station services infrastructure for this proposal, with some infrastructure relocated from below ground to aboveground.

The refinements at Parramatta metro station include a reduction in the area required for the excavation of the underground station box. Part of the station services which were proposed to be underground within the excavated station box would instead be located aboveground within additional station infrastructure as part of this proposal. This aboveground station services infrastructure would be located to the west of Horwood Place within the building previously proposed as over station development in the exhibited design (refer to Figure 2-8).

As a result, the extent of the future over station development at this location would be situated above the station services infrastructure (subject to separate approval, as outlined in Section 2.6 of the Environmental Impact Statement). The additional aboveground station services infrastructure would be, subject to design development, about 21 metres above street level (refer to Figure 2-11). The future over station development would be subject to a separate planning approvals process, including community and stakeholder engagement.

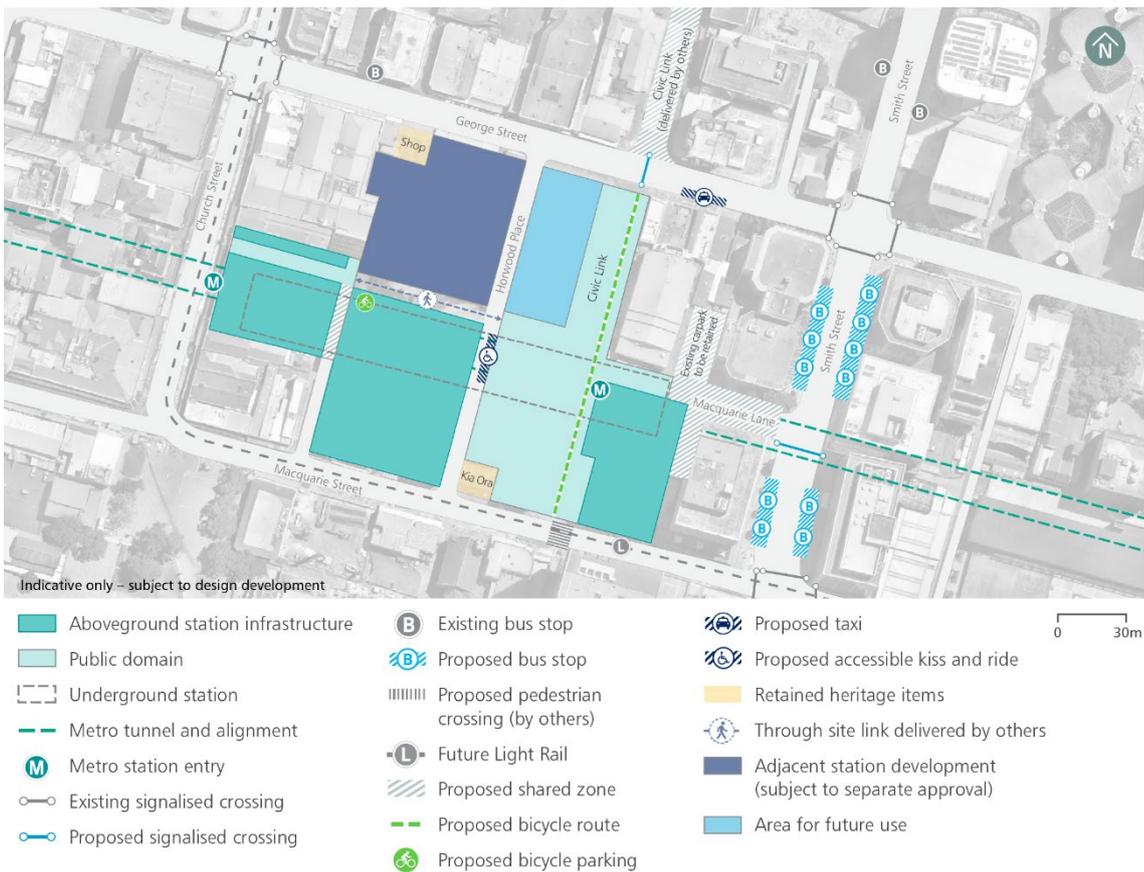
The exhibited design included bicycle parking facilities near the eastern station entry. Bicycle parking facilities would now be located within the additional aboveground station services infrastructure to the west of Horwood Place. The relocation of the bicycle parking does not require further assessment as it is still located within the metro station site and has already been considered as part of the operational transport assessment in Section 7.5.2 of the Environmental Impact Statement.

As part of further design development undertaken since exhibition of the Environmental Impact Statement, other minor changes to public domain and shared zones adjacent to the western station building are also proposed. However, this would not change the proposed pedestrian access routes and would continue to achieve the place and design outcomes. No further assessment of these proposed refinements is required.

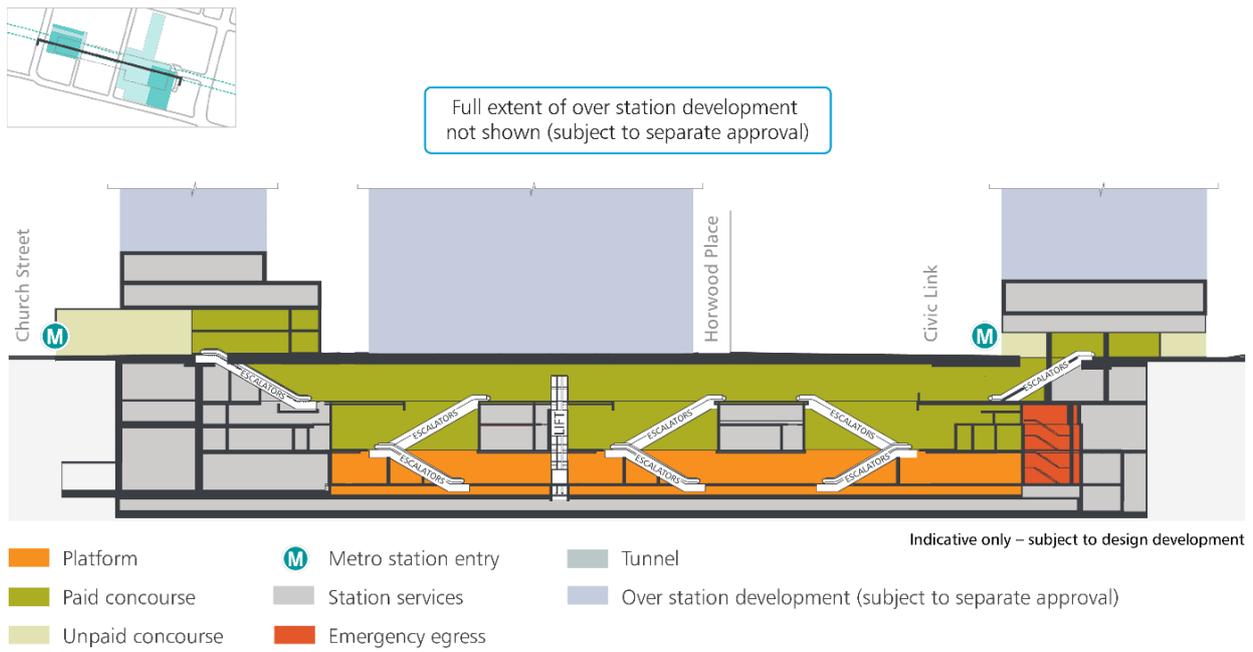
The exhibited figures showing the indicative layout and key design elements, indicative long-section, indicative cross-section and potential over station development extent in the Environmental Impact Statement are shown in Figure 2-8, Figure 2-10, Figure 2-12 and Figure 2-14, respectively. The refinements are shown in Figure 2-9, Figure 2-11, Figure 2-13 and Figure 2-15.



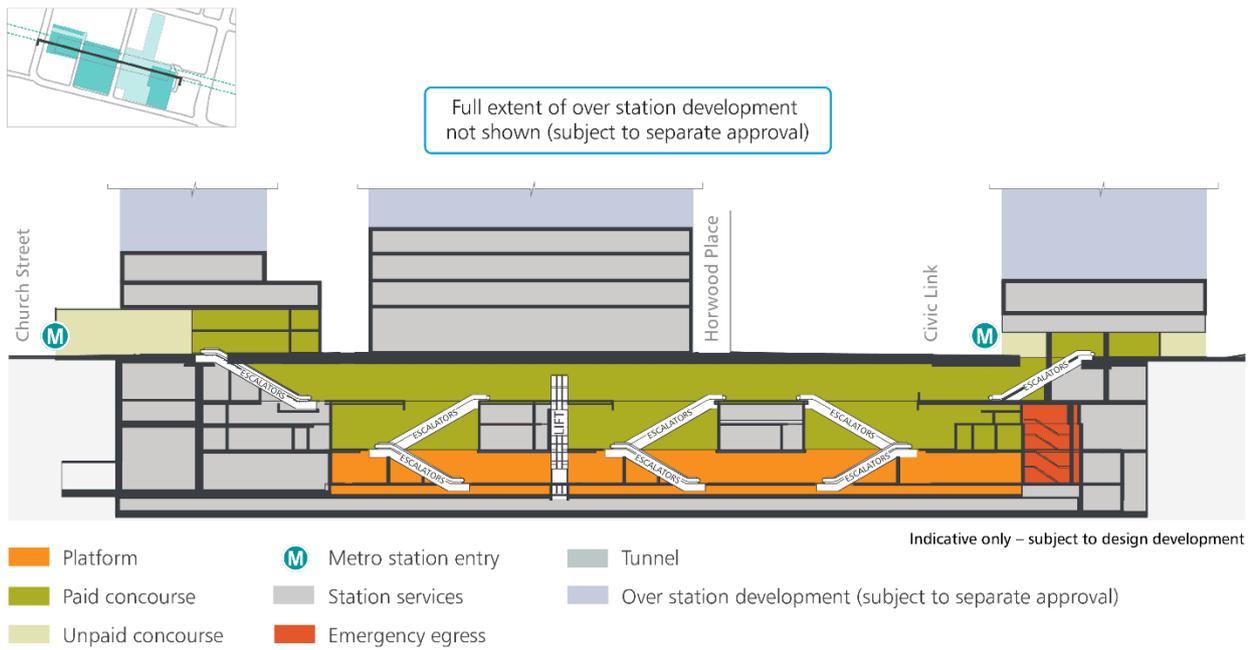
**Figure 2-8 Exhibited indicative layout and key design elements – Parramatta metro station (Figure 8-1 of the Environmental Impact Statement)**



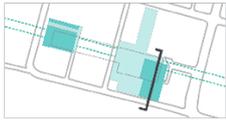
**Figure 2-9 Revised indicative layout and key design elements – Parramatta metro station**



**Figure 2-10 Exhibited indicative long-section – Parramatta metro station (Figure 8-2 of the Environmental Impact Statement)**



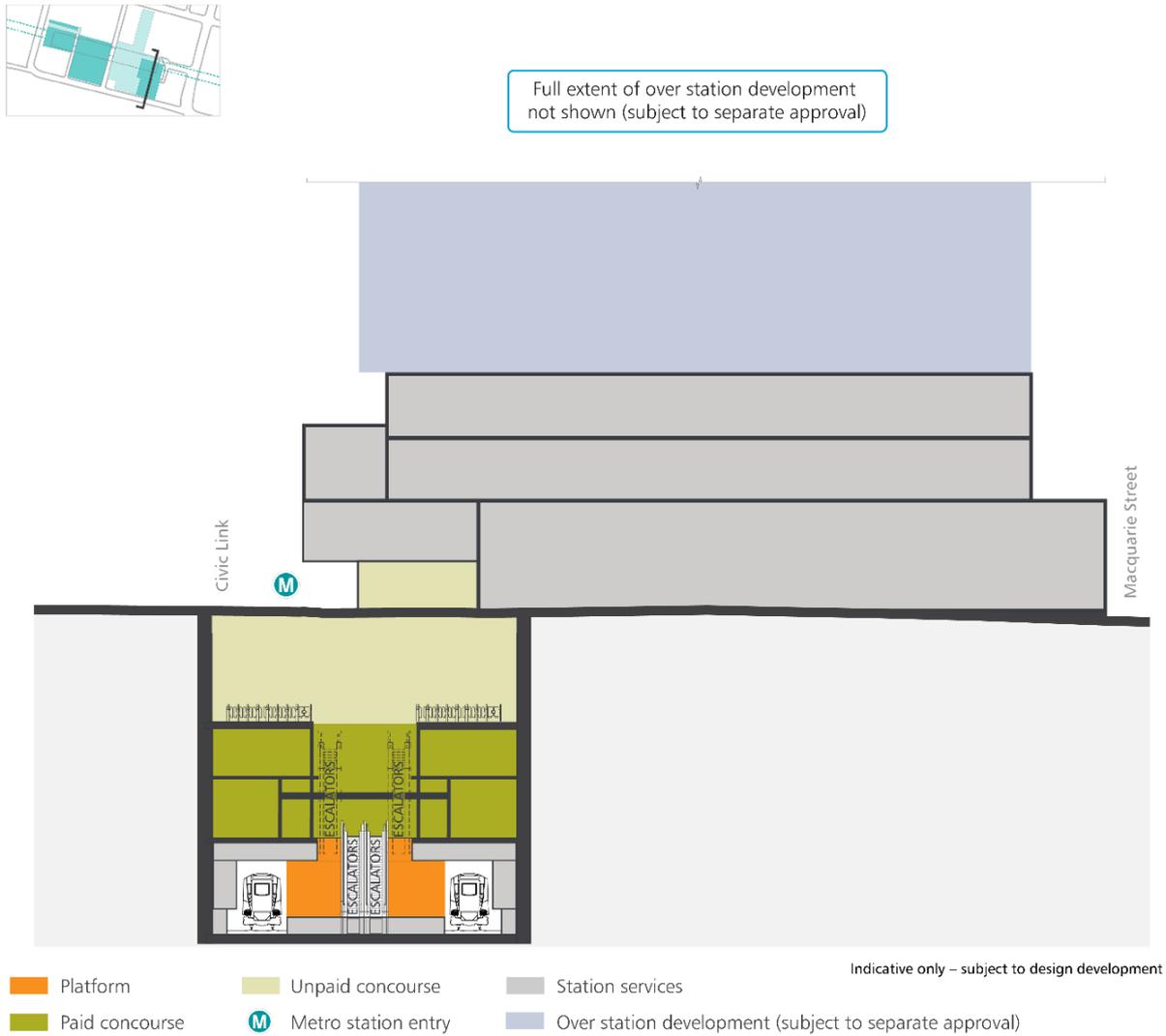
**Figure 2-11 Revised indicative long-section - Parramatta metro station**



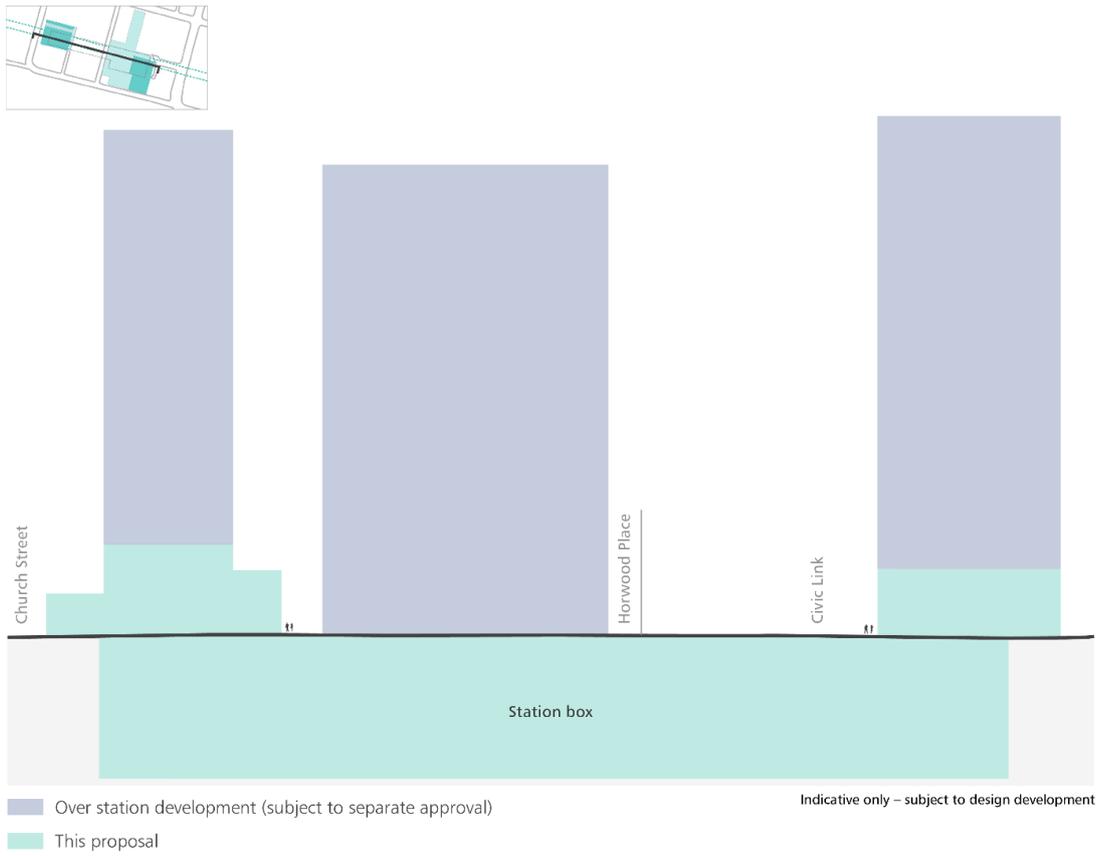
Full extent of over station development not shown (subject to separate approval)



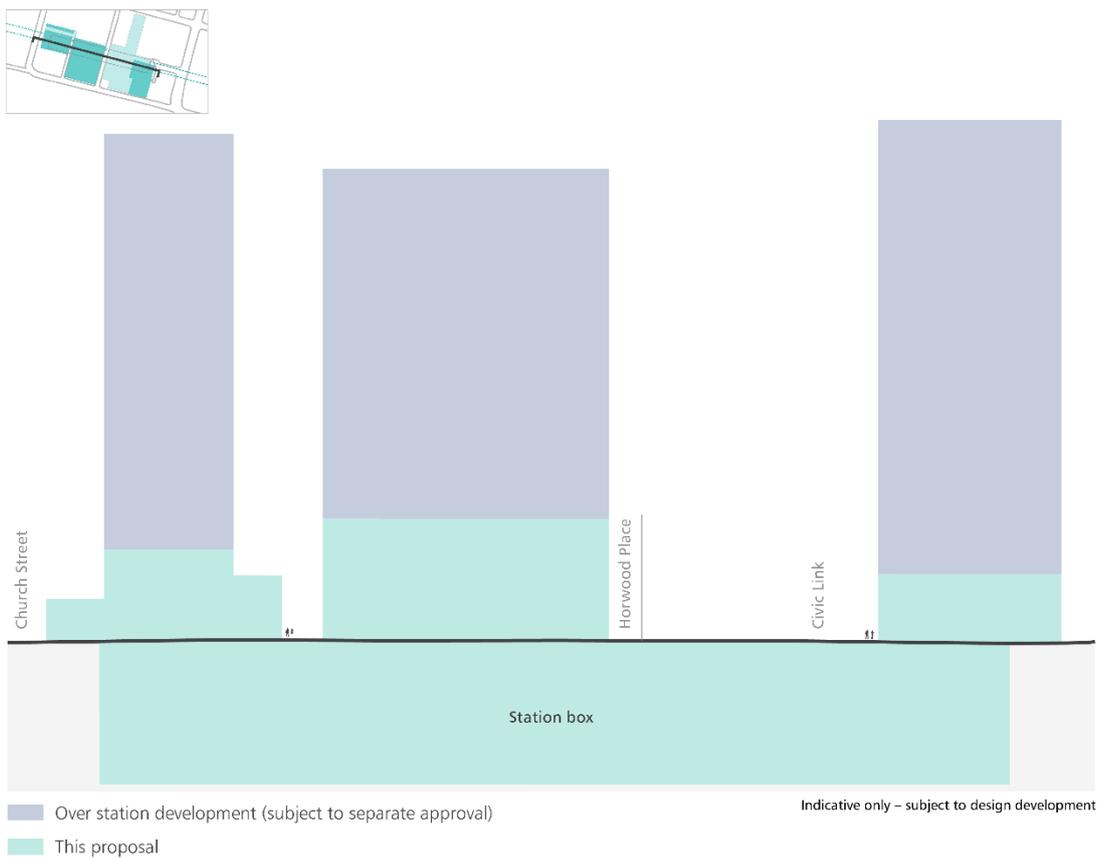
**Figure 2-12 Exhibited indicative cross-section – Parramatta metro station (Figure 8-3 of the Environmental Impact Statement)**



**Figure 2-13 Revised indicative cross-section - Parramatta metro station**



**Figure 2-14 Exhibited potential over station development extent – Parramatta metro station (Figure 8-5 of the Environmental Impact Statement)**



**Figure 2-15 Revised potential over station development extent – Parramatta metro station**

### **Refinements to proposal description – construction**

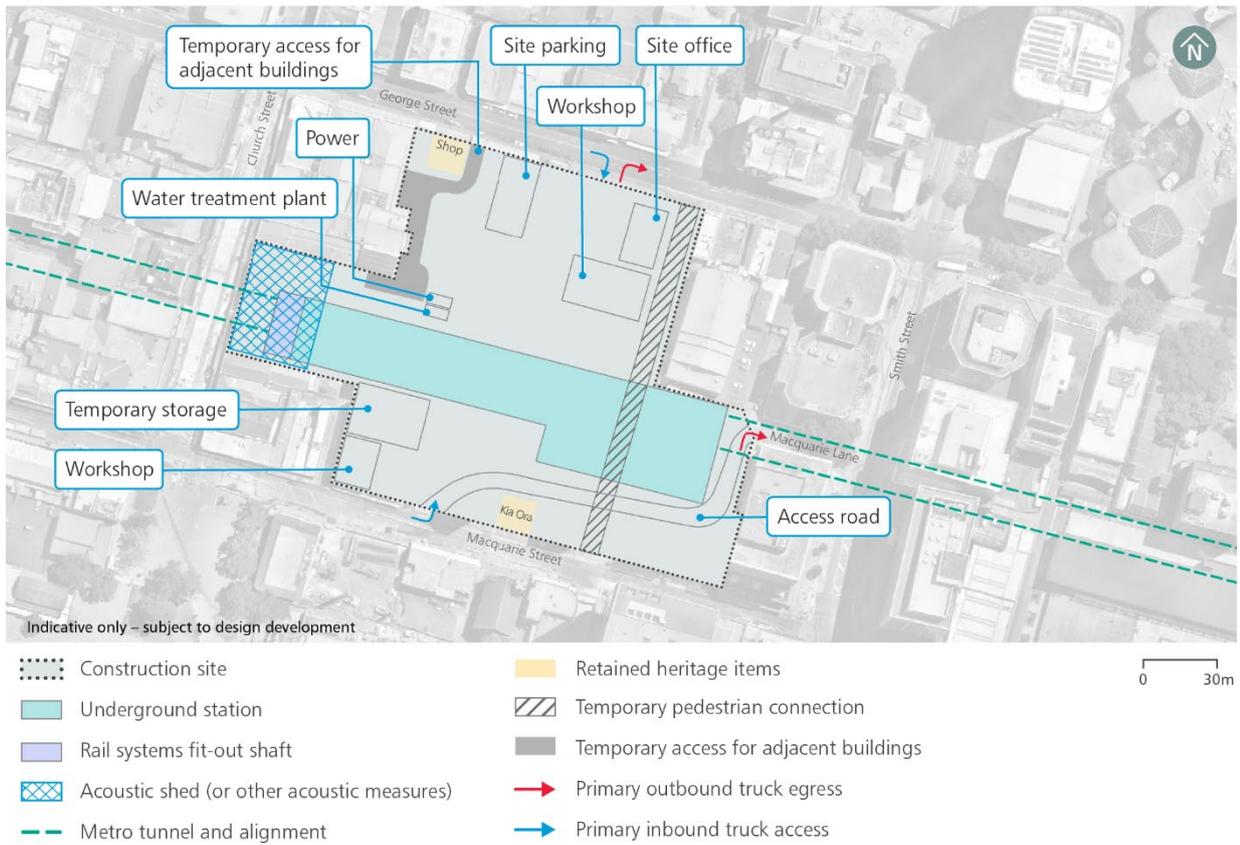
Section 8.4.2 of the Environmental Impact Statement provided an overview of the key construction work for this proposal at Parramatta metro station.

As described above, part of the station services which were proposed to be underground within the excavated station box in the Environmental Impact Statement would instead now be located aboveground within additional station services infrastructure as part of this proposal.

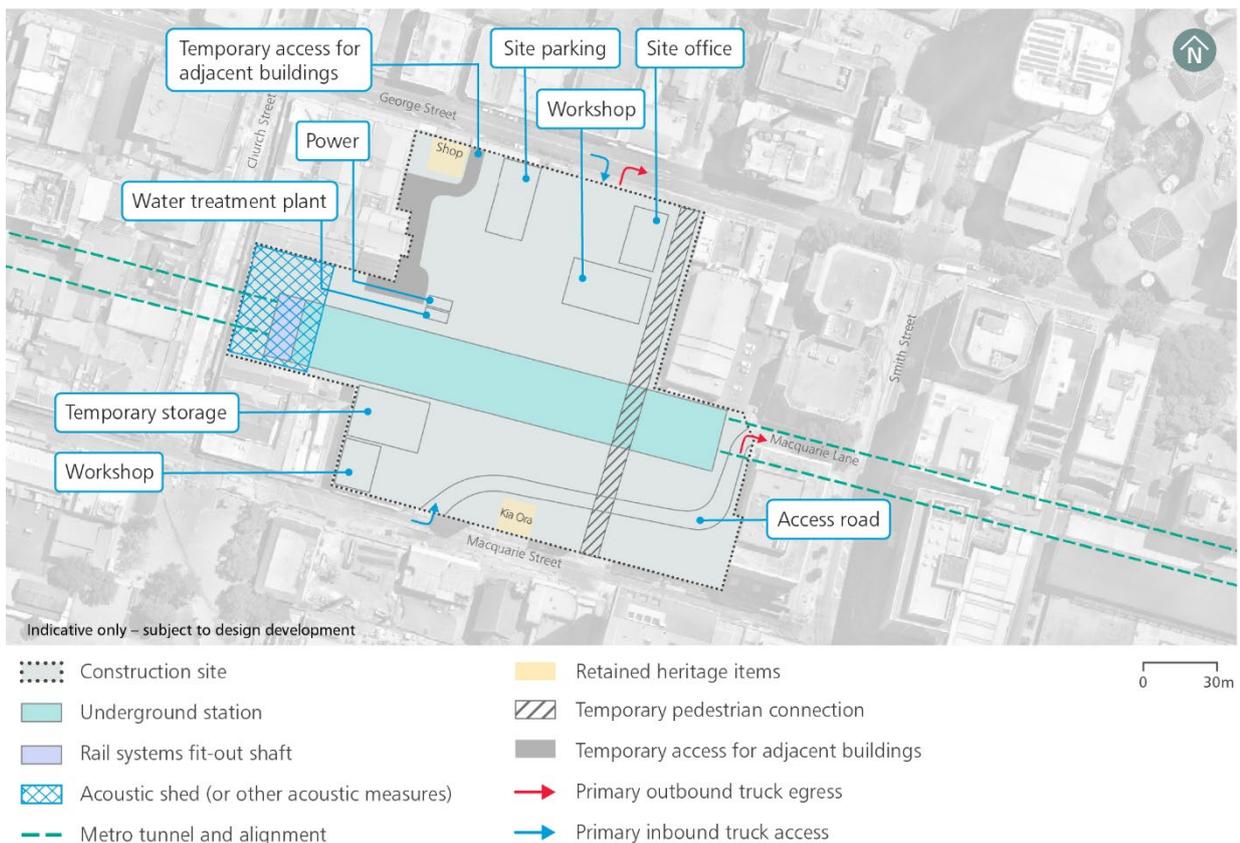
This area would be excavated for basement structures (for future over and adjacent station development), instead of station services, as part of this proposal. The addition of this area to the extent of excavation for basement structures would not materially change the amount of excavation and materials required for this proposal, when compared to the extent of basement structures proposed in the exhibited Environmental Impact Statement.

Construction of this proposal would also now include construction of the additional aboveground station services infrastructure to the west of Horwood Place. This building would be constructed using the methodology described in the Environmental Impact Statement for similar structures. This building was previously proposed to be wholly delivered as part of the future over station development (subject to separate approval). This aboveground station services infrastructure now included in this proposal would include provisions (such as structural elements) to enable the construction of the future over station development (subject to separate approval).

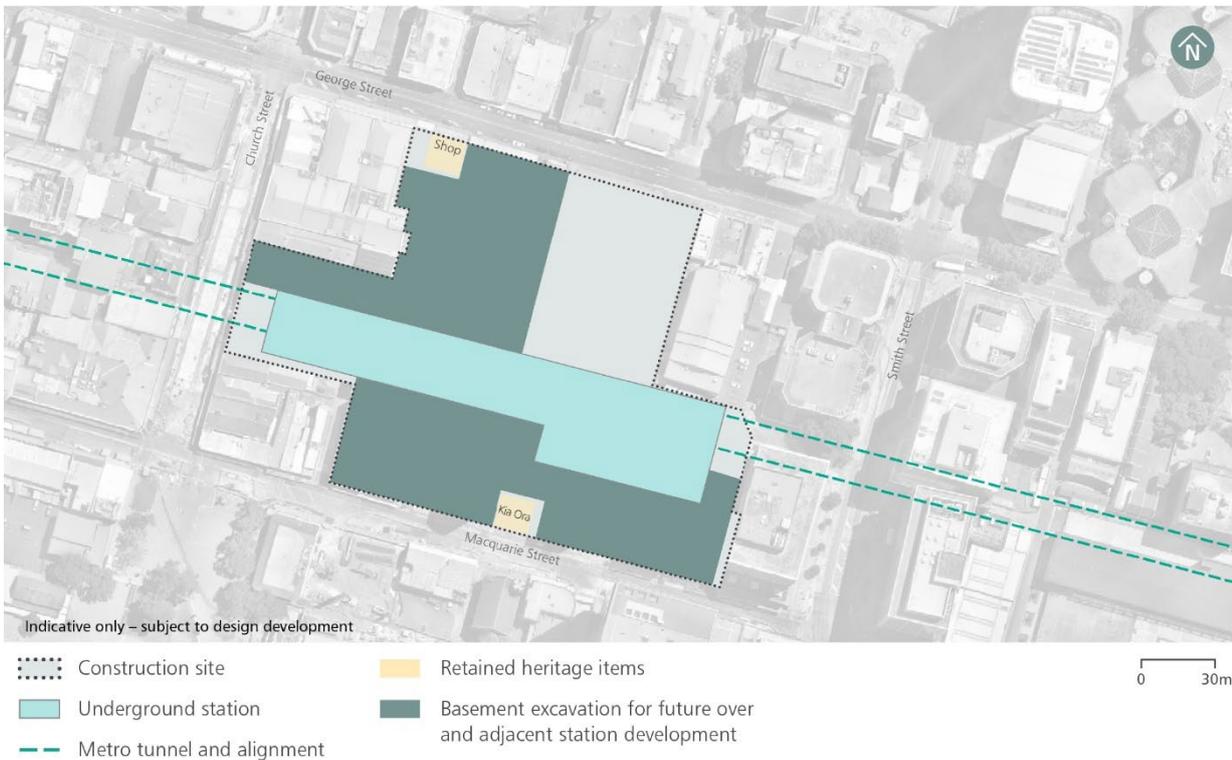
The exhibited indicative construction site layout is shown in Figure 2-16 and the exhibited extent of basement structures is shown in Figure 2-18. The revised construction site layout and extent of basement structures are shown in Figure 2-17 and Figure 2-19.



**Figure 2-16 Exhibited indicative construction site layout - Parramatta metro station (Figure 8-9 of the Environmental Impact Statement)**



**Figure 2-17 Revised indicative construction site layout - Parramatta metro station**



**Figure 2-18 Exhibited indicative basement extent – Parramatta metro station (Figure 8-10 of the Environmental Impact Statement)**



**Figure 2-19 Revised indicative basement extent - Parramatta metro station**

## 2.4.2 Additional assessment

A review of the potential impacts associated with the proposed refinements to the station box and aboveground station infrastructure at Parramatta metro station identified that the issues requiring additional assessment are:

- operational noise and vibration
- non-Aboriginal heritage
- landscape and visual amenity.

The proposed refinements are not anticipated to change the flooding impacts that are assessed in Section 8.11 and Technical Paper 8 (Hydrology, flooding and water quality) of the Environmental Impact Statement. The assessment undertaken to the Environmental Impact Statement assumed that flood protection would be provided at the location of the additional aboveground station services infrastructure, to protect the basement excavation area from potential flooding. As this building footprint was protected from potential flooding in the Environmental Impact Statement modelling, the potential impact on flood behaviour of this infrastructure was also included in the Environmental Impact Statement assessment. As such, the potential impacts would be consistent with those identified in the Environmental Impact Statement, and no further assessment of flooding impacts is required due to the proposed refinements.

### Operational noise and vibration

Section 8.6.1 of the Environmental Impact Statement describes the baseline noise environment at Parramatta metro station.

The methodology and noise criteria for the assessment of the proposed refinements is consistent with the methodology described in Technical Paper 3 (Operational noise and vibration) of the Environmental Impact Statement.

Table 2-3 summarises the predicted operational noise levels from the Environmental Impact Statement and the revised predicted noise levels from the design refinements. Noise levels for the most affected receiver is presented for each type and location. These predictions represent the total noise of all station sources operating simultaneously.

**Table 2-3 Revised operational noise levels – Parramatta metro station**

Period/source	Criteria <sup>1</sup> , dB(A)	EIS predicted noise level (L <sub>Aeq,15min</sub> )	Revised predicted noise level (L <sub>Aeq,15min</sub> )	Comparison to Environmental Impact Statement impact
<b>Adjacent – commercial</b>				
Daytime	60	58	58	No change
Evening	60	58	58	No change
Night-time	60	55	55	No change
Emergency mode	65 <sup>3</sup>	57	57	No change
<b>Macquarie Street church – place of worship</b>				
Daytime	45 (50 <sup>2</sup> )	48	44	Decrease
Evening	45 (50 <sup>2</sup> )	48	44	Decrease
Night-time	45 (50 <sup>2</sup> )	46	38	Decrease
Emergency mode	50 (50 <sup>2</sup> ) <sup>3</sup>	47	44	Decrease

Period/source	Criteria <sup>1</sup> , dB(A)	EIS predicted noise level (L <sub>Aeq,15min</sub> )	Revised predicted noise level (L <sub>Aeq,15min</sub> )	Comparison to Environmental Impact Statement impact
<b>Macquarie Street – educational</b>				
Daytime	40 (45 <sup>2</sup> )	41	36	Decrease
Evening	40 (45 <sup>2</sup> )	41	36	Decrease
Night-time	40	39	32	Decrease
Emergency mode	45 <sup>3</sup>	40	40	No change

## Notes:

1. Refer Technical Paper 3 (Operational noise and vibration) of the Environmental Impact Statement for explanation of criteria for different noise source types and noise receivers
2. Where the amenity target level is the controlling criterion and cannot reasonably be achieved, the lower of the intrusive or amenity acceptance noise level is used
3. In the absence of any relevant NSW guidance for emergency generators and equipment, the criteria have been relaxed by 5 dB for emergency plant equipment (given the equipment is not normally used, and only operates during an emergency situation or infrequent scheduled maintenance). Refer to Section 3.4 of Technical Paper 3 (Operational noise) of the Environmental Impact Statement for further detail.

The results indicate that the proposed design refinements would result in a decrease in the noise impacts identified in the Environmental Impact Statement for the Macquarie Street church and educational receivers, and that noise levels would comply with the applicable noise criteria at all locations. This decrease is the result of the additional aboveground station services infrastructure providing opportunities to locate and orientate noise sources further away from these receivers. As per the approach in the Environmental Impact Statement, to achieve these noise levels, noise attenuation has been incorporated in the design including large fan attenuators, vent orientation, acoustic louvres and appropriate plant selection. These measures would be further developed throughout the detailed design phase so that compliance with the environmental noise criteria is achieved.

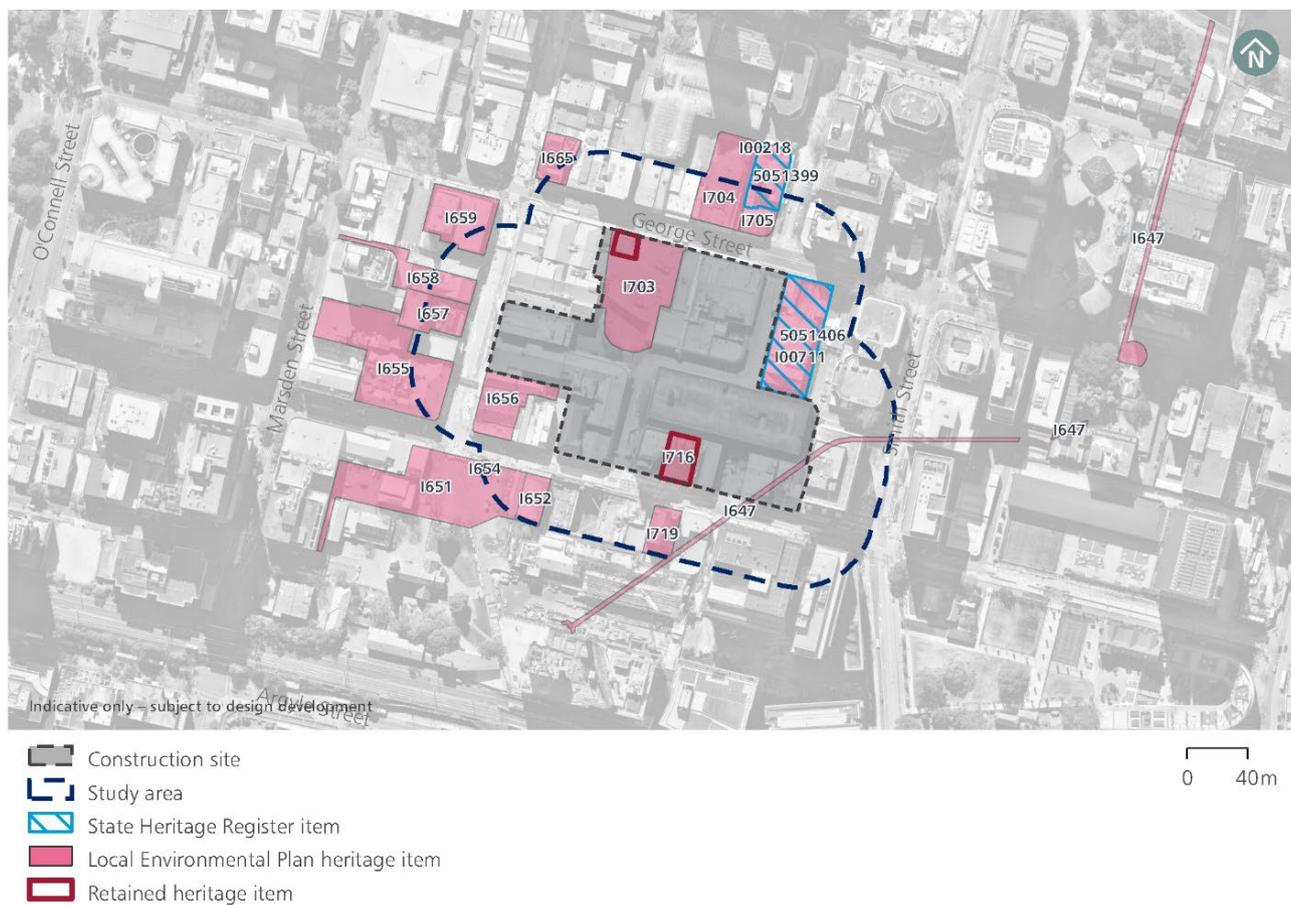
In accordance with mitigation measure EIS-NV1, the station infrastructure would be designed to meet the applicable noise criteria derived from the *Noise Policy for Industry* (NSW EPA, 2017) (refer to Appendix C (Revised mitigation measures)). An Operational Noise and Vibration Review would also be prepared during design development to confirm the mitigation measures required to manage potential airborne and ground-borne noise and vibration impacts from rail operations and stations, in accordance with mitigation measure EIS-NV4 (refer to Section 2.14). The NSW Environment Protection Authority would be consulted during the preparation of this review.

### Non-Aboriginal heritage

Section 8.7.1 of the Environmental Impact Statement describes the baseline environment at Parramatta metro station relating to the location of non-Aboriginal heritage items and archaeological resources. Appendix F (Non-Aboriginal heritage technical information) includes further detail on the additional assessment of built heritage impacts as a result of the proposed refinements.

#### *Built heritage impacts*

Section 8.7.2 of the Environmental Impact Statement assessed the potential impacts of construction and operation of this proposal on built heritage items within the study area identified for Parramatta metro station, as shown on Figure 2-20. Potential impacts to built heritage items in the study area such as Kia Ora were generally assessed as neutral or negligible, with up to moderate impacts at items within the construction site.



**Figure 2-20 Heritage items within the study area – Parramatta metro station (Figure 8-16 from the Environmental Impact Statement)**

The proposed refinements would include additional aboveground station services infrastructure, located to the west of Horwood Place. For the majority of items in the study area, this refinement would not result in changes to the impacts identified in the Environmental Impact Statement.

There would be no change to the assessed level of direct impacts to heritage items in the study area as a result of the proposed refinements, as no new work would occur within the curtilages of the items. Due to the distance of the items from the additional structure, the proposed design refinement would not result in an increase in nearby construction vibration levels that would impact the heritage items.

The introduction of the additional aboveground station services infrastructure would result in minor increases in the indirect (visual) impact ratings for four heritage items within the vicinity of the structure, compared to the impacts identified in the Environmental Impact Statement. Table 2-4 summarises the revised assessment of heritage impacts associated with the Parramatta metro station site for these items.

Changes to impacts identified in the Environmental Impact Statement due to the design refinements include the following:

- Murrays’ Building (and potential archaeological site) (Parramatta LEP Item No. I652):
  - an increase in the temporary indirect (visual) impact from negligible to minor, as the construction of the additional aboveground station services infrastructure would be visible from the Macquarie Street frontage of the heritage item. The construction activities would be partially obscured by site hoarding
  - an increase of permanent indirect (visual) impacts to the heritage item from negligible to minor, as the height and mass of the additional aboveground station services infrastructure would partially overshadow the heritage item during operation. However, the additional station services infrastructure would not interrupt views of the heritage item on Macquarie Street, and views from the heritage item to the adjacent Bicentennial Square

- **Kia Ora (and potential archaeological site) (Parramatta LEP Item No. I716):**
  - a change in the permanent indirect (visual) impact from a minor positive impact to a negligible positive impact. The proximity of the additional aboveground station services infrastructure (about 10 metres to the west of the item), and its height would result in overshadowing to Kia Ora. However, this would be generally consistent with the structure which abutted the heritage item prior to works carried out under the previous Sydney Metro West planning application. The introduction of public domain around the heritage item as part of this proposal would allow for increased views towards Kia Ora that would, on balance, result in positive heritage outcomes
- **Bicentennial Square and adjoining buildings (Parramatta LEP Item No. I651):**
  - an increase in the permanent indirect (visual) impacts to the heritage item from neutral to negligible, as the scale of the additional aboveground station services infrastructure would partially overshadow the heritage item. However, the additional station services infrastructure generally would not adversely impact public appreciation of the significant elements of the heritage item, and its visibility would be partly reduced as the infrastructure would be situated at an angle to the heritage item, rather than being immediately opposite it
- **At Centennial Memorial Clock (Parramatta LEP Item No. I654):**
  - an increase in the temporary indirect (visual) impacts to the heritage item from neutral to negligible, as the construction of the additional aboveground station services infrastructure would be visible from the item (although partially obscured by construction site hoarding). Views of the memorial clock from the south-west within Bicentennial Square would be partially overshadowed by the increased construction activities. Views of the heritage item from Macquarie Street would not be affected by the design refinements, and as such the overall temporary indirect (visual) impact would be negligible
  - an increase in the permanent indirect (visual) impacts to the heritage item from neutral to negligible, as the additional aboveground station services infrastructure would be visible above the heritage item when viewed from the south-west within Bicentennial Square. The height of the infrastructure and display of modern design materials behind the heritage item would detract from the setting of the heritage item when viewed from this direction. Views of the heritage item from Macquarie Street would not be affected by the design refinements, and as such the overall temporary indirect (visual) impact would be negligible.

**Table 2-4 Summary of revisions to built heritage impact assessment – Parramatta metro station**

	Revised magnitude (and comparison to Environmental Impact Statement impact rating)			
	Direct impact	Settlement and vibration	Temporary indirect (visual) impact	Permanent indirect (visual) impact
Murrays' Building (and potential archaeological site) Parramatta LEP Item No. I652 Local	<b>Neutral</b> (no change from the Environmental Impact Statement)	<b>Neutral</b> (no change from the Environmental Impact Statement)	<b>Minor</b> (negligible in the Environmental Impact Statement)	<b>Minor</b> (negligible in the Environmental Impact Statement)
Kia Ora (and potential archaeological site) Parramatta LEP Item No. I716 Local	<b>Negligible</b> (no change from the Environmental Impact Statement)	<b>Minor to moderate</b> (no change from the Environmental Impact Statement)	<b>Moderate</b> (no change from the Environmental Impact Statement)	<b>Negligible positive</b> (minor positive in the Environmental Impact Statement)

Item, listing and significance	Revised magnitude (and comparison to Environmental Impact Statement impact rating)			
	Direct impact	Settlement and vibration	Temporary indirect (visual) impact	Permanent indirect (visual) impact
Bicentennial Square and adjoining buildings Parramatta LEP Item No. I651 Local	<b>Neutral</b> (no change from the Environmental Impact Statement)	<b>Neutral</b> (no change from the Environmental Impact Statement)	<b>Negligible</b> (no change from the Environmental Impact Statement)	<b>Negligible</b> (neutral in the Environmental Impact Statement)
Centennial Memorial Clock Parramatta LEP Item No. I654 Local	<b>Neutral</b> (no change from the Environmental Impact Statement)	<b>Neutral</b> (no change from the Environmental Impact Statement)	<b>Negligible</b> (neutral in the Environmental Impact Statement)	<b>Negligible</b> (neutral in the Environmental Impact Statement)

### *Archaeological impact assessment*

Construction work associated with the proposed design refinements would not alter the overall construction footprint of the station, or the total area to be excavated. The area previously required for excavation of the underground station box would still be excavated as part of basement excavation for this proposal (for future over and adjacent station development). As a result, the proposed design refinements would not change the potential impacts to archaeological resources identified in the Environmental Impact Statement.

Overall, construction activities for the Parramatta metro station construction site would result in a major impact to archaeological resources. This impact rating is unchanged from the Environmental Impact Statement.

### **Landscape and visual**

Section 8.9.1 of the Environmental Impact Statement describes the baseline landscape and visual environment at the Parramatta metro station. Appendix G (Landscape and visual amenity technical information) includes further detail on the additional assessment of landscape and visual amenity at Parramatta metro station.

#### *Landscape and public domain areas*

The potential landscape character impacts of the proposed refinements during operation would be consistent with those identified in the Environmental Impact Statement. Overall, there would continue to be improved accessibility, legibility and amenity for road users and pedestrians across the Parramatta metro station site and in the realigned Horwood Place, shared zones, and Civic Link. The built form of the additional aboveground station services infrastructure would address the streetscape so that there would be continuous built form facing Macquarie Street. The scale of the built form would be consistent with the surrounding dense urban built form and there would be activated uses along the station services infrastructure.

The potential landscape character impacts of the proposed refinements during construction would also be consistent with those identified in the Environmental Impact Statement. Overall, due to the continued use of this site for large scale construction activity along a long section of both Macquarie Street and George Street, there would be a noticeable reduction in the quality of these streetscapes. There would continue to be restricted laneway access within the construction site, and a temporary, north-south pedestrian access through the construction site between George Street and Macquarie Street would be provided. The works to construct the new shared zone and station services infrastructure would not further alter the permeability and accessibility of this block and area of the CBD.

#### *Daytime visual amenity impact*

The daytime visual amenity impacts of the proposed refinements during operation, from the viewpoints shown in Figure 8-17 of the Environmental Impact Statement, would be consistent with those identified in the Environmental Impact Statement. While the additional aboveground station services infrastructure would be visible along parts of Macquarie Street, it would be consistent in scale with the surrounding dense urban built form to the south of Macquarie Street. There would be additional street level activation with the additional station services infrastructure as part of this proposal and overall, the surrounding area has the capacity to absorb larger scale built form. The main heritage character features of Kia Ora would be visible from representative viewpoints.

The daytime visual amenity impacts of the proposed refinements during construction would generally be consistent with those identified in the Environmental Impact Statement. The works would include the construction of additional aboveground station services infrastructure which would contribute to the already strong presence of construction activity within the existing construction site. Construction of this building was previously proposed to be wholly delivered as part of the future over station development (subject to separate approval). This proposal would now include provisions (such as structural elements) within the additional station services infrastructure to enable the construction of the future over station development (subject to separate approval). The additional station services infrastructure would be partially obstructed by construction of the other aboveground station infrastructure.

The proposed refinements have resulted in a change to the impact rating for representative viewpoint 7 during construction (view north-east along Macquarie Street from near Bicentennial Square). There would be additional construction work seen in this view, with the station services infrastructure being constructed to the north of Macquarie Street, in the middle ground. This work would be, subject to design development, indicatively about 21 metres high, stepping up from the traditional two storey facades in the foreground (left of view). The proposal would involve large scale construction works, that would contrast with the heritage buildings in the foreground. The impact rating would increase from a minor adverse visual impact to a moderate adverse visual impact with the proposed refinements.

#### *Night-time visual amenity impact*

The night-time visual amenity impacts during operation would be consistent with those identified in the Environmental Impact Statement. Additional lighting associated with the additional aboveground station infrastructure would be consistent with and largely absorbed into the surrounding brightly lit night scene. There would be no perceived change in the amenity of this area at night.

The night-time visual amenity impacts during construction would also be consistent with those identified in the Environmental Impact Statement. The extent of night works and footprint of the construction works would be increased to include the construction of the additional aboveground station services infrastructure to the south east of the site. There would also be further deliveries of large equipment and materials, after hours, to service this additional construction work. The lighting within the construction site would be mostly screened by surrounding buildings and the most additional lighting would be at street level. Any additional light sources and skyglow would generally be absorbed into the surrounding night scene.

#### **2.4.3 Changes to or additional mitigation measures**

The proposed refinements at Parramatta metro station do not require any changes to, or additional, mitigation measures than those provided in the Environmental Impact Statement.

## 2.5 Parramatta metro station – additional assessment of groundwater and ground movement impacts

### 2.5.1 Clarification description

As identified in Section 8.4 of the Environmental Impact Statement, this proposal includes excavation for basement structures associated with future over and adjacent station development within the Parramatta metro station construction site. The basement structures were assumed to be tanked during construction of this proposal. The fit-out and use of the basements would form part of the separate assessment and approval required for the future over and adjacent station developments.

The excavation of a tanked cut and cover station box will be completed as part of the previous Sydney Metro West planning application.

Section 8.10 of the Environmental Impact Statement included an assessment of the potential groundwater impacts of the tanked station box and excavation for tanked basement structures at Parramatta metro station during construction and operation of this proposal. Groundwater predictive modelling carried out for the previous Sydney Metro West planning application was used as the basis for this assessment, with potential impacts from the basement structures assessed qualitatively.

It was identified in Section 8.10.3 of the Environmental Impact Statement that groundwater predictive modelling carried out under the previous Sydney Metro West planning application would be reviewed and updated to consider further developments in basement design and confirm potential groundwater impacts for this proposal. Further groundwater predictive modelling has since been undertaken as part of this Submissions Report which considers the potential impacts of the basement structures, including the additional area of basement excavation now included in this proposal as discussed in Section 2.4.

Section 8.10 of the Environmental Impact Statement also included a preliminary assessment of potential ground movement impacts at the Parramatta metro station construction site in accordance with the Rankin risk classification (Rankin, 1988), based on excavation volumes and predicted groundwater drawdown. Since the exhibition of the Environmental Impact Statement, further assessment has also been undertaken to quantify potential ground movement impacts at Parramatta metro station.

### 2.5.2 Additional assessment

Additional assessment has been carried out for groundwater and ground movement.

#### **Groundwater and ground movement**

The additional assessment involved modelling of groundwater inflows and drawdown for Parramatta metro station, to take into account the basement structures proposed to be excavated as part of this proposal. These results have been compared with the exhibited Environmental Impact Statement to identify potential changes in impacts. The additional assessment also involved modelling of potential ground movement impacts associated with excavation of the basement structures.

Section 8.10.1 of the Environmental Impact Statement provides the baseline environment as relevant to groundwater and soils at Parramatta metro station. Potential impacts to groundwater resulting from work carried out under the previous Sydney Metro West planning application (described in Section 2.4.1) were taken into account in the baseline environment for this proposal.

#### *Groundwater levels, inflows and flow patterns*

Section 8.10 of the Environmental Impact Statement identified that as a result of the work under the previous Sydney Metro West planning application, the groundwater level within the immediate area around the station box is predicted to be drawn down by about 21 metres. The Environmental Impact Statement noted that the extent of groundwater drawdown associated with the construction of this proposal is expected to be similar to, or reduced, in comparison to those identified for the previous Sydney Metro West planning application. This is because the station box would be tanked prior to commencement of construction of this proposal, promoting the recovery of groundwater levels and associated inflows, and the excavation for basement structures would be shallower and involve reduced excavation volumes in comparison to the station box excavation work. This would result in any drawdown associated with the basement structures having a similar or reduced lateral extent compared to the previous drawdown associated with the station box excavation.

The Environmental Impact Statement also identified that during operation, the tanking of the station box would promote the long-term recovery of groundwater level and associated inflows (compared with construction phase drawdown) until a new groundwater level is achieved around the station. The influence of the tanked station box and adjacent basements on the overall regional flow patterns and directions was concluded to be minimal.

The additional assessment indicates that the basement structures at Parramatta would not change the overall groundwater drawdown levels, inflows or flow patterns presented in the Environmental Impact Statement. During operation, inflow rates to the basement structures would be negligible (less than about 0.01 litres per second) due to the tanking of the basements. The basement structures are not predicted to result in an increase in the lateral extent or depth of drawdown in the long-term. This confirms the assessment outcomes presented in the Environmental Impact Statement.

The Environmental Impact Statement also identified that during the construction of this proposal, the excavation of the basements for this proposal would cause groundwater drawdown of about 12 metres (to the approximate depth of excavation). Groundwater flow was expected to be in the same direction as that assessed in the previous Sydney Metro West planning application (i.e. flow towards the excavation for basement structures).

The additional assessment indicates that, during construction, the volume of groundwater inflow to the basement structures is predicted to be about 0.3 litres per second. This is because the basement walls would be tanked as they are constructed, and the floors of the basements would be tanked at the completion of their construction. The predicted groundwater inflows to the basements would be considerably less than that predicted during the excavation of the station box under the previous Sydney Metro West planning application (about 2.7 litres per second). As such, the predicted depth and extent of groundwater drawdown associated with the excavation of the basements is therefore expected to be reduced, in comparison to those identified for the previous Sydney Metro West planning application. This confirms the assessment outcomes presented in the Environmental Impact Statement.

The groundwater drawdown extent predicted around the station box and basement structures during operation and construction of this proposal (as part of the additional assessment) would not interact with any additional groundwater dependent ecosystems or surface water features, compared to the assessment in the Environmental Impact Statement. Potential impacts to groundwater dependent ecosystems and Clay Cliff Creek as a result of operation of this proposal are anticipated to be minimal, as groundwater levels would partially recover due to the tanking of the station box and basement structures. As such, there would be no additional impact to these beyond the impacts identified in the Environmental Impact Statement.

The predicted groundwater drawdown extent during operation and construction of this proposal would not interact with groundwater users (for example, groundwater bores), which is consistent with the assessment in the Environmental Impact Statement.

Potential impacts associated with groundwater would be managed in accordance with the mitigation measures in Appendix C (Revised mitigation measures) and in the CEMF (Appendix I).

#### *Ground movement*

The Environmental Impact Statement identified the potential for ground movement during construction of this proposal including due to excavation of the basement structures. If not adequately managed, ground movement has the potential to cause damage to infrastructure, nearby buildings and other structures.

The preliminary assessment in Section 8.10.3 of the Environmental Impact Statement identified that the risk to buildings and structures (including heritage buildings and structures) due to ground movement at the Parramatta metro station construction site would be slight (possible superficial damage which is unlikely to have structural significance, defined as 10 to 50 millimetres of maximum building settlement) to negligible (superficial damage unlikely, defined as less than 10 millimetres of maximum building settlement).

The additional assessment indicates that a maximum settlement of about 50 millimetres is predicted to occur during construction of the basement structures. Potential settlement within this period would continue to be within the slight range for the adjacent properties, reducing to negligible with distance from the basement structures. This confirms the assessment outcomes presented in the Environmental Impact Statement.

Around the southern basement, a maximum settlement of about 50 millimetres is predicted to occur around the north-eastern corner of the basement, near where the basement adjoins the station box. In other areas along the edge of the basement, settlement of about 40 millimetres is predicted. Around the northern basement, settlement of about 40mm to 45mm is predicted, with a maximum settlement of about 45 millimetres predicted in the areas closer to the station box. Potential settlement is anticipated to reduce overtime as the basements are tanked throughout construction. This would reduce the groundwater inflows to the basements to negligible rates, therefore reducing potential settlement risk.

In accordance with the mitigation measure CEMF-GW2 (refer to Appendix I (CEMF)), the detailed geotechnical model developed prior to construction under the previous Sydney Metro West planning application would be adopted, as relevant, for this proposal and progressively updated during design and construction, including to determine the potential risk of damage to structures or subsurface elements through ground movement. Where building damage risk is rated as moderate or higher, a structural assessment of the affected buildings/structures would be carried out and specific measures implemented to address the risk of damage.

During detailed assessment, if ground movement impacts are predicted to exceed acceptable criteria for buildings and/or heritage items, a range of potential options are available to reduce impacts to acceptable levels such as changes to elements of the construction methodology, consideration of ground improvement options, and ground movement monitoring for identified sensitive areas of this proposal. These options have been successfully implemented to manage ground movement impacts on a number of other rail and road tunnelling projects in NSW.

### **2.5.3 Changes to or additional mitigation measures**

The proposed refinement would not require any changes to, or additional, mitigation measures than those provided in the Environmental Impact Statement.

## 2.6 Sydney Olympic Park metro station – refinement to adjacent station development

Figure 9-1 of the Environmental Impact Statement identified land at intersection of Figtree Drive and the planned Precinct Street A as future adjacent station development, subject to separate approval. This area is referred to as 'Site 46' in the *Draft Sydney Olympic Park Master Plan 2030 (Interim Metro Review)* (Sydney Olympic Park Authority, 2021).

Since the exhibition of the Environmental Impact Statement, Sydney Metro have established an agreement with Sydney Olympic Park Authority to enable Site 46 to be planned in accordance with the development of the Master Plan 2050 for the broader precinct.

Site 46 is no longer required to form part of the operational station precinct boundary. The exhibited site layout for Sydney Olympic Park metro station is shown in Figure 2-21. Figure 2-22 includes a revised site layout for Sydney Olympic Park metro station which reflects this clarification.

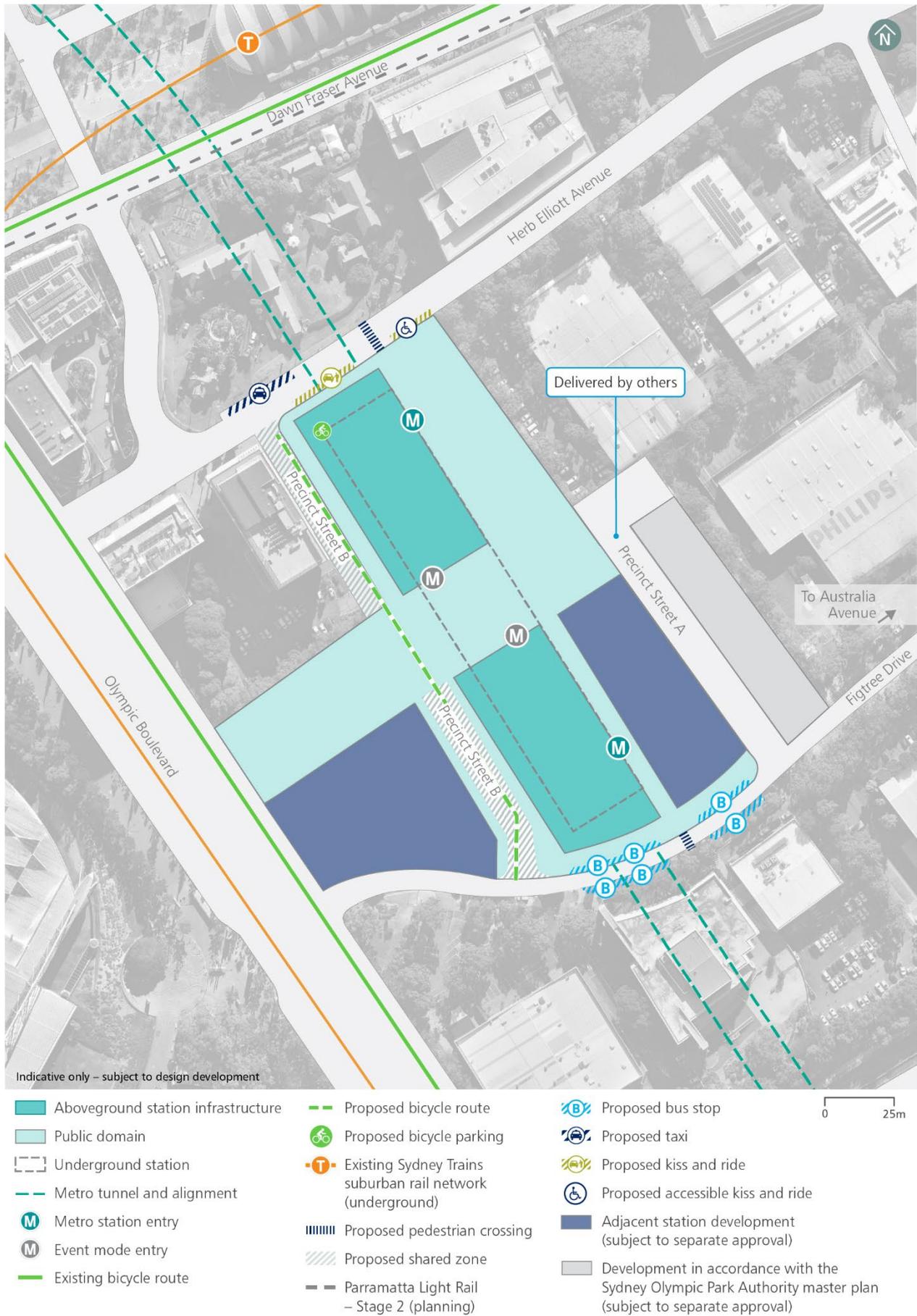
The construction of this proposal at Sydney Olympic Park metro station would remain consistent with the construction footprint and works described in Section 9.4 of the Environmental Impact Statement. As such, further assessment of this clarification is not required.

Sydney Metro will continue to work with Sydney Olympic Park Authority throughout the finalisation of the draft master plan.

Sydney Metro notes that the *Sydney Olympic Park Master Plan 2030 (Interim Metro Review)* (Sydney Olympic Park Authority, 2022) has been finalised since the exhibition of the Environmental Impact Statement.



**Figure 2-21 Exhibited indicative site layout and key design elements – Sydney Olympic Park metro station (Figure 9-1 of the Environmental Impact Statement)**



**Figure 2-22 Revised indicative site layout and key design elements – Sydney Olympic Park metro station**

## 2.7 North Strathfield metro station – reclassification of The McDonald College

### 2.7.1 Clarification description

The construction noise and vibration assessment in the Environmental Impact Statement classified The McDonald College as an educational receiver and provided an assessment of potential impacts against the relevant educational noise management level for periods when the facility was in use.

The submission on the Environmental Impact Statement from The McDonald College (refer to Section 8.6 (The McDonald College) of this Submissions Report) identified that boarders sleep at the school site during school terms. As a result, The McDonald College has been re-classified as a residential receiver for the purposes of the out of hours construction noise assessment.

### 2.7.2 Additional assessment

Additional assessment has been carried out for construction noise and vibration.

#### Construction noise and vibration

Technical Paper 4 (Construction noise and vibration) of the Environmental Impact Statement provides detail on the methodology, baseline environment and noise management levels for residential receivers at North Strathfield metro station.

The construction scenarios and anticipated working hours at the North Strathfield metro station construction sites are shown in Table 10-12 of the Environmental Impact Statement. The following scenarios would require out of hours work during the evening and night-time with the potential to affect The McDonald College:

- station/facility construction – at the North Strathfield metro station construction site
- brownfield work and piling – at the existing North Strathfield Station and rail corridor.

The other construction scenarios assessed would involve daytime work only. As such the classification of The McDonald College as an educational receiver is appropriate for other scenarios, and the potential daytime impacts would be unchanged from those assessed in the Environmental Impact Statement. Additional assessment of airborne construction noise impacts during the evening and night-time has been carried out for The McDonald College, with the College re-classified as a residential receiver.

The evening and night-time airborne noise impacts at The McDonald College are shown in Table 2-5, in terms of the predicted exceedance of the residential noise management levels for residential receivers. The assessment conservatively considers the school facade which is most affected by each construction activity to be representative of residential boarding areas. Based on further consultation with The McDonald College, it has been identified that the boarding facility is set back further from the construction site than the closest facade. As such, it is anticipated that impacts would likely be lower compared to the assessment shown in Table 2-5, which provides a worst-case scenario.

**Table 2-5 The McDonald College – overview of noise management level exceedances during out of hours work**

Scenario	Activity	Indicative duration	Residential noise management level exceedance		
			Evening	Night-time	Sleep disturbance
<b>Station construction</b>					
Station/facility construction	Internal construction and fit-out (typical)	30 months	1-10 dB	1-10 dB	-
	Installation of framing and structure (peak 1)		11-20 dB	n/a	n/a
	Concrete work (peak 2)		11-20 dB	n/a	n/a

Scenario	Activity	Indicative duration	Residential noise management level exceedance		
			Evening	Night-time	Sleep disturbance
<b>Brownfield/other off-site work</b>					
Piling	Supporting work (typical)	Rail possession	11-20 dB	11-20 dB	1-10 dB
	Bored piling with support plant (peak)		11-20 dB	>20 dB	11-20 dB
Brownfield work	Deliveries and supporting work (typical)	Rail possession	11-20 dB	11-20 dB	1-10 dB
	Installation of framing infrastructure (peak)		11-20 dB	>20 dB	11-20 dB

The worst-case construction noise impact assessment at The McDonald College during the evening and night-time indicates the following:

- station / facility construction work at the North Strathfield metro station construction site is predicted to result in ‘moderate’ worst-case impacts in the evening period when noise intensive equipment such as concrete saws are being used during peak work. Concrete saws are expected to be infrequently used throughout a 30-month construction period. The impacts during ‘typical’ work (which does not require noise intensive equipment or are inside the metro station building) are predicted to reduce, with noise levels predicted to result in ‘low’ impacts during the evening and night-time periods
- outdoor work during rail possessions (a planned short-term closure of the existing rail line to allow work to be carried out) is predicted to result in ‘high’ impacts at The McDonald College during noisy work, when equipment such as grinders are being used. The impacts during ‘typical’ work, which does not require noise intensive equipment, are predicted to reduce, with noise levels predicted to result in ‘moderate’ impacts. The requirement for night-time rail possessions would be relatively minimal, and the rail possessions would generally occur over isolated weekend periods. It is anticipated that a total of 17 rail possessions are expected to be required. The impacts are predicted to be reduced to ‘low’ when noise intensive equipment is not in being used during these activities
- no sleep disturbance impacts are predicted during the indoor construction and fit-out work that would occur for the majority of the construction period. ‘Low’ to ‘moderate’ sleep disturbance impacts are predicted during rail possessions
- The McDonald College is not predicted to be highly noise affected during any of the assessed work scenarios.

The potential impacts at The McDonald College would be similar to the predicted impacts at other nearby residential receivers detailed in the Environmental Impact Statement. Temporary construction noise and vibration impacts would be managed through the implementation of standard mitigation measures in accordance with CEMF (Appendix I) and additional mitigation measures in the CNVS (Appendix K).

## 2.8 The Bays Station – alignment with master planning work

Section 13.3 of the Environmental Impact Statement stated that “Sydney Metro will continue to work with the NSW Department of Planning and Environment to integrate The Bays Station with the *Bays West Place Strategy* (NSW Department of Planning and Environment, 2021a) and associated draft *Bays West Urban Design Framework* (NSW Department of Planning, Industry and Environment, 2021b) and relevant sub-precinct master plans, including responding to the strategic intent of these frameworks relating to road layout and interchange facilities, land use, detailed built form and landscape design”.

Since exhibition of the Environmental Impact Statement, Sydney Metro has continued to engage with the Department of Planning and Environment to align The Bays Station precinct with ongoing master planning work as part of the *Bays West Place Strategy* and associated draft *Bays West Urban Design Framework*.

The *Bays West Stage 1 draft Master Plan and Urban Design Framework* (NSW Department of Planning and Environment, 2022) was exhibited from 4 May to 31 May 2022. The master plan builds on the vision of the *Bays West Place Strategy*, and will inform development and planning controls for the area around the former White Bay Power Station.

The indicative layout of key design elements of The Bays Station (as exhibited in the Environmental Impact Statement) is broadly consistent with the *Bays West Stage 1 draft Master Plan and Urban Design Framework*, particularly with respect to the following:

- the location, layout and indicative heights of the aboveground station buildings, and provision of space for non-station use in these buildings
- provision of active transport connections, including a bicycle route along the northern edge of the station precinct and along the new precinct street
- preservation of significant view corridors where possible, including to the silhouette and chimney stacks of the former White Bay Power Station.

Sydney Metro is continuing to work with the Department of Planning and Environment and Transport for NSW to align with the *Bays West Stage 1 draft Master Plan and Urban Design Framework*, in particular relating to:

- space provisioning for the overall street network including the location, geometry and configuration of the new precinct street and other required links (e.g. pedestrian and cycle) and their interface with future sub-precinct streets, and intersections with the existing road network and ports access
- the upgrade of Robert Street / new precinct street intersection for the commencement of Sydney Metro operations. Further investigation into the design and required timeframe of delivery of the signalisation of this intersection would be undertaken in consultation with key stakeholders and dependent on the road network upgrades in the wider Bays precinct and anticipated traffic volumes
- bus access arrangement and configuration required for commencement of Sydney Metro operations
- location, design and servicing of the traction substation
- land use assumptions, built form and design parameters for development
- design interface with public domain areas beyond the scope of Sydney Metro West.

The Department of Planning and Environment are currently considering all feedback and submissions to help finalise the master plan package and inform the preparation of the initial stage rezoning proposal, which will be exhibited for further feedback later this year.

The remaining sub-precincts within Bays West will undergo a master planning and rezoning process as renewal of the wider precinct continues. Community feedback will be sought by the relevant planning authority over time as these draft sub-precinct master plans and rezoning proposals are prepared.

## 2.9 Pymont Station – construction haul route refinement

### 2.9.1 Clarification description

#### Refinements to proposal description – construction

Since exhibition of the Environmental Impact Statement, further work has been undertaken on the construction haul routes for Pymont Station to improve construction traffic outcomes. The refined construction haul routes would:

- avoid the use of Harris Street and would avoid potential traffic impacts to the Harris Street / Fig Street intersection, which currently performs at a level of service F during the AM peak due to high traffic volumes on all approaches
- provide flexibility with multiple access and egress points for the eastern construction site.

Section 2.4 of the *Sydney Metro West Submissions Report - Major civil construction between The Bays and Sydney CBD* (Sydney Metro, 2022b) has also sought to refine the exhibited haul route for the Pymont Station construction sites following consultation with Transport for NSW.

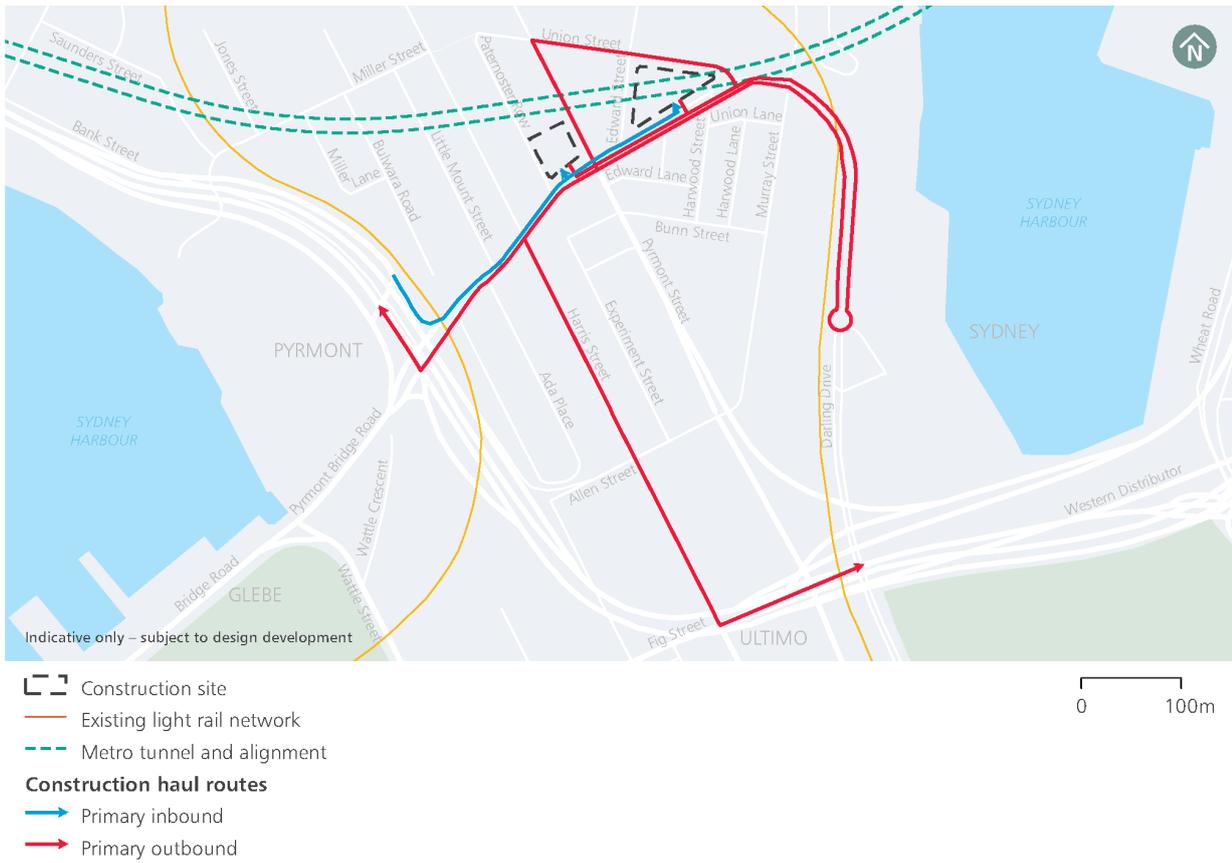
The exhibited construction haul route is shown on Figure 2-23. The refined construction haul route is shown on Figure 2-24 and would involve:

- an additional inbound route for both the western and the eastern construction sites to allow for construction heavy vehicles travelling east on the Western Distributor to turn right onto Pymont Bridge Road
- retention of the inbound route, which approaches from the west on the Western Distributor
- a revised inbound route for the eastern construction site by turning left from Pymont Bridge Road onto Edward Street, right onto Union Street and right into the construction site. This is in addition to the exhibited inbound route via Pymont Bridge Road (left-in), which would be retained
- a revised outbound route for the eastern construction site which involves turning right onto Union Street, left onto Pymont Bridge Road, and returning via the Darling Drive roundabout and Pymont Street. This is in addition to the exhibited outbound route via Pymont Bridge Road (left-out), which would be retained
- a revised outbound route for the eastern and western construction sites which involves turning left from Pymont Bridge Road onto Pymont Street then onto the Western Distributor heading east. As described above, this would avoid the use of Harris Street and avoid direct impacts to the intersection of Harris Street and Fig Street
- retention of the westbound outbound route for both the eastern and western construction sites, which involves turning right from Pymont Bridge Road onto the Western Distributor / Anzac Bridge heading to the west.

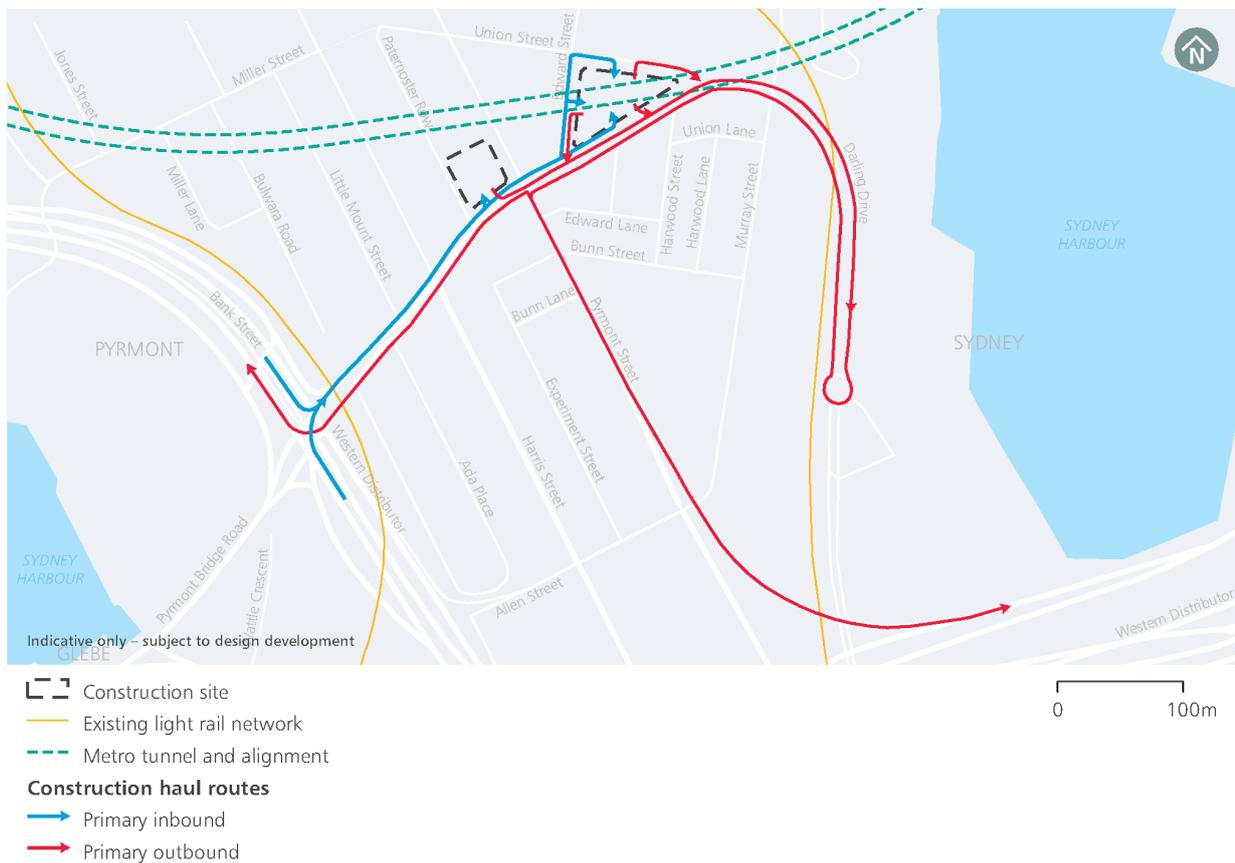
This refinement also includes the temporary (for the duration of construction) partial closure of two westbound traffic lanes on Union Street between Pymont Bridge Road and Edward Street to facilitate right turn construction vehicle access from Union Street into the eastern construction site. Eastbound traffic would continue to use the single through lane on Union Street. Access to the laneway that travels north-south between 52-72 Union Street and 84 Union Street, would also be maintained to provide access to relevant properties.

A secondary outbound route from the eastern and western construction sites may be used by turning from the construction sites left onto Pymont Bridge Road, left onto Union Street (westbound), and left onto Pymont Street (southbound). The use of this secondary route would require appropriate traffic control for the section along Union Street between Pymont Bridge Road and Edward Street. Further details are provided in Appendix D (Transport technical information).

Potential impacts associated with heavy vehicle movements using the revised construction haul routes are discussed in Section 2.9.2.



**Figure 2-23 Exhibited construction haul route - Pyrmont Station construction sites (Figure 14-11 of the Environmental Impact Statement)**



**Figure 2-24 Revised construction haul route - Pyrmont Station construction sites**

## 2.9.2 Additional assessment

A review of the potential impacts associated with the proposed construction haul route refinement at Pymont Station construction sites identified that the issues requiring additional assessment are:

- construction transport
- construction noise and vibration.

The proposed refinement would not result in any change to other issues as described and assessed in the Environmental Impact Statement.

### Construction transport

#### *Impacts on parking and property access*

No additional parking impacts are anticipated as a result of the proposed refinement compared to those identified in the Environmental Impact Statement.

Union Street between Edward Street and Pymont Bridge Road would be temporarily closed in the westbound direction as part of work carried out under the previous Sydney Metro West planning application. Eastbound traffic would continue to use the single through lane on Union Street. This temporary road network change would continue during construction of this proposal, with general traffic continuing to access Union Street between Edward Street and Pymont Bridge Road via the Union Street / Edward Street intersection.

Access to the laneway that travels north-south between 52-72 Union Street and 84 Union Street, would be maintained to provide access to relevant properties.

#### *Impacts on road network performance*

Compared to the Environmental Impact Statement, modelled intersection performance with construction traffic indicates that there would be a change in level of service with the proposed refined construction vehicle routes at the Darling Drive / Union Street / Murray Street intersection during AM peak (from level of service B to C). This is due to a higher number of construction vehicles travelling through the intersection with the proposed refined construction vehicle routes. The intersection would still operate with spare capacity.

The Pymont Bridge Road / Edward Street intersection was not assessed in the Environmental Impact Statement. Modelled intersection performance indicates that this intersection would perform at level of service A with and without construction traffic.

Intersections exhibited in the Environmental Impact Statement that would no longer be used as part of the primary construction haul route include:

- Union Street / Pymont Street (signalised)
- Harris Street / Allen Street (signalised)
- Harris Street / Fig Street / Western Distributor ramps (signalised).

Construction traffic impacts identified in the Environmental Impact Statement at these intersections would no longer occur as a result of this proposed refinement as these intersections are no longer on the primary haul route.

All other intersections would operate at the same level of service as those presented in the Environmental Impact Statement. Modelled intersection performance is provided in Appendix D (Transport technical information).

### Construction noise and vibration

The proposed refinement is unlikely to result in a noticeable increase in traffic noise levels on the construction haul routes. No roads around the Pymont Station construction sites are anticipated to have a greater than 2 dB increase. This is due to the high existing volumes of traffic that use these routes compared to the relatively small volume of proposed construction vehicles. Consistent with the approach in the Environmental Impact Statement, this assessment assumes free flowing traffic on the haul routes. Additional road traffic noise impacts may occur when construction heavy vehicles accelerate and decelerate at the entrances/exits of the construction sites.

This impact is unchanged from the Environmental Impact Statement.

Standard mitigation measures as outlined in the CEMF (Appendix I) would be implemented, where feasible and reasonable, to manage potential construction traffic noise impacts including CEMF-NV5 related to prioritising heavy vehicle movements during daytime hours, and CEMF-NV27 related to reducing the need for heavy vehicle movements during sensitive times and directing heavy vehicle movements away from sensitive receiver areas.

### **2.9.3 Changes to or additional mitigation measures**

The proposed refinement would not require any changes to, or additional, mitigation measures than those provided in the Environmental Impact Statement.

## 2.10 Hunter Street Station (Sydney CBD) – construction haul route refinement

### 2.10.1 Clarification description

#### Refinements to proposal description – construction

Since exhibition of the Environmental Impact Statement, further work has been undertaken on the construction haul routes for Hunter Street Station (Sydney CBD) to improve traffic outcomes. The refined construction haul routes would:

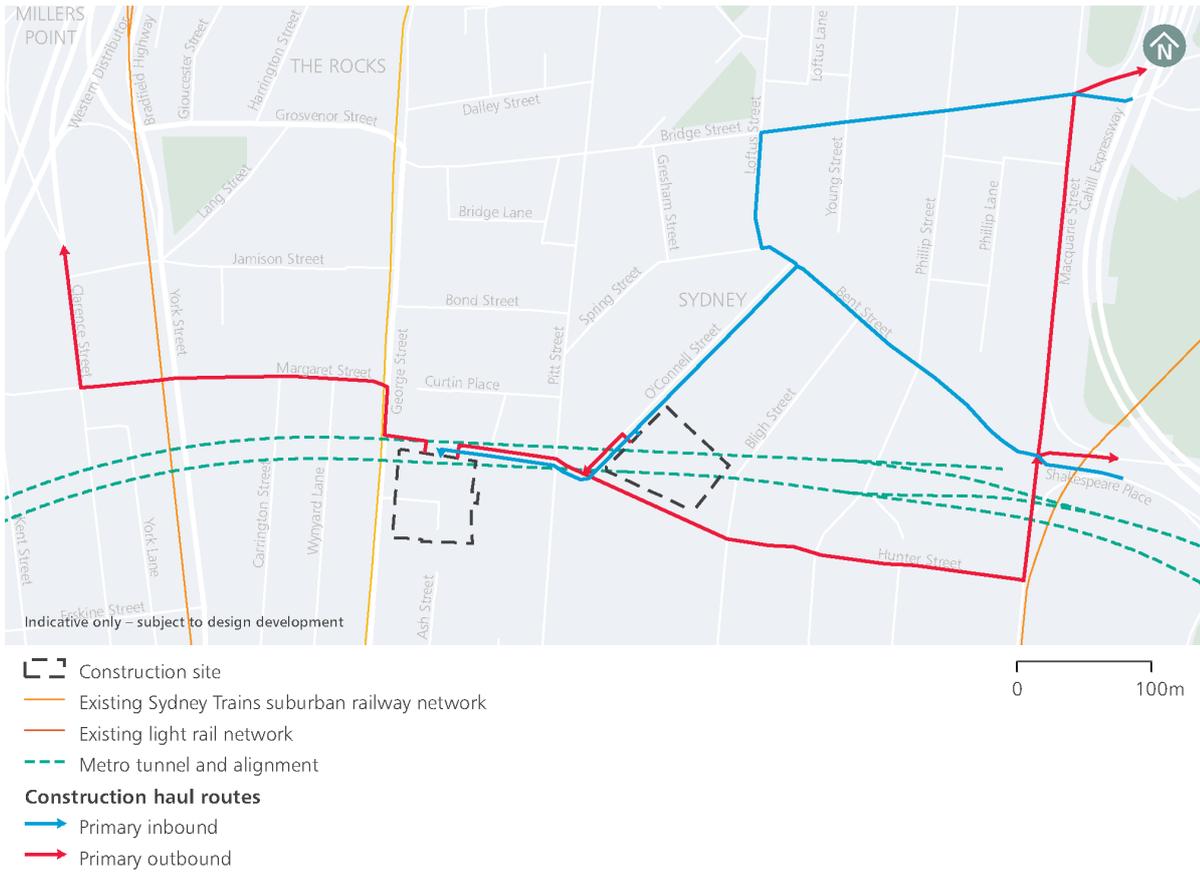
- avoid the need for construction vehicles to cross George Street and interface with light rail
- simplify the inbound route to the western construction site.

The *Sydney Metro West Submissions Report - Major civil construction between The Bays and Sydney CBD* (2022b) has also sought to refine the exhibited haul route for the western construction site following consultation with Transport for NSW and City of Sydney. The proposed refinement for this proposal would generally involve a revised inbound route to the western construction site via Macquarie Street and Hunter Street.

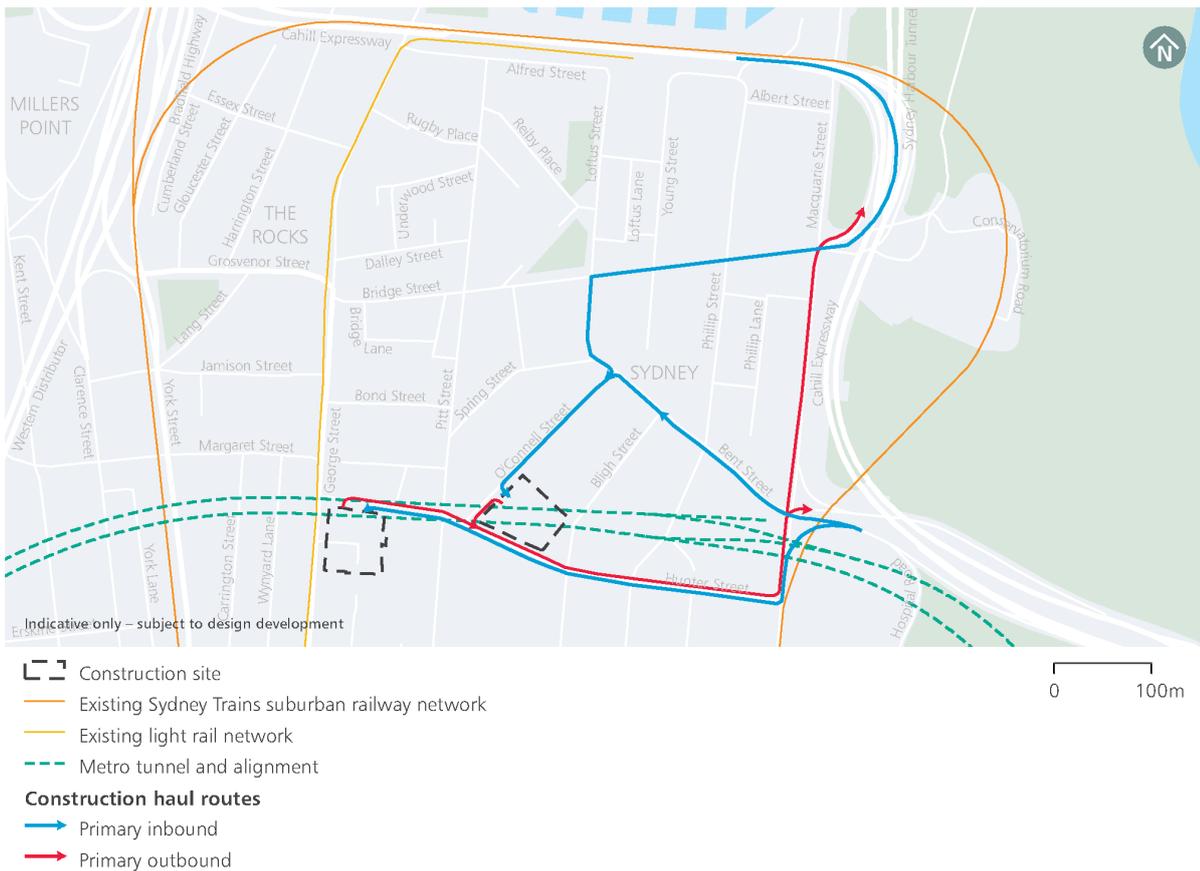
The primary inbound routes to the eastern construction site would continue to be via Bent Street and O'Connell Street, or via Bridge Street, Loftus Street and O'Connell Street, as assessed in the Environmental Impact Statement. The outbound route from the eastern construction site via O'Connell Street, Hunter Street and Macquarie Street would also remain unchanged.

Following consultation with City of Sydney, the outbound haul route from the western construction site via Margaret Street and Clarence Street described in the Environmental Impact Statement is no longer proposed as a primary haul route, in order to improve traffic outcomes. The only outbound haul route from the western construction site would be via Hunter Street and Macquarie Street. This route was assessed in the Environmental Impact Statement.

Potential impacts associated with the heavy vehicle movements using the revised construction haul route are discussed in Section 2.10.2. The exhibited construction haul route is shown on Figure 2-25. The refined construction haul route is shown on Figure 2-26.



**Figure 2-25 Exhibited construction haul route - Hunter Street Station (Sydney CBD) construction sites (Figure 15-11 of the Environmental Impact Statement)**



**Figure 2-26 Revised construction haul route – Hunter Street Station (Sydney CBD) construction sites**

### 2.10.2 Additional assessment

A review of the potential impacts associated with the proposed construction haul route refinement at Hunter Street Station (Sydney CBD) construction sites identified that the issues requiring additional assessment are:

- construction transport
- construction noise and vibration.

The proposed refinement would not result in any change to other issues as described and assessed in the Environmental Impact Statement.

#### Construction transport

##### *Impacts on road network performance*

Compared to the Environmental Impact Statement, modelled intersection performance with construction traffic indicates that there would be a change in level of service with the proposed revised construction vehicle routes at the following intersections:

- Macquarie Street / Bridge Street / Cahill Expressway ramps during the evening peak hour – from level of service C to D. This is due to a higher number of outbound construction vehicles using the Cahill Expressway to access Sydney Harbour Bridge, resulting in increased congestion along Macquarie Street
- Bridge Street / Phillip Street during the morning peak hour – from level of service D to C. This is due to a lower number of inbound construction vehicles travelling along Bridge Street
- Macquarie Street / Bent Street / Eastern Distributor ramps during the morning peak hour – from level of service D to E. This is due to a higher number of inbound and outbound construction vehicles travelling to and from the Eastern Distributor, resulting in increased congestion along Macquarie Street
- Bent Street / Bligh Street during the morning peak hour – from level of service B to A. This is due to a lower number of inbound construction vehicles travelling along Bent Street
- Bent Street / Loftus Street / O'Connell Street during the morning peak hour – from level of service B to A. This is due to a lower number of inbound construction vehicles travelling along Bent Street.

Intersections exhibited in the Environmental Impact Statement that would no longer be used as part of the primary construction haul routes include:

- Hunter Street / George Street (signalised)
- Margaret Street / George Street (signalised)
- Margaret Street / Carrington Street (signalised)
- Margaret Street / York Street (signalised)
- Margaret Street / Clarence Street (signalised)
- Clarence Street / Jamison Street (signalised).

Construction traffic impacts identified in the Environmental Impact Statement at these intersections would no longer occur as a result of this proposed refinement as these intersections are no longer on the primary haul route.

All other intersections would operate at the same level of service as those presented in the Environmental Impact Statement. Modelled intersection performance is provided in Appendix D (Transport technical information).

#### Construction noise and vibration

The proposed refinement is unlikely to result in a noticeable increase in traffic noise levels on the construction haul routes. No roads around the Hunter Street Station (Sydney CBD) construction sites are anticipated to have a greater than 2 dB increase. This is due to the high existing volumes of traffic that use these routes compared to the relatively small volume of proposed construction vehicles. Consistent with the approach in the Environmental Impact Statement, this assessment assumes free flowing traffic on the haul routes. Additional road traffic noise impacts may occur when construction heavy vehicles accelerate and decelerate at the entrances/exits of the construction sites.

This impact is unchanged from the Environmental Impact Statement.

Standard mitigation measures as outlined in the CEMF (Appendix I) would be implemented, where feasible and reasonable, to manage potential construction traffic noise impacts including CEMF-NV5 related to prioritising heavy vehicle movements during daytime hours, and CEMF-NV27 related to reducing the need for heavy vehicle movements during sensitive times and directing heavy vehicle movements away from sensitive receiver areas.

### **2.10.3 Changes to or additional mitigation measures**

The proposed refinement would not require any changes to, or additional, mitigation measures than those provided in the Environmental Impact Statement.

## 2.11 Clyde stabling and maintenance facility and Rosehill services facility – operational water treatment plant relocation

### 2.11.1 Clarification description

#### Refinements to proposal description – operation

Since the exhibition of the Environmental Impact Statement, further design development has been undertaken for the Clyde stabling and maintenance facility and Rosehill services facility. This has resulted in the relocation of the operational water treatment plant from its exhibited location adjacent to James Ruse Drive, to within the Rosehill services facility on Unwin Street. The relocation of the water treatment plant to this location would create a common precinct which houses several operational ancillary facilities, including the Rosehill services facility, traction substation and water treatment plant. Section 17.2 of the Environmental Impact Statement noted that Sydney Metro is investigating options for the location of the water treatment plant within the Clyde stabling and maintenance facility and Rosehill services facility site, including locations closer to the Rosehill services facility. The Environmental Impact Statement identified that the water treatment plant, adjacent to James Ruse Drive, would be about 25 metres long, forming a continuous built form and barrier in this area.

The relocated water treatment plant would be, subject to design development, about 40 metres long, 25 metres wide and 10 metres high.

Sydney Metro is continuing to carry out design of the tunnel dive structure and associated infrastructure at Clyde stabling and maintenance facility. Additional aboveground services infrastructure would be required in the location previously identified Environmental Impact Statement for the operational water treatment plant, adjacent to James Ruse Drive (for example, services infrastructure above the tunnel dive structure such as ventilation). This aboveground services infrastructure would be similar to the size and scale previously identified for the operational water treatment plant at this location. The aboveground services infrastructure is subject to ongoing design development and would be designed to comply with the relevant environmental noise criteria.

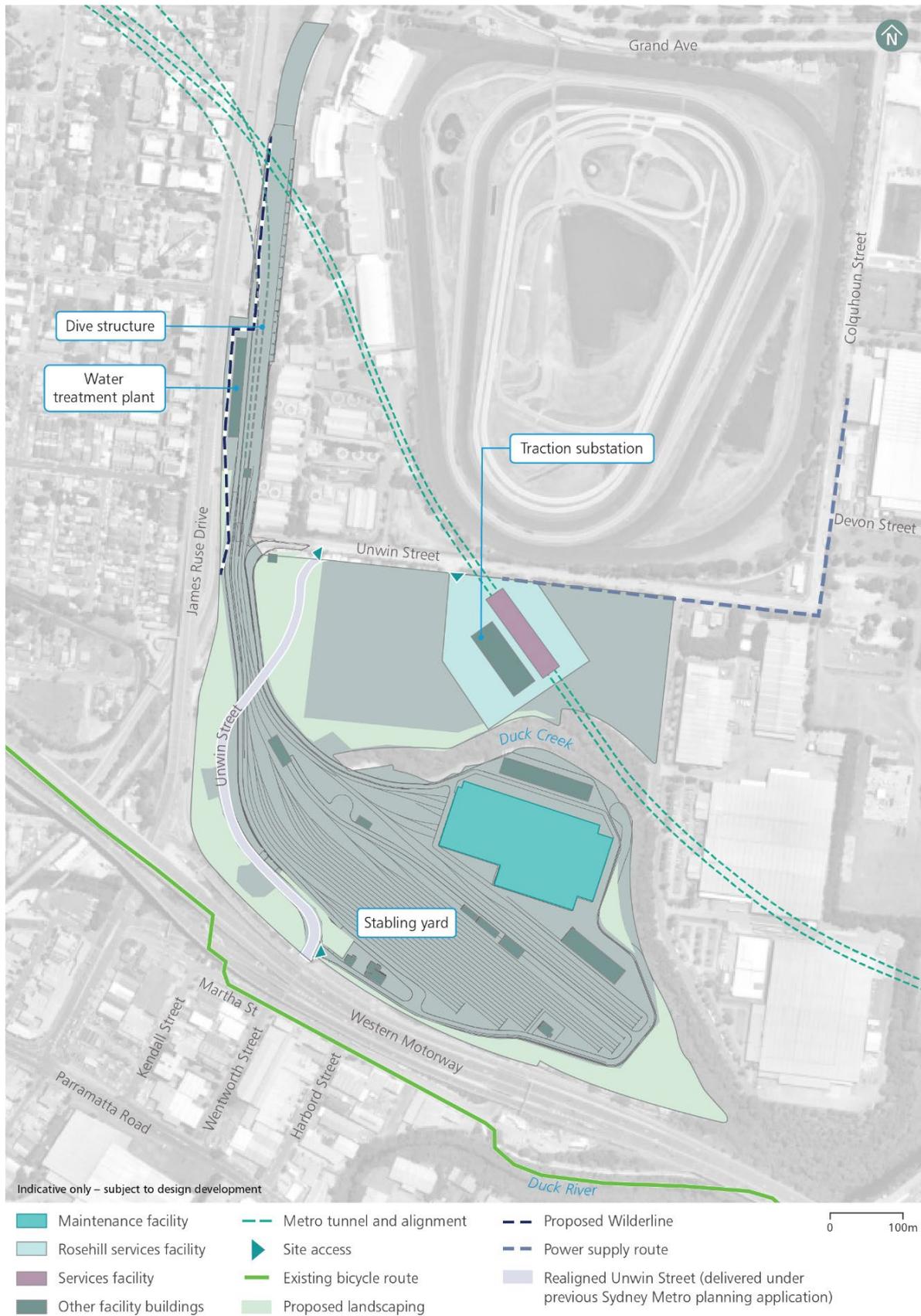
The exhibited layout and key design elements for Clyde stabling and maintenance facility and Rosehill services facility are shown in Figure 2-27. The revised layout and key design elements are shown in Figure 2-28.

Additionally, Figure 17-11 of the Environmental Impact Statement showed an incorrect scale at the bottom of the figure. Figure 2-27 now reflects the correct scale.

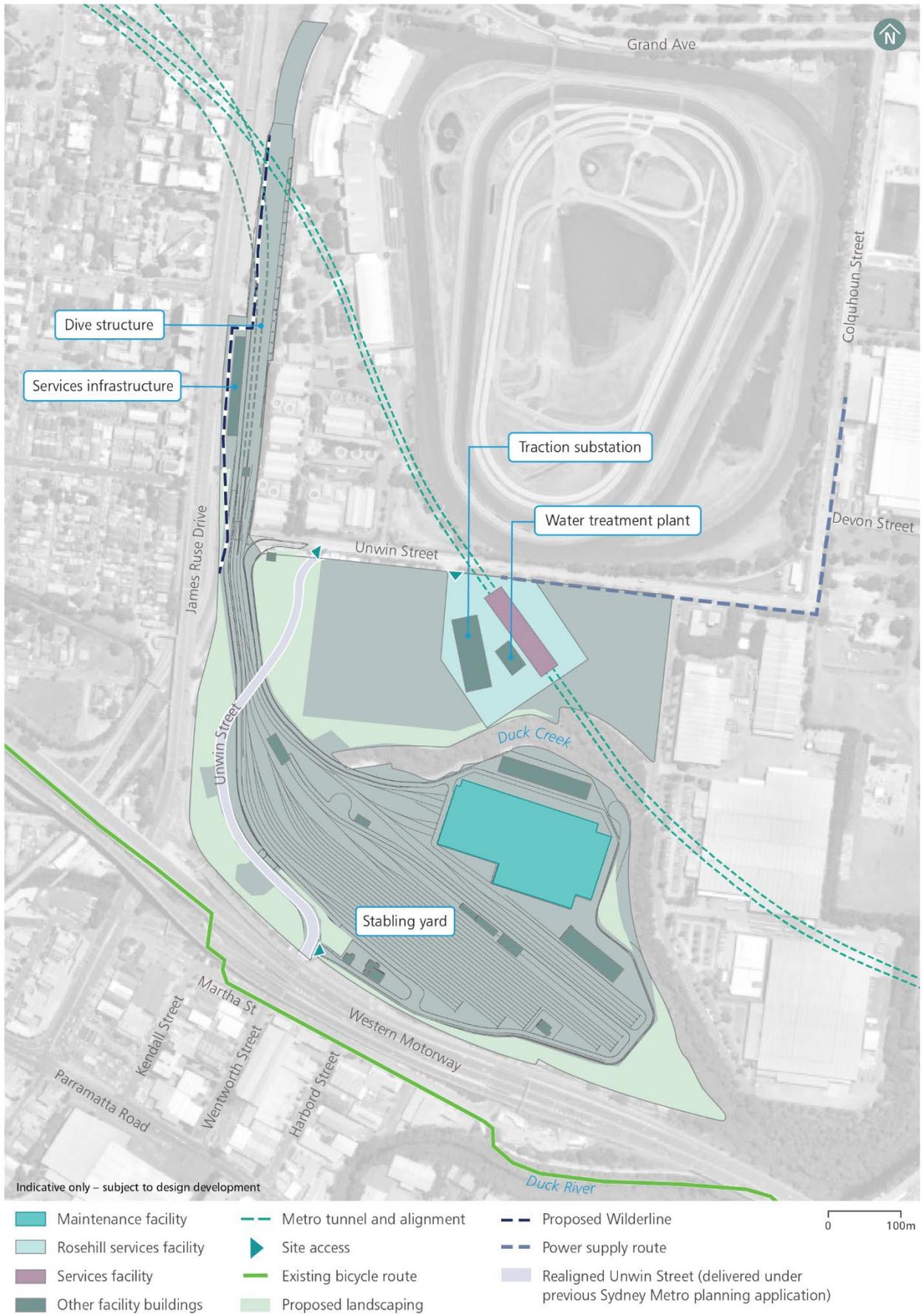
#### Refinements to proposal description – construction

Section 17.4 of the Environmental Impact Statement provided an overview of the construction work for this proposal at Clyde stabling and maintenance facility and Rosehill services facility. The construction work required for the operational water treatment plant in its new location would be consistent with the building and facility construction and fit-out considered in the Environmental Impact Statement. No change to the indicative construction program for Clyde stabling and maintenance facility and Rosehill services facility is proposed.

There would continue to be construction activity adjacent to James Ruse Drive, including the use of large construction equipment, laydown and track work for the training, testing and maintenance areas. There would be workshops, site offices, amenities and storage on land adjacent to and level with James Ruse Drive. This would potentially be followed by works to construct aboveground services infrastructure (such as ventilation equipment) for the dive structure in the location previously identified for the water treatment plant. This infrastructure would be of a similar scale to the water treatment plant building previously assessed for this location in the Environmental Impact Statement.



**Figure 2-27 Exhibited indicative layout and key design elements – Clyde stabling and maintenance facility and Rosehill services facility**



**Figure 2-28 Revised indicative layout and key design elements – Clyde stabling and maintenance facility and Rosehill services facility**

### 2.11.2 Additional assessment

A review of the potential impacts associated with the proposed refinement to the operational water treatment plant location at Clyde stabling and maintenance facility and Rosehill services facility identified that the issues requiring additional assessment are:

- operational noise and vibration
- non-Aboriginal heritage
- landscape and visual amenity.

#### Operational noise and vibration

Section 17.6.1 of the Environmental Impact Statement describes the baseline noise environment at the Clyde stabling and maintenance facility and Rosehill services facility.

The methodology and noise criteria for the assessment of the proposed refinements is consistent with the methodology described in Technical Paper 3 (Operational noise and vibration) of the Environmental Impact Statement.

Table 2-6 summarises the predicted operational noise levels from the Environmental Impact Statement and the revised predicted noise levels from the design refinements. Appendix E (Noise and vibration technical information) provides the operational airborne noise contour maps with the proposed refinements.

**Table 2-6 Revised operational noise levels – most affected sensitive receivers**

Receiver	Criteria <sup>1</sup> , dB(A)	EIS predicted noise level ( $L_{Aeq,15min}$ )		Revised predicted noise level ( $L_{Aeq,15min}$ )		Comparison to EIS impact	
		Year of opening (2030)	Year of design (2040)	Year of opening (2030)	Year of design (2040)	Year of opening (2030)	Year of design (2040)
4 A'Beckett Street, Granville (residential)	48	43	45	43	43	No change	Decrease
65 Penelope Lucas Lane, Granville (residential)	48	44	46	44	44	No change	Decrease
Rosehill Gardens racecourse stables	45 (50 <sup>2</sup> )	<b>46</b>	<b>47</b>	<b>47</b>	<b>47</b>	Increase	No change

Notes:

- Criteria differs between operational noise source type (refer Technical Paper 3 (Operational noise and vibration) of the Environmental Impact Statement)
- Where the amenity target level is the controlling criterion and cannot reasonably be achieved, the lower of the intrusive or amenity acceptance noise level is used
- Noise levels in bold identify predicted noise levels over the amenity target level

The results indicate that the predicted noise levels would be compliant with the applicable noise criteria at the nearest sensitive receivers during all periods for the year of opening (2030) and the year of design (2040), apart from a minor two decibel (dB) exceedance of the applicable noise criteria at the Rosehill Gardens racecourse stables (one dB greater than that identified in the Environmental Impact Statement).

The decrease in noise levels for the year of design for the residential receivers is a result of the relocation of the operational water treatment plant away from the noise sensitive receiver. The minor increase in noise levels by one dB at the Rosehill Gardens racecourse stables (when compared to the Environmental Impact Statement noise levels) is due to the location of the traction substation (the noisiest source) and the relocated water treatment plant both being within Rosehill services facility contributing to noise levels in the area. Maximum noise levels would remain unchanged from the Environmental Impact Statement so have not been presented in this assessment.

Noise attenuation has been incorporated into the design to determine the predicted noise levels. These measures would be further developed throughout the detailed design phase so that compliance with the environmental noise criteria is achieved, including the identification of appropriate noise mitigation measures such as a noise barrier and positioning of equipment within the site to mitigate any potential exceedance to the racecourse.

In accordance with mitigation measure EIS-NV1, the infrastructure at Rosehill services facility would be designed to meet the applicable noise criteria derived from the *Noise Policy for Industry* (NSW EPA, 2017) (refer to Appendix C (Revised mitigation measures)). An Operational Noise and Vibration Review would also be prepared during design development to confirm the mitigation measures required to manage potential airborne and ground-borne noise and vibration impacts from rail operations and stations, in accordance with mitigation measure EIS-NV4 (refer to Section 2.14). The NSW Environment Protection Authority would be consulted during the preparation of this review.

### **Non-Aboriginal heritage**

Section 17.7.1 of the Environmental Impact Statement describes the baseline environment at the Clyde stabling and maintenance facility and Rosehill services facility construction site relating to the location of non-Aboriginal heritage items and archaeological resources. Appendix F (Non-Aboriginal heritage technical information) includes further detail on the additional assessment of built heritage impacts.

#### *Built heritage impact assessment*

Section 17.7.2 of the Environmental Impact Statement assessed the potential impacts of construction and operation of this proposal on the following built heritage items at the Clyde stabling and maintenance facility and Rosehill services facility (shown on Figure 2-29):

- Wetlands (Parramatta LEP Item No. I1; local significance)
- RTA Depot (Parramatta LEP Item No. I576; local significance)
- Capral Aluminium (Parramatta LEP Item No. I575; local significance).

The potential magnitude of impacts to the items during construction and operation of this proposal were generally identified as neutral or negligible. At the RTA Depot, potential impacts associated with settlement and vibration were assessed as minor to moderate.

The proposed refinement would result in additional infrastructure (the relocated operational water treatment plant) being located within the Rosehill services facility. The operational water treatment plant would be co-located with other buildings, and smaller in scale and height than the adjacent proposed infrastructure in the area. This would minimise the potential visual impacts to heritage items. It would also be located within an area that does not have heritage significant views of remnant vegetation associated with the Wetlands.

The proposed refinements would involve additional construction activities to construct the relocated operational water treatment plant, however this would take place within the Rosehill services facility where similar activities are already planned. As such, it is not anticipated that there would be changes in temporary visual indirect (visual) impacts to heritage items. There is also not anticipated to be an increase in construction vibration levels within the vicinity of the RTA Depot due to the proposed refinements.

During operation, there would still be aboveground infrastructure visible in the location previously identified in the Environmental Impact Statement for the water treatment plant, adjacent to James Ruse Drive. This aboveground services infrastructure would be similar in size to what was assessed for the water treatment plant in the Environmental Impact Statement. Therefore, there would be no change to visual impacts to heritage items in this location.

Overall, the proposed design refinements would not result in changes to the non-Aboriginal heritage impacts identified in the Environmental Impact Statement.



**Figure 2-29 Heritage items within the study area – Clyde stabling and maintenance facility and Rosehill services facility (Figure 17-11 from the Environmental Impact Statement)**

### *Archaeological impact assessment*

Excavation associated with the proposed refinements within the Clyde stabling and maintenance facility and Rosehill services facility site would be limited to areas that have previously been assessed as having nil potential for significant archaeological remains. As a result, the proposed refinements would not change the previously assessed impacts to archaeological resources. Overall, construction activities for the Clyde stabling and maintenance facility and Rosehill services facility would continue to result in a neutral impact to archaeological resources.

### **Landscape and visual amenity**

Section 17.9.1 of the Environmental Impact Statement describes the baseline landscape and visual environment at the Clyde stabling and maintenance facility and Rosehill services facility. Appendix G (Landscape and visual amenity technical information) includes further detail on the additional assessment of landscape and visual amenity.

### *Landscape and public domain areas*

The potential landscape character impacts of the proposed refinements during operation would be consistent with those identified in the Environmental Impact Statement. During operation, there would still be aboveground infrastructure visible in the location previously identified in the Environmental Impact Statement for the water treatment plant, adjacent to James Ruse Drive. This aboveground services infrastructure would be of a similar scale to the water treatment plant building previously assessed for this location in the Environmental Impact Statement. The water treatment plant would be located near the proposed traction substation and services facility. The new built form would be similar in scale and character with the exhibited built form proposed for this area of the site, and consistent with the industrial character of the area.

The potential landscape character impacts of the proposed refinements during construction would also be consistent with those identified in the Environmental Impact Statement. There would continue to be construction activity adjacent to James Ruse Drive, and works to construct aboveground services infrastructure (such as ventilation equipment) for the dive structure in the location previously identified for the water treatment plant. Construction of the water treatment plant in its new location would be contained within the existing construction site. The scale of construction would be generally consistent with the character of the works proposed on the site in the Environmental Impact Statement.

*Daytime visual amenity impact*

The daytime visual amenity impacts of the proposed refinements during operation, from the viewpoints shown in Figure 17-12 of the Environmental Impact Statement, would be consistent with those identified in the Environmental Impact Statement. The aboveground services infrastructure adjacent to James Ruse Drive, would be of a similar scale and character to the water treatment plant considered in the same location in the Environmental Impact Statement. The relocated water treatment plant building would be similar in scale and character with the Rosehill services facility building proposed for this site. The surrounding area has a high capacity to absorb the scale of this proposal due to the setting of light industrial built form and road infrastructure.

The daytime visual amenity impacts of the proposed refinements during construction would be consistent with those identified in the Environmental Impact Statement. There would continue to be construction work visible from James Ruse Drive for the aboveground services infrastructure which would be consistent with the scale of the works expected for the water treatment plant in the Environmental Impact Statement. Construction of the water treatment plant would be set back from Unwin Street, and would be of similar scale as the former industrial buildings on the site and the proposed construction activities identified in the Environmental Impact Statement at Rosehill services facility.

*Night-time visual amenity impact*

The night-time visual amenity impacts during operation would be consistent with those identified in the Environmental Impact Statement. The additional lighting across the site, including both the relocated water treatment plant and aboveground infrastructure adjacent to James Ruse Drive, would be absorbed into the existing brightly lit setting. Lighting in the vicinity of James Ruse Drive would be set back from the adjacent residential areas located to the west of this road corridor.

The night-time visual amenity impacts during construction would also be consistent with those identified in the Environmental Impact Statement. Any night-time work for the aboveground services infrastructure structure would be located on the site previously identified in the Environmental Impact Statement for the water treatment plant on James Ruse Drive.

The water treatment plant relocation would require one refinement to the landscape character and visual amenity environmental mitigation measure (mitigation measure EIS-LV14) provided in the Environmental Impact Statement (refer to Appendix C (Revised mitigation measures)).

**2.11.3 Changes to or additional mitigation measures**

The additional assessment of the proposed refinement to the operational water treatment plant location has resulted in one revision to mitigation measure EIS-LV14 to recognise that aboveground services infrastructure would be located in the former location of the operational water treatment plant. The revised mitigation measure is provided in Section 2.14.

A full list of revised mitigation measures for this proposal is provided in Appendix C (Revised mitigation measures).

## 2.12 Clyde stabling and maintenance facility and Rosehill services facility – landscape masterplan

Section 17.2.3 of the Environmental Impact Statement identified that the use of residual land required for construction surrounding the services facility (within the vicinity of the stabling and maintenance facility) following completion of construction would be investigated during further design development and in consultation with relevant stakeholders.

Sydney Metro is proposing to develop a landscape masterplan to detail how the design would respond to the requirements of Concept condition C-B2 including active transport links, the use of residual land, rehabilitation of the Duck Creek and A'Becketts Creek riparian corridor where it adjoins the Sydney Metro site and how the facility would integrate with the master planning work for the Camellia-Rosehill precinct. The landscape masterplan would be prepared in consultation with the City of Parramatta Council, the NSW Department of Planning and Environment and other relevant stakeholders.

An additional mitigation measure (EIS-P2) has been included in relation to the development of the landscape masterplan for the Clyde-Rosehill precinct. The additional mitigation measure is provided in Section 2.14.

A full list of revised mitigation measures for this proposal is provided in Appendix C (Revised mitigation measures).

## 2.13 Minor clarifications and corrections

The following minor clarifications and corrections have been identified and do not require any further environmental assessment.

### 2.13.1 Station and precinct descriptions – height of aboveground structures

Station and precinct descriptions in Chapters 7 to 17 of the Environmental Impact Statement include descriptions of the indicative heights of aboveground structures (for example, station buildings, station services and space for non-station use). The heights are described in terms of the number of typical residential and/or commercial storeys that the height of the structure would be equivalent to (indicatively about 3-4 metres per storey). The purpose of this description was to give an indication of the scale of the structures, rather than describe the physical number of storeys which would be included in the structure. For example, a storey in a station services building may be higher than that of a typical residential building.

Appendix B (Revised proposal description) has been revised to describe the indicative heights of aboveground structures in metres.

### 2.13.2 Construction description – Parramatta metro station

The description of proposed construction work at Parramatta metro station in Section 8.4 of the Environmental Impact Statement provides an incorrect cross reference to Figure 8-2 in relation to the extent of basement excavation at Parramatta metro station. The correct figure reference is Figure 8-10 of the Environmental Impact Statement.

The extent of basement excavation has also been refined as part of a clarification in this Submissions Report, with Figure 2-19 of this report showing the revised extent of basement excavation at Parramatta metro station.

### 2.13.3 Station entries – Sydney Olympic Park metro station

Section 9.2 of the Environmental Impact Statement identifies that the proposed station entries at Sydney Olympic Park metro station include main station entries between Herb Elliott Avenue and Figtree Drive (for day to day operations), and event mode entries from public space to the west of the metro station (connected to Olympic Boulevard).

Based on feedback received during public exhibition of the Environmental Impact Statement, Sydney Metro is reviewing station entries (including day to day operations and event mode) at Sydney Olympic Park with the intent of all entries being available for day to day operations and to optimise precinct outcomes and align with Sydney Olympic Park Authority master planning. These specific design elements would be incorporated through the station design and precinct plan, which would be prepared in consultation with Sydney Olympic Park Authority.

Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

Section 5.1 and Section 5.2 of Appendix B (Revised proposal description) has been updated to acknowledge that Sydney Metro is undertaking a review of the function of the station entries at Sydney Olympic Park metro station.

#### **2.13.4 Traffic and transport – Sydney Olympic Park metro station construction haul routes**

Table 9-3 of the Environmental Impact Statement incorrectly describes the primary and secondary construction haul routes at Sydney Olympic Park metro station construction site as both including a right-out egress onto Figtree Drive. Figure 9-11 of the Environmental Impact Statement does not show Figtree Drive as part of the primary construction haul route. The right-out truck egress via Figtree Drive should be identified as part of the primary construction haul route only.

The construction haul routes were correctly identified and assessed in Technical Paper 2 (Construction transport) of the Environmental Impact Statement. Figure 3-23 in Technical Paper 2 (Construction transport) of the Environmental Impact Statement correctly identifies the primary construction haul routes, which includes right-out egress onto Figtree Drive, continuing west toward Olympic Boulevard. As such there is no change the construction traffic impacts identified in the Environmental Impact Statement.

The description of the construction haul routes at Sydney Olympic Park metro station construction site has been corrected to reflect this clarification Appendix B (Revised proposal description).

Construction haul routes would be confirmed in the construction traffic management plan for each construction site, as outlined in the Construction Traffic Management Framework (CTMF) (Appendix J). Sydney Metro would continue to work with Sydney Olympic Park Authority on this process and any proposed changes to construction haul routes.

#### **2.13.5 Permanent and temporary parking impacts**

The Transport sections in Chapters 7 to 17 of the Environmental Impact Statement include a summary of the potential parking and property access impacts during construction and operation of this proposal at each station precinct. Further detail is provided in Chapter 4 of Technical Paper 1 (Operational transport) and Chapter 3 of Technical Paper 2 (Construction transport).

Table 2-7 has been prepared to clearly present the indicative parking impacts of this proposal at each precinct, including:

- permanent parking impacts, these spaces may be removed from the commencement of construction
- temporary parking impacts which are additional to the permanent parking impacts and would be removed for part or all of the construction period.

A reference to where the resulting social, community and business impacts of parking changes are assessed for each precinct in the Environmental Impact Statement is also provided.

Mitigation measure EIS-TT3 (refer to Appendix C (Revised mitigation measures)) states that measures to address potential parking impacts arising from a loss of on-street parking in the vicinity of station precincts, as well as due to potential park and ride in residential streets would be developed, where required, in consultation with relevant local councils. This mitigation measure has also been amended to include examples of measures which could be considered (refer to Section 2.14). Any changes to on-street parking and appropriate mitigation would be confirmed during the preparation of station design and precinct plans which would be prepared in consultation with relevant stakeholders.

In accordance with the Construction Traffic Management Framework (CTMF) (Appendix J), Sydney Metro would seek to retain existing on-street parking and existing parking restrictions as far as practicable during construction. The CTMF also outlines the requirement for preparation of parking management plans, where required. These plans would identify requirements for on-site and off-site parking during construction.

Appendix B (Revised proposal description) has also been updated to clearly describe the permanent and temporary parking impacts of this proposal in the construction description sections for each station precinct.

**Table 2-7 Potential permanent and temporary parking impacts**

Station precinct	Permanent parking impacts	Temporary parking impacts (during construction)	Reference to discussion of social and business impacts
Westmead metro station	<p>The following on-street parking spaces would be permanently removed as part of this proposal:</p> <ul style="list-style-type: none"> <li>about four spaces along Railway Parade to accommodate the new kiss and ride bays and point-to-point zones.</li> </ul>	<p>In addition to the parking spaces that would be permanently removed, there would also be the following temporary on-street parking impacts during construction of this proposal:</p> <ul style="list-style-type: none"> <li>removal of about 10 spaces along Hassall Street (continued impact from previous Sydney Metro West planning application)</li> <li>removal of about 10 spaces along Bailey Street adjacent to the construction site (continued impact from previous Sydney Metro West planning application)</li> <li>short-term closures of about 27 spaces on Railway Parade during rail possessions only</li> <li>short-term closures of about 50 spaces on Alexandra Avenue (west of Hawkesbury Road) during railway possessions only</li> <li>removal of about four spaces near the Hawkesbury Road / Bailey Street intersection (about four spaces) and about 10 spaces near the Hassall Street / Bailey Street intersection to allow for the detour during the temporary closure of Alexandra Avenue</li> <li>short-term closures (for around a few months) of some spaces on Railway Parade to create a new low speed zone.</li> </ul>	<p>The current use of the parking spaces proposed to be removed would likely be associated with nearby residential and business areas, and rail customers.</p> <p>The following sections of the Environmental Impact Statement provide an assessment of potential social and business impacts as a result of parking changes at Westmead metro station:</p> <ul style="list-style-type: none"> <li>Section 7.12.2 for social impacts during operation</li> <li>Section 7.12.3 for social impacts during construction</li> <li>Section 7.13.2 for local business impacts during operation</li> <li>Section 7.13.3 for local business impacts during construction.</li> </ul>

Station precinct	Permanent parking impacts	Temporary parking impacts (during construction)	Reference to discussion of social and business impacts
Parramatta metro station	<p>The following on-street parking spaces would be permanently removed as part of this proposal:</p> <ul style="list-style-type: none"> <li>• about seven spaces on George Street.</li> </ul>	<p>No additional temporary on-street parking impacts are anticipated during construction at Parramatta metro station beyond those that would be permanently removed.</p>	<p>The current use of the parking spaces proposed to be removed would likely be associated with nearby business areas.</p> <p>The following sections of the Environmental Impact Statement provide an assessment of potential social and business impacts as a result of parking changes at Parramatta metro station:</p> <ul style="list-style-type: none"> <li>• Section 8.12.2 for social impacts during operation</li> <li>• Section 8.12.3 for social impacts during construction</li> <li>• Section 8.13.2 for local business impacts during operation</li> <li>• Section 8.13.3 for local business impacts during construction.</li> </ul>
Sydney Olympic Park metro station	<p>The following on-street parking spaces would be permanently removed as part of this proposal:</p> <ul style="list-style-type: none"> <li>• about 18 spaces on Herb Elliott Avenue, including: <ul style="list-style-type: none"> <li>- about six spaces to be replaced by a taxi stand</li> <li>- about six spaces to be replaced for a pedestrian crossing</li> <li>- one space and one motorcycle parking space to be replaced with a relocated loading zone</li> <li>- about four spaces to be re-allocated as kiss and ride bays.</li> </ul> </li> <li>• about 11 spaces to accommodate the six bus stands on Figtree Drive</li> <li>• a number of spaces on Herb Elliott Avenue near the proposed Precinct Street B for a no stopping zone.</li> </ul>	<p>In addition to the parking spaces that would be permanently removed, there may be short-term closures (for around a few months) of some on-street parking spaces in the following locations during construction of this proposal to facilitate precinct construction works:</p> <ul style="list-style-type: none"> <li>• Herb Elliott Avenue</li> <li>• Figtree Drive.</li> </ul>	<p>The current use of the parking spaces proposed to be removed would likely be associated with nearby business areas.</p> <p>The following sections of the Environmental Impact Statement provide an assessment of potential social and business impacts as a result of parking changes at Sydney Olympic Park metro station:</p> <ul style="list-style-type: none"> <li>• Section 9.12.2 for social impacts during operation</li> <li>• Section 9.12.3 for social impacts during construction</li> <li>• Section 9.13.2 for local business impacts during operation</li> <li>• Section 9.13.3 for local business impacts during construction.</li> </ul>

Station precinct	Permanent parking impacts	Temporary parking impacts (during construction)	Reference to discussion of social and business impacts
<p>North Strathfield metro station</p>	<p>The following on-street parking spaces would be permanently removed as part of this proposal:</p> <ul style="list-style-type: none"> <li>• about 24 spaces on the western side of Queen Street between Pomeroy Street and Wellbank Street</li> <li>• about 20 spaces on the eastern side of Queen Street between Beronga Street and Wellbank Street</li> <li>• about four spaces on the Waratah Street approach would be converted to kiss and ride spaces during peak periods</li> <li>• about two spaces on Hamilton Street East, which would be converted to kiss and ride spaces (adjacent to the existing kiss and ride zone)</li> <li>• about 12 spaces on the approaches to the upgraded intersections to provide safe operation and efficient use for all road users.</li> </ul>	<p>In addition to the parking spaces that would be permanently removed, there would also be the following temporary on-street parking impacts during construction of this proposal:</p> <ul style="list-style-type: none"> <li>• the kiss and ride zone on Queen Street that will be relocated as part of work carried out under the previous Sydney Metro West planning application would continue to operate in its relocated position during construction of this proposal until the permanent new kiss and ride zones are established</li> <li>• to facilitate precinct construction work, there may be some short-term closures (for around a few months) of some spaces on the western side of Queen Street south of Wellbank Street and on the northern side of Hamilton Street East to establish new kiss and ride zones.</li> </ul>	<p>The current use of the parking spaces proposed to be removed would likely be associated with nearby residential and business areas.</p> <p>The following sections of the Environmental Impact Statement provide an assessment of potential social and business impacts as a result of parking changes at North Strathfield metro station:</p> <ul style="list-style-type: none"> <li>• Section 10.12.2 for social impacts during operation</li> <li>• Section 10.12.3 for social impacts during construction</li> <li>• Section 10.13.2 for local business impacts during operation</li> <li>• Section 10.13.3 for local business impacts during construction.</li> </ul>

Station precinct	Permanent parking impacts	Temporary parking impacts (during construction)	Reference to discussion of social and business impacts
<p>Burwood North Station</p>	<p>The following on-street parking spaces would be permanently removed as part of this proposal:</p> <ul style="list-style-type: none"> <li>• about two spaces on Burton Street along the northern kerb (near Burwood Road) to accommodate statutory No Stopping requirements and kerb setbacks</li> <li>• about 10 spaces on the western side of Burwood Road between Parramatta Road and Burton Street to accommodate two northbound bus stops</li> <li>• about five spaces on the eastern side of Burwood Road between Parramatta Road and Burton Street to accommodate two southbound bus stops</li> <li>• about seven spaces along the western side of Loftus Street between Parramatta Road and Burton Street for the access and egress to the new laneway</li> <li>• about seven spaces along the southern side of Burton Street to accommodate the kiss and ride zones.</li> </ul>	<p>In addition to the parking spaces that would be permanently removed, there would also be the following temporary on-street parking impacts during construction of this proposal:</p> <ul style="list-style-type: none"> <li>• removal of about 15 spaces along Burton Street (continued impact from previous Sydney Metro West planning application)</li> <li>• short-term closures (for around a few months) of some spaces on Burwood Road and Burton Street to facilitate precinct construction works (i.e. to construct new pedestrian and interchange facilities).</li> </ul>	<p>The current use of the parking spaces proposed to be removed would likely be associated with nearby residential and business areas.</p> <p>The following sections of the Environmental Impact Statement provide an assessment of potential social and business impacts as a result of parking changes at Burwood North Station:</p> <ul style="list-style-type: none"> <li>• Section 11.12.2 for social impacts during operation</li> <li>• Section 11.12.3 for social impacts during construction</li> <li>• Section 11.13.2 for local business impacts during operation</li> <li>• Section 11.13.3 for local business impacts during construction.</li> </ul>

Station precinct	Permanent parking impacts	Temporary parking impacts (during construction)	Reference to discussion of social and business impacts
Five Dock Station	<p>The following on-street parking spaces would be permanently removed as part of this proposal:</p> <ul style="list-style-type: none"> <li>• about three spaces, including one accessible parking space on East Street, to accommodate access to the station loading dock</li> <li>• about 12 spaces along the western side of Great North Road between the midblock crossing and Second Avenue to accommodate the new bus stops</li> <li>• about two spaces along the southern side of Second Avenue west of Waterview Street to accommodate new kiss and ride zone</li> <li>• about five spaces on Second Avenue between Great North Road and Waterview Street to accommodate new kiss and ride zone</li> <li>• about three spaces on Waterview Street to accommodate new kiss and ride zone</li> <li>• about two spaces on Garfield Street to accommodate new kiss and ride zone.</li> </ul>	<p>In addition to the parking spaces that would be permanently removed, there may be short-term closures (for around a few months) of some on-street parking spaces in the following locations during construction of this proposal to facilitate precinct construction works (i.e. to construct new pedestrian and interchange facilities):</p> <ul style="list-style-type: none"> <li>• Great North Road</li> <li>• East Street</li> <li>• Second Avenue</li> <li>• Waterview Street</li> <li>• Garfield Street.</li> </ul>	<p>The current use of the parking spaces proposed to be removed would likely be associated with nearby residential and business areas.</p> <p>The following sections of the Environmental Impact Statement provide an assessment of potential social and business impacts as a result of parking changes at Five Dock Station:</p> <ul style="list-style-type: none"> <li>• Section 12.12.2 for social impacts during operation</li> <li>• Section 12.12.3 for social impacts during construction</li> <li>• Section 12.13.2 for local business impacts during operation</li> <li>• Section 12.13.3 for local business impacts during construction.</li> </ul>
The Bays Station	<p>The following on-street parking spaces would be permanently removed as part of this proposal:</p> <ul style="list-style-type: none"> <li>• about 72 spaces on Robert Street east of Mullens Street to accommodate the proposed new precinct street / Robert Street intersection.</li> </ul>	<p>In addition to the parking spaces that would be permanently removed, there may be some additional on-street parking spaces impacted by short-term closures (for around a few months) along Robert Street to facilitate construction works for the new precinct street / Robert Street intersection.</p>	<p>The current use of the parking spaces proposed to be removed would likely be associated with nearby business areas.</p> <p>The following sections of the Environmental Impact Statement provide an assessment of potential social and business impacts as a result of parking changes at The Bays Station:</p> <ul style="list-style-type: none"> <li>• Section 13.12.2 for social impacts during operation</li> <li>• Section 13.12.3 for social impacts during construction</li> <li>• Section 13.13.2 for local business impacts during operation</li> <li>• Section 13.13.3 for local business impacts during construction.</li> </ul>

Station precinct	Permanent parking impacts	Temporary parking impacts (during construction)	Reference to discussion of social and business impacts
<p>Pymont Station</p>	<p>The following on-street parking spaces would be permanently removed as part of this proposal:</p> <ul style="list-style-type: none"> <li>• about two spaces located on Pymont Street</li> <li>• about one space located on Union Street, fronting the proposed eastern station entry</li> <li>• about four spaces located on Edward Street.</li> </ul>	<p>In addition to the parking spaces that would be permanently removed, there would also be the following temporary on-street parking impacts during construction of this proposal:</p> <ul style="list-style-type: none"> <li>• removal of about 27 spaces and a loading zone both sides of Union Street between Pymont Street and Pymont Bridge Road (continued impact from previous Sydney Metro West planning application)</li> <li>• short-term closures (for around a few months) of some spaces on Pymont Street to facilitate construction of the new kiss and ride zone.</li> </ul>	<p>The current use of the parking spaces proposed to be removed would likely be associated with nearby residential and business areas.</p> <p>The following sections of the Environmental Impact Statement provide an assessment of potential social and business impacts as a result of parking changes at Pymont Station:</p> <ul style="list-style-type: none"> <li>• Section 14.12.2 for social impacts during operation</li> <li>• Section 14.12.3 for social impacts during construction</li> <li>• Section 14.13.2 for local business impacts during operation</li> <li>• Section 14.13.3 for local business impacts during construction.</li> </ul>
<p>Hunter Street Station (Sydney CBD)</p>	<p>There would be no permanent impacts to parking at Hunter Street Station (Sydney CBD).</p>	<p>There would be the following temporary on-street parking impacts during construction of this proposal:</p> <ul style="list-style-type: none"> <li>• removal of some spaces on Hunter Street and O'Connell Street (continued impact from previous Sydney Metro West planning application)</li> <li>• extension of duration of the existing restrictions on the parking lane on the northern side of Hunter Street (continued impact from previous Sydney Metro West planning application).</li> </ul>	<p>The current use of the parking spaces proposed to be removed would likely be associated with nearby business areas.</p> <p>The following sections of the Environmental Impact Statement provide an assessment of potential social and business impacts as a result of parking changes at Hunter Street Station (Sydney CBD):</p> <ul style="list-style-type: none"> <li>• Section 15.12.2 for social impacts during operation</li> <li>• Section 15.12.3 for social impacts during construction</li> <li>• Section 15.13.2 for local business impacts during operation</li> <li>• Section 15.13.3 for local business impacts during construction.</li> </ul>

### 2.13.6 Revised Sydney Metro management frameworks and guidelines

#### Construction Environmental Management Framework

Since exhibition of the Environmental Impact Statement, Sydney Metro has made amendments to the CEMF that was presented as Appendix F of the Environmental Impact Statement. These amendments include minor updates regarding heritage management, and a new dedicated chapter on contamination management. Minor changes to Appendix B (Standard mitigation measures) of the CEMF were also included to improve clarity of the intent of the mitigation measures. The updated framework is provided in Appendix I (CEMF).

#### Construction Traffic Management Framework

Since the exhibition of the Environmental Impact Statement and in consultation with Transport for NSW, Sydney Metro has made minor amendments to the Sydney Metro CTMF that was presented as Appendix G of the Environmental Impact Statement. These minor amendments are included as an Addendum to the CTMF and include agency name changes and an updated Construction Traffic Management Plan approval flowchart. The updated framework is provided in Appendix J (CTMF).

#### Construction Noise and Vibration Standard

Since the exhibition of the Environmental Impact Statement, Sydney Metro has made minor amendments to the Sydney Metro CNVS that was presented as Appendix K of the Environmental Impact Statement. This has included:

- further clarification regarding the purpose and scope of the CNVS
- more detail around the avenues for approval of works outside standard construction hours
- an update to the current relevant standards throughout, where previous standards have been superseded, and inclusion of relevant requirements from the Transport for NSW *Construction Noise and Vibration Management Strategy* (Transport for NSW, 2019)
- provision of additional information to assist in the preparation of Detailed Noise and Vibration Impact Statements and General Noise and Vibration Impact Statements
- alignment of additional noise and vibration mitigation measures with the Overarching Community Communications Strategy (OCCS)
- additional references to Sydney Metro forms and strategies where required.

The updated standard is presented as Appendix K (CNVS).

#### Heritage Interpretation Strategy

The draft Heritage Interpretation Strategy for this proposal was exhibited as Appendix K (Draft Heritage Interpretation Strategy) of the Environmental Impact Statement. Since the exhibition of the draft, Sydney Metro has finalised the Heritage Interpretation Strategy. The final Heritage Interpretation Strategy includes additional information about themes and stories and additional station specific recommendations in response to consultation with the Sydney Metro West Connect with Country Working Group and feedback from councils. The final Heritage Interpretation Strategy is provided in Appendix L (Heritage Interpretation Strategy).

#### Design Guidelines

Since the exhibition of the Environmental Impact Statement and in consultation with stakeholders, Sydney Metro has made minor amendments to the station and precinct Design Guidelines that were presented as Appendix E (Design Guidelines) of the Environmental Impact Statement. These amendments include updates to reflect the clarifications described in this Submissions Report, and refinements to urban design strategies and figures to respond to feedback from local councils and other stakeholders (such as Sydney Olympic Park Authority). The updated Design Guidelines are presented as Appendix M (Design Guidelines).

#### Overarching Community Communications Strategy

Since the exhibition of the Environmental Impact Statement, Sydney Metro has made minor amendments to the OCCS that was presented as Appendix C of the Environmental Impact Statement. These minor amendments include stakeholder and agency name changes, terminology changes and alignment with conditions of approval requirements (for the previous Sydney Metro West planning applications). The updated strategy is provided in Appendix N (OCCS).

As part of stakeholder feedback received on the previous Sydney Metro West planning application (Stage 2 of the planning approval process), the OCCS has also included additional information regarding the preparation of Community Communication Strategies and Small Business Owners Engagement Plans, to manage potential social impacts during construction.

Community Communication Strategies would be prepared in accordance with the Sydney Metro OCCS and would identify affected communities, including vulnerable or marginalised groups for each site. The Community Communications Strategies would be informed by engagement with directly affected communities and stakeholders to identify site-specific issues and develop tailored mitigation measures. It would also consider cumulative impacts at each site and outline the approach to managing cumulative impacts. The Community Communication Strategies would be subject to periodic evaluation during construction, where mitigation measures would be reviewed for appropriateness and lessons learnt would be considered.

Sydney Metro have also updated Table 7-15 Social impact summary – construction, which was provided in Technical Paper 9 (Social impacts) of the Environmental Impact Statement. This table has been updated to include specific references to the Community Communications Strategies as proposal specific management strategies (where relevant) to mitigate potential impacts to people during construction. This is provided in Appendix O (Social impacts – revised construction mitigation and management).

This has resulted in the addition of one mitigation measure, to manage potential social impacts during construction through the implementation of Community Communications Strategies (refer to Section 2.14).

The updates to the OCCS also set out the requirements for a Small Business Owners Engagement Plan, to provide assistance if required to small business owners located near to Sydney Metro construction sites, where they may be potentially impacted by construction activities. Sydney Metro activities to support to eligible businesses may include:

- small business education and mentoring
- activation events
- business engagement events
- marketing and promotion.

Appendix N (OCCS) has also been updated to include specific references to Small Business Owners Engagement Plan as proposal specific management strategies (where relevant) to mitigate potential impacts to people during construction.

## 2.14 Changes to or additional mitigation measures

Environmental management for this proposal would be undertaken through the environmental management approach as detailed in Chapter 20 (Synthesis) of the Environmental Impact Statement. This includes operational and construction mitigation measures (where relevant) and performance outcomes for the operation and construction of this proposal.

The assessment carried out for the clarifications, and the response to submissions process, has identified the need for some additional mitigation measures and adjustments to the wording of some existing measures. These additional and revised measures are included in Table 2-8.

Mitigation measures which have been added since exhibition of the Environmental Impact Statement are presented in orange shading. Additions to existing mitigation measures are shown in **bold** text, with deletions shown with a ~~strike through~~.

A complete list of mitigation measures for this proposal, including the revised and additional measures, is provided in Appendix C (Revised mitigation measures).

Table 2-8 Revised or additional mitigation measures

Reference	Impact/issue	Mitigation measure	Applicable location(s) <sup>1</sup>
<b>Transport – operation</b>			
EIS-TT3	Impacts to parking	Measures to address potential parking impacts arising from a loss of on-street parking in the vicinity of station precincts, as well as due to potential park and ride in residential streets would be developed, where required, in consultation with relevant local councils. <b>This could include:</b> <ul style="list-style-type: none"> <li>identifying opportunities to minimise potential parking loss during detailed design where possible, having regard to the Sydney Metro modal access hierarchy (e.g. kiss and ride spaces being available for general parking outside of the AM and PM peak periods)</li> <li>detailed interchange access planning including consideration of any local council initiated residential parking schemes.</li> </ul>	WMS, PMS, SOPMS, NSMS, BNS, FDS, TBS, PS
EIS-TT8	Pedestrian access	The need for pedestrian crossing facilities at the Robert Street / new precinct street and new precinct street / Port Access Road intersections would be investigated in consultation with <b>Transport for NSW</b> , Inner West Council, and NSW Department of Planning and Environment <b>and Port Authority of NSW</b> .	TBS
EIS-TT9	Future road network performance	The potential signalisation of the Robert Street / Mullens Street intersection to improve future year level of service would be investigated in consultation with <b>Transport for NSW</b> , Inner West Council, NSW Department of Planning and Environment <b>and Port Authority of NSW</b> .	TBS
EIS-TT12	Pedestrian crossing provision at Bligh Street / Hunter Street intersection	Widening of selected pedestrian crossings <b>and/or changes to signal phasing</b> at the Bligh Street / Hunter Street intersection to accommodate future pedestrian demands would be investigated in consultation with City of Sydney Council and Transport for NSW.	HSS
<b>Noise and vibration – operation</b>			
EIS-NV4	Potential airborne and ground-borne noise	An Operational Noise and Vibration Review would be prepared during design development to confirm the mitigation measures required to manage: <ul style="list-style-type: none"> <li>airborne and ground-borne noise and vibration impacts from rail operations</li> <li>airborne noise impacts from the stabling and maintenance facility</li> <li>airborne noise impacts from fixed industrial sources, including stations and services facilities.</li> </ul> The NSW Environment Protection Authority would be consulted during preparation of the Operational Noise and Vibration Review.	All
<b>Noise and vibration – construction</b>			
<del>EIS-NV4</del> EIS-NV5	Noise impacts to horses at Rosehill Racecourse Stables	Consultation with the owners and operators of the horse stables near the Clyde stabling and maintenance facility construction site would be carried out so that potential impacts to horses are appropriately managed.	CSMF

Reference	Impact/issue	Mitigation measure	Applicable location(s) <sup>1</sup>
<b>Non-Aboriginal heritage – operation</b>			
EIS-NAH8	Archaeology	An addendum to the existing Archaeological Research Design/s or a new Archaeological Research Design/s would be prepared to identify the excavation methodology for predicted locally significant non-Aboriginal archaeological remains for the additional footprint area at The Bays Station construction site. <b>This would include provision for the early investigation of areas where the ‘White Bay Power Station (Inlet) Canal’ may potentially be impacted within the additional footprint area.</b> Archaeological mitigation measures recommended in the Archaeological Research Design would be carried out in accordance with Heritage NSW guidelines, and where appropriate, supervised by a suitably qualified Excavation Director with experience in managing locally significant archaeology.	TBS
<b>Landscape and visual amenity – operation</b>			
EIS-LV1	Landscape impacts	The landscape design for the project <b>this proposal</b> would incorporate appropriate species to achieve year round flowering and support urban biodiversity.	All
EIS-LV2	Landscape impacts	The landscape design for the project <b>this proposal</b> would consider the effects of climate change on the long-term viability of urban tree health and longevity.	All
EIS-LV3	Landscape impacts	The landscape design for the project <b>this proposal</b> would consider opportunities to incorporate local native plant species identified in consultation with the traditional owners of the site where possible.	All
EIS-LV14	Visual impacts	The <del>water treatment building</del> <b>aboveground services infrastructure building located adjacent to James Ruse Drive</b> would be designed to minimise its mass and scale and have a high-quality architectural form and finish.	CSMF
<b>Social impacts – construction</b>			
EIS-S2	Potential impacts on school infrastructure	Ongoing engagement would be undertaken with NSW Department of Education <b>and other affected schools</b> to continue to investigate feasible and reasonable mitigation measures related to construction traffic, pedestrian safety, construction noise and vibration, and air quality.	WMS, PMS, NSMS, BNS, FDS
EIS-S4	Social impacts	<b>Community Communications Strategies would be prepared in accordance with the Sydney Metro West Overarching Community Communications Strategy. The Community Communications Strategies would identify affected communities, including vulnerable or marginalised groups and outline site-specific and proportionate mitigation measures to manage construction impacts (including cumulative impacts). This would be informed by engagement with directly affected communities and stakeholders and would be monitored and reviewed in accordance with the Sydney Metro West Overarching Community Communications Strategy to consider the appropriateness of mitigation measures and lessons learnt.</b>	All

Reference	Impact/ issue	Mitigation measure	Applicable location(s) <sup>1</sup>
<b>Property – operation</b>			
EIS-P1	Future use of residual land	The future use of residual land around the Clyde stabling and maintenance facility and Rosehill services facility would be determined in consultation with City of Parramatta Council, <del>and</del> the NSW Department of Planning and Environment <b>and other relevant stakeholders</b> , taking into account the existing zoning of the land, the nature of surrounding uses, the recreational needs of the local population, and the necessary work and remediation to make the land suitable for potential public use.	CSMF, RSF
<b>EIS-P2</b>	<b>Landscape masterplan for Clyde-Rosehill</b>	<b>A landscape masterplan for the Clyde-Rosehill precinct would be prepared by Sydney Metro, in consultation with the City of Parramatta Council, the NSW Department of Planning and Environment and other relevant stakeholders. The landscape masterplan would apply the relevant principles and guidelines set out in the Sydney Metro West Design Guidelines and identify how the facility would integrate with the master planning work for the Camellia-Rosehill precinct.</b>	<b>CSMF, RSF</b>

## Notes:

1. WMS: Westmead metro station; PMS: Parramatta metro station; SOPMS: Sydney Olympic Park metro station; NSMS: North Strathfield metro station; BNS: Burwood North Station; FDS: Five Dock Station; TBS: The Bays Station; PS: Pyrmont Station; HSS: Hunter Street Station (Sydney CBD); CSMF: Clyde stabling and maintenance facility; RSF: Rosehill services facility

## 3.0 Stakeholder and community engagement

This chapter outlines community and stakeholder engagement carried out to support exhibition of the Environmental Impact Statement for this proposal, and the future consultation proposed for Sydney Metro West.

### 3.1 Consultation overview

Stakeholder and community consultation is an integral part of the development of Sydney Metro West, including during the preparation and exhibition of the Environmental Impact Statement. Sydney Metro has an Overarching Community Communications Strategy (OCCS) that guides consultation and engagement processes and systems across the project life cycle of Sydney Metro West. A copy of the strategy is provided in Appendix N (Overarching Community Communications Strategy).

Sydney Metro has been engaging with the community, stakeholders, and industry since 2017 on Sydney Metro West. Feedback gathered has helped shape the project, including station locations. Sydney Metro will continue to work with the community and stakeholders as the project progresses. Sydney Metro's approach to consultation and engagement, and activities carried out to inform project development is discussed in Chapter 3 (Stakeholder and community engagement) of the Environmental Impact Statement.

Consultation proactively sought feedback and comments on Sydney Metro West through different forums and channels, to inform the development phase and the scope of issues to be assessed as part of the environmental assessment process.

Public exhibition of the Environmental Impact Statement commenced in March 2022. Sydney Metro offered a range of engagement options including digital engagement and community information sessions, to ensure the public and stakeholders could learn about the project, have their questions answered and understand how to have their say while the Environmental Impact Statement was on exhibition. The Environmental Impact Statement adopted a precinct-based approach to the environmental assessment of construction and operational impacts, which allowed the community to easily access location-specific information of interest to them.

The digital engagement approach included updating the existing Sydney Metro West interactive portal and engaging with communities and businesses through a program of proactive stakeholder outreach. Section 3.2 further outlines the engagement approach.

Sydney Metro will continue to work with stakeholders (including local communities) so that they are informed and have opportunities to provide feedback during each stage of the project. Section 3.3 further outlines the approach to ongoing consultation and engagement.

### 3.2 Consultation to support the Environmental Impact Statement exhibition

#### 3.2.1 Public exhibition of the Environmental Impact Statement

The Environmental Impact Statement was placed on public exhibition by the Department of Planning and Environment for an extended period, from 23 March to 4 May 2022, to provide the community with additional time to review the information, have their questions answered by Sydney Metro and, if they chose, prepare and make a submission to the Department of Planning and Environment.

The Environmental Impact Statement was made publicly available on the Department of Planning and Environment's Major Projects website (<https://pp.planningportal.nsw.gov.au/major-projects/projects/sydney-metro-west-rail-infrastructure-stations-precincts-and-operations>), and an online interactive portal ([www.sydneymetro.info/metrowest](http://www.sydneymetro.info/metrowest)). The Environmental Impact Statement was also publicly displayed at Customs House Library in the Sydney CBD, and the City of Sydney Glebe Library.

#### 3.2.2 Consultation activities

The following consultation activities were carried out to support public exhibition of the Environmental Impact Statement:

- virtual community engagement
- stakeholder briefings
- community information sessions, stalls and events
- letterbox drops and door knocking

- newspaper advertisements
- static displays in local shopping centres
- translated summary materials
- phone calls and emails.

### 3.2.3 Community contact and information points

The community contact and information channels established for Sydney Metro West since 2017 (as outlined in Table 3-1) were in place during the exhibition of the Environmental Impact Statement for this proposal and will remain in place for the remainder of the planning approval process.

**Table 3-1 Community contact and information points**

Activity	Details
Community information line (toll free)	1800 612 173
Community email address	<a href="mailto:sydneymetrowest@transport.nsw.gov.au">sydneymetrowest@transport.nsw.gov.au</a>
Sydney Metro website	<a href="http://www.sydneymetro.info">www.sydneymetro.info</a>
Sydney Metro West interactive portal	<a href="http://www.sydneymetro.info/metrowest">www.sydneymetro.info/metrowest</a>
Postal address	Sydney Metro West, PO Box K659, Haymarket NSW 1240
Direct contact	Sydney Metro West place managers via phone, email or door knocking
Facebook page	<a href="http://www.facebook.com/sydneymetro">www.facebook.com/sydneymetro</a>

### 3.2.4 Virtual community engagement

Sydney Metro incorporated the following virtual engagement tools during the exhibition period:

- interactive portal
- virtual information room.

#### Interactive portal

Sydney Metro launched an interactive portal to provide an informative and accessible way for the community to view and access the Environmental Impact Statement and other relevant project information. Community members were able to explore interactive maps and learn what to expect from the project in their area, with a 'search address' function allowing visitors to view the proximity of their property or business to the proposed construction sites and indicative tunnel alignment. The portal displays information from the Environmental Impact Statement, helping to depict key impacts and activities the community would see in their local area during construction and operation of this proposal. There were over 6,000 visits to the interactive portal during the exhibition period.

Using a multimedia platform that could be translated into a number of languages, the approach was intended to be informative, relevant and accessible. The portal has the ability to reach people of all backgrounds including culturally and linguistically diverse communities and people who may normally have difficulty in participating in the engagement of major projects. An image of the interactive portal is provided in Figure 3-1.

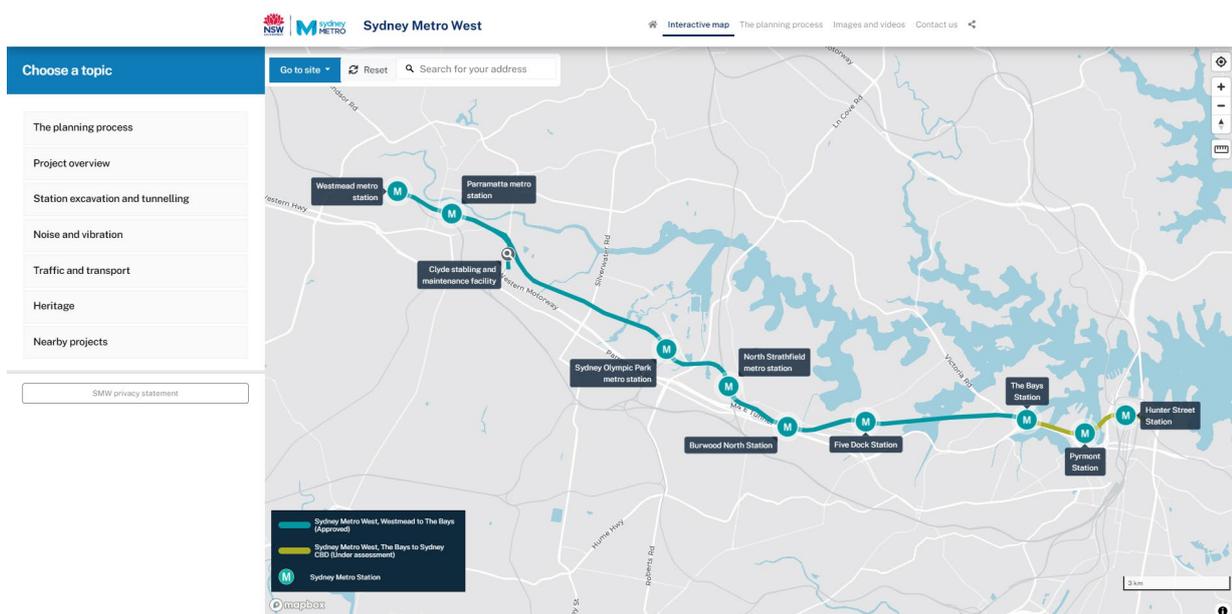


Figure 3-1 Interactive portal

**Virtual information room**

The interactive portal was also used to host a virtual information room. The virtual information room gave the community and stakeholders the opportunity to virtually ‘walk around’, read information boards and hear from experts, just as they would at a traditional community information session. A key feature of the virtual information room was a series of videos featuring project experts explaining the more complex aspects of this proposal including the planning process and placemaking, and were intended to address community questions. The virtual engagement room hosted about 5,500 visitors during public exhibition of the Environmental Impact Statement. An image of the virtual information room is provided in Figure 3-2.

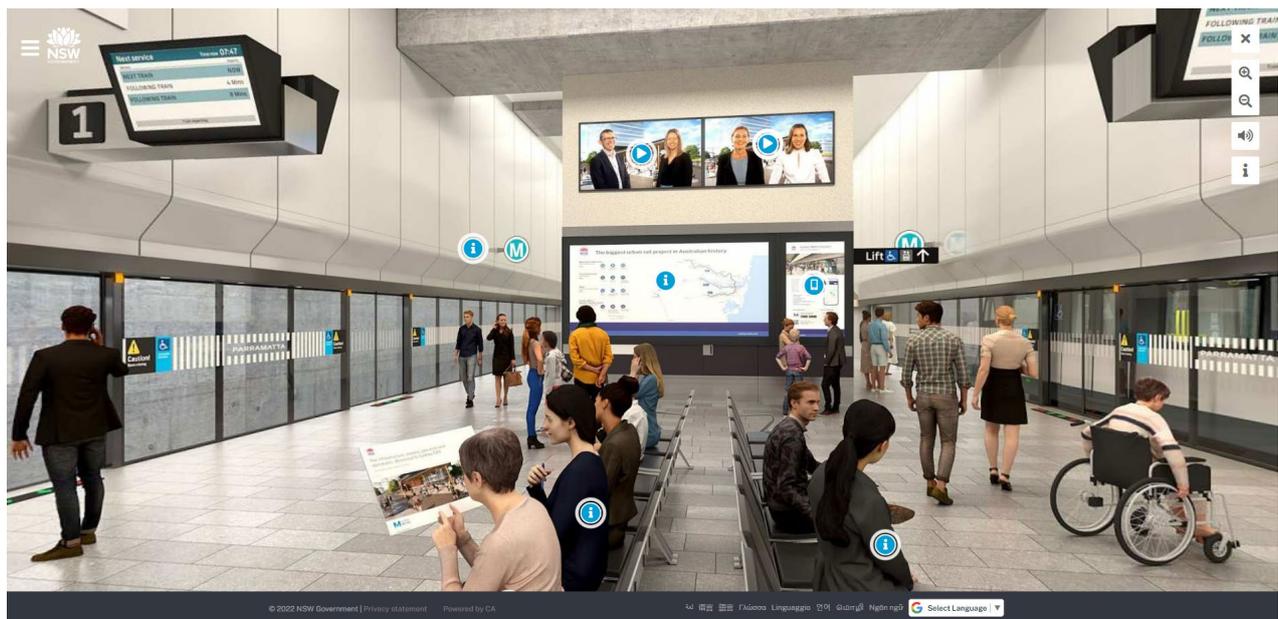


Figure 3-2 Virtual information room

### 3.2.5 Community information sessions

The Sydney Metro West team hosted a series of community information sessions, where displays and information about the Environmental Impact Statement were available.

Members of the community were invited to attend these sessions, to meet expert members of the Sydney Metro West team and have any questions answered. Visitors were not required to make a booking and were able to drop in anytime within the advertised periods.

Translating and interpreting services were also available at several information sessions to cater for the linguistically diverse community, including Mandarin interpreters at Concord and Westmead, as well as Italian and Greek at Five Dock.

There was a total of 92 visitors at the four community information sessions held along the Sydney Metro West alignment. Table 3-2 outlines the date, time, location, and number of attendees at each community information session.

**Table 3-2 Community information sessions**

Date and time	Location	Attendees
Thursday 31 March 2022, 4pm – 7pm	Five Dock Library: 4-12 Garfield Street, Five Dock	55
Monday 11 April 2022, 4pm – 7pm	Pymont Community Centre: 79A John St, Pymont	17
Tuesday 12 April 2022, 4pm – 7pm	One Hotels and Apartments: 175 Hawkesbury Road, Westmead	4
Wednesday 20 April 2022, 4pm – 7pm	Concord Community Centre: 1A Gipps St, Concord	16

People were made aware of the sessions through the following materials/tools:

- letterbox notifications
- emails
- Sydney Metro website
- Sydney Metro Connect App
- place manager outreach including phone calls, emails and door knocking
- social media posts.

At the information sessions, copies of the Environmental Impact Statement and summary booklet (described in Section 3.2.9), and information boards were available for visitors to view. Project newsletters, contact cards and fridge magnets were also available for visitors to take away.

Several information boards were presented around the room, such as an overview of Sydney Metro West, an overview of the proposed stations and operational precincts within the vicinity of the information session location, and the construction process.

The display also featured videos about this proposal (played on repeat), including videos featuring project experts explaining the more complex aspects of this proposal, such as the planning process and placemaking. These videos were also made available in the virtual information room (refer to 3.2.4 for further detail).

### 3.2.6 Community information stalls

The Sydney Metro West team hosted four community information stalls at community markets and in public squares, as outlined in Table 3-3. These were attended by 307 visitors.

Printed copies of the Environmental Impact Statement and summary booklet (described in Section 3.2.9) were available for visitors to view. Project newsletters, contact cards and fridge magnets were also available for visitors to take away.

**Table 3-3 Information stalls**

Date and time	Location	Attendees
Wednesday 30 March, 7:30am – 2:30pm	Parramatta Westfield: southern underground walkway to Parramatta Station	40
Sunday 3 April, 8:30am – 12:30pm	Concord Farmers Market: Cintra Park carpark, Concord	130
Thursday 7 April, 4pm – 7pm	Fred Kelly Place, Five Dock	10
Saturday 23 April, 9am – 3pm	Rozelle Collectors Market: 663 Darling Street, Rozelle	110
Wednesday 27 April, 3pm – 6pm	North Strathfield Station: Queen Street	17

### 3.2.7 Stakeholder briefings

Local government, NSW government agencies, peak bodies and industry associations were briefed via emails, phone calls, and via virtual meetings before and during the exhibition period. The briefings were designed to ensure stakeholders were appropriately informed about the Environmental Impact Statement and received the relevant information to make a submission.

Table 3-4 lists the stakeholders who were contacted and/or briefed before and during the exhibition period for the Environmental Impact Statement.

**Table 3-4 Stakeholders briefed/contacted to support public exhibition**

Agency group/type	Stakeholders briefed/contacted
NSW government agencies	<ul style="list-style-type: none"> <li>• Department of Planning and Environment, including the following teams: <ul style="list-style-type: none"> <li>- Greater Parramatta Growth Area</li> <li>- Eastern Harbour City</li> <li>- Biodiversity Conservation Division</li> <li>- Bays West Place Strategy</li> </ul> </li> <li>• NSW Environment Protection Authority</li> <li>• NSW State Emergency Services</li> <li>• Port Authority of NSW</li> <li>• Schools Infrastructure NSW</li> <li>• Sydney Olympic Park Authority</li> <li>• Heritage NSW</li> <li>• Heritage Council of NSW</li> <li>• Other parts of Transport for NSW</li> </ul>
Public authorities	<ul style="list-style-type: none"> <li>• Cumberland City Council</li> <li>• City of Parramatta Council</li> <li>• City of Canada Bay Council</li> <li>• Burwood Municipal Council</li> <li>• Inner West Council</li> <li>• City of Sydney Council</li> </ul>
Key stakeholders	<ul style="list-style-type: none"> <li>• The McDonald College</li> <li>• Our Lady of the Assumption Catholic Primary School</li> <li>• Australian Turf Club</li> <li>• Brookfield Property Group</li> </ul>

Following the close of the exhibition period, meetings were carried out with the stakeholders in Table 3-5. These meetings were held to:

- discuss some of the issues raised by the stakeholders
- provide further information relating to this proposal
- consult with stakeholders about some of the clarifications described in Chapter 2 (Environmental Impact Statement clarifications) of this Submissions Report.

**Table 3-5 Stakeholders met with following the close of the exhibition period**

Agency group/type	Stakeholders briefed/contacted
NSW government agencies	<ul style="list-style-type: none"> <li>• Environment Protection Agency</li> <li>• Heritage NSW</li> <li>• Department of Planning and Environment</li> <li>• Port Authority of NSW</li> <li>• Sydney Olympic Park Authority</li> </ul>
Public authorities	<ul style="list-style-type: none"> <li>• City of Sydney Council</li> <li>• Inner West Council</li> <li>• Burwood Council</li> <li>• Canada Bay Council</li> <li>• City of Parramatta Council</li> <li>• Cumberland City Council</li> </ul>
Key stakeholders	<ul style="list-style-type: none"> <li>• The McDonald College</li> <li>• Australian Turf Club</li> </ul>

### 3.2.8 Place managers

Sydney Metro West's place managers play a vital role in building and maintaining strong relationships with local communities and businesses during the planning and delivery of the project. Their key role is to engage with the community, address concerns and provide accurate and transparent information to ensure the community's understanding of the project and any potential impacts.

At the start of the Environmental Impact Statement exhibition, place managers cards were delivered to residents and businesses close to each construction site. Place managers also reached out to community members, businesses, councils, schools, adjoining projects and community groups via phone calls, email and door knocks to inform them of the exhibition, to answer questions and to encourage them to make a submission. Place managers maintained regular contact with community members throughout the exhibition period. Project subject matter experts were also available to attend both in person and virtual briefings as required. Place managers also responded to questions, provided assistance in locating relevant information in the Environmental Impact Statement and provided sections of the Environmental Impact Statement on request.

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 West.

Place managers can be contacted via the community information line (1800 612 173) or project email ([sydneymetrowest@transport.nsw.gov.au](mailto:sydneymetrowest@transport.nsw.gov.au)).

### 3.2.9 Engagement materials

The following tools and materials were developed to engage with stakeholders and support the exhibition of the Environmental Impact Statement including:

- newspaper advertisements
- phone calls and emails
- community information sessions, stalls and events
- e-newsletter alerts to the project mailing list
- interactive portal
- virtual engagement room
- Sydney Metro website
- letterbox drops
- social media
- Environmental Impact Statement summary booklet
- translated summary materials
- printed copies of the Environmental Impact Statement
- project information magnets.

## Advertising

Advertisements were placed in various newspaper outlets to promote the Environmental Impact Statement exhibition period. Table 3-6 outlines the full list of newspaper advertisements.

**Table 3-6 Newspaper advertisements**

Media outlet	Date	Circulation/printed copies
Sydney Morning Herald	24 March 2022	191,000
Sydney Korean Herald	25 March 2022	31,000
Indian Link	3 April 2022	18,000
Australian Chinese Daily	26 March 2022	50,000
Chieu Duong	26 March 2022	37,000
La Fiamma	28 March 2022	26,000
An Nahar	31 March 2022	48,000
City Hub	14 April 2022	30,000
Parra News	29 March 2022	7,000

## E-newsletters and letterbox drops

During the exhibition period, an email alert with an e-newsletter titled “Sydney Metro West Project Update” was sent to more than 19,000 community members registered on the Sydney Metro West project database. The email advised of the Environmental Impact Statement exhibition dates and encouraged recipients to visit the project website for more information.

A follow-up email titled “reminder to have your say on plans for Sydney Metro West Stations before 4 May” was sent out to the 19,000 community members registered on the project database on 21 April 2022 to encourage them to review the project information and to make a submission.

Letterbox drops to over 52,000 properties and businesses near proposed construction sites and the tunnel alignment took place, with the newsletter: “Rail infrastructure, stations, precincts and operations – Environmental Impact Statement”. A project newsletter was distributed to 52,000 properties and businesses along the corridor including information on how to contact Sydney Metro and make a submission. Two emails were also distributed to 19,000 community members along the project corridor to notify them of the exhibition and remind them to have their say. The newsletter provided a snapshot of the key features of the Environmental Impact Statement, including contact details for Sydney Metro West and outlined how the community could have their say on the project by making a submission via the Department of Planning and Environment Major Projects website.

To cater for the culturally and linguistically diverse community, the newsletter was translated into seven local languages, including Simplified Chinese, Traditional Chinese, Vietnamese, Arabic, Korean, Italian and Hindi.

## Environmental Impact Statement summary booklets

An A3 size full colour summary booklet of the Environmental Impact Statement was created to provide a summary of the information in the Environmental Impact Statement. The booklet was downloaded 114 times from the interactive portal and Sydney Metro website, and made available at community information sessions and markets. A QR code linking to the book was also made available on project newsletters. All documents, including individual Environmental Impact Statement chapters and Technical Papers, were available to download online via the interactive portal.

A print-on-demand service was made available to community members who did not have online access or preferred to access the information via hard-copy. Hard-copy Environmental Impact Statement chapters and translated newsletters were mailed to community members on request.

## Sydney Metro website

The Sydney Metro website was regularly updated with detailed project information throughout the exhibition period. The website provided a link to the interactive portal and downloadable documents, including the Environmental Impact Statement summary booklet and newsletter.

The Sydney Metro West web page received over 12,400 page views throughout the exhibition period.

### 3.3 Ongoing consultation and engagement

#### 3.3.1 Submissions Report

Sydney Metro has submitted this Submissions Report to the Department of Planning and Environment. The report has been made publicly available on the Department of Planning and Environment's website.

Government agencies, project stakeholders and the community will be able to review the report online. The Department of Planning and Environment will review the Submissions Report as part of their assessment of the Environmental Impact Statement.

Sydney Metro is notifying the community about the Submissions Report via the following communication channels:

- direct emails to community members and stakeholders
- key stakeholder briefings
- updates on the Sydney Metro website and interactive portal
- stakeholder outreach by place managers.

#### 3.3.2 Approval of this proposal

If this proposal is approved, the conditions of approval will be placed on the Department of Planning and Environment's website.

Communication tools used to assist the community in their understanding of the approval may include:

- emails and/or newsletters to the community
- Sydney Metro website and interactive portal updates
- stakeholder outreach by place managers.

#### 3.3.3 Ongoing consultation and engagement activities

Sydney Metro will continue to work with stakeholders (including local communities) so that they are informed about this proposal and have opportunities to provide feedback during each stage of the project.

Sydney Metro recognises the diverse engagement and information needs of the community and stakeholders and is committed to robust and transparent engagement processes that are inclusive in nature.

A list of indicative consultation and engagement activities and their timing is provided in Table 3-7.

**Table 3-7 Ongoing consultation and engagement activities (indicative)**

Activity	Timing
Awareness and marketing campaign to engage future customers	Ongoing
Community events	Ongoing
Community information sessions, in person (pending public health order restrictions) and/or virtually	As required
Community Communications Strategy	Prior to construction
Construction complaints management system	Prior to construction
Construction notifications	Seven days prior to construction
Door knocking	As required
Email updates/e-newsletters	Relevant milestones
Enquiries and complaints hotline	Ongoing
Fact sheets	As required
Engagement with stakeholders including government, peak bodies and local businesses	As required; relevant milestones
Interactive portal	Ongoing
Media releases	Relevant milestones

Activity	Timing
Newsletter	Relevant milestones
Newspaper advertising	Relevant milestones
Online webinars, meetings and forums	As required
Place managers	Ongoing
Project briefings in person (pending public health order restrictions) and virtually	Relevant milestones
Project overview document	Relevant milestones
Site signage	Ongoing
Social media updates	As required; relevant milestones
Sydney Metro Connect mobile application push notifications	As required
Virtual information room	Relevant milestones
Website and online forums	Ongoing

Should this proposal be approved, Sydney Metro will also specifically consult with stakeholders to fulfil mitigation measures outlined in this Submissions Report and conditions of approval (where appropriate). These consultation activities are identified in the relevant mitigation measures in Appendix C (Revised mitigation measures).

#### 3.3.4 Consultation and complaints during construction

The Sydney Metro OCCS (Appendix N) sets the requirements for community and stakeholder engagement to be carried out by delivery partners. Contract specific Community Communication Strategies will be developed by appointed project delivery communication teams to address contract and site-specific needs of the community, stakeholders and businesses during construction, and reflect the requirements of the OCCS. The contract specific Community Communications Strategies will also adhere to any requirements identified in any relevant conditions of the planning approval.

Contractors will be required to adhere to a Construction Complaints Management System which will outline the framework for managing complaints, enquiries and escalation processes throughout the project lifecycle.

## 4.0 Analysis of submissions

This chapter provides a summary of the submissions received during public exhibition of the Environmental Impact Statement, including a breakdown of the types of submitters, the number of submissions received, and key issues raised in submissions.

### 4.1 Submissions received

During the Environmental Impact Statement exhibition period, submissions were invited from the community and other stakeholders. The receipt of submissions was coordinated and managed by the Department of Planning and Environment.

A total of 71 submissions, including from public authorities, key stakeholders, individual community members, community interest groups and organisations, were received by the Department during the exhibition period. A breakdown of submissions by submitter type is provided in Table 4-1.

**Table 4-1 Breakdown of submissions received**

Submitter type	Number of submissions
<b>Community</b>	
Community members	48
Businesses	1
Community and interest groups	7
Members of Parliament	1
<b>Subtotal</b>	<b>57</b>
<b>Public authority and key stakeholders</b>	
Councils	7
Key stakeholders	7
<b>Subtotal</b>	<b>14</b>
<b>Total submissions</b>	<b>71</b>

In addition to these submissions, 11 government agencies provided advice to the Department of Planning and Environment during this time (refer to Section 4.1.3). The submissions and government agency advice are available to be viewed on the Department of Planning and Environment website: <https://pp.planningportal.nsw.gov.au/major-projects/projects/sydney-metro-west-rail-infrastructure-stations-precincts-and-operations>

#### 4.1.1 Community and key stakeholder submissions

##### Community submissions

A total of 57 submissions were received from members of the community, including those from individual community members, community interest groups and organisations.

For the 57 community submissions, a breakdown of the submitters' location (where provided) is summarised in Table 4-2.

**Table 4-2 Submitter locations for community submissions**

Location (local government area)	Number of community submitters from location
Cumberland	4
Parramatta	6
Canada Bay	25
Strathfield	1
Burwood	6

Location (local government area)	Number of community submitters from location
Inner West	7
Sydney	2
Outside of this proposal area	6

### Key stakeholder submissions

A total of seven submissions were received from key stakeholders during the exhibition period, which included:

- Accor Vacation Club
- Australian Turf Club
- Brookfield
- GPT Group
- The McDonald College
- Sydney Fish Market
- Western Sydney Leadership Dialogue.

#### 4.1.2 Public authority submissions

Seven submissions were received from the following public authorities during exhibition of the Environmental Impact Statement (excluding NSW government agencies that provided advice to the Department of Planning and Environment):

- Cumberland City Council
- City of Parramatta Council
- Strathfield Council
- City of Canada Bay Council
- Burwood Municipal Council
- Inner West Council
- City of Sydney Council.

#### 4.1.3 NSW government agency advice

The Department of Planning and Environment received advice regarding this proposal from the following 11 NSW government agencies:

- Ausgrid
- Department of Planning and Environment – Water
- Department of Planning and Environment – Biodiversity
- Department of Primary Industries – Fisheries
- Heritage Council of NSW – Non-Aboriginal heritage
- Heritage NSW – Aboriginal cultural heritage
- NSW Environment Protection Authority
- Place Management NSW
- Port Authority of NSW
- Sydney Olympic Park Authority
- Sydney Water.

## 4.2 Analysis of submissions

### 4.2.1 Issue categorisation

The analysis of submissions included reviewing the content in each submission to identify the issues raised and code each issue raised into key issue categories (e.g. transport - construction) and sub-issues (e.g. parking and property access). The key issue categories and sub-issues were based on the information and environmental aspects included in the Environmental Impact Statement. This provided an understanding of the frequency of the issues that were raised and the key areas of interest. Several submissions also raised items which aligned with more than one category.

### 4.2.2 Review of community submissions

Following the categorisation of each community and community interest group or organisation submissions, the issues raised were summarised and grouped according to the key issue and sub-issue categories.

Each issue identified in Chapter 6 (Community submissions) of this Submissions Report is presented as a summary of the issues raised by individual submissions with careful consideration given to the intent of each submission.

Responses to the summarised issues are provided in Chapter 6 (Community submissions) of this Submissions Report according to these categories. Where relevant, input was sought from the technical specialists who assisted with the preparation of the Environmental Impact Statement.

### 4.2.3 Review of public authority and key stakeholder submissions

Following categorisation of each submission received from public authorities and key stakeholders, the issues raised within each submission were summarised. These issues and responses to the issues raised are provided in Chapter 7 (Public authority submissions) and Chapter 8 (Key stakeholder submissions) of this Submissions Report. Where relevant, input was sought from the technical specialists who were involved with the preparation of the Environmental Impact Statement. Issues raised by public authorities and key stakeholders are not included in the analysis of key issues raised by the community in Section 4.3.

### 4.2.4 Review of NSW government agency advice

Government agency advice letters are not treated as formal submissions by the Department of Planning and Environment, however, this advice has also been reviewed and responses are presented in Chapter 9 (Government agency advice) of this Submissions Report. Issues raised by government agencies are not included in the analysis of key issues raised by the community in Section 4.3.

### 4.2.5 Support/objection to this proposal

Submitters from the community, interest groups, organisations and public authorities were asked to indicate whether their submission supported or objected to this proposal or provided comments via the Department of Planning and Environment Major Projects portal website as part of the submission registration process. The breakdown of support, objections or comments are as follows:

- 13 submissions supported this proposal
- 12 submissions objected to this proposal
- 46 submissions provided comments.

## 4.3 Summary of issues raised

### 4.3.1 Key issues raised in community submissions

A breakdown of the key issues raised in unique community, interest group and organisation submissions is provided in Table 4-3 by key issue category. Given some submissions raised more than one issue or the same issue more than once, the number of issues identified is greater than the total number of submissions received. Key issues were raised a total of 338 times in the community submissions.

**Table 4-3 Key issues raised in community submissions**

Key issue category	Number of times key issue was raised	Percentage (%) of total key issues
Support for Sydney Metro West	11	3
Planning and assessment process	18	5
Stakeholder and community engagement	10	3
Methodology	2	1
Proposal description - operation	72	21
Proposal description - construction	3	1
Transport - operation	73	22
Transport - construction	18	5
Noise and vibration - operation	17	5
Noise and vibration - construction	5	1
Non-Aboriginal heritage	8	2
Aboriginal heritage	2	1
Landscape and visual amenity	7	2
Social impacts	6	2
Local business impacts	2	1
Property	3	1
Air quality	3	1
Sustainability, climate change and greenhouse gas	1	<1
Waste management and resource use	5	1
Cumulative impacts	1	<1
Previous Sydney Metro West planning applications	15	4
Adjacent and/or over station development	2	1
Issues that are beyond the scope of the Environmental Impact Statement	54	16

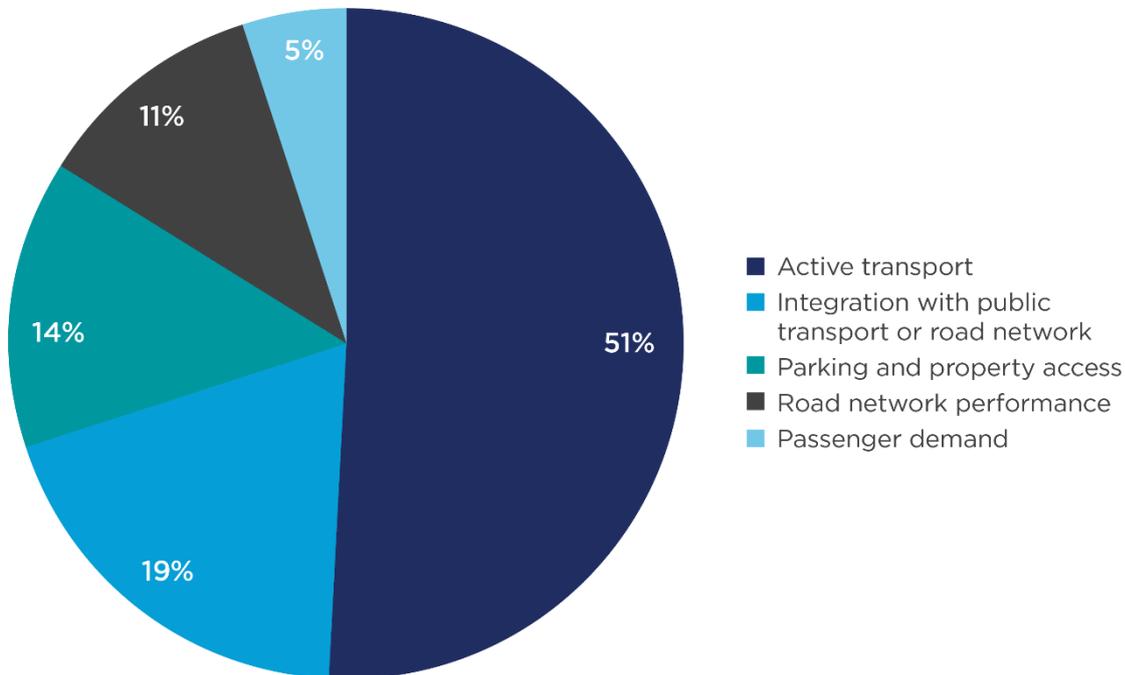
The top three most frequently raised key issues in the community submissions are:

- transport – operation
- proposal description – operation
- issues that are beyond the scope of the Environmental Impact Statement.

A breakdown of the sub-issues raised for ‘transport – operation’ is provided below in Figure 4-1 and includes the following:

- **active transport** – generally including comments on active transport interchange elements (such as footpaths, pedestrian crossings, shared zones and bicycle routes), requests for additional active transport elements within station precincts and other measures to support pedestrian and cyclist movement
- **integration with public transport or road network** – generally including requests and comments about interchange provisions between the metro stations and other transport modes (including rail, bus, light rail and private vehicles)

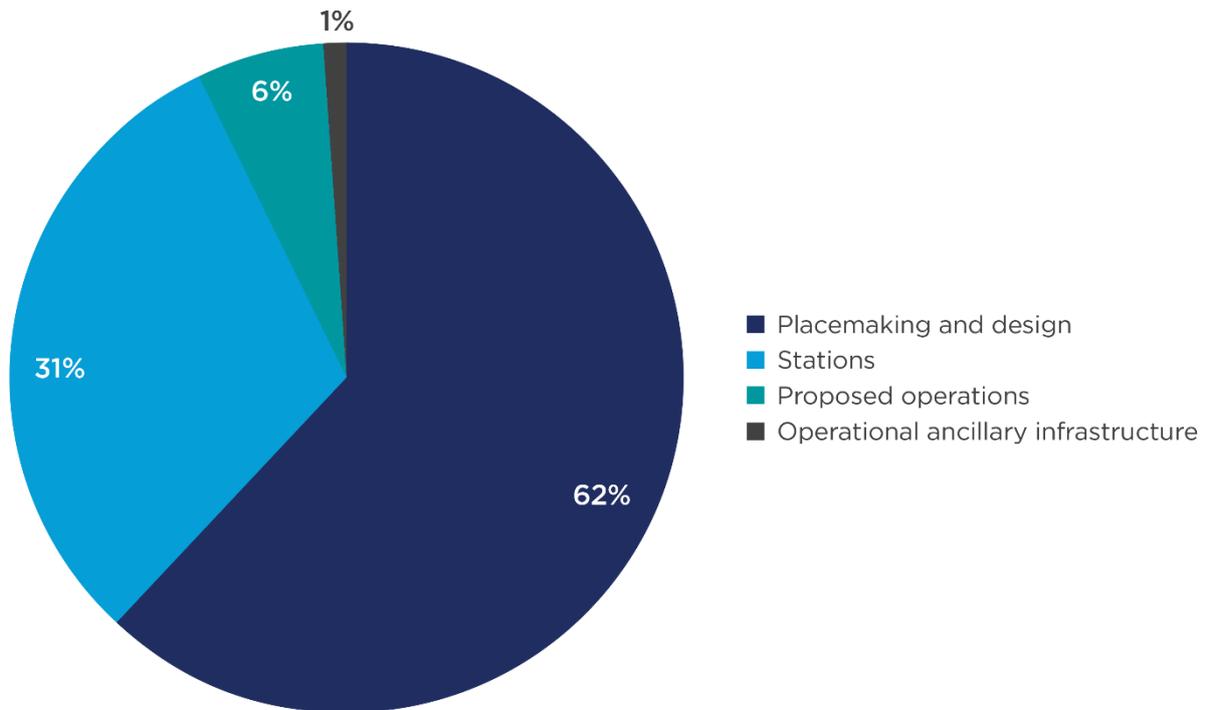
- **parking and property access** – generally including comments on the availability of parking around metro stations, suggestions for commuter car parks, and concerns about potential restrictions to property access
- **road network performance** – generally including concerns and comments about the potential for increased traffic on the road network during operation
- **passenger demand** – including comments on the modal forecasts for cyclists accessing/egressing stations and anticipated passenger demand at stations.



**Figure 4-1 Breakdown of sub-issues relating to transport – operation**

A breakdown of the sub-issues raised for ‘proposal description – operation’ is provided below in Figure 4-2 and includes the following:

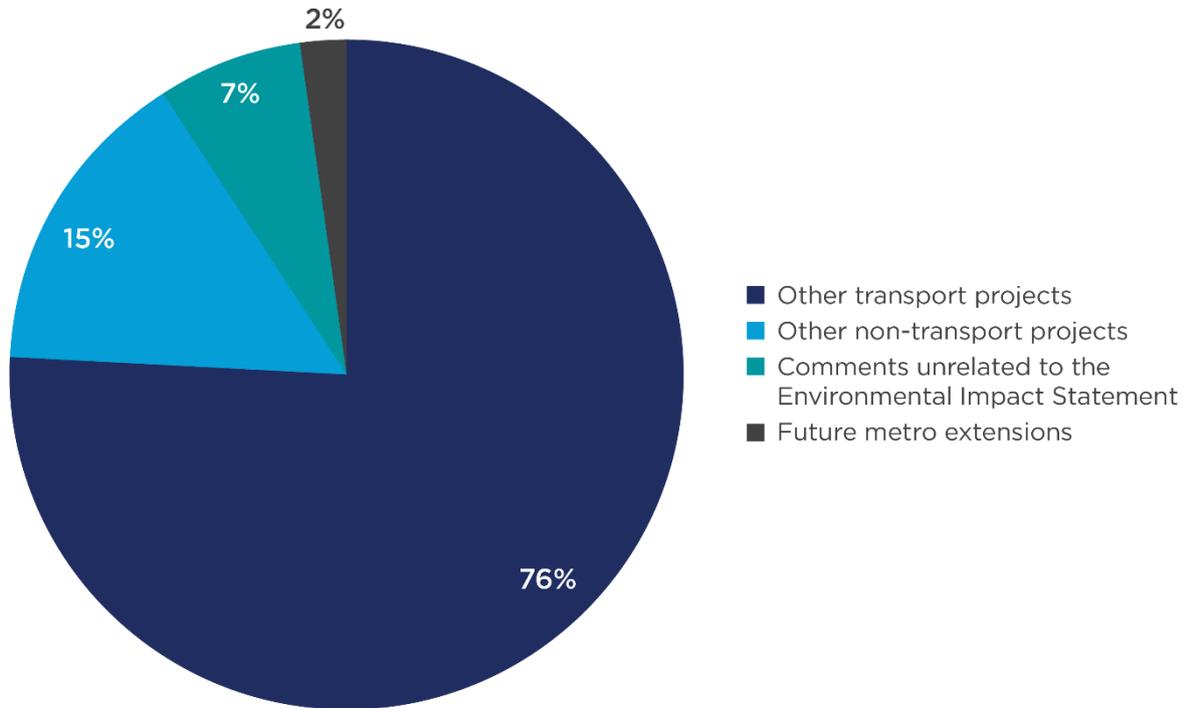
- **placemaking and design** – generally including comments on the design process, station precinct and public domain areas, customer experience, accessibility, Design Guidelines, names of stations, and alignment with local and regional plans and strategies
- **stations** – generally including comments on metro station infrastructure and elements which are common across stations, for example, entrances, vertical transport (lifts and escalators), bicycle parking and station services buildings
- **proposed operations** – including comments on the service timetable, operational staff, train types and requests for express services
- **operational ancillary infrastructure** – including a comment relating to the design of the traction substation at The Bays.



**Figure 4-2 Breakdown of sub-issues relating to proposal description – operation**

A breakdown of the sub-issues raised for ‘issues that are beyond the scope of the Environmental Impact Statement’ is provided below in Figure 4-3 and includes the following:

- **other transport projects** – generally including requests and queries regarding other public transport projects, active transport projects, and other transport-network related suggestions outside of the proposal area
- **other non-transport projects** – including comments on local council planning strategies, recommendations and concerns about future surrounding development and land use outside of the station precincts
- **comments unrelated to the Environmental Impact Statement** – including a recommendation to protect memorials outside of the proposal area and a request for enforcement of road rules through police presence
- **future metro extensions** – including requests for eastern and western extensions of Sydney Metro West, and a recommendation for the design of future extensions.



**Figure 4-3 Breakdown of sub-issues that are beyond the scope of the Environmental Impact Statement**

**4.3.2 Precinct-based issues summary**

A breakdown of issues raised by precinct/location for community and interest group submissions is provided in Table 4-4. This table shows a breakdown of the number of issues raised that could be attributed to a specific precinct/location. This includes issues raised that are beyond the scope of the Environmental Impact Statement if those issues related to the area immediately around a station precinct. Given some issues referred to more than one precinct, the total number of issues raised by precinct is larger than the total number of issues raised. The number of issues raised relating to areas outside of this proposal and non-location specific (proposal-wide) issues are also shown.

No community submissions raised issues in relation to the Clyde stabling and maintenance facility and Rosehill services facility.

Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report also provides an overview of the key elements of feedback from the community which relate to placemaking and design of the stations and precincts, how the design responds to this feedback and/or how this feedback would be considered during further design development.

**Table 4-4 Number of issues raised by precinct/location in community submissions**

Precinct / location	Number of issues raised relevant to precinct / location	Percentage (%) of total number of issues raised	Top issues raised at each precinct
Westmead	19	6	<ul style="list-style-type: none"> <li>transport – operation</li> <li>proposal description – operation</li> <li>social impacts</li> <li>air quality</li> <li>waste management and resource use</li> </ul>
Parramatta	3	1	<ul style="list-style-type: none"> <li>transport – operation</li> <li>non-Aboriginal heritage</li> </ul>
Sydney Olympic Park	2	1	<ul style="list-style-type: none"> <li>proposal description – operation</li> <li>transport – operation</li> </ul>
North Strathfield	59	17	<ul style="list-style-type: none"> <li>proposal description – operation</li> <li>transport – operation</li> <li>issues that are beyond the scope of the Environmental Impact Statement</li> </ul>
Burwood North	21	6	<ul style="list-style-type: none"> <li>transport – operation</li> <li>proposal description – operation</li> <li>issues that are beyond the scope of the Environmental Impact Statement</li> </ul>
Five Dock	96	28	<ul style="list-style-type: none"> <li>transport – operation</li> <li>noise and vibration – operation</li> <li>transport – construction</li> </ul>
The Bays	43	13	<ul style="list-style-type: none"> <li>issues that are beyond the scope of the Environmental Impact Statement</li> <li>proposal description – operation</li> <li>transport – operation</li> </ul>
Pymont	11	3	<ul style="list-style-type: none"> <li>issues that are beyond the scope of the Environmental Impact Statement</li> <li>stakeholder and community engagement</li> <li>proposal description – operation</li> </ul>
Hunter Street (Sydney CBD)	2	1	<ul style="list-style-type: none"> <li>transport – operation</li> </ul>
Proposal-wide	64	19	<ul style="list-style-type: none"> <li>proposal description – operation</li> <li>transport – operation</li> <li>support for Sydney Metro West</li> </ul>
Outside of proposal area	18	5	<ul style="list-style-type: none"> <li>issues that are beyond the scope of the Environmental Impact Statement</li> </ul>

### 4.3.3 Key issues raised in public authority and key stakeholder submissions

Key issues raised in public authority submissions included:

- placemaking and design, including recommendations for station design and entry points and requesting further details on station and precinct designs and the Design Guidelines
- future over and adjacent station development (subject to separate approval), generally requesting further detail
- stakeholder consultation, generally requesting ongoing consultation related to the detailed design of the stations and surrounding precincts
- potential traffic impacts during construction and operation, particularly related to parking around station precincts
- potential flooding impacts during operation, particularly for stations where proposed infrastructure is below the flood protection level
- potential contamination impacts, particularly requests for detailed site investigations
- potential business impacts during construction, related to transport, noise and vibration, and air quality impacts
- potential non-Aboriginal heritage impacts and comments related to heritage interpretation in the design.

Key issues raised in key stakeholder submissions included:

- potential construction transport impacts, including property access and parking impacts
- potential operational transport impacts, including active transport connections and interface with existing developments
- potential construction noise impacts, including to specific sensitive receivers
- potential local business impacts during construction related to reduced local amenity
- stakeholder consultation, related to consultation prior to exhibition of the Environmental Impact Statement and requests to be consulted going forward.

### 4.3.4 Key issues raised in government agency advice

Key raised issues raised in government agency advice (which generally reflected their areas of responsibility) included:

- potential noise and vibration impacts during operation and construction, including queries or concerns about assessment methodology and level of construction impacts
- potential flooding impacts during operation, including concerns about the level of assessment, the use of flood barriers and emergency management at stations
- potential groundwater impacts, including request that impacts should be quantified further
- potential non-Aboriginal heritage impacts, including impacts to the Abattoir Heritage Precinct at Sydney Olympic Park metro station and White Bay Power Station at The Bays Station
- placemaking and design, including related to alignment with master planning at Sydney Olympic Park metro station and The Bays Station
- stakeholder consultation, generally requesting ongoing consultation relating to construction impacts or design development.

## 5.0 Feedback on placemaking and design of stations and precincts

This chapter provides an overview of how the design responds to placemaking and design feedback from submissions and agency advice, and/or how this feedback would be considered during further design development. This chapter also provides an overview of the process for future design development, including community and stakeholder consultation.

### 5.1 Background

During public exhibition of the Environmental Impact Statement, Sydney Metro asked the community and stakeholders for feedback on how the metro stations could integrate with and shape their local area. As shown in Table 4-4 in Chapter 4 (Analysis of submissions) of this Submissions Report, the majority of precinct-specific issues and comments raised in community submissions were related to precincts where surrounding development currently has a residential character, such as Westmead, North Strathfield, Burwood North, Five Dock, The Bays and Pyrmont. Relatively few issues or comments were raised in predominantly commercial locations such as Parramatta, Sydney Olympic Park, and the Sydney CBD. There were no placemaking and design issues raised in submissions from the community specifically related to Clyde and Rosehill, although comments were provided by City of Parramatta Council.

Specific submissions and agency advice regarding placemaking and design are further discussed in Chapters 6 to 9 of this Submissions Report.

### 5.2 Ongoing design development

Ongoing design would be informed by design objectives and principles, in consultation with stakeholders. This design review process is aimed at achieving high quality design outcomes at each stage of the process and would be guided by the documents:

- Sydney Metro design objectives (outlined in Table 5-2 of the Environmental Impact Statement)
- Design quality framework (described in Table 5-4 of the Environmental Impact Statement)
- Design Guidelines, including the place and design principles for Sydney Metro West (Appendix M).

If planning approval is granted, each stage of the design would be subject to independent review through a Design Review Panel (as described in Table 5-5 of the Environmental Impact Statement). Local councils would be invited to participate in the Design Review Panel meetings as required to advise on local issues and design outcomes as they relate to the local context.

#### 5.2.1 Station design and precinct plans

Following development of the design, station design and precinct plans (or equivalent as required by the conditions of approval) would be developed for each metro station to document and illustrate the permanent built works and landscape design. The station design and precinct plans would include:

- context and form:
  - the existing built, natural and community context
  - urban design objectives, principles and standards
- detailed design:
  - description of permanent design features (such as station entries, station services buildings, and structures and spaces for non-station use) including plans, sections and visual representations of the design outcome
  - opportunities for public art
  - specific heritage interpretation elements based on the outcomes of the Connecting with Country pilot, the Heritage Interpretation Strategy and station-specific Heritage Interpretation Plans (refer to Section 5.2.2)

- landscaping:
  - identify areas of vegetation to be retained and proposed landscaping, including the use of local native species
  - strategies to rehabilitate and revegetate disturbed area
  - water sensitive urban design initiatives
  - monitoring and maintenance procedures for vegetation and landscaping
- transport and access:
  - interchange access plans in accordance with the modal access hierarchy
  - details of active transport connections
  - strategies to maximise the amenity of public spaces, permeability around station entries and integration with other transport modes.

These plans would be prepared in consultation with (as relevant to each station) local council(s), Sydney Olympic Park Authority, Department of Planning and Environment, and the local community.

### 5.2.2 Heritage

Sydney Metro is piloting the Government Architect NSW’s Connecting with Country framework (2020b) and developing a corridor-wide approach to connect with Country and an ongoing approach to Aboriginal engagement. As part of the pilot Sydney Metro is working with Aboriginal knowledge holders in the development of heritage interpretation and throughout design development.

A Heritage Interpretation Strategy (Appendix L) has been prepared for this proposal in accordance with Concept conditions of approval C-B4 to C-B6, which includes how Aboriginal heritage values would be interpreted and reflected within the design of this proposal.

Heritage interpretation would assist in placemaking at stations, ensuring that stories from the area's past are part of their future. The Heritage Interpretation Strategy (Appendix L) provides an overarching strategic direction for the interpretation of cultural heritage on Sydney Metro West, with detailed interpretation planning to occur alongside design development. Station-specific Heritage Interpretation Plans would be developed in accordance with the Heritage Interpretation Strategy (Appendix L) and in consultation with the Sydney Metro Connect with Country Aboriginal Working Group to identify the specific heritage interpretation devices for each metro station.

The outcomes of the Connecting with Country pilot, Heritage Interpretation Strategy and station-specific Heritage Interpretation Plans would be incorporated into the station design and precinct plans.

## 5.3 Westmead metro station

Key feedback related to placemaking and design at Westmead metro station, the response and ongoing design considerations is provided in Table 5-1.

**Table 5-1 Placemaking and design feedback and response – Westmead metro station**

Feedback	Response and ongoing considerations during design development
The community values the quiet surroundings while still being close to amenities	<p>The station and precinct are being designed to maintain the amenity of nearby residential areas. For example, operational noise from the station has and would continue to be designed to achieve applicable environmental noise criteria.</p> <p>The new station precinct would provide a range of opportunities for retail, commercial and/or community facilities which would enable the activation of each station precinct and provide social benefits and local business opportunities.</p>

Feedback	Response and ongoing considerations during design development
<p>Request for a second station entry to provide convenient access from the south. This would:</p> <ul style="list-style-type: none"> <li>• achieve better precinct outcomes</li> <li>• provide better public transport interchange</li> <li>• accommodate planned growth in the area</li> <li>• increase the resilience of the network</li> </ul>	<p>In response to feedback received from the community and other stakeholders, further design development has been carried out for Westmead metro station. This has resulted in the decision to include an additional metro station entry from Hawkesbury Road (to the south of Alexandra Avenue). This additional station entry would improve amenity, access, and connectivity to the metro station, support the planned growth in south Westmead, and respond to stakeholder feedback. Section 2.2 (Westmead metro station – station and precinct design refinements) of this Submissions Report provides further detail and assessment of the additional station entry at Westmead metro station.</p>
<p>Requests related to transport interchange including:</p> <ul style="list-style-type: none"> <li>• integration with Parramatta Light Rail and buses</li> <li>• additional kiss and ride and taxi zones</li> <li>• suggestion for a separate bicycle route on the eastern side of Hawkesbury Road and additional bike parking</li> <li>• improved north-south connections to improve pedestrian mobility</li> <li>• improved pedestrian crossings around the station</li> <li>• desire for a commuter car park</li> </ul>	<p>Westmead metro station would be designed to provide an efficient transport interchange and pedestrian friendly environment, including upgrades to the surrounding road network, new pedestrian crossings and a new pedestrian plaza. Transport interchange arrangements at Westmead metro station are described in the revised proposal description (Appendix B).</p> <p>A low-speed environment is proposed on Railway Parade, which would prioritise safe pedestrian movements across both sides of the street and would link the Parramatta Light Rail Westmead Stop with Westmead metro station. Westmead metro station would also provide for easy interchange with Sydney Trains T1 Western Line and T5 Cumberland lines.</p> <p>A bus interchange is proposed on both sides of Alexandra Avenue which would facilitate easy, efficient interchange between the metro and bus services. The station would connect with existing active transport links and provide bicycle path connections through the station precinct. Kiss and ride and point to point bays would be provided on Railway Parade. Sydney Metro is continuing to investigate opportunities to optimise the location of and provide additional kiss and ride facilities at Westmead metro station. This would be confirmed through the station design and precinct plans to be prepared during detailed design, in consultation with key stakeholders.</p> <p>Customers would be able to use either the existing signalised crossing at Hawkesbury Road or the pedestrian zebra crossing further east to safely cross Railway Parade. To the south of the station, new zebra crossings are proposed across Alexandra Avenue and Bailey Street to provide for customer access to the southern entry.</p> <p>Further design development for the station has also relocated the separated bicycle route to be on the eastern side of Hawkesbury Road, reducing the number of road crossing for cyclists. These upgrades to the eastern side of the Hawkesbury Road overbridge would create expansive pedestrian zones enabling north-south movement. Section 2.2 (Westmead metro station – station and precinct design refinements) of this Submissions Report provides further detail regarding these design elements.</p> <p>Bicycle parking would be provided at Westmead metro station. The specific number and typology of bicycle parking spaces would be determined during detailed design based on forecast demand numbers and in accordance with and the following guidelines:</p> <ul style="list-style-type: none"> <li>• Transport for NSW <i>Cycleway Design Toolkit</i> (2020)</li> <li>• Austroads <i>Bicycle Parking Facilities: Guidelines for Design and Installation</i> (2016)</li> <li>• Australian Standards – AS2890.3 Parking Facilities: Bicycle Parking (2015).</li> </ul>

Feedback	Response and ongoing considerations during design development
	<p>Commuter parking would not be provided at Sydney Metro West stations. All Sydney Metro West stations would be designed to promote active and public transport access above the use of private vehicles. Stations have been planned to integrate with other forms of public transport like light rail, suburban rail, and buses. Station precincts would be designed in consultation with councils to provide for easy connections to walking and cycling links. To accommodate customers driving to stations, spaces would be provided for pick up and drop off by taxi or kiss and ride.</p> <p>Sydney Metro would work with Cumberland City Council and City of Parramatta Council to help address potential parking impacts arising from potential park and ride in residential streets around Westmead metro station (refer to mitigation measure EIS-TT3 in Appendix C (Revised mitigation measures)).</p>
<p>Suggestion to setback the western part of the site to enable reconfiguration and upgrade of Hawkesbury Road</p>	<p>The Westmead metro station building would be setback from Hawkesbury Road as shown in Figure 3-6 Built form urban design strategies – Westmead metro station of Appendix B (Revised proposal description). Enhanced public domain and street improvements would be provided along the eastern side of Hawkesbury Road outside the southern station entry.</p>
<p>Suggestion regarding heritage interpretation relating to the history of Westmead and the presence of key local stories</p>	<p>The Heritage Interpretation Strategy (Appendix L) has been updated to:</p> <ul style="list-style-type: none"> <li>• include additional information regarding the process for selecting devices during the development of the station Heritage Interpretation Plan, including the requirement for further consultation with Cumberland City Council</li> <li>• acknowledge Westmead is a key opportunity for interpretation as the terminus of Sydney Metro West</li> <li>• recommend additional research on the history of Westmead during the development of the station Heritage Interpretation Plan</li> <li>• recommend the material finish of Westmead metro station design draw on materials that represent a connection to Country.</li> </ul>
<p>Concerns regarding traffic movements particularly related to kiss and ride, changes to available traffic movements and potential impact to emergency vehicles</p>	<p>As modelled in Technical Paper 1 (Operational transport) of the Environmental Impact Statement, it is anticipated that a relatively small percentage (around six per cent in the morning peak hour) of trips to Westmead metro station would be via kiss and ride. Therefore, the proposal is not expected to be a high impact on road network performance. Sydney Metro would continue to consider the location of kiss and ride facilities at Westmead metro station during the preparation of detailed station design and precinct plans, including considering the need to manage potential impacts to the road network.</p> <p>Sydney Metro is continuing to investigate options for the layout and use of Alexandra Avenue between Hawkesbury Road and Hassall Street, including the potential for this section of road to be narrowed and used for bus and emergency services only. Should change in use and restrictions on Alexandra Avenue be progressed, investigations would include consideration of the impact of diverted traffic.</p> <p>The function of the road network would continue to be considered during detailed design and as part of the broader strategic planning for the Westmead precinct in consultation with Transport for NSW and relevant councils.</p> <p>The operation of the station is not anticipated to impact emergency vehicles in the area. Sydney Metro would continue to consult with emergency service providers during development of the design.</p>

## 5.4 Parramatta metro station

Key feedback related to placemaking and design at Parramatta metro station, the response and ongoing design considerations is provided in Table 5-2.

**Table 5-2 Placemaking and design feedback and response – Parramatta metro station**

Feedback	Response and ongoing considerations during design development
<p>The design of the Civic Link should:</p> <ul style="list-style-type: none"> <li>demonstrate consistent outcomes for the broader Civic Link and the block</li> <li>safeguard the agreed intent for the Civic Link and public domain (including consideration of heritage items)</li> <li>include consideration of deep soil provisions</li> </ul>	<p>The design would continue to be developed in consultation with City of Parramatta Council to consider:</p> <ul style="list-style-type: none"> <li>the provisions of the Civic Link Special Area in the Parramatta City Council's draft City Centre Development Control Plan</li> <li>areas for soil beds at grade and soil beds for deep soil planting</li> <li>information on building footprints and three-dimensional built form (reflecting the objectives of Parramatta City Council's draft City Centre Development Control Plan)</li> <li>outcomes for adjacent heritage items by maintaining and enhancing views.</li> </ul> <p>These elements would be considered during the preparation of the station design and precinct plan.</p>
<p>The community values the non-Aboriginal heritage items in the area</p>	<p>The design of Parramatta metro station has been developed to retain key heritage items adjacent to the station, including Kia Ora, the Roxy Theatre and the shop on George Street.</p> <p>The proposed Civic Link would retain existing views that are available to the Roxy Theatre with the potential to enhance these through appropriate landscaping. The setting of Kia Ora would be improved through the public domain and landscaping delivered around the station.</p> <p>The implementation of the Design Guidelines (Appendix M), in particular Section 5.2 of the guidelines would provide for the enhancement of adjacent heritage items at Parramatta metro station. This includes requirements to provide setbacks and respond sensitively to the scale of heritage items within and adjoining the station to enhance their setting and provide sensitive interfaces to heritage buildings. The design of the station and precinct would also include heritage interpretation devices developed in accordance with the Heritage Interpretation Strategy (Appendix L).</p>
<p>Support for active flood protection measures (i.e. flood gates) rather than steps and ramps within or adjoining the public domain</p>	<p>Sydney Metro is proposing to protect Parramatta metro station from the probable maximum flood event using active measures such as flood barriers.</p> <p>This would be further investigated during detailed design to consider both urban design and access outcomes.</p>
<p>Suggestions related to transport interchange and outcomes including:</p> <ul style="list-style-type: none"> <li>retention of the on-grade carpark east of the Roxy Theatre would result in conflicts with pedestrian movements</li> <li>Horwood Place should be designed with a straight alignment</li> <li>request for a direct connection to the existing Parramatta Station</li> </ul>	<p>The on-grade car parking east of the Roxy Theatre provides access for the adjoining development and is proposed to be retained during operation of this proposal. Sydney Metro would continue to work with City of Parramatta Council on pedestrian movement outcomes during ongoing design development.</p> <p>Horwood Place is being designed to allow traffic to travel eastbound along Macquarie Street and then north through to George Street due to the closure of Macquarie Street as part of Parramatta Light Rail. Detailed design would continue to consider Parramatta City Council's feedback, the interface with Kia Ora and the proposed over station development. Sydney Metro would continue to undertake traffic assessments during detailed design to understand the traffic impacts of the Horwood Place realignment so that these are managed where required.</p> <p>Customers would be able to make an indirect connection between Parramatta metro station and the existing Parramatta Station and bus interchange on Argyle Street via a short walk along the Civic Link and through Parramatta Square.</p>

Feedback	Response and ongoing considerations during design development
	Parramatta metro station is not intended to provide a direct interchange with the existing Parramatta Station. Customers wishing to interchange with T1 Western Line and T5 Cumberland Line services would be able to do so at Westmead metro station, where an efficient interchange would be provided with the existing Westmead Station.

## 5.5 Sydney Olympic Park metro station

Key feedback related to placemaking and design at Sydney Olympic Park metro station, the response and ongoing design considerations is provided in Table 5-3.

**Table 5-3 Placemaking and design feedback and response – Sydney Olympic Park metro station**

Feedback	Response and ongoing considerations during design development
Request for a sensitive design interface overlay at the northern end of the site to manage the interface between and integration of the northern station building, Central Urban Park, connecting pedestrian paths and the State Abattoir Precinct	<p>Sydney Metro has adjusted the Design Guidelines (Appendix M) to recognise a sensitive design interface along the site frontage to Herb Elliott Avenue opposite the State Abattoir Heritage Precinct.</p> <p>Mitigation measure EIS-NAH2 also requires detailed design of aboveground station elements, ancillary facilities, public domain and landscaping to respond to relevant heritage guidelines and Conservation Management Plans in order to minimise impacts to heritage items (refer to Appendix C (Revised mitigation measures)).</p>
'Site 46' should be developed in a cohesive manner to result in urban design and site efficiency outcomes	<p>Sydney Metro has established an agreement with Sydney Olympic Park Authority to enable Site 46 to be planned as part of the Sydney Olympic Park Master Plan 2050, in a cohesive manner with the broader precinct.</p> <p>Section 2.6 (Sydney Olympic Park metro station – refinement to adjacent station development) of this Submissions Report provides a revised operational precinct plan Sydney Olympic Park metro station which reflects this clarification.</p>
Request that all station entries are available for day to day operations rather than two entries being dedicated as 'event only'	<p>The public domain between the station buildings (accessible from Olympic Boulevard) would be accessible to the public during day to day operations as well as event mode.</p> <p>Sydney Metro is reviewing station entries (including day to day operations and event mode) at Sydney Olympic Park with the intent of all entries being available for day to day operations and to optimise precinct outcomes and align with Sydney Olympic Park Authority master planning.</p>
<p>Requests in relation to public open space including:</p> <ul style="list-style-type: none"> <li>publicly accessible open space on the northern station building in line with the <i>Sydney Olympic Park Master Plan 2030 (Interim Metro Review)</i> (Sydney Olympic Park Authority, 2022)</li> <li>the Central Urban Park should not be reduced in size</li> </ul>	<p>Consistent with further consultation held with the Sydney Olympic Park Authority, Sydney Metro would continue to work with Sydney Olympic Park Authority to achieve the objective of a green roof to the northern station building that is high quality and visually appropriate to be viewed from ground level and overlooking buildings.</p> <p>Significant areas of new public domain are proposed within the Sydney Olympic Park metro station precinct including delivery of part of the Central Urban Park identified in the Master Plan 2030.</p> <p>The Central Urban Park would be designed as a centrally located publicly accessible green space, and as a focal point for the town centre. The extent of public domain proposed at Sydney Olympic Park metro station is consistent with the <i>Sydney Olympic Park Master Plan 2030 (Interim Metro Review)</i>.</p> <p>Sydney Metro notes that the <i>Sydney Olympic Park Master Plan 2030 (Interim Metro Review)</i> has been finalised since the exhibition of the Environmental Impact Statement.</p>

Feedback	Response and ongoing considerations during design development
<p>Request for a community centre space consistent with the principles set out in City of Parramatta Council's Community Infrastructure Strategy</p>	<p>Sydney Olympic Park Authority is reviewing the community space requirements for the broader master plan as part of its current Sydney Olympic Park Master Plan 2050 review.</p> <p>Sydney Metro would continue to work with Sydney Olympic Park Authority during ongoing design development (including in relation to the provision of sufficient public open space and the function of the station and the precinct during major events).</p>
<p>Suggestions related to transport interchange, active transport and other outcomes including:</p> <ul style="list-style-type: none"> <li>• interchange facilities should be sufficiently sized to accommodate increased bus feeder services (i.e. from Newington and Silverwater)</li> <li>• request for active transport connections beyond their current extent between the metro station, train station and future Light Rail stop</li> <li>• request for wayfinding between the existing Sydney Olympic Park Station and the Sydney Olympic Park metro station</li> <li>• suggestions for a commuter car park</li> </ul>	<p>Additional mass transit accessibility and amenity provided by this proposal would provide an opportunity to optimise the bus network. It is expected that bus services and connections to Sydney Metro West stations, including Sydney Olympic Park, would be assessed and reconfigured where necessary by Transport for NSW to support the operation of Sydney Metro West.</p> <p>The design of the transport interchange facilities takes into consideration the anticipated bus services to and from the Sydney Olympic Park metro station including during major events.</p> <p>Active transport connections within the Sydney Metro site (as shown on the indicative layout plan in the Environmental Impact Statement and Figure 5-1 in Appendix B (Revised proposal description)) would be delivered as part of this proposal. Sydney Metro would continue to work with Sydney Olympic Park Authority to coordinate connections delivered by others beyond the Sydney Metro site (refer to mitigation measure EIS-TT2 in Appendix C (Revised mitigation measures)).</p> <p>Customers would be able to make an indirect interchange via a short walk along Dawn Fraser Avenue and Showground Road or through the Abattoir Heritage Precinct. Appropriate wayfinding and signage would be provided at the station precinct to enable efficient navigation of stations and easy interchange with other transport modes. Further information on wayfinding and signage is provided in Section 3.1.3 of the Design Guidelines (Appendix M).</p> <p>Commuter parking would not be provided at Sydney Metro West stations. All Sydney Metro West stations would be designed to promote active and public transport access above the use of private vehicles. Stations have been planned to integrate with other forms of public transport like light rail, suburban rail, and buses. Station precincts would be designed in consultation with key stakeholders to provide for easy connections to walking and cycling links. To accommodate customers driving to stations, spaces would be provided for pick up and drop off by taxi or kiss and ride.</p>

## 5.6 North Strathfield metro station

Key feedback related to placemaking and design at North Strathfield metro station, the response and ongoing design considerations is provided in Table 5-4.

**Table 5-4 Placemaking and design feedback and response – North Strathfield metro station**

Feedback	Response and ongoing considerations during design development
<p>The community values the existing character of the area including the heritage character of the existing station</p> <p>Request for the heritage gardens associated with the existing North Strathfield Railway Station to be retained and for consistency in character and place between the existing station and the new station</p>	<p>The design of North Strathfield metro station has been developed to be sympathetic to the character of the area and the heritage significance of the existing North Strathfield Station.</p> <p>Sydney Metro is proposing to remove the heritage gardens at North Strathfield Station to provide sufficient space for the metro station entry and interchange. Opportunities to provide gardens within the areas adjoining the heritage listed areas of North Strathfield Railway Station, or in the vicinity, would be investigated as part of design development to reflect the local values of the community and reinforce the sense of place for the North Strathfield local centre (refer to mitigation measure EIS-LV8 in Appendix C (Revised mitigation measures)).</p> <p>The design would be developed to integrate with and celebrate the heritage elements and the historic value of the station precinct, as required by Section 5.4 of the Design Guidelines (Appendix M). The design of the station and precinct would also include heritage interpretation devices developed in accordance with the Heritage Interpretation Strategy (Appendix L).</p>
<p>Request for landscaping around the station including an increase in tree canopy coverage</p>	<p>Sydney Metro would provide replacement trees across the whole project at a 2:1 ratio resulting in a net increase in tree canopy cover across the project in accordance with Concept condition of approval C-B8.</p> <p>Where possible, trees and other landscaping elements be provided within the metro station precinct. This would be identified during detailed design through the station design and precinct plans to be prepared for the site.</p>
<p>Concerns regarding the height, bulk and scale of the station buildings and a desire for enhanced placemaking outcomes such as new public domain and reduced speed limits around the station</p>	<p>The height of the station infrastructure has been developed to minimise visual impacts whilst providing necessary station infrastructure. The aboveground station infrastructure (including station services and space for non-station use) would be, subject to detailed design, indicatively around 25 metres above Queen Street at the northern end of the station, reducing to indicatively around 10 metres above street level and the new eastern entry to the south. The new footbridge would be indicatively around 18 metres above the existing station platforms, subject to detailed design.</p> <p>The station design includes proposed enhancements to public domain including the area to the south of the station and along the western side of Queen Street, where the metro station would be set back from the street to provide space for a high amenity public domain. This proposal also includes the introduction of a low-speed environment along Queen Street in front of the station entries and new pedestrian crossings on Queen Street.</p> <p>Sydney Metro would continue to work with City of Canada Bay Council regarding the scale and built form of aboveground station infrastructure.</p> <p>The design of the station and public domain spaces would be guided by the Design Guidelines (Appendix M).</p>

Feedback	Response and ongoing considerations during design development
<p>Suggestions that connections to the western side of the existing rail corridor could be enhanced through improved entries and cross-corridor connections (including to the Bakehouse Quarter)</p>	<p>The proposed new aerial footbridge has been located to provide improved access to Sydney Trains and Sydney Metro platforms and connect into the existing entries to the station from the west (from Pomeroy Street and Hamilton Street East). These entries would be directly connected to the new aerial footbridge, providing improved connectivity from the west.</p> <p>Sydney Metro is continuing to investigate upgrades to the existing footbridge with the potential for a new pedestrian footbridge to provide enhanced customer transfer capacity while maintaining a connection across the rail corridor.</p>
<p>Support for active transport connections and requests for wider connections such as to Powells Creek and the proposed East West Regional Cycleway</p>	<p>This proposal includes improvements to pedestrian and cyclist amenity on Queen Street, including footpath widening, a bicycle link, and the introduction of a low-speed environment in front of the station.</p> <p>Sydney Metro West would support improved access to Powell's Creek through enhanced connections across the existing rail corridor. Direct connections beyond the station precinct to Powell's Creek and the proposed East West Regional Cycleway are beyond the scope of this proposal.</p> <p>Sydney Metro is continuing to work with the City of Canada Bay Council regarding opportunities for integration with other proposed cycleways and the wider active transport network (refer to mitigation measure EIS-TT2 in Appendix C (Revised mitigation measures)).</p>
<p>Some concerns regarding pedestrian safety due to the location of kiss and ride facilities near schools</p>	<p>Stations and precincts would be designed to be safe and accessible for all to use including young children. Interchange facilities, such as kiss and ride zones, would be designed in a manner which supports pedestrian safety. The design of kiss and ride spaces would be progressed in accordance with Section 4.2.4 of the Design Guidelines (Appendix M), including considering safe and efficient vehicle access and minimising conflicts with pedestrians, cycles, buses and other vehicles.</p> <p>Sydney Metro would continue to consider the location of kiss and ride facilities at North Strathfield metro station, including taking into account the need to manage potential impacts and the modal access hierarchy. This would be detailed through the station design and precinct plans to be prepared for the site in consultation with key stakeholders.</p> <p>Sydney Metro would continue to work with The McDonald College and Our Lady of the Assumption Catholic Primary School to ensure the safety of nearby school children.</p>

## 5.7 Burwood North Station

The key feedback related to placemaking and design at Burwood North Station, the response and ongoing design considerations is provided in Table 5-5.

**Table 5-5 Placemaking and design feedback and response – Burwood North Station**

Community feedback	Response and ongoing considerations during design development
<p>Requests related to transport interchange including pedestrian permeability, access to Concord Oval, enhanced cycle routes near the station and wider connections such as to the proposed East West Regional Cycleway</p>	<p>Sydney Metro West would be integrated with other transport modes, including the existing pedestrian and cycle network.</p> <p>Sydney Metro would maximise active uses at ground level along pedestrian laneways and through site links where possible, noting the need to balance this with providing for the operational infrastructure and services required for the station. This includes proposed through site links between Parramatta Road and Burton Street and to the northern station entry. Pedestrian access would be also provided through the station precinct to support access to Concord Oval from the west.</p> <p>At Burwood North Station, an active transport link would be provided through the station precinct, connecting from Burton Street in the north to and across Parramatta Road. Direct connections beyond the station precinct to the proposed East West Regional Cycleway are beyond the scope of this proposal. Sydney Metro is continuing to work with the City of Canada Bay Council regarding opportunities for integration with other proposed cycleways and the wider active transport network (refer to mitigation measure EIS-TT2 in Appendix C (Revised mitigation measures)).</p>
<p>Suggestions for greater Aboriginal cultural interpretation at the station</p>	<p>Sydney Metro is piloting the Government Architect NSW's Connecting with Country framework and (2020b) developing a corridor-wide approach to connect with Country and an ongoing approach to Aboriginal engagement. As part of the pilot Sydney Metro is working with Aboriginal knowledge holders in the development of heritage interpretation and throughout design development. The Heritage Interpretation Strategy (Appendix L) details how Aboriginal heritage values would be interpreted and reflected within the design of this proposal.</p> <p>Across Sydney Metro, the design and integration of stations and station precincts (including Burwood North Station) would respect and respond to the culture and stories embedded within the land through which they pass.</p>
<p>Concerns that the southern station entry would visually compete with the heritage listed Bath Arms Hotel</p>	<p>The non-Aboriginal heritage assessment undertaken for the Environmental Impact Statement acknowledges that the new southern station entry could visually compete with the heritage listed Bath Arms Hotel. This is considered to result in a minor permanent indirect (visual) impact to the Bath Arms Hotel.</p> <p>Sydney Metro would continue to investigate design options to minimise these impacts in accordance with the Design Guidelines (Appendix M) which include place-specific design principles that responds to contextual factors.</p>

Community feedback	Response and ongoing considerations during design development
<p>Suggestions related to urban design and public domain including:</p> <ul style="list-style-type: none"> <li>urban design principles to align with wider Council vision</li> <li>increase the setback of the station entry from Burwood Road</li> <li>open space should be provided within the station precinct</li> </ul>	<p>The urban design vision and principles are outlined in the Design Guidelines (Appendix M), These have been developed taking into consideration local and State planning reference documents.</p> <p>The station entry buildings to the north and south of Parramatta Road have been setback from the street frontage, as shown in Figure 7-6 Built form urban design strategies – Burwood North Station of Appendix B (Revised proposal description). These setbacks are intended to support the strategic intent of <i>Parramatta Road Corridor Urban Transformation Strategy NSW Government, 2016</i> to increase amenity and improve the place character of both Parramatta Road and Burwood Road. These public domain areas at the station entries would provide space for customers to enter and exit the station, and circulation space around the station.</p> <p>The precinct design also responds to the planned future Burton Street plaza (to be delivered by others), as shown in Figure 7-6 Built form urban design strategies – Burwood North Station of Appendix B (Revised proposal description).</p>
<p>Recommendations for alternative station names</p>	<p>Sydney Metro acknowledges the suggestions for alternative station names.</p> <p>Operational station names would be defined closer to the commencement of operations and would be subject to consultation with the Geographical Names Board of NSW having regard to community and stakeholder feedback.</p>
<p>Concerns relation to additional traffic on local roads associated with kiss and ride facilities, and requests for reduced speed limits around the station</p>	<p>Network changes around Burwood North Station proposed as part of Sydney Metro West are not expected to have a significant impact on network performance on streets near Burwood North Station.</p> <p>The design of kiss and ride spaces would be progressed in accordance with Section 4.2.4 of the Design Guidelines (Appendix M), including considering safe and efficient vehicle access and minimising conflicts with pedestrians, cycles, buses and other vehicles.</p>

## 5.8 Five Dock Station

The key feedback related to placemaking and design at Five Dock Station, the response and ongoing design considerations is provided in Table 5-6.

**Table 5-6 Placemaking and design feedback and response – Five Dock Station**

Feedback	Response and ongoing considerations during design development
<p>Concerns regarding the height of station buildings including overshadowing impacts and request that these are consistent with local planning controls</p> <p>Concerns regarding the future overdevelopment of the area</p>	<p>The height and scale of the aboveground infrastructure at Five Dock Station would recognise the local planning controls (as identified in the Local Environmental Plan and Development Control Plan) and local setting of the area, responding to the local village character and minimising visual and overshadowing impacts. Upper level setbacks would also be provided from Fred Kelly Place, as shown in Figure 12-6 Built form urban design strategies – Five Dock Station of Appendix B (Revised proposal description).</p> <p>Sydney Metro has and would continue to work with Canada Bay Council regarding the scale and built form of aboveground station infrastructure.</p> <p>Sydney Metro is not proposing over and/or adjacent station development at Five Dock.</p>

Feedback	Response and ongoing considerations during design development
Requests for wider active transport connections such as to the proposed East West Regional Cycleway	<p>Sydney Metro West would be integrated with other transport modes, including the existing pedestrian and cycle network. At Five Dock, an active transport link would be provided adjacent to the station building on East Street.</p> <p>Direct connections beyond the station precinct to the proposed East West Regional Cycleway are beyond the scope of this proposal. Sydney Metro is continuing to work with the City of Canada Bay Council regarding opportunities for integration with other proposed cycleways and the wider active transport network (refer to mitigation measure EIS-TT2 in Appendix C (Revised mitigation measures)).</p>
Requests related to the location of transport interchange facilities including sufficient bicycle parking, concerns related to additional traffic and requests for reduced speed limits around the station	<p>The location of transport interchange facilities has been and would continue to be guided by the Sydney Metro modal access hierarchy. The objective of the hierarchy is to ensure that the design of stations, and their integration with other transport modes, gives the highest priority to the most efficient and sustainable access modes (including pedestrian and cycle infrastructure). The metro stations would focus on providing safe and convenient connections between different transport modes, including walking, cycling, buses, taxis and kiss and ride.</p> <p>Bicycle parking would be provided at Five Dock Station. The specific number and typology of bicycle parking spaces would be determined during detailed design based on forecast demand numbers and in accordance with and the following guidelines:</p> <ul style="list-style-type: none"> <li>• Transport for NSW <i>Cycleway Design Toolkit</i> (2020)</li> <li>• Austroads <i>Bicycle Parking Facilities: Guidelines for Design and Installation</i> (2016)</li> <li>• Australian Standards – AS2890.3 <i>Parking Facilities: Bicycle Parking</i> (2015).</li> </ul> <p>Minor network changes proposed as part of Sydney Metro West are not expected to have a major impact on overall network performance, and would be further investigated and assessed as part of the station design and precinct plans prepared for the site.</p> <p>Sydney Metro would continue to consider the location of kiss and ride facilities at Five Dock Station in consultation with City of Canada Bay Council, including taking into account the need to manage potential impacts and the modal access hierarchy.</p> <p>Vehicle speed limits in the areas adjacent to the station would be considered further during detailed design as part of the interchange access plans, and in consultation with relevant stakeholders such as local councils and other parts of Transport for NSW.</p>
Concerns related to parking impact in the area and suggestions to provide commuter car park	<p>Commuter parking would not be provided at Sydney Metro West stations. All stations would be designed to promote active and public transport access above the use of private vehicles. Stations have been planned to integrate with other forms of public transport like light rail, suburban rail, and buses. Station precincts would be designed in consultation with councils to provide for easy connections to walking and cycling links. To accommodate customers driving to stations, spaces would be provided for pick up and drop off by taxi or kiss and ride.</p> <p>Five Dock Station is being designed to prioritise transport interchange and would include a dedicated bus interchange on both sides of Great North Road and connect with existing active transport links including new bicycle paths through the station precinct and widening of footpaths on Great North Road near pedestrian crossings and bus stops. Kiss and ride bays are planned to be located on Waterview Street, Second Avenue, East Street (accessible) and, during peak hours, on Garfield Street and Second Avenue.</p>

Feedback	Response and ongoing considerations during design development
	<p>The proposed location of transport interchange elements is shown in Appendix B (Revised proposal description), and these would be further investigated through the station design and precinct plans prepared for the site.</p> <p>Sydney Metro would consider opportunities to minimise parking impacts as part of interchange access planning while achieving the outcomes of the model access hierarchy. As identified in Section 12.5.2 of the Environmental Impact Statement this could include kiss and ride spaces being available for general parking outside of the AM and PM peak periods. The potential social and business impacts associated with parking changes at the precinct are considered in Section 12.12 and Section 12.13 of the Environmental Impact Statement, respectively.</p> <p>Sydney Metro would work with City of Canada Bay Council to help address potential parking impacts that may arise from customers using neighbouring residential streets to park and ride at Five Dock (in accordance with mitigation measure EIS-TT3 in Appendix C (Revised mitigation measures)). EIS-TT3 has also been amended to include example measures that could be considered (refer to Section 2.14 (Changes to or additional mitigation measures) of this Submissions Report).</p>

## 5.9 The Bays Station

The key feedback related to placemaking and design at The Bays Station, the response and ongoing design considerations is provided in Table 5-7.

**Table 5-7 Placemaking and design feedback and response – The Bays Station**

Feedback	Response and ongoing considerations during design development
<p>Suggestions to align the station design with master planning for The Bays</p>	<p>The indicative layout of key design elements of The Bays Station is broadly consistent with the <i>Bays West Stage 1 draft Master Plan and Urban Design Framework</i> (NSW Department of Planning and Environment, 2022), particularly with respect to the following:</p> <ul style="list-style-type: none"> <li>• the location, layout and indicative heights of the aboveground station buildings, and provision of space for non-station use in these buildings</li> <li>• provision of active transport connections, including a bicycle route along the northern edge of the station precinct and along the new precinct street</li> <li>• preservation of significant view corridors where possible, including to the silhouette and chimney stacks of the former White Bay Power Station.</li> </ul> <p>Sydney Metro is continuing to work with the Department of Planning and Environment and Transport for NSW to align with the <i>Bays West Stage 1 draft Master Plan and Urban Design Framework</i>.</p>

Feedback	Response and ongoing considerations during design development
<p>The community value the heritage White Bay Power Station</p> <p>Requests to maintain important view corridors associated with and views to the White Bay Power Station</p> <p>The height of the station and traction substation should be reduced and should minimise visual impacts to heritage and to Anzac bridge</p>	<p>The location and height of station buildings and the design of the traction substation has been developed consistently with the <i>Bays West Place Strategy</i> (NSW Department of Planning, Industry and Environment, 2021a) and associated draft <i>Bays West Urban Design Framework</i> (NSW Department of Planning, Industry and Environment, 2021b) and sub-precinct master plans, and based on feedback from the Design Advisory Panel.</p> <p>The design of The Bays Station and precinct has considered the important view corridors to and from the State heritage listed former White Bay Power Station. There would, however, be some minor direct and moderate indirect impacts to the former White Bay Power Station mainly associated with the new traction substation located to the south. Sydney Metro is continuing to consider the location, size and design of the traction substation to minimise impacts to the adjacent heritage listed White Bay Power Station. Alternative locations could include placement outside of the White Bay Power Station heritage curtilage.</p> <p>The design of station and other metro infrastructure at The Bays would be progressed in accordance with the Design Guidelines (Appendix M). This includes strategies to ensure bulk and scale of station infrastructure is minimised and that primary view corridors are maintained and impacts to secondary view corridors are minimised, as identified in the White Bay Power Station Conservation Management Plan and the <i>Bays West Place Strategy</i> and associated draft Urban Design Framework.</p> <p>Sydney Metro has also identified mitigation measures to minimise potential impacts to the White Bay Power Station curtilage and buildings (refer to Appendix C (Revised mitigation measures)). This includes:</p> <ul style="list-style-type: none"> <li>• mitigation measure EIS-NAH2, which requires detailed design for aboveground station elements, ancillary facilities and public domain and landscaping work located in or near to heritage significant items to respond to relevant heritage guidelines and existing Conservation Management Plans during design development in order to minimise indirect (visual) impacts</li> <li>• mitigation measure EIS-NAH10, which requires opportunities to minimise the scale or alter the siting of the proposed traction substation to be considered so that the prominence of White Bay Power Station is not obstructed on significant view lines from the south and south-east would be explored during detailed design</li> <li>• mitigation measure EIS-LV9 which requires design of the traction substation building to have an industrial character with a high quality architectural finish and not detract from the visual prominence of the existing power station façade and silhouette of the twin stacks.</li> </ul>
<p>Support for active transport connections and requests for wider connections such as toward Glebe Island Bridge, to the Rozelle Rail Yards parklands and the Inner West Light Rail</p>	<p>Bicycle routes are proposed throughout the station precinct to connect to the existing and planned active transport network. This includes a proposed connection from the existing active transport routes on Victoria Road and Robert Street, into the station precinct and metro station entry.</p> <p>The proposed cycle routes would provide connections to the Rozelle Parklands (being delivered as part of Rozelle Interchange) and to the east towards the future link across Glebe Island Bridge (to be delivered by others).</p> <p>Connections outside of the station precinct are beyond the scope of this proposal. Sydney Metro is continuing to work with the Inner West Council and the Department of Planning and Environment regarding the coordination of active transport links at The Bays and opportunities for integration with other proposed cycleways and the wider active transport network (refer to mitigation measure EIS-TT2 in Appendix C (Revised mitigation measures)).</p>

Feedback	Response and ongoing considerations during design development
<p>Requests related to transport interchange facilities including:</p> <ul style="list-style-type: none"> <li>• prioritisation of pedestrians and cyclists, followed by public transport</li> <li>• provision of sufficient bike parking</li> <li>• shared spaces can result in challenges for navigability</li> <li>• suitable wayfinding should be provided</li> </ul>	<p>Transport interchange facilities would be provided at The Bays Station to cater for pedestrians, cyclists, bus and kiss and ride. The station precinct would include a new bus interchange, new pedestrian links from Robert Street and new pedestrian crossings.</p> <p>The location of transport interchange facilities would be guided by the modal access hierarchy. The objective of the hierarchy is to ensure that the design of stations, and their integration with other transport modes, gives the highest priority to the most efficient and sustainable access modes (including pedestrian and cycle infrastructure). The metro stations would focus on providing safe and convenient connections between different transport modes, including walking, cycling, buses, taxis and kiss and ride.</p> <p>Bicycle parking would be provided at The Bays Station which would be weather protected and close to the station entry in line with the modal access hierarchy. The specific number and typology of bicycle parking spaces would be determined during detailed design based on forecast demand numbers and in accordance with and the following guidelines:</p> <ul style="list-style-type: none"> <li>• Transport for NSW <i>Cycleway Design Toolkit</i> (2020)</li> <li>• Austroads <i>Bicycle Parking Facilities: Guidelines for Design and Installation</i> (2016)</li> <li>• Australian Standards – AS2890.3 Parking Facilities: Bicycle Parking (2015).</li> </ul> <p>The design for The Bays Station would be integrated with the wider Bays West precinct. Connections to active transport links and cyclist links would be provided through the station precinct connecting to the Rozelle Parklands with the White Bay foreshore, and Rozelle and Balmain with Anzac Bridge, Pyrmont and the city.</p> <p>Appropriate wayfinding and signage would be provided at the station precinct to enable efficient navigation of stations and easy interchange with other transport modes. Further information on wayfinding and signage is provided in Section 3.1.3 of the Design Guidelines (Appendix M).</p>
<p>Requests related to the wider road network including:</p> <ul style="list-style-type: none"> <li>• consider a one-way street pattern</li> <li>• reduced speed limits within the precinct</li> <li>• the ability for vehicles to turn around within the precinct to avoid accessing James Craig Road</li> <li>• provision of traffic signals at the Robert Street / Mullens Street intersection</li> <li>• upgrade to the Victoria Road / Robert Street intersection</li> <li>• footpath upgrades along Robert Street</li> </ul>	<p>The road network within The Bays Station precinct is subject to ongoing design development, including street patterns and speed limits, in accordance with the <i>Bays West Stage 1 draft Master Plan and Urban Design Framework</i> and consultation with the Department of Planning and Environment.</p> <p>Sydney Metro would construct the main precinct street and proposed roundabout adjacent to the station precinct to support bus access, kiss and ride, and other vehicles required to service the station. The precinct street delivered as part of this proposal would be designed to enable vehicles to turn around at the roundabout to exit the precinct, without the need to access James Craig Road.</p> <p>Options to improve the performance of the Robert Street / Mullens Street intersection (including potential signalisation) would be investigated in consultation with key stakeholders, in accordance with mitigation measure EIS-TT9 (refer to Appendix C Revised mitigation measures).</p> <p>Upgrades to Victoria Road / Robert Street intersection are not within the scope of Sydney Metro West.</p> <p>Upgrades to existing footpaths are beyond the scope of the Sydney Metro West project, except where required to tie in with road and active transport network upgrades.</p>

## 5.10 Pyrmont Station

The key feedback related to placemaking and design at Pyrmont Station, the response and ongoing design considerations is provided in Table 5-8.

**Table 5-8 Placemaking and design feedback and response – Pyrmont Station**

Feedback	Response and ongoing considerations during design development
<p>The scale of the buildings should be reduced</p>	<p>The proposed metro station entries at Pyrmont would consider the existing or anticipated urban form in terms of scale, character and heritage where relevant. The design would provide an entry space which would provide a safe, well lit, open and welcoming customer environment with clear sight lines between the interior and exterior of the station, sufficient customer circulation space and necessary station plant and equipment. The scale of the proposed buildings at Pyrmont is consistent with the intended future land use in the area being progressed as part the <i>Pyrmont Peninsula Place Strategy</i> (NSW Department of Planning, Industry and Environment, 2020).</p> <p>The Design Guidelines (Appendix M) would be used to guide the ongoing design of the Pyrmont Station, including the station entrances. The Design Guidelines include strategies such as upper level building setbacks to provide for a comfortable pedestrian environment, and consideration of a high-quality façade design which aligns with the heritage values of the area, manages the visual impact of station services to the street and enhances the character and amenity of its setting.</p> <p>Future over station development at the eastern station site would be subject to separate assessment and approval, including consideration of its scale and potential visual impact. Over station development is not proposed at the western station site.</p>
<p>Requests related to transport interchange facilities including:</p> <ul style="list-style-type: none"> <li>• active transport connections</li> <li>• reduced speed limits around the station</li> <li>• recommendations regarding the pedestrian environment, crossings and signal phasing</li> </ul>	<p>The location of transport interchange facilities has been and would continue to be guided by the modal access hierarchy. The objective of the hierarchy is to ensure that the design of stations, and their integration with other transport modes, gives the highest priority to the most efficient and sustainable access modes (including pedestrian and cycle infrastructure). The metro stations would focus on providing safe and convenient connections between different transport modes, including walking, cycling, buses, taxis and kiss and ride.</p> <p>At Pyrmont Station, active transport connections are provided for via the existing separated facility on Union Street, and the shared zone along Paternoster Row.</p> <p>Sydney Metro would continue to work with City of Sydney Council and the Department of Planning and Environment regarding coordination with the <i>Pyrmont Peninsula Place Strategy</i> including integration with other proposed active transport links being delivered by others.</p> <p>Sydney Metro would also work with City of Sydney Council regarding integration with the surrounding pedestrian network. This would include investigating measures to improve the overall performance for both pedestrians and vehicles at the Pyrmont Bridge Road / Union Street intersection (in accordance with mitigation measures EIS-TT11) (refer to Appendix C (Revised mitigation measures)).</p>
<p>Heritage interpretation should be a key consideration in the design of the buildings and should integrate with public art</p>	<p>Sydney Metro has considered City of Sydney’s recommendations in the final Heritage Interpretation Strategy (Appendix L). Sydney Metro would continue to work with the City of Sydney in the development of detailed Heritage Interpretation Plans. The Heritage Interpretation Plans would be developed alongside design.</p> <p>In accordance with Section 4.1.6 of the Design Guidelines (Appendix M), public art would be integrated within stations, plazas and precincts to elevate the customer experience and enhance sense of place. Public art is also identified as a potential heritage interpretation device in the Heritage Interpretation Strategy (Appendix L).</p>

Feedback	Response and ongoing considerations during design development
<p>Comments related to parking impact in the area and suggestion that measures should be developed with City of Sydney Council</p>	<p>Sydney Metro would consider opportunities to minimise parking impacts as part of interchange access planning while achieving the outcomes of the model access hierarchy. This would be investigated through the station design and precinct plans prepared for the site. The potential social and business impacts associated with parking changes at the precinct are considered in Section 14.12 and Section 14.13 of the Environmental Impact Statement, respectively.</p> <p>Sydney Metro would work with City of Sydney Council to help address potential parking impacts at Pyrmont (in accordance with mitigation measure EIS-TT3 in Appendix C (Revised mitigation measures)). EIS-TT3 has also been amended to include example measures that could be considered (refer to Section 2.14 (Changes to or additional mitigation measures) of this Submissions Report).</p>

### 5.11 Hunter Street Station (Sydney CBD)

The key feedback related to placemaking and design at Hunter Street (Sydney CBD) Station, the response and ongoing design considerations is provided in Table 5-9.

**Table 5-9 Placemaking and design feedback and response – Hunter Street (Sydney CBD) Station**

Feedback	Response and ongoing considerations during design development
<p>Requests related to transport interchange facilities including:</p> <ul style="list-style-type: none"> <li>• integration between Sydney Metro and other modes</li> <li>• reduced speed limits around the station</li> <li>• recommendations regarding the pedestrian environment, crossings and signal phasing</li> </ul>	<p>Hunter Street Station (Sydney CBD) would provide easy connections from the metro to other transport modes, including to Martin Place Station and Wynyard Station. The following interchange facilities to public transport services would be provided:</p> <ul style="list-style-type: none"> <li>• a direct underground connection would be provided within the paid concourse between the eastern entry and Sydney Metro City &amp; Southwest Martin Place Station</li> <li>• an unpaid underground connection would be provided between the western entry and Wynyard Station through an existing tunnel beneath George Street. This connection would also be possible aboveground, across the pedestrianised George Street</li> <li>• the western entry would provide a connection to the Wynyard light rail stop on George Street</li> <li>• bus connections would be possible via a short walk to either Wynyard Station or Martin Place interchanges.</li> </ul> <p>Sydney Metro would continue to work with City of Sydney Council regarding integration with the surrounding pedestrian network. This would include investigating potential changes to the pedestrian crossing and signal phasing at Bligh Street / Hunter Street intersection (in accordance with mitigation measure EIS-TT12) and minor footpath upgrades in select locations (in accordance with mitigation measure EIS-TT13 (refer to Appendix C (Revised mitigation measures))). Changes to speed limits beyond the station precinct are beyond the scope of this proposal.</p> <p>Sydney Metro has amended mitigation EIS-TT12 to include consideration of signal phasing at the Bligh Street / Hunter Street intersection (refer to Section 2.14 (Changes to or additional mitigation measures) of this Submissions Report).</p>
<p>Suggestion to coordinate pedestrian connections with the adjacent planning proposal at 15-25 Hunter Street and 105-107 Pitt Street</p>	<p>Sydney Metro would continue to work with City of Sydney and the proponents of the planning proposal to provide coordinated outcomes in relation to through site pedestrian links.</p>

Feedback	Response and ongoing considerations during design development
Request for a sensitive design interface to be included around Skinners Family Hotel	Sydney Metro have adjusted the Design Guidelines (Appendix M) to recognise a sensitive design interface around the Skinners Family Hotel.  Mitigation measure EIS-NAH2 also requires detailed design of aboveground station elements, ancillary facilities, public domain and landscaping to respond to relevant heritage guidelines in order to minimise impacts to heritage items (refer to Appendix C (Revised mitigation measures)).
The alignment and street frontage height should be respected at the interface with Richard Johnson Square	The Design Guidelines (Appendix M) include a requirement for the eastern site building to be setback from Bligh Street to align with the adjoining heritage building (Lowy Institute Building) to celebrate this heritage façade and promote a visual connection to Richard Johnson Square.
The street frontage heights at the western site should match the Skinners Family Hotel and 15-17 Hunter Street	The Design Guidelines (Appendix M) have been updated to include a requirement for the streetwall design for the western building to align with the predominant streetwall heights along George Street to the south, the scale of the former Skinners Family Hotel at the corner of Hunter Street and George Street, and step up to the east to respond to the scale of the former New South Wales Sports Club.

## 5.12 Clyde stabling and maintenance facility and Rosehill services facility

The key feedback from submissions related to placemaking and design at Clyde stabling and maintenance facility and Rosehill services facility, the response and ongoing design considerations is provided in Table 5-10.

**Table 5-10 Placemaking and design feedback and response – Clyde stabling and maintenance facility and Rosehill services facility**

Feedback	Response and ongoing considerations during design development
The indicative layout should be updated to consider the use of the residual land and active transport links	In accordance with Concept condition of approval C-B2 (b), Sydney Metro is considering the future use of residual land required for construction surrounding the Rosehill services facility (within the vicinity of the stabling and maintenance facility) following completion of construction, which includes consideration of: <ul style="list-style-type: none"> <li>• Sydney Metro's operational requirements</li> <li>• existing zoning of the land</li> <li>• the nature of the surrounding uses</li> <li>• the recreational needs of the local population</li> <li>• the necessary work and remediation</li> <li>• potential use of this land to provide flood storage to meet the requirements of condition of approval D10 of the previous Sydney Metro West planning application.</li> </ul> Mitigation measure EIS-P2 requires preparation of a landscape masterplan for the Clyde-Rosehill precinct in consultation with the City of Parramatta Council, the NSW Department of Planning and Environment and other relevant stakeholders. The landscape masterplan would identify active transport links, the use of residual land and how the facility would integrate with the master planning work for the Camellia-Rosehill precinct.

Feedback	Response and ongoing considerations during design development
<p>Consider the potential impacts to fish habitat, wildlife movement and reduced water quality in A'Becketts Creek and Duck Creeks Suggestion that a wider vegetated riparian zone buffer is required for A'Becketts Creek</p>	<p>Sydney Metro would prepare a Rehabilitation Management Plan to guide the riparian rehabilitation and provide further detail on the approach to rehabilitation (in accordance with Concept condition of approval C-B2). This would detail the requirements of the riparian zone.</p> <p>Potential impacts to fish habitat, wildlife movement and reduced water quality to A'Becketts Creek and Duck Creeks have been considered in the Environmental Impact Statements for this proposal and the previous Sydney Metro West planning application (where relevant).</p>

## 6.0 Community submissions

This chapter provides responses to issues raised in submissions from the community, including community members, and community interest groups and organisations. Appendix A (Where to find responses to issues raised in submissions) includes a table which lists each submitter identification number and provides a cross-reference to the section(s) of this report where the issues that were raised are addressed.

### 6.1 Support for Sydney Metro West

#### 6.1.1 General support for Sydney Metro West

##### Submitter identification numbers

S-39582345, S-39635033, S-39946214, S-40085272, S-41388569, S-41517733, S-41732139, S-41814224, S-41827153, S-42047941, S-42138442

##### Issue raised

Submitters expressed their support for Sydney Metro West.

##### Response

Sydney Metro notes the support expressed for Sydney Metro West.

### 6.2 Planning and assessment process

#### 6.2.1 Adequacy of the assessment

##### Submitter identification numbers

S-41073503, S-41308152, S-41461591, S-41461619, S-42075104, S-42077895, S-42009347, S-42155225, S-42161079, S-42162561, S-42158385, S-42143534, S-42078112, S-42077925, S-42214721, S-42138528

##### Issue raised – Secretary’s environmental assessment requirements

A submitter raised concern that Secretary’s environmental assessment requirements regarding operational transport and design, place and movement have not been addressed, particularly in relation to integration with the wider active and public transport network at North Strathfield metro station, Burwood North Station and Five Dock Station (including local and regional cycle strategies), and pedestrian and cyclist safety.

##### Response – Secretary’s environmental assessment requirements

The assessment in the Environmental Impact Statement has been completed in accordance with the Secretary’s environmental assessment requirements. Appendix A (Assessment requirements) of the Environmental Impact Statement provides an overview of where the Secretary’s environmental assessment requirements have been addressed. Operational transport impacts, including wider transport interactions, are assessed in the Transport sections in Part B (Environmental assessment) and Technical Paper 1 (Operational transport) of the Environmental Impact Statement. Chapter 5 (Proposal description – operation) and Placemaking sections in Part B (Environmental assessment) of the Environmental Impact Statement provide detail on how this proposal addresses design, place and movement. Responses to submissions which raised integration with the wider active and public transport network and pedestrian/cyclist safety during operation are included in Section 6.7.

##### Issues raised – North Strathfield metro station

Submitters raised the following concerns and queries about the adequacy of the assessment in the Environmental Impact Statement for North Strathfield metro station:

- concern that the transport assessment has not considered existing traffic volumes and congestion on George Street, North Strathfield, particularly during school drop-off and pickup periods
- concern that the operational transport assessment does not adequately address pedestrian safety or road network performance during peak periods on Hamilton Street East, North Strathfield
- concern that pedestrian crowding on proposed overhead bridges at North Strathfield metro station has not been adequately assessed, particularly during major event periods
- concern that overshadowing analysis has not been provided for aboveground structures at North Strathfield metro station.

## Response – North Strathfield metro station

The operational and construction transport assessments (including intersection performance modelling) have considered intersections which are directly impacted and most relevant to the assessment. The baseline road and pedestrian environment includes consideration of existing road and pedestrian traffic associated with schools in the vicinity, including school buses. The baseline environment for the transport assessment at North Strathfield metro station is described further in Section 10.5.1 of the Environmental Impact Statement.

In accordance with the Construction Traffic Management Framework (CTMF) (Appendix J), Sydney Metro would seek to retain existing on-street parking and restrictions as far as practicable. Sydney Metro would continue to work with the affected stakeholders so that safe and efficient access to The McDonald College and Our Lady of the Assumption at North Strathfield is maintained throughout the duration of construction.

During operation, vehicles would use the kiss and ride facility on Hamilton Street East (in addition to the existing kiss and ride on Queen Street). It is noted that there is an existing kiss and ride on Hamilton Street East which would be enhanced as part of this proposal. Operational intersection performance modelling has considered kiss and ride locations on both Hamilton Street East and Queen Street. The forecast mode of access and egress to North Strathfield metro station (as shown in Table 10-7 of the Environmental Impact Statement) would predominantly be walking or by bus. Integration with the pedestrian network (including safety considerations as relevant) and road network performance during operation at North Strathfield metro station is assessed in Section 4.6 of Technical Paper 1 (Operational transport) of the Environmental Impact Statement.

Sydney Metro would continue to consider the location of kiss and ride facilities at stations, taking into account the need to manage potential impacts and the modal access hierarchy. Section 4.2 of the Design Guidelines (Appendix M) includes provisions to support pedestrian safety at interchanges. In accordance with the guidelines, kiss and ride spaces are to be located where safe and efficient vehicle access and high turnover is available, minimising conflicts with pedestrians, cyclists, buses and other vehicles.

Section 3.1.2 of the Design Guidelines includes guidance to provide adequate space to meet customer demands during peak periods and for long-term patronage forecasts. In accordance with the Design Guidelines, the movement capacity, configuration and spatial sequences of each station is to respond to patronage requirements defined as Level of Service C or better (based on a scale from A to F), appropriate to the location and context.

Pedestrian modelling has been carried out for North Strathfield metro station, which has informed the design and capacity of the new pedestrian footbridge and public domain areas, in Section 4.6.3 of Technical Paper 1 (Operational transport) of the Environmental Impact Statement. The new overhead footbridge would be designed to cater for the forecast demand of pedestrian movements. During major event periods (for example, at Sydney Olympic Park), marshalling of customers interchanging may be required at North Strathfield metro station.

Overshadowing analysis has been carried out for precincts where there is potential for this proposal to overshadow existing adjacent residential properties and public domain areas identified for solar access protection in local planning guidance (as outlined in Section 2.2 of Technical Paper 6 (Landscape and visual amenity) of the Environmental Impact Statement)). The station building height at North Strathfield metro station would, subject to design development, be indicatively around 25 metres at the northern end and would reduce to around 10 metres high as the building form transitions along Queen Street to the south. Any overshadowing from the station building in a westerly direction would only occur during the AM period and would be likely to extend into the existing rail corridor only, which has a width of around 28 metres. The station is unlikely to result in overshadowing to adjacent residential properties or public domain areas. Additionally, over and/or adjacent station development is not proposed at North Strathfield metro station.

## Issues raised – Five Dock Station

Submitters raised the following concerns and queries about the adequacy of the assessment in the Environmental Impact Statement for Five Dock Station:

- concern about accuracy of the operational ground borne noise modelling in relation to Five Dock, including concern that modelling does not consider dual tunnels running under each property and the potential for noise levels to increase as train wheels and tracks start to wear
- query as to how visual impacts at Five Dock Station could be adequately assessed and that the assessment outcomes may be unreliable or understated, given that the station design is indicative only and subject to further design development
- concern that the station design at Five Dock could be changed following approval of this proposal.

## Response – Five Dock Station

An important part of a new rail project is considering potential noise and vibration levels once the railway opens. Sydney Metro is designed to reduce noise and vibration. The metro system would be designed to achieve a ground-borne noise level of 35dBA and vibration levels that meet the criteria for human comfort, in line with the *Rail Infrastructure Noise Guideline* (NSW Environment Protection Authority (EPA), 2013) and *Assessing Vibration: a technical guideline* (Department of Environment, Climate Change, 2006).

In the vicinity of Lancelot Street, high attenuation track (form 2) has been modelled as sufficiently meeting the requirements of the *Rail Infrastructure Noise Guideline*. During detailed design development, the different track types would be combined to generate an optimised track form design that would achieve compliance with the applicable criteria for all receivers. It is unlikely that residents or businesses located directly above or proximal to the tunnels would notice train movements during operation. Sydney Metro uses rail fasteners or floating tracks inside the tunnels to help create separation between the tracks and the ground reducing the potential for transference of ground-borne noise and vibration once the railway is operational. These measures are used across the tunnel alignment and extra measures are used in sensitive areas, like around stations and where the tunnels are not as deep, to achieve the target ground-borne noise and vibration levels.

As part of the planning approval Sydney Metro is required to demonstrate that operational noise and vibration is in keeping with levels identified during the planning and assessment process, and in line with regulatory guidelines, including those from the NSW Environment Protection Authority. In line with best practice, validation of key noise and vibration predictions would be made during the operational phase. An Operational Noise and Vibration Review would be prepared during design development to confirm the mitigation measures required to manage potential airborne and ground-borne noise and vibration impacts from rail operations and stations, in accordance with mitigation measure EIS-NV4. The NSW Environment Protection Authority would be consulted during the preparation of this review. This has been included as an additional mitigation measure in Section 2.14 (Changes to or additional mitigation measures) of this Submissions Report.

Sydney Metro used a similar process to predict operational noise levels on the Metro North West rail line. Operational noise levels were reassessed in the first twelve months of operation and were shown to be consistent with the planning approval and *Rail Infrastructure Noise Guideline* limits. At properties with similar or shallower depths to those along Lancelot Street the results showed that noise at all locations where monitoring was undertaken were compliant and well below the design objectives.

Operational noise associated with both tunnels has been assessed in Chapter 16 (Tunnels) and Technical Paper 3 (Operational noise and vibration) of the Environmental Impact Statement. Appropriate track form would be implemented so that ground-borne noise and vibration from the operation of metro trains in the tunnels would comply with the applicable criteria. Maintenance of the metro trains and tracks would also be undertaken during operation, so that operational noise levels remain compliant within the specified standards.

Refer to Section 6.9 for further discussion on the potential ground-borne noise impacts during operation of the tunnels.

The level of detail is sufficient for the assessment of potential environmental impacts, including visual impacts. The level of design detail provided and assessed in the Environmental Impact Statement is consistent with the level of design detail in other major transport project planning approvals, including previous Sydney Metro projects. Design Guidelines (Appendix M) and relevant mitigation measures (refer to Appendix C (Revised mitigation measures)) would be applied so potential visual impacts are appropriately mitigated.

Some design elements of this proposal would continue to be refined as part of the design development process. The design process would follow robust internal review processes and independent review through the use of a Design Review Panel (as described in Table 5-5 of the Environmental Impact Statement). Following development of the design, station design and precinct plans (or equivalent as required by the conditions of approval) would be developed for each metro station to document and illustrate the permanent built works and landscape design. The ongoing design process would include opportunities for community and stakeholder feedback. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

## 6.3 Stakeholder and community engagement

### 6.3.1 Key stakeholder and industry engagement

#### Submitter identification number

S-42214721

#### Issue raised

A submitter commented that consultation has not been undertaken with adjacent schools at North Strathfield.

#### Response

Sydney Metro has been engaging with the community, stakeholders and industry on Sydney Metro West since 2017. The community near North Strathfield metro station have been specifically engaged with since the station location was announced in 2019, for example through door knocks with contact details for the dedicated place manager, newsletters and notifications about each stage of planning, community surveys along the Sydney Metro West corridor, and ongoing engagement with place managers. Sydney Metro has also consulted with schools in the vicinity of the station precincts.

Sydney Metro place managers met with The McDonald College and Our Lady of the Assumption Catholic Primary School prior to public exhibition of the Environmental Impact Statement and a briefing was offered to each school when the Environmental Impact Statement was lodged for public exhibition. Sydney Metro place managers also met with The McDonald College following public exhibition to discuss the issues raised in their submission (refer to Section 8.6 (The McDonald College) of this Submissions Report).

The briefings prior to public exhibition focused on:

- upcoming construction activities and potential impacts
- construction program including scheduling around HSC studies
- early design considerations and opportunities to provide feedback during public exhibition of the Environmental Impact Statement.

Sydney Metro is committed to ongoing consultation regarding potential impacts with The McDonald College and Our Lady of the Assumption Catholic Primary School, including during the work carried out under the previous Sydney Metro West planning application, and during construction of this proposal, to identify appropriate mitigation measures and suitable respite periods so that impacts are minimised as much as is feasible and reasonable.

The Overarching Community Communications Strategy (OCCS) (Appendix N) has been prepared to guide Sydney Metro's approach to stakeholder and community consultation.

### 6.3.2 Consultation undertaken during the planning approvals process for Sydney Metro West

#### Submitter identification numbers

S-42009347, S-39946214, S-40408215

#### Issues raised

Submitters raised the following concerns and comments about the consultation undertaken during the planning approval process for Sydney Metro West:

- concern that no community information sessions were held during the exhibition of the previous Sydney Metro West planning application (in relation to Five Dock), and that they were unable to make an informed comment on the metro alignment at this stage due to these limitations during the exhibition period in 2020
- concern about the lack of direct consultation with members of the local community during preparation of the Environmental Impact Statement for this proposal and lack of opportunities to provide input during the design process
- comment that there has been no communication or consultation with residents near Five Dock Station during preparation of the Environmental Impact Statement for this proposal.

## Response

Sydney Metro has been engaging with the community, stakeholders and industry on Sydney Metro West since 2017. Feedback gathered has helped shape the project, including station locations. Sydney Metro's approach to consultation and engagement and activities carried out to inform project development and as part of the previous Sydney Metro West planning applications is discussed in Chapter 3 (Stakeholder and community engagement) of the Environmental Impact Statement.

The previous Sydney Metro West planning application – *Sydney Metro West Environmental Impact Statement – Westmead to The Bays and Sydney CBD* (Sydney Metro, 2020a) – was placed on public exhibition by the Department of Planning, Industry and Environment for an extended period from 30 April 2020 to 26 June 2020. During the exhibition period submissions were invited from the community and stakeholders.

The implementation of restrictions in response to the COVID-19 pandemic during April 2020 required Sydney Metro to develop new and innovative ways to engage with stakeholders and the community and to call for submissions and feedback. Sydney Metro incorporated the use of an interactive portal which visually displayed the proposed project alignment, station locations and potential environmental impacts and mitigations. The portal was complemented by a virtual information room which also displayed the project alignment and an Environmental Impact Statement summary including detailed information on the proposed tunnel alignment and depths. Virtual community meetings were used to provide the community with access to specific information. Sydney Metro place managers conducted outreach with the community and community organisations, addressing concerns and providing accurate and transparent information to generate the community's understanding of the project and any relevant impacts.

Further tools and materials that were developed to engage with stakeholders and support the exhibition of the previous Sydney Metro West planning application included a media release, newspaper advertisements in local and multicultural newspapers, an interactive project map, videos from project experts on key Environmental Impact Statement areas, phone calls and emails, e-newsletter alerts to the project mailing list and, letterbox drops, and virtual meetings.

Sydney Metro engaged with more than 15,000 people over the eight-week exhibition period in 2020. Chapter 4 of the *Sydney Metro West – Westmead to The Bays and Sydney CBD Submissions Report* (Sydney Metro, 2020b) provides further detail on consultation undertaken during exhibition of the previous Sydney Metro West planning application.

During the exhibition of this proposal from 23 March to 4 May 2022, the Sydney Metro West team provided the community with a range of options for engaging with the planning process including the continued use of the project interactive portal, virtual information room and an Environmental Impact Statement summary outlining the key design features of each station and precinct along with rail infrastructure and operational factors. Sydney Metro hosted a series of community information sessions and community information stalls in areas along the Sydney Metro West corridor. A community information session was hosted at the Five Dock Library on Thursday 31 March 2022. A community information stall was hosted at Fred Kelly Place in Five Dock on Thursday 7 April 2022. Members of the community were invited to attend these sessions, to meet expert members of the Sydney Metro West team and have any questions answered.

Further tools and materials included newspaper advertisements in local languages and multicultural newspapers, videos from project experts on stations, precincts and operations, e-newsletter alerts to the project mailing list and letterbox drops.

Outside of the exhibition periods Sydney Metro dedicated place managers have continued to provide project information to the community, addressing specific concerns and organising briefings with project experts as needed. This has included specific information sessions about the tunnel alignments and tunnelling, operational factors and construction works. Sydney Metro has also continued to communicate with the Five Dock community since the station was announced in 2019, for example through newsletters and notifications, project email alerts, the Sydney Metro Connect App, project website, and door knocks.

Further engagement and consultation would be carried out in accordance with the OCCS (Appendix N). Sydney Metro would continue to work with the community and stakeholders in Five Dock, including local councils, as Sydney Metro West progresses. Dedicated Sydney Metro place managers would continue to engage with the community, address concerns, and provide accurate and transparent information about Sydney Metro West. Some design elements of this proposal would also continue to be refined as part of the design development process, taking into account community and stakeholder feedback. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

Additional detail on ongoing community consultation is provided in Chapter 3 (Stakeholder and community engagement) of this Submissions Report.

### 6.3.3 Ongoing consultation and engagement activities

#### Submitter identification numbers

S-40044306, S-42214721, S-42078098, S-42165514, S-42138528

#### Issues raised

Submitters raised the following comments and requests about ongoing consultation and engagement activities:

- support for the proposed participation of bicycle user groups in the Traffic and Transport Liaison Group, as noted in the Construction Traffic Management Framework, particularly in relation to Five Dock and North Strathfield
- comment about the importance of consulting with active transport users to keep them informed and seek input on pedestrian/cyclist diversions during construction
- support for consultation with the community and community groups in regard to active transport infrastructure
- comment that Sydney Metro should liaise with the council and adjoining landowners in relation to design and placemaking opportunities at North Strathfield metro station
- requests from parent and citizen groups associated with Five Dock Public School that a communication plan be established and maintained with Sydney Metro West project staff, until the completion of construction. Submitter suggested that this includes a central point of contact, site visits for school students, and community updates held at the school
- request for a discussion of a submission from Five Dock with the Department of Planning and Environment
- request for ongoing consultation with the community at Pyrmont, through a community reference group.

#### Response

Sydney Metro has been engaging with the community about Sydney Metro West since 2017. Sydney Metro would continue to work with key stakeholders (including local councils and communities) so that they are informed about this proposal and have opportunities to provide feedback during each stage of the project. Sydney Metro would also continue to work with local councils and relevant adjoining landowners, in accordance with the OCCS (Appendix N), including relating to the detailed design of stations and placemaking.

As noted in CTMF (Appendix J), bicycle user group(s) may be invited to attend the Traffic and Transport Liaison Group and/or receive relevant information depending on the matters under discussion or consideration. The CTMF also includes requirements regarding the provision of safe alternate pedestrian and cycle routes, and notification requirements to the public for proposed transport network changes.

In accordance with mitigation measure EIS-TT2, potential opportunities to connect active transport measures with the wider active transport network would be further investigated in consultation with key stakeholders (refer to Appendix C (Revised mitigation measures)).

Consultation with community groups would be undertaken throughout construction in accordance with the OCCS (Appendix N). Sydney Metro ensures a personal approach is maintained when undertaking community engagement by having dedicated community relations specialists called place managers. Their role is to act as a single, direct contact between members of the community and the project team. As described in Chapter 3 (Stakeholder and community engagement) of this Submissions Report, place managers play a vital role in building and maintaining strong relationships with local communities and businesses during the planning and delivery of Sydney Metro West. Their key role is to engage with the community, address concerns and provide accurate and transparent information. A place manager can be contacted for information specific to an area during the project development phase and during the design and delivery of Sydney Metro West.

During construction, community members can contact the project team via a 24-hour project information line or via email. Site-specific needs of the community, stakeholders and businesses would be addressed through a range of online and/or in person engagement tools including work notifications and newsletters, signage, meetings and door knocks.

Sydney Metro would continue to work with Five Dock Public School through a dedicated point of contact, and local place managers, providing information about the project at relevant intervals. Ongoing engagement would also be undertaken with NSW Department of Education to continue to investigate feasible and reasonable mitigation measures related to construction traffic, pedestrian safety, construction noise and vibration, and air quality, in accordance with mitigation measure EIS-S2 (refer to Appendix C (Revised mitigation measures)).

Discussions of submissions with the Department of Planning and Environment is a matter for the Department. The Department of Planning and Environment will review the Environmental Impact Statement, submissions received and this Submissions Report. Following its assessment, a draft Environmental Assessment Report will be prepared for the Secretary of the Department of Planning and Environment, which may include recommended conditions of approval. The Environmental Assessment Report will then be provided to the Minister for Planning. The Minister will then decide whether to approve the project and identify any conditions of approval that would apply. The Minister's determination, including any conditions of approval and the Environmental Assessment Report, would be published on the Department of Planning and Environment Major Projects website.

Further detail on ongoing community consultation is provided in Chapter 3 (Stakeholder and community engagement) of this Submissions Report.

## 6.4 Methodology

### 6.4.1 Assessment methodologies

#### Submitter identification number

S-42214721

#### Issues raised

A submitter raised the following concerns about the methodology of the transport assessment for North Strathfield metro station:

- operational transport
  - concern that overall intersection performance is described as 'satisfactory' during operation, when several intersections perform at level of service F both with and without this proposal
  - concern that traffic modelling has not considered vehicles travelling from the west who choose to drop off passengers at Queen Street, rather than using the kiss and ride to the west of the station
- construction transport
  - concern that the traffic assessment does not propose appropriate mitigation in response to intersections anticipated to perform at level of service F both with and without the proposal
  - concern that the construction traffic modelling has not accounted for construction workers travelling to the site.

#### Response

Operational intersection performance modelling for North Strathfield metro station found that intersection performance would be at a 'satisfactory' level during station operations and were forecast to operate at level of service C or better during the weekday AM and PM peak periods. The impacts referred to by the submitter (intersections performing at level of service F with and without this proposal) is from the construction impact assessment (refer to Section 10.5.3 and Figure 10-11 of the Environmental Impact Statement). Where intersections are predicted to perform at level of service F both with and without this proposal, Technical Paper 2 (Construction transport) of the Environmental Impact Statement includes other intersection performance parameters such as average delay and queue length to understand the potential impacts of this proposal.

Operational intersection performance modelling has considered kiss and ride locations on both Hamilton Street East and Queen Street. Sydney Metro would continue to consider the location of kiss and ride facilities at stations, including the need to manage potential impacts and the modal access hierarchy. The forecast mode of access and egress to North Strathfield metro station (as shown in Table 10-7 of the Environmental Impact Statement) would predominantly be walking or by bus. In accordance with the Design Guidelines (Appendix M), kiss and ride spaces are to be located where safe and efficient vehicle access and high turnover is available, minimising conflicts with pedestrians, cycles, buses and other vehicles.

The construction phase intersection performance modelling has included both heavy and light vehicles (including construction workers) travelling to and from the construction sites. The assessed vehicle movements are based on the anticipated number of vehicles required to carry out the various proposed construction activities, including vehicles for construction workers. Construction traffic impacts at North Strathfield metro station would be appropriately managed through the implementation of the CTMF (Appendix J), such as through minimising construction traffic during network peak periods where possible. The CTMF provides the overall strategy and approach for construction traffic management for Sydney Metro West, and an outline of the traffic management requirements, mitigation measures and processes that would be common to each of the proposed construction sites. Parking management plans that would be prepared in accordance with the CTMF (Appendix J) would note public transport nodes in proximity to the site and encourage workers to travel by public transport. North Strathfield metro station is well serviced by public transport, including the existing North Strathfield Station.

## 6.5 Proposal description – operation

### 6.5.1 Placemaking and design

This section includes responses to submissions which raised issues related to placemaking and design. This generally includes issues specific to the design process for Sydney Metro West; station precincts; customer experience; accessibility; Design Guidelines; and alignment with local and regional plans and strategies. Responses to submissions which raised issues specifically related to metro stations are included in Section 6.5.2.

#### Submitter identification numbers

S-39737504, S-40062784, S-41394277, S-41732139, S-41814224, S-42162006, S-41965271, S-42124217, S-42077925, S-43136212, S-42214721, S-42047941, S-42137516, S-42138442, S-42138528

#### Issues raised – proposal-wide

Submitters raised the following comments, concerns and requests about placemaking and design for this proposal:

- comments and suggestions about the ongoing design process, including:
  - suggestion that a cross-agency governance framework is implemented during design development and to support integration with the transport network and placemaking
  - support for the use of independent Design Review Panels in the design process
- comment that this proposal would improve the areas around the stations and would provide connectivity
- request that public squares are provided outside of each station, rather than roads
- recommendation that additional land be acquired for the use of public domain
- request that main streets are activated
- comment that there is opportunity for the design to focus on walking and cycling as a key consideration within the precincts
- recommendation that Sydney Metro West help facilitate the incentivisation of cycling across the Transport agency cluster
- comment expressing support for the use of cycleway design standards and guidelines in the design for Sydney Metro West, including the *Cycleway Design Toolbox* (Transport for NSW, 2020b) and *Cycling Aspects of Austroads Guides* (Austroads, 2017)
- request that the following standards and guidelines relevant to bicycle users are incorporated in the design
  - *Bicycle Parking Facilities: Updating the Austroads Guide to Traffic Management* (Austroads Research Report AP-R528-16),
  - *Cycling Infrastructure Selected Case Studies* (Austroads Technical Report AP-T282-14)
  - *Guide to Road Design Part 6A Paths for Walking and Cycling* (Austroads)
  - *Integrating Safe System with Movement and Place for Vulnerable Road Users* (Austroads Research Report AP-R611-20) and
  - Australian Standard AS 2890.3 Parking Facilities: Bicycle Parking (2015)

- concern that the Environmental Impact Statement has not demonstrated that this proposal would support the principles of *Greener Places* (Government Architect NSW, 2020a) at North Strathfield metro station, Burwood North Station and Five Dock Station
- concern that the Environmental Impact Statement has not demonstrated that this proposal would address the Sydney Metro West Design Objectives and principles, in particular Objective 2 'Being part of a fully integrated transport system', as it has not considered integration with active transport strategies at North Strathfield metro station, Burwood North Station and Five Dock Station.

### Response – proposal-wide

Sydney Metro is committed to a collaborative design approach that includes consultation with relevant government agencies, local councils and precinct partners. As detailed in Chapter 3 (Stakeholder and community engagement) of the Environmental Impact Statement, Sydney Metro undertakes ongoing engagement with several cross-agency forums and working groups, for example, in relation to integration with master planning for The Bays and Sydney Olympic Park. Sydney Metro would continue to engage with government agencies, councils and precinct partners throughout the design and delivery of Sydney Metro West, including in relation to integration with the transport network and placemaking. Further detail on ongoing design development is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

Sydney Metro notes the support expressed for the use of independent Design Review Panels, which is described in Section 5.2 of the Environmental Impact Statement.

Sydney Metro West would enhance the areas around metro stations and improve connectivity to key destinations in Greater Sydney. These are key priorities in the project objectives, Sydney Metro design objectives, and the Design Guidelines (refer to Appendix M).

Station and precinct design guidelines for Sydney Metro West would be used to guide the detailed design of this proposal (refer to Appendix M (Design Guidelines)). These include guidelines for the provision of public domain areas. Public domain areas are proposed at each metro station, including both new public domain areas (for example, at Westmead metro station), and the enhancement of existing public domain (for example, the proposed extension of Fred Kelly Place at Five Dock Station).

The design of station precincts needs to consider both placemaking opportunities (for example, designing stations as focal points in the community), and the efficient movement and interchange of people to and from the station. Metro stations would be designed to provide safe and efficient interchange between transport modes including heavy and light rail services, supporting the Greater Sydney Commission's 30-minute cities vision. Streets and roads are required within the vicinity of the stations to allow for movement and interchange, for example, to access bus services and to maintain road network connectivity and existing property access. Notwithstanding, stations would be designed in accordance with the modal access hierarchy, which prioritises pedestrian and bicycle access as the most efficient and sustainable access modes (refer to Appendix M (Design Guidelines) for further detail).

The design of Sydney Metro West has sought to minimise the need for private property acquisition, while achieving placemaking outcomes. As such, further property acquisition is not proposed for public domain areas being delivered under this proposal. Public domain would be designed in accordance with the principles and guidelines set out in the Design Guidelines (Appendix M). Public domain areas within some station precincts (including Parramatta, Sydney Olympic Park, Burwood North, Five Dock and The Bays) are also being located and designed so that they can be integrated with broader land use/master planning being delivered by others.

The Design Guidelines (Appendix M) include urban design strategies to support activation at each precinct. The guidelines also identify opportunities for active uses at street level, including opportunities along existing main and high streets (such as Hawkesbury Road, Westmead, Queen Street, North Strathfield and Great North Road, Five Dock).

The modal access hierarchy, which prioritises pedestrian and bicycle access, would be implemented in the design of all Sydney Metro West stations, in accordance with the performance outcomes for Sydney Metro West (refer to Chapter 20 (Synthesis) of the Environmental Impact Statement). The Design Guidelines (Appendix M) also include guidance to prioritise pedestrian and bicycle movement ahead of vehicle circulation, thereby promoting opportunities for public transport patronage, walking and cycling. These would be used to guide ongoing design.

Sydney Metro would work with Transport for NSW during detailed design around the location of bicycle infrastructure at metro stations. As noted in Section 5.1.2 of the Environmental Impact Statement, a key characteristic of the metro network is an accessible system which is designed to enable bicycles on trains.

The Design Guidelines (Appendix M) also include guidelines to prioritise and promote bicycle movements, which would support incentivisation of cycling.

Chapter 5 (Proposal description – operation) of the Environmental Impact Statement identifies several strategies and active transport guidance documents which are being considered during the ongoing design of stations, precincts and ancillary facilities. Where relevant, the design would have regard to the intent of additional strategy and guideline documents throughout the ongoing design process.

This proposal would support the principles of *Greener Places* (Government Architect NSW, 2020a), including through integration (considering opportunities to integrate green infrastructure with metro stations and facilities) and connectivity (providing opportunities to improve connectivity to open spaces, parklands, waterways and active transport routes). Specific opportunities to support the Sydney Green Grid are identified in the relevant precinct chapter of the Environmental Impact Statement. Areas of public domain and active transport links being delivered as part of this proposal are generally located within or immediately adjacent to the station precincts. However, these would be integrated with existing and proposed active transport connections and areas of open space being delivered by others beyond the station precincts.

Sydney Metro West design objectives have and would continue to be considered during ongoing design. In accordance with mitigation measure EIS-TT2, potential opportunities to connect active transport measures with the wider active transport network would be further investigated in consultation with key stakeholders (refer to Appendix C (Revised mitigation measures)).

#### **Issue raised – Sydney Olympic Park metro station**

Submitter queried what wayfinding methods would be provided between the existing Sydney Olympic Park Station and Sydney Olympic Park metro station.

#### **Response – Sydney Olympic Park metro station**

Wayfinding and signage would be provided at Sydney Olympic Park metro station in accordance with the Design Guidelines (Appendix M). This could include measures such as signage, legible station entrances, and clear view lines in public domain areas to support customer orientation.

Sydney Metro is continuing to engage with Sydney Olympic Park Authority to integrate the Sydney Olympic Park metro station precinct with the *Sydney Olympic Park Master Plan 2030 (Interim Metro Review)* (Sydney Olympic Park Authority, 2022), including in relation to transport interchange elements.

#### **Issues raised – North Strathfield metro station**

Submitter raised the following comments, requests and concerns about placemaking and design at North Strathfield metro station:

- request that the design of the North Strathfield metro station is cohesive with the existing North Strathfield station
- concern that the design of the North Strathfield metro station does not respond to the surrounding precinct, or create a safer, more convenient environment
- comment that the station design has prioritised functionality and technical elements (such as catering for interchange between Sydney Trains and metro services), over placemaking opportunities
- comments that the station design should prioritise placemaking opportunities, east-west connectivity over the existing rail corridor, accessible access arrangements, pedestrian permeability, amenity and safety
- concerns and comments about placemaking and connectivity with the western side of North Strathfield metro station, including:
  - concern that access to the station from the west would not be improved compared to existing access arrangements, and that the design prioritises connectivity to the east of the station
  - concern that the proposed access to the station from the west would not be legible, intuitive, have adequate weather protection, or promote safety consistent with the Crime Prevention Through Environmental Design (CPTED) principles
  - concern that the existing pathway to the station from Pomeroy Street and Hamilton Street East (proposed to be retained) lacks passive surveillance and activation, and that the access points to the pathway are too far from the metro station

- concern that the design of North Strathfield metro station does not adequately address placemaking, growth and renewal opportunities by not improving connectivity to key attractors to the west of the station, including the Bakehouse Quarter and Powell's Creek open space corridor
- concern that there are not substantial upgrades or improvements proposed to Hamilton Street East, and the connection between Pomeroy Street and Hamilton Street East
- concern about access, connectivity and built form on the eastern side of North Strathfield metro station
- concern that the proposed public domain includes changes to the existing station plaza, rather than the delivery of additional or substantially improved public domain areas
- concern that the Environmental Impact Statement has not described how active transport would connect to the Green Grid network (include Powell's Creek and Mason Park) at North Strathfield
- comments that the design at North Strathfield would not achieve the principles and guidance set out in the Sydney Metro West Design Guidelines
- comment that further consideration of connectivity, placemaking and pedestrian safety on both sides of the existing rail corridor is required to meet Sydney Metro design objectives
- concern about the changing character of North Strathfield due to increased density and high-rise structures.

### **Response – North Strathfield metro station**

North Strathfield metro station would be designed in accordance with the objectives, principles and strategies set out in the Design Guidelines (Appendix M). A place and design principle for North Strathfield metro station is to 'integrate the historic value of the North Strathfield Station into the design of the metro station, and its surrounding station precinct.' In response to this, the design would aim to retain or interpret key heritage significant fabric of the existing North Strathfield Station. Where possible, the design of the station buildings would respond to the local heritage character of the precinct. A Heritage Interpretation Strategy (Appendix L) has been prepared for this proposal which provides a framework for the interpretation of non-Aboriginal heritage at North Strathfield metro station. The strategy would inform station-specific interpretation planning, including the selection of interpretive devices.

The Design Guidelines (Appendix M) identify a range of urban design strategies to address placemaking opportunities at North Strathfield metro station, such as areas for active uses and public domain improvements. Ongoing design would continue to plan for efficient interchange between Sydney Metro and Sydney Trains services on the T9 Northern Line, as well as placemaking opportunities.

The existing station entries to the west (from Hamilton Street East and Pomeroy Street) would be directly connected to the new aerial footbridge providing improved access to Sydney Trains and Sydney Metro platforms. This proposal would also support east-west connectivity over the rail corridor with a new pedestrian overpass and retention of the existing footbridge. Sydney Metro is continuing to investigate the potential to upgrade the existing footbridge to enhance pedestrian flow and connectivity throughout the station precinct. Proposed improvements to Hamilton Street East include an extension of the existing kiss and ride zone. The design of the metro station, including access arrangements from the east and west takes into account a range of considerations. For example, the design has sought to minimise the need for private property acquisition and minimise impacts to heritage items. The Design Guidelines (Appendix M) include several strategies to provision for a safe, accessible and convenient station and precinct which prioritises pedestrian and cyclist movement, which would be used to guide ongoing design. The Design Guidelines also include direction to enhance the pedestrian and cycle experience at Hamilton Street East, and along the western link (from Hamilton Street East to Pomeroy Street), through landscape improvements.

All station elements, including access arrangements from the west, would be designed to meet appropriate CPTED requirements. Adequate weather protection would also be provided at all interchange facilities where feasible in accordance with the Design Guidelines (Appendix M).

Several enhancements to public domain are proposed. These includes areas to the south of the station (in the location of the existing station plaza) and along the western side of Queen Street, where the metro station would be set back from the street to provide space for a high amenity public domain, with elements such as street trees, new street lighting, shelters (at bus stops) and new pavements. Public domain would be designed in accordance with the principles and guidelines set out in the Design Guidelines (Appendix M).

The purpose of the Design Guidelines (Appendix M) is to guide ongoing design development of the stations, precincts and ancillary infrastructure. The design of North Strathfield metro station presented the Environmental Impact Statement is indicative and would be subject to further detailed design to address the objectives, principles and guidelines set out in the Design Guidelines (including the Sydney Metro design objectives).

Sydney Metro West would support improved access to planned growth areas, and attractors such as the Bakehouse Quarter, Powell's Creek and Mason Park, by providing upgraded entries to the west of the station and enhanced easy connections across the existing rail corridor. Direct connections from the station to the Bakehouse Quarter, Powell's Creek and Mason Park are beyond the scope of this proposal.

In accordance with the principles identified in the Design Guidelines (Appendix M), the design of North Strathfield metro station would seek to respond to the local character of the surrounding area at North Strathfield, including the historic character of the existing North Strathfield Station. In addition, in accordance with mitigation measure EIS-LV8, opportunities to provide gardens within the areas adjoining the heritage listed areas of the station, or in the vicinity, would be investigated as part of design development to reflect the local values of the community and reinforce the sense of place for the North Strathfield local centre (refer to Appendix C (Revised mitigation measures)).

### **Issues raised – Burwood North Station**

Submitters had the following comments about the name of Burwood North Station:

- suggestion that Burwood North Station is renamed to 'Concord Oval Station'
- suggestion that the station is named 'Wangal Station', as it will be located on Wangal Country and would promote the local Wangal people.

### **Response – Burwood North Station**

Operational station names would be defined closer to the commencement of operations and would be subject to consultation with the Geographical Names Board of NSW, having regard to community and stakeholder feedback.

A Heritage Interpretation Strategy (Appendix L) has been prepared for this proposal which provides a framework for the interpretation of Aboriginal heritage at Burwood North Station.

### **Issues raised – The Bays Station**

Submitters raised the following comments and concerns about placemaking and design at The Bays Station:

- comment that large roads should not be provided around the metro station, and that emphasis should be placed on placemaking opportunities
- recommendation that a lift is installed to provide access from Victoria Road to The Bays Station level
- comment expressing the importance of bicycle infrastructure at The Bays Station
- comment expressing support for provision of green corridors through the site at The Bays
- request that trees are grown in advance of station buildings and ancillary facilities
- comments relating to the master planning process for Bays West, including
  - that the station design should consider the master plan for the area, and that aboveground building plans for the metro station should not be confirmed while The Bays West Stage 1 master plan is still in development
  - concern about future development of the area and 'piecemeal' approach to planning of Bays West
  - request that a whole of government approach is taken for the delivery of bicycle links in the area, and that this is coordinated with master planning for Bays West.

### **Response – The Bays Station**

The design of The Bays Station and precinct would continue to consider both placemaking opportunities and the efficient movement and interchange of people to and from the station. Streets and roads are required within the vicinity of the stations to allow for movement and interchange, for example to access bus services, and to maintain access for existing cruise terminal and port related traffic at The Bays. Notwithstanding, stations would be designed in accordance with the modal access hierarchy, which prioritises pedestrian and bicycle access as the most efficient and sustainable access modes (refer to the Design Guidelines (Appendix M) for further detail).

Sydney Metro is also continuing to work with the Department of Planning and Environment and Transport for NSW to align with the *Bays West Stage 1 draft Master Plan and Urban Design Framework* (NSW Department of Planning and Environment, 2022), including in relation to configuration of the new precinct street and street network, and design interface with public domain areas (including green links to surrounding areas) beyond the scope of Sydney Metro West. Further detail is included in Chapter 2 (Environmental Impact Statement clarifications) of this Submissions Report.

A lift on Victoria Road to connect to The Bays Station is beyond the scope of this proposal. Notwithstanding, accessible pathways would be provided to and from station entries in accordance with the Design Guidelines (Appendix M). The existing and proposed active transport connections at The Bays Station are shown in Figure 13-1 of the Environmental Impact Statement. This includes a proposed connection from the existing active transport routes along on Victoria Road and Robert Street, into the station precinct and metro station entry. All stations and interchanges would be accessible and compliant with the *Commonwealth Disability Discrimination Act 1992* (Disability Discrimination Act) and the *Disability Standards for Accessible Public Transport* (Australian Government, 2002).

Bicycle routes and bicycle parking are proposed at The Bays Station to connect with the existing active transport network. In accordance with mitigation measure EIS-TT2, potential opportunities to connect active transport measures with the wider active transport network would be further investigated in consultation with key stakeholders (refer to Appendix C (Revised mitigation measures)).

Design strategies to mitigate impacts so that service and ancillary buildings are contextually responsive, would be provided in accordance with the Design Guidelines (Appendix M). This would generally occur prior to the commencement of operation.

As identified in the Environmental Impact Statement, Sydney Metro has and would continue to work with the Department of Planning and Environment and other relevant stakeholders to integrate The Bays Station with the *Bays West Place Strategy* (NSW Department of Planning and Environment, 2021a) and the master planning being undertaken for this area. Section 2.8 (The Bays Station – alignment with master planning work) of this Submissions Report provides further detail on how the station precinct is integrated with the master planning and ongoing engagement in relation to this matter.

### 6.5.2 Stations

This section includes responses to submissions related to metro stations. This generally includes elements common across stations such as entrances, vertical transport (lifts and escalators), bicycle parking and station services infrastructure. Responses to submissions which raised issues relating to placemaking and design are included in Section 6.5.1.

#### Submitter identification numbers

S-39646582, S-39946214, S-40044306, S-40408215, S-41388569, S-41732139, S-41814224, S-41965271, S-43136212, S-42301076, S-42214721, S-42047941, S-42137516, S-42138528

#### Issues raised – proposal-wide

Submitters raised the following comments and requests about common elements of Sydney Metro West stations:

- request that easy access is provided to the station platforms, including through the removal of ticket gates
- request that wider station gates are provided, to allow for prams and electric cargo bikes
- request that lifts at stations are large enough to carry electric cargo bikes
- request that any advertisement billboards provided around the stations are silent
- suggestion that active transport infrastructure should be improved
- request that adequate amount of bicycle parking is provided
- request for safe, accessible, weatherproof bicycle parking that allows for electric cargo bikes.

#### Response – proposal-wide

Features which are common among all Sydney Metro West stations are described in Section 5.4 of the Environmental Impact Statement. Further details and guiding principles for detailed design development of each station is provided in the Sydney Metro West station and precinct Design Guidelines (Appendix M).

The stations would be designed to allow for easy and accessible access to the station platforms. Ticket gates are likely to be used at most stations. However, in accordance with Section 3.3.1 of the Design Guidelines (Appendix M), at least one wide aisle gate would be provided at each gateline. Wide aisle gates would be clearly visible and located on accessible paths of travel.

Section 4.2.3 of the Design Guidelines (Appendix M) also includes provisions for station design to allow for bicycles to be taken on metro trains. This would be considered in the design of lifts. The design of stations and interchanges would provide for a range of bicycle users, bicycle types and dimensions.

The placement and typology of advertising at the stations would be considered as part of detailed design. This would be guided by relevant principles in the Design Guidelines (Appendix M), which includes guidance to prioritise the design and placement of wayfinding and customer information, and customer campaigns, over advertising. Advertising at stations would not change the outcomes of the operational noise assessments included for each precinct in the Environmental Impact Statement (refer to Part B (Environmental assessment) and Technical Paper 3 (Operational noise and vibration) of the Environmental Impact Statement).

Bicycle routes and bicycle parking are proposed to enable integration with active transport networks. In accordance with mitigation measure EIS-TT2, potential opportunities to connect active transport measures with the wider active transport network would be further investigated in consultation with key stakeholders (refer to Appendix C (Revised mitigation measures)).

The Design Guidelines (Appendix M) include provisions for convenient and accessible bicycle parking at stations to accommodate current and future demands. The specific number and typology of bicycle parking spaces would be determined during detailed design. Cycling provisions would be provided based on forecast demand numbers and in accordance with the following guidelines:

- Transport for NSW *Cycleway Design Toolkit* (2020)
- Austroads *Bicycle Parking Facilities: Guidelines for Design and Installation* (2016)
- Australian Standards – AS2890.3 *Parking Facilities: Bicycle Parking* (2015).

#### **Issues raised – Westmead metro station**

A submitter raised the following about station entrances at Westmead metro station:

- request for an additional southern station entrance to accommodate for planned growth in the area, and to improve customer experience
- concern that the station entrance arrangements proposed in the Environmental Impact Statement would channel significant foot traffic into a single entrance
- comment that some residents would be required to walk further to access the metro station, if only one entrance is provided
- comment that a single station entrance may create safety-related issues, in the event of a single entrance needing to be closed.

#### **Response – Westmead metro station**

Table 7-1 of the Environmental Impact Statement identified that Sydney Metro was continuing to investigate the opportunity for an additional southern station entrance. In response to feedback received from the community and key stakeholders including Cumberland Council, further design development has been carried out for Westmead metro station. This has resulted in refinements to the exhibited design of Westmead metro station and the surrounding precinct, including the addition of a new metro station entry from Hawkesbury Road (to the south of Alexandra Avenue). The refinements have been identified to improve amenity, access and connectivity to the metro station, minimise potential impacts, and respond to stakeholder feedback. Section 2.2 (Westmead metro station) of this Submissions Report provides further detail on the proposed refinements at Westmead metro station.

#### **Issues raised – North Strathfield metro station**

Submitters raised the following about North Strathfield metro station:

- comment that the height of structures described in the Environmental Impact Statement (about six to seven storeys at the northern end of the station) appears inconsistent with the number of storeys shown in long and cross sections
- comment that no detail has been provided on floor-to-floor heights or overall building heights for aboveground structures

- request that the metro station entrance is relocated to be further north along Queen Street
- concern about the bulk and scale of aboveground station infrastructure along Queen Street, noting that it would be considerably higher than surrounding lower scale buildings
- suggestion that the overpass and the metro station entrance be redesigned to be more aesthetically pleasing
- suggestion that the existing uncovered footbridge be removed
- request that weather protection is provided for the entire station
- concern about the provision of weather protection along the access path from Pomeroy Street or on pedestrian overpasses, in particular that overhead cover would not provide adequate protection, and an enclosed walkway would cause heat build-up and be unsightly.

### **Response – North Strathfield metro station**

Section 10.2 of the Environmental Impact Statement identifies that the aboveground station infrastructure at North Strathfield metro station would rise about six to seven storeys above the street at the northern end of the station. This has been described in terms of the number of typical residential and/or commercial storeys that the height of the structure would be equivalent to (indicatively about 3-4 metres per storey). The purpose of this description was to give an indication of the scale of the structure. The aboveground station infrastructure (including station services and space for non-station use) would be, subject to design development, indicatively around 25 metres above Queen Street at the northern end of the station, reducing to indicatively around 10 metres above street level at the new eastern entry at Queen Street to the south. The new footbridge would be indicatively around 18 metres above the existing station platforms, subject to design development. This has been addressed as a minor clarification in Chapter 2 (Environmental Impact Statement clarifications) of this Submissions Report. Appendix B (Revised proposal description) has also been revised to describe the indicative height of structures in metres.

The description of this proposal is indicative in the Environmental Impact Statement and based on the current level of design, as noted in Chapter 5 (Proposal description – operation) of the Environmental Impact Statement. The level of design detail provided and assessed in the Environmental Impact Statement is consistent with the level of detail provided in other major transport project planning approvals, including previous Sydney Metro projects. Some design elements would continue to be refined as part of the design development process which would include opportunities for community and stakeholder feedback. Further detail on ongoing design development is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

The proposed metro station entry on Queen Street has been located to provide interchange to the existing North Strathfield Station (including via the existing and proposed pedestrian footbridges), convenient access to bus stops, access to the local centre along Queen Street, as well as for customers travelling from the north and from the east along Waratah Street. It therefore is not proposed to relocate this entry further to the north.

Station and precinct Design Guidelines for Sydney Metro West would be used to guide the detailed design of North Strathfield metro station (refer to Appendix M (Design Guidelines)). The Design Guidelines include strategies which would minimise the potential impact of station infrastructure on Queen Street, including setting the metro station back from the street to provide for public domain areas. The Design Guidelines also provides direction for the design to integrate and celebrate heritage elements and the historic value of the station precinct, which would be applied in the design of the overpass and entry. The station would be subject to further detailed design in accordance with the strategies in the Design Guidelines (Appendix M).

The existing southern footbridge (that connects Queen Street, the Sydney Trains station platforms, and the public footpath access to the west of the station) would be retained as it provides for access and interchange at the station and a connection across the rail corridor. As identified in Section 10.2 of the Environmental Impact Statement, the footbridge may require upgrades/replacement including the potential widening of the footbridge to provide improved interchange capacity (to be further investigated).

Adequate weather protection would be provided at the station and precinct, including the station building facing Queen Street and the new pedestrian footbridge. The Design Guidelines (Appendix M) provide direction for station design, and in accordance with these guidelines, weather protection would be provided within station precincts to maintain customer comfort, as well as at gatelines, queuing zones, amenities, ticketing and information areas.

### Issues raised – Burwood North Station

Submitters raised the following about Burwood North Station:

- support for the proposed station design and bicycle routes
- comment that adequate bicycle racks and/or lockers should be provided.

### Response – Burwood North Station

Sydney Metro notes the support expressed for the proposed station design and bicycle routes.

Bicycle parking would be provided at Burwood North Station (as identified in Chapter 11 (Burwood North Station) of the Environmental Impact Statement). Station and precinct Design Guidelines for Sydney Metro West would be used to guide the detailed design of this proposal (refer to Appendix M (Design Guidelines)). These include guidelines for the provision for convenient and accessible bicycle parking at stations to accommodate current and future demands. The specific number and typology of bicycle parking spaces would be determined during detailed design. Cycling provisions would be provided based on forecast demand numbers and in accordance with the following guidelines:

- Transport for NSW *Cycleway Design Toolkit* (2020)
- Austroads *Bicycle Parking Facilities: Guidelines for Design and Installation* (2016)
- Australian Standards – AS2890.3 Parking Facilities: Bicycle Parking (2015).

### Issues raised – Five Dock Station

Submitters raised the following about Five Dock Station:

- comment that additional secure parking for up to 100 bicycles should be provided underground
- request for bicycle lockers at the metro station, and bike racks in Fred Kelly Place and the surrounding area
- concern about the safety and security of bicycle lockers, noting that the design should mitigate anti-social and criminal behaviour
- comment expressing support that over and/or adjacent station development is not proposed at Five Dock Station, noting their concern about the potential for overdevelopment in the area.

### Response – Five Dock Station

Bicycle parking would be provided at Five Dock Station (as identified in Chapter 12 (Five Dock Station) of the Environmental Impact Statement).

Station and precinct Design Guidelines for Sydney Metro West would be used to guide the detailed design of this proposal (refer to Appendix M (Design Guidelines)). These include guidelines for the provision of convenient, weather protected and accessible bicycle parking at stations to accommodate current and future demands. The specific number and typology of bicycle parking spaces would be determined during detailed design. Cycling provisions would be provided based on forecast demand numbers and in accordance with and the following guidelines:

- Transport for NSW *Cycleway Design Toolkit* (2020)
- Austroads *Bicycle Parking Facilities: Guidelines for Design and Installation* (2016)
- Australian Standards – AS2890.3 Parking Facilities: Bicycle Parking (2015).

Station elements such as bicycle parking would also be designed to meet appropriate CPTED requirements.

Sydney Metro notes the support for not including over and/or adjacent station development at Five Dock Station.

### Issues raised – The Bays Station

Submitters raised the following about The Bays Station:

- request that the size of The Bays Station and the traction substation is reduced from what has been proposed
- request for ample and easily accessible secure bicycle storage and parking, for both metro customers and visitors to the area
- request that end of trip facilities for cyclists are provided.

## Response – The Bays Station

The height of station buildings and design of the traction substation has been developed consistently with the *Bays West Place Strategy* (NSW Department of Planning, Industry and Environment, 2021a) and associated draft *Bays West Urban Design Framework* (NSW Department of Planning, Industry and Environment, 2021b) and sub-precinct master plans, the *Bays West Stage 1 draft Master Plan and Urban Design Framework* (NSW Department of Planning and Environment, 2022) and based on feedback from the Design Advisory Panel. The design has taken into account the future context and planned growth in Bays West, which is expected to undergo significant renewal and growth into a mixed-use harbourside destination for Sydney (subject to the master planning process being undertaken for this area by the NSW Department of Planning and Environment). Potential landscape and visual impacts associated with the station are assessed in Chapter 13 (The Bays Station) and Technical Paper 6 (Landscape and visual amenity) of the Environmental Impact Statement.

Sydney Metro is continuing to consider the location, size and design of the traction substation to minimise impacts to the adjacent heritage listed White Bay Power Station (refer to mitigation measure EIS-LV9 in Appendix C (Revised mitigation measures)). In accordance with the Design Guidelines (Appendix M), the design would ensure bulk and scale of station infrastructure is minimised and that primary view corridors are maintained and impacts to secondary view corridors are minimised, as identified in the White Bay Power Station Conservation Management Plan and the *Bays West Place Strategy* and associated draft Urban Design Framework.

Potential impacts to the White Bay Power Station curtilage and buildings would be managed in accordance with the following mitigation measures (refer to Appendix C (Revised mitigation measures)):

- mitigation measure EIS-NAH2, which requires detailed design for aboveground station elements, ancillary facilities and public domain and landscaping work located in or near to heritage significant items to respond to relevant heritage guidelines and existing Conservation Management Plans during design development in order to minimise indirect (visual) impacts
- mitigation measure EIS-NAH10, which requires opportunities to minimise the scale or alter the siting of the proposed traction substation to be considered so that the prominence of White Bay Power Station is not obstructed on significant view lines from the south and south-east would be explored during detailed design.

Bicycle parking would be provided at The Bays Station (as identified in Chapter 13 (The Bays Station) of the Environmental Impact Statement). The Design Guidelines (Appendix M) include provisions for convenient and accessible bicycle parking at stations to accommodate current and future demands. The specific number and typology of bicycle parking spaces would be determined during detailed design. Cycling provisions would be provided based on forecast demand numbers and in accordance with and the following guidelines:

- Transport for NSW *Cycleway Design Toolkit* (2020)
- Austroads *Bicycle Parking Facilities: Guidelines for Design and Installation* (2016)
- Australian Standards – AS2890.3 Parking Facilities: Bicycle Parking (2015).

Change facilities are not proposed at stations. These facilities are more appropriately provided at the start or end of a trip such as within surrounding developments separate to this proposal.

Sydney Metro is also continuing to work with the Department of Planning and Environment and Transport for NSW to consider bicycle parking and access into the area as part of the *Bays West Stage 1 draft Master Plan and Urban Design Framework* and future rezoning process for the wider sub-precinct.

## Issues raised – Pyrmont Station

A submitter raised the following about the Pyrmont Station entrances:

- concern that the entrances are too large in scale
- request that the station entrances are of a similar scale to metro station entrances in London and Paris, rather than of a large scale
- request that the entrances are designed to allow for retail and street activation.

## Response – Pymont Station

The metro entry design would consider the existing or anticipated urban form in terms of scale, character and heritage context. The design of the entry space which would provide a safe, well lit, open and welcoming customer environment with clear sight lines between the interior and exterior of the station, sufficient customer circulation space and necessary station plant and equipment. The scale of the buildings is consistent with the intended future land use in the area being progressed as part the *Pymont Peninsula Place Strategy* (NSW Department of Planning, Industry and Environment, 2020).

The Design Guidelines (Appendix M) would be used to guide the ongoing design of Pymont Station, including the station entrances. The Design Guidelines include strategies such as upper level building setbacks to provide for a comfortable pedestrian environment, and consideration of a high-quality façade design which aligns with the heritage values of the area, manages the visual impact of station services to the street and enhances the character and amenity of its setting. Details regarding scale, articulation and materiality of the station would be determined as part of detailed design in accordance with the strategies in the Design Guidelines. Future over station development at the eastern station site would be subject to separate assessment and approval, including consideration of its scale and potential visual impact. Over station development is not proposed at the western station site. Section 14.2 of the Environmental Impact Statement includes an overview of the potential extent of the over station development at Pymont Station.

The Design Guidelines also identify potential opportunities for active uses at ground level, such as facing Pymont Street (near the western entry) and facing Union Street (near the eastern station entry). Fit-out and use of these spaces would be subject to separate approval, as required.

### 6.5.3 Operational ancillary infrastructure

#### Submitter identification number

S-43136212

#### Issue raised

A submitter requested that the traction substation at The Bays is relocated to a less publicly visible location, or alternatively concealed with a publicly accessible green roof and that an elevator be provided from the green roof down to The Bays Station.

#### Response

The traction substation, located at the edge of the station precinct to the south of the former White Bay Power Station, avoids the need for this large industrial element to be located within the new pedestrian-focused precinct and minimises the visual impact to the main east facing façade of the White Bay Power Station.

Sydney Metro is continuing to consider the location, design and size of the traction substation to minimise visual impacts and impacts to the adjacent heritage listed White Bay Power Station (refer to mitigation measure EIS-LV9 in Appendix C (Revised mitigation measures)). In accordance with mitigation measure EIS-NAH10, opportunities to minimise the scale or alter the siting of the proposed traction substation would be considered so that the prominence of White Bay Power Station is not obstructed on significant view lines from the south and south-east would be explored during detailed design. A publicly accessible green roof would not be provided at the traction substation as this would present operational, maintenance, security and safety constraints, and would not be well integrated with the station precinct at ground level and surrounding land use including the White Bay Power Station. Public space would be provided in the broader precinct in accordance with *The Bays West Stage 1 draft Master Plan and Urban Design Framework* (NSW Department of Planning and Environment, 2022), which identifies potential open space and public domain areas to the north of the metro station along the waterfront, and to the immediate west and south-east of the White Bay Power Station.

## 6.5.4 Proposed operations

### Submitter identification numbers

S-39644395, S-41814224, S-42213238, S-42138528

### Issues raised

Submitters raised the following comments and requests about the proposed operations of Sydney Metro West:

- request that timetables between the metro and other transport modes are coordinated to avoid waiting times
- request for an express service between Parramatta metro station and Hunter Street Station (Sydney CBD)
- suggestion to decrease travel times between Westmead and the Sydney CBD by skipping or removing The Bays Station from the alignment
- comment that the submitter expects that configuration of the metro trains will be similar to those on the Metro North West Line
- comment expressing support for allocating spaces for prams, bicycles and luggage on trains, noting that these can be hazardous during congested peak periods
- request that staff are present on the trains and at the stations.

### Response

Sydney Metro West would operate with 'turn-up-and-go' frequencies, meaning there is no need for a timetable. The stations would also be designed to provide for efficient interchange with other transport modes, in accordance with the modal access hierarchy. Changes to bus services (including timetabling) would be determined closer to the opening of Sydney Metro West in consultation with other parts of Transport for NSW.

A key product feature of Sydney Metro West is the consistency in service patterns which means that there would not be an express service. All services would stop at all stations. Details regarding alternative alignments for Sydney Metro West, including options with a more express service and a different number of stations was provided in Chapter 3 of the *Sydney Metro West Environmental Impact Statement – Westmead to The Bays and Sydney CBD* (Sydney Metro, 2020a). As discussed in Section 13.3.1 of the Environmental Impact Statement. The Bays has been identified as a State Significant Precinct and Growth Centre by the NSW Government which will accommodate urban renewal opportunities to transform the Harbour CBD and expand the innovation corridor of the CBD. The provision of a station is considered to be a first step to unlocking the potential of the precinct and in serving future resident, worker and visitor populations.

All metro trains would be new, single-deck, fully automated and driverless metro trains. Trains would include allocated multi-purpose areas for prams, bicycles and customers travelling with luggage to enable customers to travel safely. The configuration of the trains would be determined in future and would take into consideration passenger demand in peak periods. Section 5.6.3 of the Environmental Impact Statement includes further information on the key features of the metro trains.

Section 3.1.5 of the Design Guidelines (Appendix M) includes guidelines to enhance customer safety which would be applied in station and precinct design, such as provisions for integrated CCTV systems and visible staff presence as close as possible to customer movement and decision-making zones.

Sydney Metro West staff would assist customers in person throughout stations and trains. Customer service assistants would be at every station, and would move through the network during the day and night. Emergency help points and clear customer information would also be provided at stations and on board the metro trains, such as passenger information screens. The arrangement of staffing to operate this proposal would be determined as part of future operator requirements.

## 6.6 Proposal description – construction

### 6.6.1 Indicative construction program

#### Submitter identification number

S-39644395

#### Issue raised

A submitter requested that construction be completed prior to 2030, to enable the benefits of this proposal to be realised sooner.

#### Response

The indicative construction program for this proposal is provided in Chapter 6 (Proposal description – construction) of the Environmental Impact Statement.

The planning approvals and environmental impact assessment for Sydney Metro West has been broken down into three stages, recognising the size of the overall project. This approach has allowed for earlier commencement of critical construction activities, including tunnelling and station excavation under the previous Sydney Metro West planning applications, and reduction in the overall construction period of Sydney Metro West.

Overall, Sydney Metro would carry out construction works as efficiently as possible and would continue to consider opportunities to achieve efficiencies in the construction program.

### 6.6.2 Construction hours

#### Submitter identification number

S-42077895

#### Issue raised

A submitter raised concern about night-time work during construction at Five Dock Station.

#### Response

Sydney Metro recognises that construction work planned at night may be disturbing to the community. Most aboveground construction work would be undertaken during the day, with out of hours work required for some elements of station and facility construction, such as internal construction and fit-out of the station. Underground and internal construction activities would generally occur 24 hours per day, seven days per week. During the night-time, the majority of internal construction and fit-out work during station construction at Five Dock would occur inside the built station structure and does not require noise intensive equipment (refer to Section 12.6.3 of the Environmental Impact Statement for further detail). Completing work out of hours would reduce the overall program of this proposal. Earlier completion of the proposal would bring considerable benefits to the community (in terms of reducing the construction period) and would reduce the duration of construction related disruption.

The proposed construction hours are described in Section 6.5 of the Environmental Impact Statement. Justification for out of hours work is provided in Section 6.5.1 and Section 4.4.1 of Technical Paper 4 (Construction noise and vibration) of the Environmental Impact Statement.

Potential noise and vibration impacts associated with out of hours works at Five Dock Station were assessed in Section 12.6.3 of the Environmental Impact Statement. Potential impacts associated with out of hours work would be managed in accordance with the mitigation measures for this proposal (refer to Appendix C (Revised mitigation measures)), and management frameworks such as the Construction Noise and Vibration Standard (CNVS) (Appendix K). Sydney Metro would implement mitigation measures to minimise noise during night-time work, potentially including the use of acoustic blankets, the provision of respite periods from noisy work and the provision of alternative temporary accommodation for highly impacted residents.

### 6.6.3 Construction workforce

#### Submitter identification number

S-42077895

#### Issue raised

A submitter raised concern about the potential for poor treatment of community members by construction workers at Five Dock Station.

## Response

Sydney Metro has established a set of values that guides its approach to the procurement and delivery of Sydney Metro. These values are:

- safety and wellbeing
- collaboration
- integrity
- innovation
- excellence
- achievement.

Sydney Metro works closely with contractors so that they adhere to and uphold these values in their dealings with Sydney Metro, other contractors, communities and stakeholders. The Sydney Metro values encourage working together to achieve agreed outcomes which support the delivery of metro projects across many diverse communities.

Sydney Metro has a number of programs and initiatives in place to embed these values, guide behaviours and recognise individuals and teams for consistently demonstrating them.

As a requirement of the OCCS (Appendix N), contractors would be required to adhere to these behaviours. The OCCS is supported by a Construction Complaints Management System which would outline the framework for managing complaints, enquiries and escalation processes throughout the project lifecycle. This includes a 24-hour toll-free community phone line which can be used by the community to report any suspected anti-social behaviours.

## 6.7 Transport – operation

### 6.7.1 Passenger demand

#### Submitter identification numbers

S-42213238, S-42138528

#### Issues raised

Submitters raised the following concerns and comments about passenger demand:

- concern that the 2036 modal forecast for cyclists accessing and egressing several metro stations is a low proportion of overall users, given that Greater Sydney is experiencing growth in cycling, and that active transport is prioritised in the modal access hierarchy for stations
- comment on the competing demand between the bus network and metro services at Five Dock Station
- comment that The Bays Station may not be a necessary station location due to lack of passenger demand.

#### Response

Forecast demand numbers for the operational transport assessment, including access and egress mode split, have been determined based on the Transport for NSW Public Transport Projects Model (PTPM). PTPM 2036 future year strategic transport model ran 'with' and 'without the proposal' scenarios to assess the potential impacts in the vicinity of station precincts. The 'with the proposal' scenario included additional land use growth that would not be possible without the proposal and associated induced traffic demands. This information was used to inform transport interchange requirements and subsequent pedestrian modelling around the station precincts. Sydney Metro would continue to undertake appropriate transport modelling during detailed design. Further detail on the methodology for the operational transport assessment is provided in Section 2.3 of Technical Paper 1 (Operational transport) of the Environmental Impact Statement.

The selection and location of interchange facilities has been planned to achieve the Sydney Metro modal access hierarchy which prioritises walking and cycling as the most efficient and sustainable access modes. Interchange facilities are subject to ongoing design in accordance with the Design Guidelines (Appendix M).

A metro station at Five Dock would open a new rail catchment and deliver significant travel time savings of more than 30 minutes for customers travelling to the Sydney CBD and about 30 minutes for customers travelling to the Parramatta CBD.

Sydney Metro West services would be planned to integrate with the bus network, including at Five Dock Station. The additional mass transit accessibility and amenity provided by this proposal would also provide an opportunity to optimise the bus network. This could include additional feeder services to Sydney Metro West stations, and re-deployment of existing parallel bus services that would duplicate parts of the Sydney Metro West alignment. It is expected that bus services and connections to Sydney Metro West stations would be assessed and reconfigured where necessary by Transport for NSW to support the operation of Sydney Metro West.

A station at The Bays was identified as core to Sydney Metro West and was announced in November 2016. The Bays is set to undergo urban transformation and become a major employment hub and destination, in accordance with the *Bays West Place Strategy* (NSW Department of Planning, Industry and Environment, 2021a) and *Bays West Stage 1 draft Master Plan and Urban Design Framework* (NSW Department of Planning, Industry and Environment, 2022). As discussed in Section 13.3.1 of the Environmental Impact Statement, The Bays has been identified as a State Significant Precinct and Growth Centre by the NSW Government which will accommodate urban renewal opportunities to transform the Harbour CBD and expand the innovation corridor of the CBD. The provision of a station is considered to be a first step to unlocking the potential of the precinct and in serving future resident, worker and visitor populations.

### 6.7.2 Active transport

#### Submission identification numbers

S-39587077, S-39617275, S-40085272, S-40408215, S-41394277, S-41732139, S-41814224, S-42066281, S-42077895, S-43136212, S-42301076, S-42214721, S-42137516, S-42138442, S-42138528

#### Issues raised – proposal-wide

Submitters raised the following concerns, comments and requests about active transport for this proposal:

- recommendations that pedestrians and cyclists are prioritised, and that bicycle movements and bike parking are considered further
- concern that the metro stations, in particular Five Dock Station, lack active transport options that are safe and encourage customers to walk or cycle to and from Sydney Metro West
- recommendation that separated cycling infrastructure is provided in areas which form part of the scope of this proposal, which can be connected into local council bicycle routes in future
- concern that the Environmental Impact Statement has not considered integration with active transport plans in the City of Canada Bay local government area, including the *Foreshore Access Strategy* (City of Canada Bay, 2020) and East West Regional Cycleway
- query about whether footpaths would be widened, and bicycle paths would be extended
- suggestion that wombat crossings (pedestrian crossing in the form of a wide, flat speed bump) are provided instead of signalised crossings
- suggestion that road design devices (for example, shared zones, raised pedestrian crossings and heavy vehicle restrictions) are implemented to improve pedestrian safety where the metro station precincts interface with vehicle traffic. Submitter requested that justification is provided for instances where these measures aren't used
- suggestions for reductions to vehicle speed limits around the metro stations in order to prioritise cyclists and pedestrians, including:
  - 10 kilometre per hour shared zones in the immediate vicinity of metro stations
  - 30 kilometre per hour zones for surrounding precincts, including suggestions that plans for these areas could be initiated by Sydney Metro and developed in consultation with local government and other parts of Transport for NSW
  - speed management devices to control the speed of motor vehicles, such as thresholds, speed cushions and line marking
- comment that the Secretary's environmental assessment requirements which relate to accessibility, connectivity (in relation to integration with the wider planning and existing active transport network), and achieving a balance between "place" and "movement" (in relation to pedestrian and cyclist safety) have not been addressed.

## Response – proposal-wide

Station and precinct Design Guidelines for Sydney Metro West would be used to guide the detailed design of this proposal (refer to Appendix M (Design Guidelines)). These include guidelines for the provision for convenient and accessible bicycle parking at stations, and connections to existing and proposed bicycle networks.

The selection and location of interchange facilities has been planned to achieve the Sydney Metro modal access hierarchy which prioritises walking and cycling as the most efficient and sustainable access modes. Interchange facilities are subject to ongoing design in accordance with the Design Guidelines (Appendix M). The specific number and typology of bicycle parking spaces would be determined during detailed design, based on forecast demand numbers and in accordance with and the following guidelines:

- Transport for NSW *Cycleway Design Toolkit* (2020)
- Austroads *Bicycle Parking Facilities: Guidelines for Design and Installation* (2016)
- Australian Standards – AS2890.3 *Parking Facilities: Bicycle Parking* (2015).

Bicycle routes and bicycle parking are proposed to enable integration with active transport networks. Bicycle routes are proposed through several station precincts to connect, where possible, with existing active transport or planned active transport routes. The detailed design of bicycle facilities is subject to ongoing design development. Sydney Metro would continue to work with local councils throughout design development regarding integration with other proposed cycleways. In accordance with mitigation measure EIS-TT2, potential opportunities to connect active transport measures with the wider active transport network would be further investigated in consultation with key stakeholders (refer to Appendix C (Revised mitigation measures)). Further detail on proposed bicycle routes is provided in Appendix B (Revised proposal description).

Localised footpath upgrades and widening are proposed at several station precincts, including several footpaths adjacent to the Westmead metro station precinct, sections of Queen Street at North Strathfield metro station and sections of Great North Road Five Dock Station. In some locations, such as Pymont Station, station buildings would be set back from the street to provide wider footpaths and/or public domain areas. In accordance with mitigation measure EIS-TT13, the potential for minor footpath upgrades around Hunter Street Station (Sydney CBD) on O'Connell Street, Hunter Street and at Richard Johnson Square (corner of Bligh Street and Hunter Street) would be investigated in consultation with key stakeholders (refer to Appendix C (Revised mitigation measures)). Further detail on proposed changes to footpaths and public domain are provided in Appendix B (Revised proposal description).

Pedestrian crossings, both signalised and un-signalised, are proposed in several locations (refer to Appendix B (Revised proposal description) for further detail). The specific typologies of crossings would be considered further during detailed design as part of the interchange access plans, taking into account relevant design and safety standards, potential impacts on traffic flows, and stakeholder feedback.

Road design devices such as shared zones, pedestrian crossings and low speed environments are proposed at several metro stations to provide for pedestrian safety and accessibility. The Design Guidelines (Appendix M), which would be used to guide ongoing design, also include several strategies to provide for safe, efficient, accessible and legible pedestrian movement.

Vehicle speed limits in the areas adjacent to stations would be considered further during detailed design as part of the interchange access plans, and in consultation with relevant stakeholders such as local councils and other parts of Transport for NSW. Changes to speed limits beyond the station precinct are beyond the scope of this proposal. Sydney Metro would continue to work with stakeholders to support integration of the stations into the broader local area.

The assessment in the Environmental Impact Statement has been completed in accordance with the Secretary's environmental assessment requirements. Operational transport impacts are assessed in Transport sections in Part B (Environmental assessment) and Technical Paper 1 (Operational transport) of the Environmental Impact Statement. Chapter 5 (Proposal description – operation) and Placemaking sections in Part B (Environmental assessment) of the Environmental Impact Statement provide detail on how this proposal addresses design, place and movement. Appendix A (Assessment requirements) of the Environmental Impact Statement provides an overview of where the Secretary's environmental assessment requirements have been addressed.

### Issues raised – Westmead metro station

Submitters raised the following concerns and comments about active transport at Westmead metro station:

- concern that a single station entrance on Hawkesbury Road could create congestion on Hawkesbury Road which poses a pedestrian safety risk
- request that a four-way signalised pedestrian crossing (scramble crossing) is provided at the intersection of Hawkesbury Road and Railway Parade.

### Response – Westmead metro station

Since the exhibition of the Environmental Impact Statement, further design development has been undertaken for Westmead metro station. This has resulted in the addition of a new metro station entry from Hawkesbury Road (to the south of Alexandra Avenue). The additional entry would address concerns regarding potential congestion associated with the single station entry proposed in the Environmental Impact Statement. Chapter 2 (Environmental Impact Statement clarifications) of this Submissions Report provides further detail on the proposed refinements.

Existing signalised crossings are located at the intersection of Hawkesbury Road and Railway Parade, which would be retained for this proposal. The specific typologies of crossings would be considered further during detailed design for the interchange access plans, taking into account relevant design and safety standards, potential impacts on traffic flows, and stakeholder feedback.

### Issues raised – North Strathfield metro station

Submitters raised the following concerns and comments about active transport at North Strathfield metro station:

- concern that interchanging via a pedestrian footbridge would provide a poor customer experience and lead to crowding during peak periods and events
- suggestion for alternative positioning for the new shared pedestrian footbridge, stating that it could be realigned to accommodate future development on both sides of the corridor with easy grades between North Strathfield and the Bakehouse Quarter
- suggestion for the provision of a new shared path crossing over the existing rail corridor (in place of the retained pedestrian overpass), noting that it is currently challenging for cyclists to cross the rail corridor
- comment that planned development in the North Strathfield area will require good connectivity for active transport across the existing rail corridor
- concern that access to the station from the west would not be improved compared to existing access arrangements
- concern about the distance to the station from access points on Pomeroy Street and Hamilton Street East
- concern about potential safety risks to young children attending educational facilities associated with increased vehicle movements in the precinct
- suggestion for the provision of shared zones on Queen Street (between Waratah Street and Wellbank Street) and on Hamilton Street East
- request that the proposed bicycle route on Queen Street is a separated on-road cycleway that extends further along Queen Street and along Princess Avenue to connect to the East West Regional Cycleway
- comment that the Environmental Impact Statement has not described how active transport infrastructure would be connected to the Green Grid network (specifically Powell's Creek and Mason Park).

### Response – North Strathfield metro station

Pedestrian modelling has been carried out for North Strathfield metro station, which has included consideration of pedestrian footbridges, in Section 4.6.3 of Technical Paper 1 (Operational transport) of the Environmental Impact Statement. The new aerial footbridge would be designed to cater for the forecast demand in pedestrians. During major event periods (for example, at Sydney Olympic Park), marshalling of interchange crowds may be required at North Strathfield metro station.

The new aerial footbridge has been located to provide convenient access to bus stops, the local centre along Queen Street, as well as customers travelling from the north and from the east along Waratah Street. It has also been located to provide improved access to Sydney Trains and Sydney Metro platforms and connect into the existing entries to the station from the west (from Pomeroy Street and Hamilton Street East). These entries would be directly connected to the new aerial footbridge, providing improved connectivity from the west. As identified in the Environmental Impact Statement, Sydney Metro is continuing to investigate upgrades to the existing footbridge with the potential for a new pedestrian footbridge to provide enhanced customer transfer capacity while maintaining connection across the rail corridor.

It is noted that access points on Pomeroy Street and Hamilton Street East currently provide access to the existing North Strathfield station. The proposed aerial footbridge would partially reduce the distance from the entry point to the pathway from Pomeroy Street and the station entry. All station elements, including access arrangements from the west, would be designed to meet appropriate CPTED requirements.

In accordance with the Design Guidelines (Appendix M), stations and precincts would be designed to be safe and accessible for everyone. Interchange facilities, such as kiss and ride zones, would be designed in a manner which supports pedestrian safety. Sydney Metro is also committed to ongoing consultation regarding potential impacts with The McDonald College and Our Lady of the Assumption Catholic Primary School.

This proposal includes several provisions to improve pedestrian and cyclist amenity on Queen Street, including footpath widening, a bicycle route, and the introduction of a low-speed environment in front of the station entries. The Design Guidelines (Appendix M) also include provision for enhancements to the pedestrian and cycle experience at Hamilton Street East through landscape improvements.

The detailed design of bicycle facilities (including cycleways) is subject to ongoing design development. Sydney Metro would continue to work with the City of Canada Bay Council throughout design development regarding integration with other proposed cycleways. In accordance with mitigation measure EIS-TT2, potential opportunities to connect active transport measures with the wider active transport network would be further investigated in consultation with key stakeholders (refer to Appendix C (Revised mitigation measures)).

Sydney Metro West would support improved access to Powell's Creek and Mason Park by providing upgraded entries to the west of the station and enhanced easy connections across the existing rail corridor. Direct connections from the station to the Powell's Creek and Mason Park are beyond the scope of this proposal. Section 4.6.4 of Technical Paper 1 (Operational transport) of the Environmental Impact Statement also provides an overview of how proposed bicycle infrastructure would integrate with the existing and planned bicycle network.

### **Issues raised – Burwood North Station**

Submitters raised the following about active transport at Burwood North Station:

- concern about the potential for additional foot traffic on Burton Street
- request for a raised pedestrian crossing on Burwood Road, directly adjacent to the proposed bus stops
- request for a shared zone on Burton Street, adjacent to the proposed kiss and ride
- request for a new bicycle route along Parramatta Road, between the metro station and Neichs Lane
- request for an off-road bicycle route at Concord Oval next to Loftus Street.
- comment that safe and convenient pedestrian access should be provided at Burwood North Station for access to Concord Oval during events.

### **Response – Burwood North Station**

Pedestrian modelling undertaken for the Burwood North Station precinct (in 2036) indicates that the impacts of increased pedestrian flows as a result of the metro station would be minimal, as the existing and proposed footpath infrastructure would be sufficient to cope with additional demand. The footpaths within the precinct, including along Burton Street, would continue to operate satisfactorily at a level of service A in both AM and PM peak periods. Further detail on potential impacts to the pedestrian network is included in Chapter 11 (Burwood North Station) and Technical Paper 1 (Operational transport) of the Environmental Impact Statement.

Signalised crossings are proposed at the intersection of Burwood Road and Burton Street. These would enable pedestrians to travel between the station entrance and bus stops on the western side of Burwood Road. Customers could also use the existing signalised crossing at Burwood Road and Parramatta Road.

This proposal would provide public domain and a bicycle route in the area between Burton Street and Parramatta Road to facilitate pedestrian and bicycle movement throughout the precinct (presented in Figure 11-1 of the Environmental Impact Statement). Shared zones are not proposed in the surrounding precinct streets. In accordance with mitigation measure EIS-TT2, potential opportunities to connect active transport measures with the wider active transport network would be further investigated in consultation with key stakeholders (refer to Appendix C (Revised mitigation measures)).

The metro station would support improved transport connectivity to Concord Oval. Pedestrian access would be provided through the station precinct to support access to the Oval from the west. The Design Guidelines (Appendix M), which would be used to guide design of the station precinct, include further strategies to support improved priority and amenity for pedestrians in the area.

### Issues raised – Five Dock Station

Submitters raised the following concerns, requests and comments about active transport at Five Dock Station:

- request for additional measures to reduce traffic volumes and improve safety for active transport users on Great North Road
- concern about safety for pedestrians crossing at the corner of Second Avenue and Great North Road, noting that increased presence of pedestrians and vehicles on Great North Road would make this area more difficult to cross
- suggestion that a signalised pedestrian crossing is provided near Second Avenue at Great North Road
- suggestions for reductions to vehicle speed limits around the metro station to contribute to safety and walkability, including
  - a 10 kilometre per hour shared zone within the vicinity of the metro station, including on Great North Road between Fred Kelly Reserve and Second Avenue, and extending into Second Avenue
  - a 30 kilometre per hour speed limit in the surrounding area, including on Great North Road from the intersection of Queens Road / Fairlight Street to Lyons Road / Lyons Road West, with additional restrictions for heavy vehicles in this area
- request that shared zones are provided on East Street (adjacent to Five Dock Station), and at the proposed kiss and ride on Garfield Street
- suggestion that the bicycle route proposed on East Street is extended to the north to Henry Street, to connect with the East West Regional Cycleway.

### Response – Five Dock Station

Several measures are proposed to improve safety of active transport users on Great North Road. Footpath widening would be provided on both sides of the road, adjacent to proposed signalised crossings and proposed and existing bus stops. Relocation of the existing signalised mid-block crossing across Great North Road at Fred Kelly Place closer to the station entry is currently being investigated, subject to ongoing consultation with Transport for NSW. This would align the crossing better with the future 'town square' (proposed by the City of Canada Bay Council on their land as per the *City of Canada Bay Development Control Plan* (City of Canada Bay Council, 2020)) and provide a more direct and safe crossing point to and from the bus interchange. The Design Guidelines (Appendix M) also provide several strategies to prioritise pedestrian and cyclist movement within station precincts, which would be used to guide ongoing design.

Further, network changes proposed as part of this proposal are not expected to have a substantial impact on overall road network performance, including on Great North Road. Operational intersection performance modelling undertaken for 2036 indicates that the assessed intersections on Great North Road would perform satisfactorily, at level of service C or better, during the weekday AM and PM peak periods with and without this proposal. Further detail is included in Chapter 12 (Five Dock Station) and Technical Paper 1 (Operational transport) of the Environmental Impact Statement.

As identified in the Environmental Impact Statement, Sydney Metro is continuing to investigate options for a pedestrian crossing of Second Avenue at Great North Road, to respond to pedestrian desire lines. The potential to provide a raised marked pedestrian crossing in this location would be discussed with City of Canada Bay Council and other relevant stakeholders.

Vehicle speed limits in the areas adjacent to stations would be considered further during detailed design for the interchange access plans, and in consultation with relevant stakeholders such as local councils and other parts of Transport for NSW. This would need to provide a balance between place and movement, noting Great North Road provides an important north-south movement corridor. Changes to speed limits beyond the station precinct are beyond the scope of this proposal. Sydney Metro would continue to work with stakeholders to support integration of the stations into the broader local area.

A bicycle route is proposed on East Street immediately adjacent to the metro station. Sydney Metro would continue to work with the City of Canada Bay Council regarding active transport connections and integration with proposed cycleways, in accordance with mitigation measure EIS-TT2 (refer to Appendix C (Revised mitigation measures)).

### Issues raised – The Bays Station

Submitters raised the following suggestions and requests about active transport at The Bays Station:

- request that active transport connections to The Bays Station are improved and maximised
- suggestion that easy bicycle connections to The Bays Station are provided from Balmain and Rozelle. Submitter suggested that these be planned in consultation with the local council
- suggestion that separated bicycle lanes are provided on arterial roads approaching The Bays Station, to allow for electric scooters and bicycles
- suggestion that an elevated bicycle route is provided from the metro station, to and from Robert Street in front of the White Bay Power Station.

### Response – The Bays Station

Station and precinct Design Guidelines for Sydney Metro West would be used to guide the detailed design of The Bays Station and precinct (refer to Appendix M (Design Guidelines)). These include guidelines for the provision for convenient and accessible bicycle parking at stations, and connections to existing and proposed active transport networks.

Active transport routes are proposed throughout the station precinct to connect to the existing and planned active transport network. The existing and proposed active transport connections at The Bays Station are shown in Figure 13-1 of the Environmental Impact Statement. This includes a proposed connection from the existing active transport routes along Victoria Road and Robert Street, into the station precinct and metro station entry.

The detailed design of bicycle facilities is subject to ongoing design development. Bicycle routes would generally be provided at grade/at street level and be aligned with the wider active transport network as per *Bays West Stage 1 draft Master Plan and Urban Design Framework* (NSW Department of Planning and Environment, 2022).

In accordance with mitigation measure EIS-TT2, potential opportunities to connect active transport measures with the wider active transport network would be further investigated in consultation with key stakeholders (refer to Appendix C (Revised mitigation measures)). This would include the relevant local council.

### 6.7.3 Integration with public transport or road network

#### Submitter identification numbers

S-39644395, S-40085272, S-41394277, S-42066281, S-42161437, S-43136212, S-42214721, S-42138528

#### Issues raised – proposal-wide

A submitter raised the following comments about integration of this proposal with the public transport or road network:

- recommendation for further consideration of vehicle movements around the stations, including parking options (including kiss and ride, short stays and longer stays)
- recommendation for further consideration of transport connectivity with existing routes, for example at Burwood.

## Response – proposal-wide

A modal access hierarchy would be applied in the design of Sydney Metro West stations (refer to Appendix M (Design Guidelines) for further detail). The objective of the hierarchy is to ensure that the design of stations, and their integration with other transport modes, gives the highest priority to the most efficient and sustainable access modes. This influences the design of stations and interchanges, highlighting the need to balance transport integration with 'place' elements. Sydney Metro West stations would therefore be designed to promote active and public transport access above the use of private vehicles. Stations have been planned to integrate with other forms of public transport like light rail, suburban rail and buses. Station precincts would be designed in consultation with councils to provide for easy connections to walking and cycling links. To accommodate customers driving to stations, spaces would be provided for pick up and drop off by taxi or kiss and ride. Dedicated facilities are proposed at the majority of metro stations.

This proposal does not include the provision of any park and ride facilities (such as new commuter parking spaces) beyond what is already provided near the proposed metro stations.

Commuter parking would not be provided at Sydney Metro West stations. All Sydney Metro West stations are designed to promote active and public transport access above the use of private vehicles. Stations have been planned to integrate with other forms of public transport like light rail, suburban rail, and buses. Station precincts would be designed in consultation with councils to provide for easy connections to walking and cycling links. To accommodate customers driving to stations, spaces would be provided for pick up and drop off by taxi or kiss and ride.

Impacts on vehicle movements in the streets around stations road network performance during operation are assessed in Part B (Environmental assessment) and Technical Paper 1 (Operational transport) of the Environmental Impact Statement.

Sydney Metro West would be integrated with the broader transport network, including existing transport routes. Figure 5-12 of the Environmental Impact Statement provides an overview of the proposed interchange opportunities at each station. The additional mass transit accessibility and amenity delivered by this proposal would also provide an opportunity to optimise the bus network. This could include additional feeder services to Sydney Metro West stations, and re-deployment of existing parallel bus services that would duplicate parts of the Sydney Metro West alignment. It is expected that bus services and connections to Sydney Metro West stations would be assessed and reconfigured where necessary by Transport for NSW to support the operation of Sydney Metro West.

## Issues raised – Westmead metro station

A submitter raised the following concerns and comments about integration with the public transport or road network at Westmead metro station:

- concern for passenger safety along Railway Parade when passengers are interchanging between the metro station and the future Parramatta Light Rail Stage 1 Westmead stop
- suggestion that an underground tunnel be provided to connect the metro station and future Parramatta Light Rail Stage 1 stop
- comment that the bus interchange should be convenient for both passengers and bus movements. Submitter suggested that platforms or a bus interchange similar to the existing Bondi Junction Station could be implemented.

## Response – Westmead metro station

A low-speed environment is proposed on Railway Parade, which would prioritise safe pedestrian movements across both sides of the street and would link Parramatta Light Rail with Westmead metro station. Customers would also be able to use either the existing signalised crossing at Hawkesbury Road or the pedestrian zebra crossing further east to safely cross Railway Parade. Given the proposed low-speed nature of the street, proximity to the station entry and the two existing crossings, a tunnel between the station and future light rail stop is not proposed.

The proposed bus interchange on Alexandra Avenue would facilitate easy, efficient interchange between the metro and bus services. Since the exhibition of the Environmental Impact Statement, further design development has been undertaken for Westmead metro station. Refinements to the design include an additional station entry to the south of Alexandra Avenue, and the relocation of bus stops to the west along Alexandra Avenue, closer to the station entries. Chapter 2 (Environmental Impact Statement clarifications) of this Submissions Report provides further detail on the proposed refinements. The interchange would be subject to further design development, in accordance with the relevant strategies in the Design Guidelines (Appendix M).

### Issue raised – Parramatta metro station

Submitters requested that an underground pedestrian connection is provided between Parramatta metro station, and the existing Parramatta Station and bus interchange.

### Response – Parramatta metro station

At Parramatta, customers would be able to make an indirect connection to the existing Parramatta Station and bus interchange on Argyle Street via a short walk along the Civic Link and through Parramatta Square.

Customers would be able to directly interchange with T1 Western Line and T5 Cumberland Line services at Westmead metro station. A direct connection between the metro and the Sydney Trains suburban rail network, including the T1 Western Line, at the existing Parramatta Station is not proposed.

Options for direct interchange with the T1 Western Line were considered during project development for the Sydney Metro West Concept (refer to Chapter 3 of the *Sydney Metro West Environmental Impact Statement – Westmead to The Bays and Sydney CBD* (Sydney Metro, 2020a) for further detail). This options assessment concluded that the T1 Western Line interchange would be provided at the existing Westmead Station. This would allow for the provision a new metro station in the heart of the Parramatta CBD, and of a high-quality interchange for customers north and south of the existing rail line at Westmead. This would also provide relief to the existing Parramatta Station.

### Issues raised – North Strathfield metro station

Submitters raised the following concerns and comments about integration with the public transport or road network at North Strathfield metro station:

- concern that the design does not provide for easy interchange from the station with other transport modes (with the exception of Sydney Trains services and directly in front of the station on Queen Street)
- request that bicycle users are accommodated as part of the possible interchanges with intercity services.

### Response – North Strathfield metro station

North Strathfield metro station would provide for easy interchange with other transport modes including the existing North Strathfield Station and bus services along Queen Street. The modal access hierarchy has and would continue to be applied in the design of interchange facilities, which prioritises pedestrian and bicycle access as the most efficient and sustainable access modes. In addition to the proposed interchange facilities on Queen Street, an extended kiss and ride zone would be provided on Hamilton Street East. Sydney Metro is continuing to investigate opportunities for an additional kiss and ride zone on Waratah Street. Bicycle parking is also proposed at North Strathfield metro station. The station precinct and interchange facilities would be subject to further detailed design in accordance with the strategies in the Design Guidelines (Appendix M).

Appendix B (Revised proposal description) provides further detail on the proposed precinct and interchange facilities at North Strathfield metro station.

Sydney Metro West would be designed to allow for bicycles on trains, as identified in Chapter 5 (Proposal description – operation) of the Environmental Impact Statement. The Design Guidelines (Appendix M) also include provisions for station design to allow for bicycles to be taken on metro trains. Bicycles are permitted on Sydney Trains and Intercity services, where there is space available. The configuration of potential future Intercity trains and services would be a matter for other parts of Transport for NSW.

### Issue raised – Burwood North Station

A submitter raised concern that bus interchange has not been prioritised, as customers interchanging to and from northbound bus services on Burwood Road would have to walk to proposed signalised crossings at the intersection of Burwood Road and Burton Street in order to cross Burwood Road.

### Response – Burwood North Station

The modal access hierarchy has and would continue to be applied in the design of interchange facilities at Burwood North Station. Bus customers would have an efficient interchange with the metro station by using the proposed signalised crossings at the intersection of Burwood Road and Burton Street. This is a relatively short distance from both the station entry and proposed bus stops. Due to the short distance between signalised intersections at the Parramatta Road / Burwood Road and Burwood Road / Burton Street, and the need to cross four lanes of traffic, an additional pedestrian crossing in this location would result in traffic network and potential traffic safety impacts.

### Issues raised – The Bays Station

Submitters raised the following concerns and requests about integration with the public transport or road network at The Bays Station:

- request that buses, private vehicles and taxis are excluded from the White Bay Power Station sub-precinct (which includes the White Bay Power Station and metro station)
- request for weather-proof walkways between the metro station and bus stops
- concern that buses accessing The Bays Station via Victoria Road and Robert Street would increase travel times
- recommendation that a bus stop is established in front of the White Bay Power Station, in the location of the former White Bay Hotel.

### Response – The Bays Station

The station and precinct design at The Bays would provide for efficient movement and interchange of people to and from the station. Streets and roads are required within the vicinity of the stations to allow for movement and interchange, for example to access bus services, and to maintain access for existing cruise terminal and port related traffic at The Bays. Notwithstanding, stations would be designed in accordance with the modal access hierarchy, which prioritises pedestrian and bicycle access as the most efficient and sustainable access modes (refer to Appendix M (Design Guidelines) for further detail).

Sydney Metro is also continuing to work with the Department of Planning and Environment and Transport for NSW to align with the *Bays West Stage 1 draft Master Plan and Urban Design Framework* (NSW Department of Planning and Environment, 2022), including in relation to configuration of the new precinct street and street network. Further detail is included in Chapter 2 (Environmental Impact Statement clarifications) of this Submissions Report.

Bus stops would be provided within walking distance to the metro station entry. The through site link from bus stops on the new precinct street to the metro station would be subject to ongoing design development as part of the master planning process for The Bays, in consultation with the Department of Planning and Environment. Weather protection would be provided at the station and precinct. The Design Guidelines (Appendix M) provide direction for station design, and in accordance with these guidelines, weather protection would be provided within station precincts to maintain customer comfort, as well as at gatelines, queuing zones, amenities, ticketing and information areas.

Sydney Metro West services would be designed to integrate with the bus network, including at The Bays Station. The additional mass transit accessibility and amenity provided by this proposal would also provide an opportunity to optimise the bus network. This could include additional feeder services to Sydney Metro West stations, and re-deployment of existing parallel bus services that would duplicate parts of the Sydney Metro West alignment. This would generally be expected to improve travel times for customers travelling to locations along the Sydney Metro West alignment, including the Sydney CBD. It is expected that bus services and connections to Sydney Metro West stations would be assessed and reconfigured where necessary by Transport for NSW to support the operation of Sydney Metro West.

### Issues raised – Hunter Street Station (Sydney CBD)

Submitters raised the following requests about integration with the public transport or road network at Hunter Street Station (Sydney CBD):

- request for easy connections from the metro to other transport modes, including to Martin Place Station and Wynyard Station
- request that a bus layover is provided on O'Connell Street at the station entry.

### Response – Hunter Street Station (Sydney CBD)

Hunter Street Station (Sydney CBD) would provide easy connections from the metro to other transport modes, including to Martin Place Station and Wynyard Station. As outlined in Section 15.3.3 of the Environmental Impact Statement, the following interchange facilities to public transport services would be provided:

- a direct underground connection would be provided within the paid concourse between the eastern entry and Sydney Metro City & Southwest Martin Place Station
- an unpaid underground connection would be provided between the western entry and Wynyard Station through an existing tunnel beneath George Street. This connection would also be possible aboveground, across the pedestrianised George Street

- the western entry would provide a connection to the Wynyard light rail stop on George Street
- bus connections would be possible via a short walk to either Wynyard Station or Martin Place interchanges.

Bus layovers (areas for bus driver parking between services) are not proposed at the metro stations. It is generally desirable to avoid locating bus layovers in CBD areas and central locations where there may be high volumes of pedestrian traffic.

#### 6.7.4 Road network performance

##### Submitter identification numbers

S-39587077, S-42077895, S-42161437, S-42158385, S-42301076, S-42214721

##### Issues raised – Westmead metro station

Submitters raised the following concerns and comments about road network performance at Westmead metro station:

- concern about the safety and efficiency of the road network due the proposed kiss and ride area on Railway Avenue. The submitter suggested that a roundabout is built at Railway Parade and Central Avenue
- concern that a single station entrance could create congestion on Hawkesbury Road and result in delays to emergency vehicles.

##### Response – Westmead metro station

A low-speed environment and two existing crossing points would be provided on Railway Parade near the proposed kiss and ride. It is anticipated that a relatively small percentage of trips to the station would be kiss and ride, which is not expected to have a high impact on road network performance. Further detail is included in Technical Paper 1 (Operational transport) of the Environmental Impact Statement. Sydney Metro would continue to consider the location of kiss and ride facilities at Westmead metro station, taking into account the need to manage potential impacts.

Since the exhibition of the Environmental Impact Statement, further design development has been undertaken for Westmead metro station. This has resulted in the addition of a new metro station entry from Hawkesbury Road (to the south of Alexandra Avenue). The additional entry would address concerns regarding potential congestion associated with the single station entry proposed in the Environmental Impact Statement. Chapter 2 (Environmental Impact Statement clarifications) of this Submissions Report provides further detail on the proposed refinements.

##### Issues raised – North Strathfield metro station

A submitter raised concern that the kiss and ride on Hamilton Street East could cause traffic congestion, due to its location on a cul-de-sac, and close proximity to a primary school, childcare centre and residential apartment driveways.

##### Response – North Strathfield metro station

During operation, vehicles would use the kiss and ride facility on Hamilton Street East (in addition to the existing kiss and ride on Queen Street). It is noted that there is an existing kiss and ride on Hamilton Street East which would be enhanced as part of this proposal.

Operational intersection performance modelling has considered kiss and ride locations on both Hamilton Street East and Queen Street. The forecast mode of access and egress to North Strathfield metro station (as shown in Table 10-7 of the Environmental Impact Statement) would predominantly be walking or by bus. Integration with the pedestrian network (including safety considerations as relevant) and road network performance during operation at North Strathfield metro station are assessed in Section 4.6 of Technical Paper 1 (Operational transport) of the Environmental Impact Statement.

Sydney Metro would continue to consider the location of kiss and ride facilities at North Strathfield metro station, taking into account the need to manage potential impacts and the modal access hierarchy (refer to Section 6.2.1 for further detail).

Access to neighbouring properties would be maintained during operation, in accordance with mitigation measure EIS-TT1 (refer to Appendix C (Revised mitigation measures)).

### Issues raised – Burwood North Station

A submitter raised concern about the potential for additional vehicle traffic on Burton Street such as the proposed kiss and ride at Burwood North Station, noting that they currently experience delays due to traffic in this area.

### Response – Burwood North Station

Network changes proposed as part of Sydney Metro West are not expected to have significant impact on network performance on streets near Burwood North Station, including Burton Street. This proposal would enhance pedestrian and road safety by introduction of traffic signals at the Burton Street / Burwood Road intersection and other minor road network upgrades. Further detail on road network performance during operation is included in Section 4.7.7 of Technical Paper 1 (Operational transport) of the Environmental Impact Statement.

Operational intersection performance modelling undertaken for 2036 indicates that while there may be some increase in traffic at the Burton Street / Burwood Road and Burton Street / Loftus Street intersections, these would perform satisfactorily, at level of service B or better, during the weekday AM and PM peak periods with and without this proposal. Further detail is included in Chapter 11 (Burwood North Station) and Technical Paper 1 (Operational transport) of the Environmental Impact Statement.

### Issues raised – Five Dock Station

Submitters raised the following concerns and comments about road network performance at Five Dock Station:

- concern about increased traffic on local streets, including on Second Avenue due to the proposed kiss and ride
- concern that there would be limited kiss and ride opportunities for northbound vehicles on Great North Road. Submitter noted that this could result in double parking and traffic congestion, and requested further consideration of kiss and ride locations
- concern about road network performance due to the proposed widening of the footpaths near Fred Kelly Place
- concern for the road network performance around Five Dock due to single lane traffic.

### Response – Five Dock Station

Network changes proposed as part of Sydney Metro West are not expected to have a major impact on overall network performance. Rather, pedestrian and road safety would be enhanced by the introduction of wider footpaths, addition of road safety initiatives and other minor road network upgrades. Operational intersection performance modelling undertaken for 2036 indicates that the assessed intersections would perform satisfactorily, at level of service C or better, during the weekday AM and PM peak periods with and without this proposal. This includes intersections on Second Avenue and Great North Road. Great North Road would continue to operate with one through traffic lane in each direction adjacent to the station precinct. Further detail is included in Chapter 12 (Five Dock Station) and Technical Paper 1 (Operational transport) of the Environmental Impact Statement.

The design of the metro station, precinct and interchange facilities would prioritise walking and other modes of active transport, in accordance with the modal access hierarchy. The highest forecasted mode of arrival and departure at Five Dock station is walking (refer to Chapter 12 (Five Dock Station) and Technical Paper 1 (Operational transport) of the Environmental Impact Statement). Several kiss and ride locations are proposed at Five Dock Station, including on Great North Road, Garfield Street and Second Avenue. Vehicles travelling northbound on Great North Road would be able to access kiss and ride facilities by turning into these streets. Sydney Metro would continue to consider the location of kiss and ride facilities at Five Dock Station, taking into account the need to manage potential impacts and the modal access hierarchy.

### 6.7.5 Parking and property access

#### Submitter identification numbers

S-40383747, S-40408215, S-41732139, S-42077895, S-42004814, S-42161437, S-42158385, S-42078098, S-42165514

#### Issues raised

Submitters raised the following concerns, requests and comments about parking and property access during operation:

- comment that commuter car parks would result in congestion and safety issues
- suggestions for commuter car parks to be provided at Westmead, Sydney Olympic Park and Five Dock
- concern about the limited parking options around the Five Dock Station and potential impacts to existing parking availability around the Five Dock Public School
- concern that the proposed kiss and ride on Second Avenue would restrict access to properties and the proposed service laneway at Five Dock Station
- concern about access for emergency services due to single lane traffic surrounding Five Dock Station.

#### Response

This proposal does not include the provision of any new commuter parking spaces beyond what is already provided near the proposed metro stations. The modal access hierarchy would be applied in the design of Sydney Metro West stations (refer to Appendix M (Design Guidelines) for further detail). Sydney Metro West stations would be designed to promote active and public transport access above the use of private vehicles. Stations have been planned to integrate with other forms of public transport like light rail, suburban rail and buses. Station precincts would be designed in consultation with councils to provide for easy connections to walking and cycling links. To accommodate customers driving to stations, spaces would be provided for pick up and drop off by taxi or (kiss and ride). Park and ride facilities (such as commuter car parks) would not be provided.

Sydney Metro would work with relevant local councils to help address potential parking impacts that may arise from a loss of on-street parking in the vicinity of station precincts, as well due to potential park and ride in residential streets (in accordance with mitigation measure EIS-TT3 in Appendix C (Revised mitigation measures)). This measure would apply to all stations except for Hunter Street Station (Sydney CBD). EIS-TT3 has also been amended to include example measures that could be considered (refer to Section 2.14 (Changes to or additional mitigation measures) of this Submissions Report. The potential social and business impacts associated with parking changes at each precinct are considered in Social impacts and Local business impacts sections in Part B (Environmental assessment) of the Environmental Impact Statement, respectively.

Access to neighbouring properties would be maintained in accordance with mitigation measure EIS-TT1 (refer to Appendix C (Revised mitigation measures)). The layout of interchange elements presented in the Environmental Impact Statement is indicative and subject to further design development. The proposed kiss and ride on Second Avenue at Five Dock Station would be designed in a manner which does not conflict with the operation of the proposed service lane.

Network changes proposed as part of this proposal are not expected to have a substantial impact on overall network performance at Five Dock Station. Intersection performance analysis undertaken for the Environmental Impact Statement forecasts all intersections would operate satisfactorily at level of service C or better during the weekday AM and PM both with and without this proposal. As such, this proposal is not anticipated to impact travel times or access for emergency services. Further detail is provided in Chapter 12 (Five Dock Station) and Technical Paper 1 (Operational transport) of the Environmental Impact Statement.

## 6.8 Transport – construction

### 6.8.1 Active transport – pedestrian/bicycle

#### Submitter identification numbers

S-40408215, S-42078098, S-42165514, S-42138528

#### Issues raised

Submitters raised the following concerns and comments regarding active transport during construction:

- concerns around cyclist safety at the intersection of Queen Street / Beronga Street / Pomeroy Street, especially those who use the eastern side of North Strathfield station
- concerns regarding pedestrian and cyclist safety at Five Dock, due to construction vehicles egressing the eastern construction site, with further information requested relating to how the interface between pedestrians and construction vehicles will be managed
- requests for alterations to the roads during construction around Five Dock Public School, including a kiss and ride area, additional signalised pedestrian crossings and raised zebra crossings, as well as traffic calming measures.

#### Response

Construction traffic would be managed in accordance with the CTMF (Appendix J). This includes the hierarchy of access framework, requirements regarding the provision of safe alternate pedestrian and cycle routes, and notification requirement to the public. The CTMF requires that consideration of safety and security issues for pedestrians and cyclists would occur at all construction sites. Construction traffic management plans would be prepared for construction sites, in line with the requirements on the CTMF (Appendix J). Construction traffic management plans would include measures to manage risks to pedestrians and cyclists, such as:

- deployment of speed awareness signs in conjunction with variable message signs near construction sites to provide alerts to drivers
- providing community education and awareness about sharing the road safely with heavy vehicles
- specific construction driver training to understand route constraints, safety and environmental considerations such as sharing the road safely with other road users and limiting the use of compression braking
- use of technology and equipment to eliminate heavy vehicle blind spots
- monitoring vehicle location and driver behaviour and improving vehicle safety standards.

Further detail is included in Section 9.5 of the CTMF (Appendix J).

Traffic control measures at the construction sites would also adhere to the *Transport for NSW Traffic Control at Worksites Technical Manual (2022)* and *AS 1742.3 Manual of uniform traffic control devices – Traffic control for works on roads (2019)*.

Changes to the surrounding road network in proximity to Five Dock Public School are beyond the scope of Sydney Metro West and the Environmental Impact Statement. Construction haul routes and site access for construction traffic would use Great North Road and Waterview Street, which are over 150 metres from Five Dock Public School, and therefore are not expected to impact drop off and pick up zones for the school.

## 6.8.2 Haul routes

### Submitter identification numbers

S-41388569, S-41521974, S-42078098, S-42165514

### Issues raised

Submitters raised the following concerns and comments regarding construction haul routes:

- concerns that heavy vehicles for construction of Westmead metro station, Burwood North Station and Five Dock Station will use routes other than the ones assessed in the Environmental Impact Statement, leading to safety and noise impacts
- requests that fines be issued to heavy vehicles who access local roads without permission
- recommendations that heavy vehicles do not use Garfield Street, Five Dock and Broughton Street, Burwood.

### Response

The proposed construction haul routes are identified in the Transport sections in Part B (Environmental assessment) of the Environmental Impact Statement. Where possible, the objective of the selected haul routes is to minimise the use of local roads and use the most efficient route to the arterial road network, in order to minimise potential road network and safety impacts. Sydney Metro has developed the construction haul routes in consultation with key stakeholders, including other parts of Transport for NSW, to minimise construction traffic impacts on the road network and noise impacts to nearby residential receivers. Construction haul routes would be confirmed in the construction traffic management plan for each construction site. Sydney Metro would continue to look for opportunities to minimise impacts, including working with key stakeholders to modify construction haul routes as required.

Heavy vehicles would be managed in line with the CTMF (Appendix J). This would include educating heavy vehicle drivers, so they are fully aware of the construction site traffic management arrangements and site-access requirements, including approach and departure routes and any heavy vehicle noise management measures required. Heavy vehicle drivers would be required to use the approved construction haul routes. Construction contractors would be required to have systems in place to monitor vehicle locations (for example, telematics) at all times and report and address any identified non-conformance.

## 6.8.3 Road network performance and safety

### Submitter identification numbers

S-40408215, S-42078098, S-42165514

### Issues raised

Submitters raised the following concerns and requests regarding road network performance and safety at Five Dock Station:

- requests that existing signage is reviewed at West Street / Henry Street and Scott Street / Henry Street intersections to minimise safety risks associated with sight lines at these intersections
- requests that bus routes be reviewed to avoid congestion around the construction sites
- concern regarding the change to one-way traffic on parts of Waterview Street and Second Avenue.

### Response

The impacts on buses at Five Dock Station construction sites would be limited to a potential minor increase in travel time due to the additional construction vehicles on the road network. Construction planning would take into consideration potential impacts to bus routes and Sydney Metro would continue to work with key stakeholders including other parts of Transport for NSW to minimise construction traffic impacts on the public transport network. This is discussed further in Section 12.5.3 of the Environmental Impact Statement.

Waterview Street and Second Avenue will be converted from two-way operation to one-way operation during work carried out under the previous Sydney Metro West planning application and this change would continue during construction of this proposal. This is required to manage road safety and manage road network performance by minimising conflicting vehicular movements and providing sufficient area for vehicle turn path requirements. This also reduces the amount of car parking required to be removed during construction.

Construction transport impacts of this change are discussed in Section 12.1.2 of the Environmental Impact Statement, which notes that the Parramatta Road / Great North Road, Great North Road / Queens Road / Fairlight Street, and Great North Road / Ramsay Road / First Avenue intersections would experience a temporary decline in performance during construction, due to the additional construction vehicles on the road network. Construction transport impacts would be managed in accordance with the Construction Traffic Management Framework (CTMF) (Appendix J).

#### 6.8.4 Parking and property access

##### Submitter identification numbers

S-40408215, S-41388569, S-42077895

##### Issues raised

Submitters raised the following concerns regarding parking and property access during construction:

- concerns that parking loss around Five Dock Station and Burwood North Station would exacerbate existing parking issues
- concerns regarding access to residential properties around Five Dock Station.

##### Response

Some parking spaces will be removed at both Five Dock Station and Burwood North Station as part of work carried out under the previous Sydney Metro West planning application, and this parking removal would continue during construction of this proposal.

Permanent and temporary removal of some on-street parking spaces is required for this proposal. Temporary removal of parking spaces during construction is required to enable construction vehicles to access and egress the construction sites safely, for example by providing site access/egress points, sufficient space for vehicle turn paths, and visibility for construction vehicle drivers. Permanent parking removal is required for operation of the station, including for elements such as new bus stops and kiss and ride zones (refer to Section 11.5.3 and 12.5.3 of the Environmental Impact Statement). Section 2.13 (Minor clarifications and corrections) of this Submissions Report provides further clarity regarding the indicative permanent and temporary parking impacts of this proposal, including at Five Dock and Burwood North.

Section 11.5.3 and 12.5.3 of the Environmental Impact Statement notes that parking impacts in these locations are anticipated to be minor during construction given the low number of impacted spaces and the availability of parking on nearby streets. The potential social and business impacts associated with parking changes at Burwood North are considered in Section 11.12 and Section 11.13 of the Environmental Impact Statement, respectively. The potential social and business impacts associated with parking changes at Five Dock are considered in Section 12.12 and Section 12.13 of the Environmental Impact Statement, respectively.

The CTMF (Appendix J) outlines the requirement for preparation of parking management plans, where required. These plans would identify requirements for on-site and off-site parking during construction and would note public transport nodes in proximity to the site to encourage workers to travel by public transport. Opportunities to mitigate impacts of on-street parking would be explored in consultation with City of Canada Bay Council and Burwood Council during construction planning.

Access would be maintained to all residential properties around Five Dock Station construction site during construction.

## 6.9 Noise and vibration – operation

##### Submitter identification numbers

S-41073503, S-41308152, S-41461591, S-41461619, S-41521974, S-42075104, S-42009347, S-42155225, S-42161079, S-42162561, S-42158385, S-42143534, S-42078112, S-42078098, S-42165514

##### Issue raised – Westmead metro station

Submitters raised concerns that operational noise and vibration from this proposal would negatively impact on nearby properties.

##### Response – Westmead metro station

The results of the operational noise and vibration impact assessment for Westmead metro station indicate that the predicted noise levels would be compliant with the applicable noise criteria.

It is unlikely that residents or businesses located directly above or proximal to the tunnels would notice train movements during operation. Sydney Metro uses rail fasteners or floating tracks inside the tunnels to help create separation between the tracks and the ground reducing the potential for transference of ground-borne noise and vibration once the railway is operational. These measures are used across the tunnel alignment and extra measures are used in sensitive areas, like around stations and where the tunnels are not as deep, to achieve the target ground-borne noise and vibration levels.

Operational vibration levels are not anticipated to cause any damage to properties above the tunnel alignment.

Section 7.9.2 of the Environmental Impact Statement provides further detail on the operational noise and vibration impact assessment for Westmead metro station. There would be no sources of vibration as part of operation of the station that would impact nearby receivers. In accordance with mitigation measure EIS-NV1, the noise generated by stations would be reviewed during further design development to meet the applicable noise criteria (refer to Appendix C (Revised mitigation measures)).

The metro rail tunnels are designed to achieve a ground-borne noise level of 35dBA and vibration levels that meet the criteria for human comfort, in line with the *Rail Infrastructure Noise Guideline* (NSW EPA, 2013) and *Assessing Vibration: a technical guideline* (Department of Environment, Climate Change, 2006). Section 5.2 of Technical Paper 2 (Operational noise and vibration) and Section 16.4.2 of the Environmental Impact Statement includes the outcomes from the ground-borne noise and vibration modelling for the operation of the metro tunnels. This assessment showed that the applicable noise and vibration levels can be achieved by applying a range of track attenuation types.

During detailed design development, the different track types would be combined to generate an optimised track form design that would achieve compliance with the applicable criteria for all receivers. In accordance with mitigation measure EIS-NV3, track form would be confirmed as part of design development in order to meet the relevant ground-borne noise and vibration criteria from the *Rail Infrastructure Noise Guideline* (refer to Appendix C (Revised mitigation measures)).

An Operational Noise and Vibration Review would be prepared during design development to confirm the mitigation measures required to manage potential airborne and ground-borne noise and vibration impacts from rail operations and stations, in accordance with mitigation measure EIS-NV4. The NSW Environment Protection Authority would be consulted during the preparation of this review. This has been included as an additional mitigation measure in Section 2.14 (Changes to or additional mitigation measures) of this Submissions Report.

### **Issues raised – Five Dock Station**

Submitters raised the following concerns and comments regarding operational noise and vibration impacts at Five Dock Station:

- requests that Type 3A track is used to mitigate ground-borne noise from the Sydney Metro West tunnels under Lancelot Street
- concerns that ground-borne noise levels may negatively impact receivers, including residential and educational
- concern that vibration emitted from the Sydney Metro West tunnels could cause damage to susceptible properties.

### **Response – Five Dock Station**

The metro system would be designed to achieve a ground-borne noise level of 35dBA and vibration levels that meet the criteria for human comfort, in line with the *Rail Infrastructure Noise Guideline* (NSW EPA, 2013) and *Assessing Vibration: a technical guideline* (Department of Environment, Climate Change, 2006).

Section 16.4.2 of the Environmental Impact Statement outlines the outcomes from the ground-borne noise and vibration modelling which was carried out to determine the indicative track form along the tunnel alignment to meet the design objectives at receivers above the tunnels. In the vicinity of Lancelot Street, high attenuation track (form 2) has been modelled as sufficiently meeting the requirements of the *Rail Infrastructure Noise Guideline*.

During detailed design development, the different track types would be combined to generate an optimised track form design that would achieve compliance with the applicable criteria for all receivers. In accordance with mitigation measure EIS-NV3, track form would be confirmed as part of design development in order to meet the relevant ground-borne noise and vibration criteria from the *Rail Infrastructure Noise Guideline* (refer to Appendix C (Revised mitigation measures)).

It is unlikely that residents or businesses located directly above or proximal to the tunnels would notice train movements during operation. Sydney Metro uses rail fasteners or floating tracks inside the tunnels to help create separation between the tracks and the ground reducing the potential for transference of ground-borne noise and vibration once the railway is operational. These measures are used across the tunnel alignment and extra measures are used in sensitive areas, like around stations and where the tunnels are not as deep, to achieve the target ground-borne noise and vibration levels.

Operational vibration levels are not anticipated to cause any damage to properties above the tunnel alignment.

As part of the planning approval Sydney Metro is required to demonstrate that operational noise and vibration is in keeping with levels identified during the planning and assessment process, and in line with regulatory guidelines, including those from the NSW Environment Protection Authority. In line with best practice, validation of key noise and vibration predictions would be made during the operational phase.

Sydney Metro used the same process to predict operational noise levels on the Metro North West rail line. Operational noise levels were reassessed during operation and were shown to be consistent with the planning approval and *Rail Infrastructure Noise Guideline* limits. At properties with similar or shallower depths to those along Lancelot Street the results showed that noise at all locations where monitoring was undertaken were compliant and well below the design objectives.

An Operational Noise and Vibration Review would be prepared during design development to confirm the mitigation measures required to manage potential airborne and ground-borne noise and vibration impacts from rail operations and stations, in accordance with mitigation measure EIS-NV4 (refer to Appendix C (Revised mitigation measures)). The NSW Environment Protection Authority would be consulted during the preparation of this review. This has been included as an additional mitigation measure in Section 2.14 (Changes to or additional mitigation measures) of this Submissions Report.

## 6.10 Noise and vibration – construction

### Submitter identification numbers

S-40408215, S-41521974, S-42077895

### Issues raised

Submitters raised the following concerns and comments regarding construction noise and vibration impacts:

- concerns about how noise would impact on receivers at nearby properties and areas surrounding Westmead metro station
- concerns regarding noise impacts during construction at Five Dock Station, including from out of hours work and road traffic noise.

### Response

Some temporary noise and vibration impacts during certain construction activities, including some 'moderate' and 'high' impacts, have been identified in the construction noise assessment at Westmead metro station and Five Dock Station. The mitigation measures outlined in the CEMF (Appendix I) and the Sydney Metro CNVS (Appendix K) would be implemented to minimise potential noise and vibration impacts. There would be periods when construction noise levels are much lower than the worst-case levels predicted and there would be times when no equipment is in use and no impacts occur. Potential construction noise impacts at Westmead metro station and Five Dock Station are discussed further in Section 7.6 and Section 12.6 of the Environmental Impact Statement, respectively.

The majority of aboveground construction work would be undertaken within daytime hours, with out of hours work as required for activities such as work requiring temporary road closures or temporary rail possessions. Underground and internal construction activities would generally take place 24 hours per day, seven days per week. During the night-time, the majority of internal construction and fit-out work during station construction would occur inside the built station structure and would not require noise intensive equipment.

Completing out of hours work would reduce the overall construction program of this proposal. Earlier completion of the proposal would bring considerable benefits to the community (in terms of reducing the construction period) and would reduce the duration of construction related disruption. Further detail on the justification for out of hours work is provided in Section 6.5.1 of the Environmental Impact Statement and Section 4.4.1 of Technical Paper 4 (Construction noise and vibration) of the Environmental Impact Statement.

Potential impacts associated with out of hours work would be managed in accordance with the mitigation measures for this proposal (refer to Appendix C (Revised mitigation measures)), and management frameworks such as the CNVS (Appendix K). Sydney Metro would implement mitigation measures to minimise noise during night-time work, potentially including the use of acoustic blankets, the provision of respite periods from noisy work and the provision of alternative temporary accommodation and respite (including respite periods) for highly impacted residents.

With the exception of emergencies and subject to the terms of the planning approval and any environment protection licence, activities would not take place outside daytime construction hours without prior notification of the affected community and the NSW Environment Protection Authority as required.

Road traffic noise impacts during construction at Five Dock Station are discussed in Section 12.6.3 of the Environmental Impact Statement. Second Avenue east of Great North Road is anticipated to have a 3 dBA increase above the background noise level during daytime hours as a result of heavy vehicle movements. Night-time heavy vehicle movements are not anticipated to result in more than a 2 dBA increase. Further assessment of potential traffic noise impacts would be carried out during detailed construction planning. Potential measures to manage any increases in noise from construction traffic are detailed in mitigation measure CEMF-NV27 (refer to Appendix I (Construction Environmental Management Framework (CEMF))).

## 6.11 Non-Aboriginal heritage

### Submitter identification numbers

S-39582345, S-39587077, S-40085272, S-41814224, S-41965271, S-42214721, S-42047941

### Issue raised – proposal-wide

Submitters raised requests for the proposal to preserve the heritage of the areas along the proposal alignment, including the need for any new buildings to be sympathetic to heritage.

### Response – proposal-wide

Opportunities to minimise impacts to non-Aboriginal heritage have and would continue to be considered throughout design development for the stations and precincts. The non-Aboriginal heritage mitigation measures (refer to Appendix C (Revised mitigation measures)) would be implemented during construction and operation of this proposal to mitigate and minimise potential impacts. A Heritage Interpretation Strategy (Appendix L) has been prepared for this proposal which provides a framework for the heritage interpretation, and would be used to guide station specific interpretation planning.

Potential impacts to non-Aboriginal heritage are discussed in the non-Aboriginal heritage sections of Part B (Environmental assessment) of the Environmental Impact Statement.

### Issue raised – Parramatta metro station

Submitters provided recommendations that the proposed section of the Civic Link at Parramatta metro station should include sympathetic landscaping and features to the Roxy Theatre, and include other placemaking elements in this style such as seating and a fountain.

### Response – Parramatta metro station

In accordance with mitigation measures EIS-NAH2 and EIS-NAH3, detailed design for aboveground station elements, ancillary facilities and public domain and landscaping work located in or near to heritage significant items, would respond to relevant heritage guidelines during design development. The new Civic Link would incorporate a landscape design that enhances the heritage significant elements and features of the adjacent 'Roxy Theatre' (SHR # 00711) (refer to Appendix C (Revised mitigation measures)). The Design Guidelines (Appendix M) identify a range of urban design strategies to address placemaking opportunities at Parramatta metro station, such as areas for active uses and public domain improvements. Station design and precinct plans would be prepared for the site which would provide more detail on the landscape design features in accordance with the Design Guidelines (Appendix M) (refer to Chapter 5 (Feedback on placemaking and design of stations and precincts)).

### Issue raised – North Strathfield metro station

Submitter raised concern about impacts to the heritage garden at North Strathfield metro station and requests to preserve the remaining portion of the garden.

### **Response – North Strathfield metro station**

Sydney Metro is proposing to remove the heritage gardens at North Strathfield Station to provide sufficient space for the metro station entry and interchange. In accordance with mitigation measure EIS-LV8, opportunities to provide gardens within the areas adjoining the heritage listed areas of North Strathfield Railway Station, or in the vicinity, would be investigated as part of design development to reflect the local values of the community and reinforce the sense of place for the North Strathfield local centre (refer to Appendix C (Revised mitigation measures)).

### **Issue raised – Burwood North Station**

Submitters raised concerns regarding landscape and visual impacts to heritage-listed properties on Burton Street in Burwood due to future development.

### **Response – Burwood North Station**

The residential properties along Burton Street in the vicinity of the station are not heritage listed (i.e. they are not identified as heritage items on any environmental planning instrument, State, Commonwealth or World Heritage lists). Potential visual impacts to these properties are assessed in the visual impact assessment discussed in Section 11.9 of the Environmental Impact Statement.

St Luke's Anglican Church (local heritage listed) is located on the northern side of Burton Street, about 20 metres north of the station precinct. Potential heritage impacts to this item are assessed in Section 11.7 of the Environmental Impact Statement and would be neutral or negligible. There are no other heritage items located on Burton Street within the heritage assessment study area for Burwood North Station.

The adjacent station development fronting Burton Street at Burwood North Station and any other future development would be subject to separate environmental assessments and approvals process.

### **Issue raised – The Bays Station**

Submitters raised concerns that The Bays Station, including the aboveground station infrastructure and the traction substation, will have permanent visual impacts on the White Bay Power Station.

### **Response – The Bays Station**

The design of The Bays Station and precinct has considered the important view corridors to and from the State heritage listed former White Bay Power Station. There would, however, be some minor direct and moderate indirect impacts to the former White Bay Power Station mainly associated with the new traction substation located to the south. Sydney Metro is continuing to consider the location, size and design of the traction substation to minimise these impacts. Consideration of alternative locations would include potential locations outside of the White Bay Power Station heritage curtilage.

In accordance with the Design Guidelines (Appendix M), the design would ensure that primary view corridors are maintained and impacts to secondary view corridors are minimised, as identified in the White Bay Power Station Conservation Management Plan and the *Bays West Place Strategy* (NSW Department of Planning and Environment, 2021a) and associated draft Urban Design Framework (NSW Department of Planning and Environment, 2021b).

Potential impacts to the White Bay Power Station curtilage and buildings would be managed in accordance with the following mitigation measures (refer to Appendix C (Revised mitigation measures)):

- mitigation measure EIS-NAH2, which requires detailed design for aboveground station elements, ancillary facilities and public domain and landscaping work located in or near to heritage significant items to respond to relevant heritage guidelines and existing Conservation Management Plans during design development in order to minimise indirect (visual) impacts
- mitigation measure EIS-NAH10, which requires opportunities to minimise the scale or alter the siting of the proposed traction substation to be considered so that the prominence of White Bay Power Station is not obstructed on significant view lines from the south and south-east would be explored during detailed design.

Mitigation measure EIS-LV9 would also mitigate potential visual impacts on the White Bay Power Station, which requires design of the traction substation building to have an industrial character with a high quality architectural finish and not detract from the visual prominence of the existing power station façade and silhouette of the twin stacks.

## 6.12 Aboriginal heritage

### Submitter identification numbers

S-41814224, S-42162006

### Issues raised

Submitters raised the following comments regarding impacts to Aboriginal heritage:

- recommendations that new buildings should be designed in a way that is sympathetic to heritage
- the design of Burwood North Station should acknowledge and commemorate Aboriginal heritage.

### Response

Sydney Metro is piloting the Government Architect NSW's Connecting with Country framework (2020b). This includes the development of a corridor-wide approach to connect with Country, as well as Aboriginal engagement.

As part of the pilot Sydney Metro is working with Aboriginal knowledge holders in the development of heritage interpretation and throughout design development. In accordance with Concept conditions of approval C-B4 and C-B5, a Heritage Interpretation Strategy (Appendix L) has been prepared for this proposal which details how Aboriginal heritage values would be interpreted and reflected within the design of this proposal.

Across Sydney Metro, the design and integration of stations and station precincts (including Burwood North Station) would respect and respond to the culture and stories embedded within the land through which they pass. The Heritage Interpretation Strategy (Appendix L) identifies themes and stories for Burwood North that relate to Aboriginal heritage.

Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report provided further information on how heritage would be incorporated as part of ongoing design development.

## 6.13 Landscape and visual amenity

### Submitter identification numbers

S-40408215, S-42077895, S-41965271, S-43136212, S-42214721, S-42047941

### Issues raised – North Strathfield metro station

Submitters raised the following concerns and comments regarding impacts to landscape and visual amenity during operation:

- concern that the bulk and scale of aboveground station infrastructure at North Strathfield would be considerably higher than surrounding buildings, possibly resulting in overshadowing to the station plaza area
- requests that existing canopy cover be retained and enhanced at North Strathfield metro station
- requests that additional landscaping is undertaken on the North Strathfield freight rail underpass.

### Response – North Strathfield metro station

The station building height at North Strathfield metro station would be about 25 metres at the northern end and would reduce to 10 metres high as the building form transitions along Queen Street to the south. The landscape and visual assessment of the aboveground station infrastructure at North Strathfield metro station is discussed in Section 10.9 of the Environmental Impact Statement. During operation, there is generally expected to be a noticeable improvement to the character and visual amenity of the area due to the new metro station, and the associated accessibility and placemaking outcomes. However, from some viewpoints there may be a reduction in visual amenity due to the scale of the metro infrastructure and changes to the existing North Strathfield Station.

At North Strathfield, any overshadowing from the station building in a westerly direction during the AM period would be likely to extend into the existing rail corridor only, which has a width of around 28 metres. Overshadowing to the east in the PM period would largely fall within the Queen Street road reserve. Overshadowing of residential properties or any area of open space identified for protection in local planning guidance is not anticipated.

In accordance with the Sydney Metro West corridor-wide urban design principles, the scale of aboveground station infrastructure would aim to reflect existing and desired future character of station precincts. The urban design strategies for North Strathfield metro station (refer to the Design Guidelines in Appendix M) also include requirements related to integrating the station design and interchange with the existing precinct and celebrating the heritage value of the existing station. This would involve consideration of the bulk and scale of the new station infrastructure.

Some minor additional vegetation clearing would be required at North Strathfield metro station for this proposal, mainly within the existing rail corridor. This vegetation is comprised of planted street trees and naturally propagated native and exotic species. In accordance with Concept condition of approval C-B8, as many mature trees as practicable must be retained by Sydney Metro West and there must be a net increase in the number of mature trees provided by Sydney Metro West at a ratio of 2:1 within 10 years of the date of Concept approval or no later than commencement of operations (whichever is earlier). In accordance with Concept condition of approval C-B9, Sydney Metro West must also result in an increase in tree canopy coverage. Where possible, trees and other landscaping elements would be provided within the metro station precinct. This would be identified during detailed design through the station design and precinct plans to be prepared for the site.

### **Issue raised – Five Dock Station**

Submitters raised concern regarding visual impacts from the bulk and scale of aboveground station infrastructure and buildings including on the residential building at Great North Road / Second Avenue, Five Dock.

### **Response – Five Dock Station**

The height and scale of the aboveground infrastructure at Five Dock Station would recognise the local planning controls (as identified in the Local Environmental Plan and Development Control Plan (City of Canada Bay Council, 2020)) and local setting of the area, responding to the local village character and minimising visual and overshadowing impacts. Sydney Metro has and would continue to work with Canada Bay Council regarding the scale and built form of aboveground station infrastructure. The landscape and visual assessment of the aboveground station infrastructure at Five Dock Station is discussed in Section 12.9 of the Environmental Impact Statement.

### **Issue raised – The Bays Station**

Submitters raised concern regarding landscape and visual impacts on the surrounding area at The Bays Station, including on the sight lines to the Harbour Bridge from Victoria Road.

### **Response – The Bays Station**

The design of The Bays Station and precinct has considered the important view corridors to and from the State heritage listed former White Bay Power Station, including the view corridor to the Sydney Harbour Bridge.

The visual impact assessment for The Bays Station is discussed in Section 13.9 of the Environmental Impact Statement. Representative viewpoint 1 (view east of Hornsey Street, Rozelle), which is adjacent to Victoria Road, identified that the traction substation would be seen from this view, rising above Victoria Road, to the south and east of the former White Bay Power Station. Between the traction substation and the former White Bay Power Station, the metro station building would be seen in the middle ground, obstructing the glimpse to the White Bay and view of the Sydney Harbour Bridge in the background. While this view has the capacity to absorb new built form and is largely dominated by existing road infrastructure, the obstruction of the distant view to the Sydney Harbour Bridge by the new station building would somewhat reduce the amenity of this view. However, given that the viewpoint is of neighbourhood sensitivity, the potential impacts were identified as minor. Further detail on the assessment approach for landscape and visual amenity impacts is included in Section 2 of Technical Paper 6 (Landscape and visual amenity) of the Environmental Impact Statement.

The design and assessment have taken into account the future context and planned growth in the Bays West, which is expected to undergo significant renewal and growth into a mixed-use harbourside destination for Sydney (subject to the master planning process being undertaken for this area by the NSW Department of Planning and Environment). The scale of the station buildings would be consistent with the building heights envisaged in the *Bays West draft Stage 1 master plan and Urban Design Framework* (NSW Department of Planning and Environment, 2022).

## 6.14 Social impacts

### Submitter identification numbers

S-39587077, S-40408215, S-41521974, S-42077895, S-42047941

### Issues raised

Submitters raised the following concerns and comments regarding social impacts:

- concerns regarding the construction and operation of Westmead metro station affecting residents' ability to enjoy the area due to impacts on their way of life, livelihood, surroundings, as well as health and wellbeing
- concerns regarding safety and loitering of people using Burwood North Station
- concerns regarding the construction of Five Dock Station affecting the quality of life, health and wellbeing of residents, particularly in terms of impacts arising from noise and vibration
- concerns regarding visual impacts due to the traction substation at The Bays Station affecting the public's cultural connection to the White Bay Power Station.

### Response

Construction impacts from this proposal include temporary social impacts due to construction-related disruptions and potential amenity impacts. These impacts would likely vary at different stages over the expected construction period and would effectively be a general reduction in impacts in comparison to work carried out under the previous Sydney Metro West planning applications. Construction impacts to community, culture, way of life, health and wellbeing, surroundings and livelihood would be managed and mitigated through the implementation of the CEMF (Appendix I), CTMF (Appendix J), CNVS (Appendix K) and the OCCS (Appendix N). Sydney Metro would also prepare a Sydney Metro West Community Benefit Plan and Community Communication Strategies for each site to manage potential social impacts. In accordance with mitigation measure EIS-S4, the Community Communication Strategies would be informed by engagement with directly affected communities and stakeholders to identify site-specific issues and develop tailored mitigation measures (refer to Section 2.14 (Changes to or additional mitigation measures) of this Submissions Report and Appendix C (Revised mitigation measures) for further detail).

Further detail on the social impact assessment during construction is provided in the Social Impact sections in Part B (Environmental assessment) of the Environmental Impact Statement.

Operational social impacts at Westmead metro station relating to way of life would be managed and mitigated through relevant measures noted in Appendix C (Revised mitigation measures). On balance, the benefits for Westmead – increased access to jobs, businesses, education, services, and social facilities improving social cohesion and social health for the whole community, including vulnerable persons – alongside the implementation of management and mitigation measures, and the temporal nature of construction, would result in a net benefit for the Westmead community.

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

The safe movement of customers, staff and contractors through station areas would be facilitated through many aspects of physical design, including provision of adequate platform capacity and circulation space, clear routes, adequate lighting and slip resistant flooring, as well as by minimising obstructions and eliminating potential for crowding. Station and public domain design would identify and reflect current architectural and engineering best practice with respect to safety. Guidelines and protocols, such as CPTED, would also be important benchmarks in minimising the risks of personal harm, operational disruption and conflict. Sydney Metro's commitment to safety is provided in Chapter 5 (Proposal description – operation) of this Submissions Report and Section 2.3 of the Design Guidelines (Appendix M).

At The Bays, the community may continue to experience changes to community character and sense of place during operation associated with visual changes and the proximity to the heritage listed former White Bay Power Station (refer to Section 13.12.2 of the Environmental Impact Statement). The indicative layout of key design elements of The Bays Station is broadly consistent with the *Bays West Stage 1 draft Master Plan and Urban Design Framework* (NSW Department of Planning and Environment, 2022) which was exhibited from 4 May to 31 May 2022, including with respect to the preservation of significant view corridors where possible, including to the silhouette and chimney stacks of the former White Bay Power Station.

Although beyond the scope of Sydney Metro West, Section 2.4.7.2 of the *Bays West Stage 1 draft Master Plan and Urban Design Framework* identifies that there is an opportunity to adaptively re-use the White Bay Power Station to become a public, cultural and community landmark, and that public access could be delivered to all significance features within the White Bay Power Station.

Alternative locations and the design and scale of the traction substation would continue to be considered as part of ongoing design to minimise these impacts. This would consider potential locations outside of the White Bay Power Station heritage curtilage.

Potential impacts to the White Bay Power Station curtilage and buildings would be managed in accordance with the following mitigation measures (refer to Appendix C (Revised mitigation measures)):

- mitigation measure EIS-NAH2, which requires detailed design for aboveground station elements, ancillary facilities and public domain and landscaping work located in or near to heritage significant items to respond to relevant heritage guidelines and existing Conservation Management Plans during design development in order to minimise indirect (visual) impacts
- mitigation measure EIS-NAH10, which requires opportunities to minimise the scale or alter the siting of the proposed traction substation to be considered so that the prominence of White Bay Power Station is not obstructed on significant view lines from the south and south-east would be explored during detailed design.

In addition, the Design Guidelines (Appendix M) notes that the design would ensure that primary view corridors are maintained and impacts to secondary view corridors are minimised, as identified in the White Bay Power Station Conservation Management Plan and the *Bays West Place Strategy* (NSW Department of Planning, Industry and Environment, 2021a) and associated draft Urban Design Framework (NSW Department of Planning, Industry and Environment, 2021b).

During construction, impacts to the public's cultural connection to the heritage listed White Bay Power Station associated with visual changes in the precinct would be managed and mitigated through implementation of the measures identified in Appendix C (Revised mitigation measures) and the CEMF (Appendix I).

## 6.15 Local business impacts

### Submitter identification number

S-40408215

### Issue raised

Submitter raised concern regarding local business impacts during construction at Five Dock Station from the loss of parking which would result in a reduction in convenience for customers.

### Response

Sydney Metro acknowledge that construction would affect local businesses, including due to continued impacts on parking and access. Customers visiting local businesses at Five Dock may experience reduced convenience due to potential parking and access impacts within the area around Five Dock Station construction sites.

Permanent and temporary removal of some on-street parking spaces is required for this proposal. Temporary removal of parking spaces during construction is required to enable construction vehicles to access and egress the construction sites safely, for example by providing site access/egress points, sufficient space for vehicle turn paths, and visibility for construction vehicle drivers. Permanent parking removal is required for operation of the station, including for elements such as new bus stops and kiss and ride zones (refer to Section 12.5.3 of the Environmental Impact Statement). Section 2.13 (Minor clarifications and corrections) of this Submissions Report provides further clarity regarding the indicative permanent and temporary parking impacts of this proposal, including at Five Dock.

Parking impacts have been assessed in Section 12.13 of the Environmental Impact Statement as resulting in a 'slight negative' impact to local businesses.

The CTMF (Appendix J) outlines the requirements for parking management plans, where required. These plans would identify parking requirements and also on-site and off-site parking arrangements and associated impacts; remote parking arrangements and associated access between sites and public transport nodes; alternate parking arrangements for displaced parking; and communication and parking management measures. For any proposed kerbside use impacts within a town centre or other activity centre, a proposal for relocation of impacted users may be required. Consultation would also be carried out with the City of Canada Bay Council to investigate opportunities to provide alternative parking facilities during construction.

The Sydney Metro OCCS (Appendix N) has been prepared to guide Sydney Metro's approach to stakeholder and community liaison including engagement with communities, stakeholders and businesses. Sydney Metro would work with local businesses within project catchments to ensure communication and engagement is tailored to their specific needs. Sydney Metro's overarching approach to business engagement is to:

- identify and document potentially impacted businesses prior to project commencement
- provide early advice to businesses of upcoming projects
- provide businesses with information about the project and its long terms benefits
- provide businesses with information about construction progress
- ensure businesses understand the scope of the works and mitigation measures contractors can provide
- ensure businesses understand the proposed timing of the works
- consult with businesses and take steps to minimise potential impacts
- ensure the project team understands the operational requirements and sensitivities of businesses around each site.

## 6.16 Property

### 6.16.1 Property value

#### Submitter identification numbers

S-39587077, S-41521974, S-42009347

#### Issues raised

Submitters raised concerns regarding impacts to their property value from this proposal, including that the tunnels running underneath properties would reduce property values and future land use opportunities for properties located above the alignment.

#### Response

Property values are influenced by a number of complex factors including demand at a certain point in time, economic climate, general location, accessibility, traffic, noise, and proximity to transport infrastructure and other services.

The existence of Sydney Metro West infrastructure such as the metro tunnels, does not prevent future development above the tunnel alignment. This is also the case for the existing Sydney Metro North West tunnels and Sydney Trains tunnels operating below Sydney. Developers work with Transport for NSW and Sydney Metro engineers to ensure property developments are designed so that the railway infrastructure can remain safely operating.

To manage potential noise and vibration impacts of this proposal during operation, mitigation measure EIS-NV3 would be implemented in order to meet the relevant ground-borne noise and vibration criteria (refer to Appendix C (Revised mitigation measures)). An Operational Noise and Vibration Review would also be prepared during design development to confirm the mitigation measures required to manage potential airborne and ground-borne noise and vibration impacts from rail operations and stations, in accordance with mitigation measure EIS-NV4. The NSW Environment Protection Authority would be consulted during the preparation of this review. This has been included as an additional mitigation measure in Section 2.14 (Changes to or additional mitigation measures) of this Submissions Report.

## 6.17 Air quality

### Submitter identification numbers

S-41521974, S-42077895

### Issues raised

Submitters raised concern about operational and construction air quality and how it would affect their property as well as areas surrounding the project.

### Response

As discussed in Section 18.3.2 of the Environmental Impact Statement, this proposal is expected to benefit regional air quality during operation by delivering an attractive alternative mode of public transport, which could result in a mode shift from road to rail. Analysis undertaken by Sydney Metro shows that total network wide car trips would be reduced by about 83,000 weekday trips by 2036 and about 110,000 weekday trips by 2056. This has the potential to reduce air pollution emissions from road transport and associated congestion, when compared to the emissions that would otherwise occur if this proposal was not delivered. As this proposal would be powered by electricity, local emissions generated during operation are expected to be minimal and highly dispersed. Potential air quality impacts during operation would present a low level of risk, would occur infrequently and would be manageable with negligible impacts on local air quality.

As discussed in Section 18.3.3 of the Environmental Impact Statement, for much of the construction works associated with this proposal, activities with a high potential to generate large quantities of dust (such as major demolition work or bulk earthworks) would not be required. However, some bulk earthworks are required at the Westmead metro station construction site, Parramatta metro station construction site, Sydney Olympic Park metro station construction site. With the implementation of appropriate mitigation measures, dust nuisance and human health risk and ecological risk would be negligible at all construction sites.

As per mitigation measure CEMF-AQ1 (refer to Appendix I (CEMF)), the following best-practice dust management measures would be implemented during all construction work for this proposal including:

- regularly wet-down exposed and disturbed areas including stockpiles, active earthwork areas, unsurfaced haul roads and loads of soil being transported to reduce wind-blown dust emissions, especially during dry weather
- minimise the number of stockpiles onsite, and:
  - avoid stockpiling in exposed areas
  - position stockpiles away from surrounding receivers
  - appropriately cover or seal exposed areas prior to periods of no work (e.g. long weekends, picnic day weekends, holiday periods)
  - progressively rehabilitate exposed areas on completion of different work stages, including providing temporary cover and commencing permanent landscaping as early as possible
- wheel-wash facilities or rumble grids would be provided and used near the site exit points, as appropriate
- ensure vehicles and mobile plant:
  - use designated haulage and access routes and that appropriate vehicle speeds are assigned on sealed and unsealed roads
  - are covered when entering or exiting the site when carrying loads
  - are maintained in accordance with manufacturer specifications
- dust extraction and filtration systems would be installed for deep excavation with limited surface exposure
- the intensity of activities would be adjusted based on measured and observed dust levels and weather forecasts
- consider all relevant measures listed in the *Guidance on Monitoring in the Vicinity of Demolition and Construction Sites (Version 1.1)* (Institute of Air Quality Management, 2018).

The CEMF (Appendix I) requires the preparation of an Air Quality Management Plan which would include further detail regarding measures to monitor and address air quality impact during construction.

## 6.18 Sustainability, climate change and greenhouse gas

### Submitter identification number

S-41814224

### Issue raised

A submitter suggested that total emissions of different design options are calculated and used to inform the design of stations and precincts, and that this takes into account emissions from private vehicles accessing the stations.

### Response

Sydney Metro West stations and precincts are being designed to prioritise walking and other modes of active transport, and public transport, in the stations, interchanges and associated developments in accordance with Design Guidelines and corridor-wide urban design principles in Section 5.2.5 of the Environmental Impact Statement. No park and ride facilities would be provided. The design of the stations would integrate walkable urban environments with the Green Grid to contribute to safe, permeable and well-connected station precincts.

It is also forecast that the majority of customers would access and egress the Sydney Metro West stations via active or public transport modes, rather than private vehicles. The forecast modes of access and egress at each station in 2036 are provided in the Transport sections of the relevant chapters in Part B (Environmental assessment) of the Environmental Impact Statement.

Accounting for emissions of private vehicles accessing the stations is beyond the scope of the Environmental Impact Statement. However, analysis undertaken by Sydney Metro also shows that total network wide car trips would be reduced by about 83,000 weekday trips by 2036 and about 110,000 weekday trips by 2056. This has the potential to reduce air pollution emissions from road transport and associated congestion, when compared to the emissions that would otherwise occur if this proposal was not delivered (refer to Section 18.3.2 of the Environmental Impact Statement).

The greenhouse gas assessment for this proposal is provided in Section 18.4 of the Environmental Impact Statement. The greenhouse gas assessment was completed in accordance with the Secretary's environmental assessment requirements (see Appendix A (Assessment requirements) of the Environmental Impact Statement) and the Sydney Metro West Concept performance outcomes in Section 20.7.6 of the Environmental Impact Statement.

The greenhouse gas assessment undertaken for this proposal is based on the indicative design and construction methodology as detailed in the Environmental Impact Statement. Greenhouse gas emissions calculations would be validated and/or updated during further design development of this proposal. The use of electricity to power the stations and operate the metro rail service would be the largest contributor to operational greenhouse gas emissions. Sydney Metro would use zero emission electricity for its metro operations. Sydney Metro would also maximise opportunities for on-site renewable generation to supply low voltage loads.

Design development of this proposal would also continue to consider the Sydney Metro West Sustainability Plan and the sustainability initiatives identified in Table 18-8 of this Environmental Impact Statement, which include objectives related to reducing energy use and carbon emissions, and to drive excellence in low carbon emissions. Concept condition of approval C-B7 requires Sydney Metro West to achieve a minimum Infrastructure Sustainability Council (ISC) rating of 75 (Version 1.2) (or equivalent level of performance using a demonstrated equivalent rating tool) or a 5-Star Green Star rating (or equivalent level of performance using a demonstrated equivalent rating tool). Sydney Metro West (including this proposal) have committed to achieve an equivalent or improved level of sustainability performance compared to previous metro projects. This would include achieving a 'leading' ISC rating (Version 1.2) for relevant infrastructure components of this proposal and a 5-Star Green Star rating for relevant buildings and precincts.

## 6.19 Waste management and resource use

### 6.19.1 Waste management and resource use – operation

#### Submitter identification numbers

S-39587077, S-40062784, S-41521974

#### Issues raised

Submitters raised the following concerns and questions about waste management and resource use during operation:

- concern about waste management (i.e. littering) and how it would affect their property as well as areas surrounding the proposal
- query about what stormwater captured at the stations would be used for.

#### Response

Bins would be provided at stations. Potential waste management impacts could occur during operation of this proposal, including for example if waste (such as litter) from station buildings being blown into the surrounding environment. Potential waste management impacts are considered manageable through standard mitigation measures and would be managed by the implementation of an Operational Environmental Management Plan or System. Section 18.5.2 of the Environmental Impact Statement provides further detail on the waste management and resource use assessment during operation of this proposal.

Potential options for the reuse of captured stormwater at Sydney Metro West stations would be confirmed during detailed design. Sydney Metro would also investigate options to minimise potable water (drinking water quality) use and maximise opportunities for reuse of non-potable water sources during operation, in accordance with the Sydney Metro West Sustainability Plan. This could include initiatives to harvest and reuse rainwater at permanent and temporary facilities, where feasible.

### 6.19.2 Waste management and resource use – construction

#### Submitter identification numbers

S-40062784, S-41521974

#### Issues raised

Submitters raised the following concern and question about waste management and resource use during construction:

- concern about waste management and how it would affect their property as well as areas surrounding the proposal
- query about how much recycled material will be used in the project and how much of the material used in the proposal will be reused and recycled.

#### Response

Section 18.5.3 of the Environmental Impact Statement outlines the potential waste impacts during construction and the likely main construction waste streams for this proposal. Potential waste management issues are manageable through standard mitigation measures. These measures would be developed in accordance with the Sydney Metro West Sustainability Plan and the measures identified in the CEMF (Appendix I).

In accordance with the CEMF (Appendix I), the principal contractor would develop and implement a Waste Management Plan which would include the following as a minimum:

- the waste management mitigation measures as detailed in the environmental approval documentation and Appendix B of the CEMF (Appendix I)
- the responsibilities of key project personnel with respect to the implementation of the plan
- waste management monitoring requirements
- a procedure for the assessment, classification, management and disposal of waste in accordance with Waste Classification Guidelines
- compliance record generation and management.

Consistent with the resource management hierarchy of the *Waste Avoidance and Resource Recovery Act 2001* and the reuse and recycling initiatives identified in Table 18-8 of the Environmental Impact Statement, resource consumption would be minimised where possible and the project would target to recycle or beneficially reuse at least 95 per cent construction and demolition waste.

The CEMF (Appendix I) includes the following waste and resource environmental mitigation measures related to material reuse during construction:

- waste streams would be segregated to avoid cross-contamination of materials and maximise reuse and recycling opportunities (mitigation measure CEMF-WR5)
- a materials tracking system would be implemented for material transferred between sites and to offsite locations such as licensed waste management facilities (mitigation measure CEMF-WR6)
- the use of raw materials (noise hoarding, site fencing, etc.) would be reused or shared, between sites and between construction contractors where feasible and reasonable (mitigation measure CEMF-WR7).

## 6.20 Cumulative impacts

### Submitter identification number

S-42047941

### Issue raised

A submitter raised concern about potential cumulative noise impacts from other projects during construction at The Bays Station. The submitter requested that noise impacts from concurrent construction activity at Glebe Island and White Bay are included in the noise assessments for construction and operation.

### Response

The cumulative impact assessment in Chapter 19 (Cumulative impacts) of the Environmental Impact Statement included consideration of a number of projects currently under construction or expected to be under construction at the same time as this proposal in the vicinity of The Bays Station. This included the assessment of cumulative noise impacts in Section 19.4.2 of the Environmental Impact Statement and Technical Paper 4 (Construction noise and vibration) of the Environmental Impact Statement.

The Bays Station construction site would be used during the work carried out under the previous Sydney Metro West planning applications. The approved construction work between The Bays and Westmead at this site is expected to occur through to around quarter three 2024. The proposed major civil construction work between The Bays and Sydney CBD would occur on a portion of the construction site through to around quarter three 2025. Construction work associated with this proposal would start in quarter two of 2025. Concurrent cumulative noise impacts may occur during the period of the handover to the contractor(s) engaged to construct this proposal. The indicative construction program presented in Figure 6-1 of the Environmental Impact Statement shows the overlaps in the construction program for this proposal and for previous Sydney Metro West planning applications.

Several other major projects are also located nearby, including M4-M5 Link Rozelle Interchange, and the Western Harbour Tunnel and Warringah Freeway Upgrade. Construction of these projects are, however, expected to be complete prior to construction work starting on this proposal, meaning concurrent cumulative noise impacts are unlikely.

The presence of construction work from several overlapping or consecutive major projects in the wider area surrounding The Bays Station construction site may result in consecutive impacts (i.e. 'construction fatigue') at the surrounding receivers. Management measures that may minimise the impact of construction fatigue would include the provision of respite periods.

In accordance with mitigation measure CEMF-CI1, coordination and consultation with relevant stakeholders would occur where required to manage the interface of projects under construction at the same time (refer to Appendix I (CEMF)). Co-ordination and consultation with these stakeholders would include:

- provision of regular updates to the detailed construction program, construction sites and haul routes
- identification of key potential conflict points with other construction projects
- developing mitigation strategies in order to manage conflicts. depending on the nature of the conflict, this could involve:
  - adjustments to construction program, work activities or haul routes of conflicting projects
  - co-ordination of traffic management arrangements between projects.

Predicted noise levels from operation of The Bays Station are well below the applicable noise criteria. As such, cumulative operational noise impacts with other developments are unlikely to occur.

## 6.21 Previous Sydney Metro West planning applications

### 6.21.1 Sydney Metro West Concept

#### Submitter identification numbers

S-41369288, S-41382690, S-41827153, S-42009347, S-42135497, S-43136212

#### Issues raised

Submitters raised the following concerns and comments regarding the Sydney Metro West Concept:

- concerns regarding station locations, including North Strathfield metro station and Sydney Olympic Park metro station given their existing rail connections, and recommendation to realign the metro tunnels south of Parramatta Road with stations at Flemington and Homebush West
- questions why there are no stations between Parramatta and Sydney Olympic Park (such as at Camellia or Newington), as well as between Five Dock and The Bays (such as at Lilyfield with an interchange with light rail)
- comment that the tunnel alignment (under Lancelot Street, Five Dock) differed to the location of geotechnical investigations undertaken by Sydney Metro (on Garfield Street, Five Dock). Submitter queried why the tunnel alignment appears to have changed from being located beneath Garfield Street, to beneath Lancelot Street.

#### Response

The *Sydney Metro West Environmental Impact Statement - Westmead to The Bays and Sydney CBD* (Sydney Metro, 2020a) documents the design development process and alternatives considered for the Sydney Metro West alignment and station location options. The Concept for Sydney Metro West was approved on 11 March 2021 for Stage 1 of the planning approval process (refer to Section 1.2.1 (Staged planning approval) of this Submissions Report for further detail).

The station locations options assessment considered a range of factors including stakeholder feedback, alignment with key government priorities and project objectives, technical and construction consideration, affordability, economic evaluation and risk assessment. Sydney Metro West preliminary investigations identified that stations at Parramatta, Sydney Olympic Park, The Bays and Sydney CBD would provide connections to key centres along the corridor and were core to the Concept (referred to as 'core stations').

A Sydney Olympic Park metro station would enable full realisation of the Sydney Olympic Park lifestyle super precinct as a centre of recreation, entertainment, knowledge intensive jobs and higher density living. Mass transit would support the 34,000 jobs and more than 23,000 residents which are expected to be located in the area by 2030 (Sydney Olympic Park Authority, 2018), and significantly enhance public transport connectivity.

Sydney Metro West preliminary investigations also identified that a metro station interchanging with the T9 Northern Line would offer significant relief to existing T9 services, could provide customers with faster travel times and expand the 30-minute catchment for Greater Parramatta. A connection with the T9 Northern Line may facilitate land use change with residential and employment growth opportunities and provide wider accessibility and journey time savings across Greater Sydney.

As well as alleviating pressure from the T9 Northern Line, it was identified that a North Strathfield station location would support urban renewal within the Homebush precinct redevelopment area. The station would reach a significant walking catchment and offer a more efficient alignment (and therefore improved travel times for customers travelling between Parramatta and the Sydney CBD).

Sydney Metro West preliminary investigations for station locations considered a range of factors including stakeholder feedback, alignment with key government priorities and project objectives, technical and construction consideration, affordability, economic evaluation and risk assessment. These investigations identified the following in relation to alternate stations:

- a station at Camellia was not progressed as there were technical constraints on the constructability due to flood protection requirements, as well as potential impacts on basements associated with the draft Camellia Town Centre Masterplan (NSW Department of Planning and Environment, 2018). Significant remediation work would have also been required which would have impacted construction timing. The NSW Government is delivering Stage 1 of Parramatta Light Rail which will connect Westmead to Carlingford via the Parramatta CBD and Camellia and is due to open in 2023

- while Newington would create a new rail catchment area and support travel time savings, a station in this locality would not align with the current strategic land use vision for this area which seeks to retain the existing residential community without any significant increase in density, enabling the retention and protection of essential industrial and urban services land in adjoining Silverwater (NSW Department of Planning and Environment, 2017a)
- Lilyfield is characterised by lower density residential land use, green space and heritage which would limit the opportunity for urban renewal. The locality would present complex constructability and deliverability challenges due to interaction with the M4-M5 Link Rozelle Interchange and Hawthorne Canal. Initial investigations suggest this would require a very deep station, resulting in greatly increased access and interchange times for customers.

The tunnel alignment has been designed in reference to the location, depth and structure of stations, the vertical grade required for reliable train speeds and to deliver the Sydney Metro West tunnels in a way that minimises impacts to the environment and existing infrastructure and buildings.

The *Sydney Metro West Environmental Impact Statement - Westmead to The Bays and Sydney CBD* (2020a) which was placed on public exhibition between April and June 2020 included an indicative tunnel alignment for assessment purposes. It was noted that it would be subject to detailed design. This was the first time an indicative tunnel alignment for the project was made publicly available. Lancelot Street was identified in this document as sitting within the rail corridor above the indicative tunnel alignment. Following detailed design, the alignment narrowed through Lancelot Street (south tunnel remained as shown in the *Sydney Metro West Environmental Impact Statement - Westmead to The Bays and Sydney CBD* (Sydney Metro, 2020a) and the north tunnel moved towards the south tunnel) to accommodate a change in the Five Dock Station configuration from a binocular station to a cavern. This change will provide design benefits for passenger movements within the station and will result in less impacts during construction due to changes in construction methodology and reduced timeframes for construction.

### 6.21.2 Major civil construction between Westmead and The Bays (Stage 1)

#### Submitter identification numbers

S-41462832, S-42077895, S-42009347, S-42158385, S-42078098, S-42165514

#### Issues raised

Submitters raised the following concerns and comments regarding major civil construction work between Westmead and The Bays:

- concerns regarding the vibration and impacts to property during Sydney Metro West tunnelling works at The Bays and at Five Dock
- concerns that issues raised in submissions to the previous Sydney Metro West planning application have not been adequately addressed
- concerns that tunnel depths presented in the Environmental Impact Statement under the properties along Lancelot Street in Five Dock are different to previous Sydney Metro West planning applications, and that the tunnel alignment is different than expected.

#### Response

Noise and vibration impacts of major civil construction between Westmead and The Bays will be managed in accordance with the relevant conditions of approval, mitigation measures for the previous planning application, and Sydney Metro management frameworks including the CNVS (Appendix K). The CNVS includes a list of standard mitigation measures that would be implemented where feasible and reasonable, including monitoring of impacts. Where vibration levels are predicted to exceed the screening criteria, vibration monitoring would be carried out to ensure vibration levels remain below appropriate limits for that structure.

The process of analysis of submissions as part of the previous Sydney Metro West planning application is described in *Sydney Metro West – Westmead to The Bays and Sydney CBD Submissions Report* (Sydney Metro, 2020b). The Submissions Report for the previous Sydney Metro West planning application provided responses to all issues raised. The adequacy of these responses was considered by the Department of Planning and Environment as part of their assessment and determination of the application.

In accordance with the Sydney Metro OCCS (Appendix N), Sydney Metro would continue to consult with community members, government agencies and other stakeholders during construction to minimise potential impacts on the local and regional environment and the community. Construction impacts at Five Dock Station construction sites associated with this proposal would be managed and mitigated in accordance with the Sydney Metro management frameworks such as the CEMF (Appendix I).

The *Sydney Metro West Environmental Impact Statement - Westmead to The Bays and Sydney CBD* (Sydney Metro, 2020a) showed an indicative depth at a nominated point in Lancelot Street, Five Dock as 30 metres. This measurement was taken from the existing ground level to rail level. The depth of the tunnel along Lancelot Street has not changed since and remains at 30 metres. The tunnel tool provided to residents shows an indicative depth from ground level to top of the running tunnel (approximately 23 metres). Taking this into consideration there has been no change to proposed tunnel depths at Lancelot Street. The tunnel alignment at Five Dock was assessed and approved under the previous Sydney Metro West planning application.

## 6.22 Adjacent and/or over station development

### Submitter identification numbers

S-40062784, S-41814224

### Issues raised

Submitters raised the following comments regarding adjacent and/or over station development relating to Sydney Metro West:

- recommendations that high-quality housing is built above stations, and that car parking spaces for residents be restricted to electric and disability only, with provision for storing bicycles
- questions regarding the use of the Liveable Housing Design Guidelines to design future over station development.

### Response

The proposal makes provision for future over station development at Parramatta, Sydney Olympic Park, Pyrmont and Hunter Street (Sydney CBD), as well as adjacent station development at Westmead, Parramatta, Sydney Olympic Park, Burwood North and The Bays.

The future adjacent and/or over station development, including the use of these buildings and the guidelines that would be adopted in the design of this development, is beyond the scope of the Environmental Impact Statement and would be subject to separate assessment and approval and community and stakeholder engagement.

## 6.23 Issues that are beyond the scope of the Environmental Impact Statement

### 6.23.1 Future metro extensions

#### Submitter identification number

S-41382690

#### Issues raised

Submitters raised the following concerns and comments regarding future Sydney Metro extensions:

- recommendations that Sydney Metro West is extended to the eastern suburbs, the outer western suburbs and Western Sydney Airport
- recommendations that a sky rail may be more cost effective than constructing metro tunnels for future extensions.

#### Response

Additional transport projects and metro extensions are beyond the scope of Sydney Metro West, and would be planned in accordance with the *Future Transport Strategy 2056* (Transport for NSW, 2020a) and subject to further investigations by Transport for NSW and consideration by the NSW Government.

The *Future Transport Strategy 2056* identifies potential extensions of Sydney Metro West to the west, toward Western Sydney Airport, and to the south-east as part of the future 2056 rail network, subject to further investigation and an investment decision by the NSW Government. The *South East Sydney Transport Strategy* (Transport for NSW, 2020c) was released in August 2020 which identifies the potential for an extension of Sydney Metro West to the south-east via Zetland and Randwick, subject to an investment decision by the NSW Government.

Section 5.3 of the Environmental Impact Statement identifies Sydney Metro West would be future-proofed and include the provision of stub tunnels at the western and eastern extents of the tunnels to allow for minimal disruption of the operating line during the construction of future extensions.

The design of future metro projects or extensions would consider a number of factors when determining above ground or below ground alignments including land use and property impacts, visual amenity, operational noise impacts and project cost.

### 6.23.2 Other transport projects

#### Submitter identification numbers

S-39587102, S-39635033, S-39946214, S-40062784, S-40383747, S-41736304, S-41827153, S-42004814, S-42135497, S-42158385, S-42213238, S-43136212, S-42137516, S-42138528

#### Issues raised

Submitters raised the following concerns and comments regarding other transport projects:

- question regarding whether the network will extend to St Marys with a station at Blacktown, and what the travel time would be between Westmead and St Marys with and without a metro line
- suggestions regarding public transport including:
  - significantly altered public transport network for Sydney
  - a metro line servicing Dundas Valley
  - a rail line between Richmond and Macquarie Park and converting the line between Richmond to Lidcombe and Sydney Olympic Park
  - from Western Sydney Aerotropolis to Macarthur, Sutherland, Kogarah, Campsie, Strathfield, Lidcombe, utilisation of line between Berala and Yagoona, Western Sydney University Milperra campus, Cabramatta, Blacktown, and St Marys
  - relocating Bankstown Station to University of Western Sydney Milperra campus
  - to Green Square, UNSW Science theatre, Kingsford, Maroubra, La Perouse, Kernel, Sutherland, Hurstville, Kogarah, Brighton La Sand, and Kingsford Smith airport
  - additional platforms at Kingsford Smith Airport
  - a metro rail line with stations at Strathfield, Burwood, Lewisham, Stanmore, Newtown, relocated MacDonalddown Station, UTS Ultimo, Pyrmont, Barangaroo, St James, Darlinghurst, Paddington, NIDA Kensington, Kingsford, Hillsdale, East lakes, Mascot, Domestic airport, International airport, Wolli Creek, Arncliffe, Hurstville, Penhurst, Sutherland to Cronulla
  - a rail line between Leppington and Macarthur
  - a rail line between Southern Highlands to Port Kembla
  - new freight line that avoids the use of Cabramatta line and Homebush line
  - additional tracks between Homebush and Lidcombe
  - additional tracks between Regents Park and Lidcombe
  - relocation of heritage turntables from Central urban lines to regional lines to enable converting the line between Macarthur to Glenfield via City Circle to metro
  - extending Sydney Metro Western Sydney Airport to Schofields to join the Sydney Metro Northwest Line
  - a new interchange at Chatswood West with lines to the upper north shore
  - completion of the circle from the new airport to the city.

- extending the Sydney Metro network further west and establishing new stations spanning from Seven Hills/Blacktown to Parramatta
- Light rail to The Bays including for the existing line to be connected to The Bays Station
- changes to the 389 bus route
- suggestions regarding active transport, including:
  - a pedestrian tunnel between Pyrmont Station to the Fish Market light rail stop or Blackwattle Bay
  - the proposal for an on-road cycle way along Pyrmont Bridge Road should not proceed due to the current traffic performance
  - converting the Bankstown to Yagoona line to an active transport corridor
  - support for re-opening of Glebe Island Bridge as an active transport connection
  - a new footbridge across Rozelle Bay connecting Glebe with Rozelle Bay and the metro
  - new active transport connections in the Rozelle and Balmain area including a reinstated footbridge across Victoria Road, an underpass tunnel beneath City West Link or the Anzac Bridge approach, an elevated bicycle route along Robert Street which connects with the Victoria Road bicycle route, and a bicycle route to and from Railyard Park under Victoria Road to connect with Lilyfield Road
  - a lift and bicycle racks on Lilyfield Road, and changes to existing ramps, stairs and active transport connections on streets in the surrounding area to improve accessibility
  - improved facilities for cyclists on Sydney Trains and NSW Trains services
  - extensions of the existing Powell's Creek cycleway in the Homebush area
  - extensions of the proposed bicycle connections from Burwood North Station to connect to Concord Oval, Cintra Park and the East West Regional Cycleway
  - an active transport connection along Hamilton Street East and Hamilton Street, to extend across Powell's Creek to the existing Powell's Creek cycleway
  - a new shared path crossing of the rail corridor at North Strathfield, to support connectivity to the Bakehouse Quarter and accommodate for planned growth in the surrounding area
  - an upgrade of the Concord West underpass
- other transport-network related suggestions including:
  - support for the Sydney Metro - Western Sydney Airport project.
  - a new bridge should be built over Parramatta River near Wentworth Point
  - query about a future laneway behind the police station at Five Dock, which is identified in separate Canada Bay Council plans
  - recommended changes to the Burwood North, North Strathfield and Five Dock areas, including reducing speed limits and implementing shared zones where future rezoning occurs close to the metro stations.

## Response

The subject of the Environmental Impact Statement relates to rail infrastructure, stations, precincts and operation of Sydney Metro West. The other transport project related suggestions identified in the submissions are beyond the scope of Sydney Metro West and the Environmental Impact Statement.

Sydney Metro West would be integrated with other transport modes, including the existing Sydney Trains suburban rail network, pedestrian and cycle network, light rail and buses. Active transport links would generally be provided within or immediately adjacent to the station precincts. In accordance with mitigation measure EIS-TT2, potential opportunities to connect active transport measures with the wider active transport network would be further investigated in consultation with key stakeholders (refer to Appendix C (Revised mitigation measures)).

### 6.23.3 Other non-transport projects

#### Submitter identification numbers

S-39946214, S-40085272, S-42077925, S-42047941, S-42138528

#### Issues raised

Submitters raised the following concerns and comments regarding other non-transport projects:

- comments regarding City of Canada Bay Council's 'Sydney Metro West: draft North Strathfield Local Character Statement', including future traffic congestion as a result of development by others, and proposed changes to height limits
- recommendations that future surrounding development consider overall density, the height of buildings as well as sympathetic design
- concerns around future over development of The Bays precinct
- recommendations that additional community services be provided near the proposal, such as a police station at Pymont Station.

#### Response

The subject of the Environmental Impact Statement relates to rail infrastructure, stations, precincts and operation of Sydney Metro West.

Future development (including changes to height restrictions) at North Strathfield, The Bays and Pymont and the changes that may be progressed by others are beyond the scope of the Environmental Impact Statement. The ongoing design development of the stations would address the exiting conditions and urban interfaces of each station surroundings and be integrated with council strategic planning documents, refer to the Design Guidelines (Appendix M) for more details.

Future development near The Bays Station would be guided by the *Bays West Place Strategy* (NSW Department of Planning, Industry and Environment, 2021a). The Department of Planning and Environment exhibited the *Bays West Stage 1 draft Master Plan and Urban Design Framework* (NSW Department of Planning, Industry and Environment, 2022) from 4 May to 31 May 2022. The Department of Planning and Environment are currently considering all feedback and submissions to help finalise the master plan package and inform the preparation of the initial stage rezoning proposal, which will be exhibited for further feedback later this year.

The remaining sub-precincts within Bays West will undergo a master planning and rezoning process as renewal of the wider precinct continues. Community feedback will be sought by the relevant planning authority over time as these draft sub-precinct master plans and rezoning proposals are prepared.

Additional community services within metro stations, such as police stations, are beyond the scope of the Environmental Impact Statement. The station would support the aims of the *Pymont Peninsula Place Strategy* (NSW Department of Planning, Industry and Environment, 2020), which includes a transition to a place where people walk and use public transport to connect to other places. The *Pymont Peninsula Place Strategy* would consider the need for additional community facilities and social infrastructure in the area.

### 6.23.4 Comments unrelated to the Environmental Impact Statement

#### Submitter identification numbers

S-42158385, S-43136212, S-42078098, S-42165514

#### Issues raised

Submitters raised concerns and comments unrelated to the Environmental Impact Statement, including:

- recommendations that memorials such as the one for the United States forces at Glebe Island be protected and promoted
- requests that a police presence be established around Five Dock to manage motorists who do not adhere to road rules.

#### Response

The issues raised in submissions are outside of the scope of the Environmental Impact Statement as they are outside of this proposal area and/or are not a matter for Sydney Metro.

## 7.0 Public authority submissions

### 7.1 Overview of submissions received

Submissions were received from the following public authorities:

- Cumberland City Council
- City of Parramatta Council
- Strathfield Council
- City of Canada Bay Council
- Burwood Council
- Inner West Council
- City of Sydney Council.

The approach to processing and responding to these submissions is described in Chapter 4 (Analysis of submissions) of this Submissions Report. A summary of the issues raised in public authority submissions and a response to the issues raised is provided in the following sections.

### 7.2 Cumberland City Council

#### 7.2.1 General

##### Issue raised

Cumberland City Council requested to be actively involved in the future design and development of this proposal, particularly related to the development of Westmead metro station.

##### Response

Cumberland City Council is considered a key stakeholder for this proposal and has been consulted since 2017. The Sydney Metro Overarching Community Communications Strategy (OCCS) (Appendix N) has been prepared to guide Sydney Metro's approach to stakeholder and community liaison, including engagement with stakeholders.

Chapter 3 (Stakeholder and community engagement) of this Submissions Report also details consultation undertaken to support public exhibition of the Environmental Impact Statement and the plans for ongoing consultation including consultation with local councils and other key stakeholders. A briefing was held with Cumberland City Council to support public exhibition, which was aimed at ensuring Council were appropriately informed about the Environmental Impact Statement and received the relevant information to make a submission. A briefing was also held with Council during the preparation of this Submissions Report to further understand any feedback from Cumberland City Council in response to the Environmental Impact Statement. Should this proposal be approved, Sydney Metro would continue to consult with Cumberland City Council during detailed design development and construction.

Section 5.2.7 of the Environmental Impact Statement also identifies ongoing council engagement as part of design review. Relevant councils and key stakeholders would be invited to participate in Design Review Panel meetings as required to advise on local issues and design outcomes as they relate to the local context.

Following development of the design, station design and precinct plans (or equivalent as required by the conditions of approval) would be developed for each metro station to document and illustrate the permanent built works and landscape design. The station design and precinct plan for Westmead metro station would be prepared in consultation with Cumberland City Council, City of Parramatta Council, the local community and other relevant stakeholders. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

## 7.2.2 Westmead metro station indicative layout and design

### Issues raised

Cumberland City Council raised the following issues related to the indicative layout and design of Westmead metro station:

- support for the indicative station layout and design noting the design would be subject to further detailed design development
- strong support for the new aerial station concourse along Hawkesbury Road, escalators and/or stairs and lifts providing access between the Sydney Trains and underground Sydney Metro platforms, public domain areas, and station precinct and interchange elements
- request for clarification regarding the number and location of station entry points and identification of several disadvantages of a single access point from the north
- strong support for and identification of several benefits associated with an additional southern station entrance
- concern that the transport interchange facilities would be concentrated to the north of the transport hub and would not support travellers with origins or destinations to the south and recommended provision of transport interchange facilities to the south of the station
- recommendation for consideration of a pedestrian crossing on the northern approach of the Hawkesbury Road traffic signals to assist commuters exiting the metro station onto Hawkesbury Road (north of Alexandra Avenue) to cross and reach the northern side of Alexandra Avenue (west of Hawkesbury Road)
- strong support for retention of the existing Alexandra Avenue alignment
- request that narrowing and regrading of Alexandra Avenue to accommodate the new bus interchange include provision of access to the public domain south of Alexandra Avenue at street level with no or minimal steps
- request for detail regarding the final configuration of Alexandra Avenue so Council can provide further input.

### Response

Cumberland City Council's support for the indicative Westmead metro station layout and design including the new aerial station concourse is noted.

Table 7-1 of the Environmental Impact Statement identified that Sydney Metro was continuing to investigate the opportunity for an additional southern station entrance. In response to feedback received from the community and key stakeholders including Cumberland City Council, further design development has been carried out for Westmead metro station. Proposed changes include:

- provision of a new metro station entry from Hawkesbury Road (to the south of Alexandra Avenue) and additional transport interchange facilities including additional pedestrian crossings on Alexandra Avenue and Bailey Street and an additional bicycle parking location to the south of Alexandra Avenue, associated with the proposed southern entry to support customer access to and from the south
- regrading of Alexandra Avenue between Hawkesbury Road and Hassall Street which would improve accessibility, pedestrian safety and amenity; and enhance the placemaking outcomes identified in the Environmental Impact Statement.

These changes are further described and assessed in Section 2.2 (Westmead metro station – station and precinct design refinements) of this Submissions Report.

A pedestrian crossing on the northern approach of the Hawkesbury Road traffic signals (north of Alexandra Avenue) is not within the scope of this proposal, however Sydney Metro would continue to work with relevant stakeholders including Transport for NSW and Cumberland City Council to integrate Westmead metro station with the active transport network. The existing pedestrian crossing would be available on the southern approach of this intersection. The station design and precinct plan (or equivalent as required by the conditions of approval) for Westmead metro station would include details of active transport connections and an interchange access plans (refer to Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report).

Sydney Metro is continuing to investigate opportunities regarding the layout and use of adjoining streets to support station access and public domain improvements, including the potential for Alexandra Avenue between Hawkesbury Road and Hassall Street to be narrowed and used for bus and emergency services only. Sydney Metro would continue to consult with Cumberland City Council on this matter.

### 7.2.3 Transforming Hawkesbury Road and surrounds

#### Issues raised

Cumberland City Council raised the following issues related to the transformation of Hawkesbury Road and surrounds:

- strong support for public domain infrastructure including the proposed concourse on the Hawkesbury Road overbridge, the proposed cycleway on Bailey Street, provision of active uses at ground level and enhanced verge opportunities along both Hawkesbury Road and Alexandra Avenue to help catalyse the transformation of Hawkesbury Road to become a green, safe, and walkable high street
- support for, and request for clarification on whether the station would be setback to achieve a realignment of Hawkesbury Road, particularly near its intersection with Alexandra Avenue to support improved pedestrian amenity, widened footpaths, a cycleway and the futureproofing of Hawkesbury Road for a future T-way connection or light rail extension further south
- note that further consultation on the details of the public domain and interfacing uses will be critical in ensuring this space is welcoming, safe, vibrant, and multi-functional
- concern that that the proposed cycle route shown in Figure 7-1 (Chapter 7 of the Environmental Impact Statement) is inconvenient and disruptive for cycle users through this area and cyclists are likely to use the at-grade crossings of Alexandra Avenue and Railway Parade using the pedestrian path or bus lane which may create conflicts and impacts on pedestrian and bus traffic flow
- suggestion for provision of a separated cycleway along Hawkesbury Road and across the eastern side of Hawkesbury Road overbridge is critical to ensure safety for cyclists travelling along Hawkesbury Road to access the transport hub or the northern parts of the Westmead precinct
- support for the proposed bicycle route on Bailey Street and request for clarification on whether the proposed cycleway would be on or off road
- recommendations in relation to transforming Hawkesbury Road and its surrounds.

#### Response

Cumberland City Council's support for the proposed public domain infrastructure on and surrounding Hawkesbury Road is noted. Sydney Metro would continue to consult with Cumberland City Council regarding the Westmead metro station and precinct design including public domain elements, Hawkesbury Road and its surrounds. This would include consultation as part of the development of the station design and precinct plan (or equivalent as required by the conditions of approval) for Westmead metro station. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

Figure 7-6 of the Environmental Impact Statement shows how the Westmead metro station building would be setback from Hawkesbury Road and the provision of enhanced public domain and street improvements along Hawkesbury Road. Future options for a T-Way connection or light rail extension further south in this location are outside the scope of this proposal, however this proposal would not preclude these options being investigated by others.

The proposed bicycle route and public domain upgrades would now be located on the eastern side of Hawkesbury Road which would reduce the number of road crossing cyclists would be required to navigate (which is supported by Cumberland City Council). This cycle route would be separated from vehicle traffic. This change is further described and assessed in Section 2.2 (Westmead metro station - station and precinct design refinements) of this Submissions Report.

The nature and configuration of the Bailey Street cycleway is subject to further design development which Sydney Metro would continue to progress in consultation with Cumberland City Council.

## 7.2.4 Transport hub and precinct design

### Issues raised

Cumberland City Council raised the following issues related to the transport hub and precinct design:

- Council generally supports the high-level place and design principles and urban design strategies identified in the Design Guidelines
- Council provided a number of recommendations in relation to the urban design strategies in the Design Guidelines.

### Response

Cumberland City Council's support for the place and design principles and urban design strategies in the Design Guidelines is noted.

Sydney Metro has considered Cumberland City Council's recommendations in the updated Design Guidelines (Appendix M). The land use and function urban design strategies for Westmead metro station have been revised to recognise the role of the emerging Westmead town centre and Westmead south, and other suggested minor text additions to these strategies have been made in response to Cumberland City Council's suggestions.

## 7.2.5 Transport

### Issues raised

Cumberland City Council raised the following issues related to transport:

- advises that approval from the Cumberland Traffic Committee and Council is required for all proposed traffic facilities including regulatory signs and line marking, and all temporary road closures/other temporary and permanent traffic measures
- request that Construction Traffic Management Plans and Road Occupancy applications should be submitted to Council for assessment
- allowing only buses, taxis and emergency vehicles through Alexandra Avenue will divert other traffic through Bailey Street and Hassall Street, which would impact streets and intersections along the route. Any changes to Alexandra Avenue between Hawkesbury Road and Hassall Street, including the potential for this section of road to be regraded and narrowed and used for bus and emergency services only, will require consideration of the impacts of redirected traffic
- as with Railway Parade, a lower speed limit of 40km/hr should be considered for the roads around the metro station block due to high pedestrian volumes. At a minimum, Alexandra Avenue, Bailey Street, Hassall Street and sections of Hawkesbury Road should be considered for lower speed limits
- removal of parking spaces on local roads should be kept to a minimum to avoid major impact to residents
- to ensure the safety of school children and other pedestrians and to minimise impacts on traffic during school drop-off and pick-up times, construction vehicle numbers exiting via Hawkesbury Road should be avoided or reduced to a minimum. Council reiterates that heavy vehicles should not travel through or wait on local residential streets at any time, as mentioned
- support for the carrying out of a condition survey of roads before and after construction, and the repair of any damage caused to these roads due to construction activities
- the current proposal for Sydney Metro West does not provide commuter car parking at Westmead. While the rationale for this approach is acknowledged, it does not consider current travel patterns and demand for access to Westmead in the absence of other services. It is requested that investigations are undertaken for commuter car parking to be provided at Westmead to support existing and future transport networks, and for Council to be involved in these investigations with State agencies
- the adequacy of bus services for residents likely to use or encouraged to use metro needs to be reviewed. To further encourage a modal shift to public transport, any changes required to the bus routes to provide further bus services for residents in nearby areas travelling to and from the metro station should be reviewed and implemented.

## Response

Sydney Metro would continue to consult with Cumberland City Council regarding temporary and permanent changes to Council's road network. Construction traffic would be managed through implementation of the Construction Traffic Management Framework (CTMF) (Appendix J). This includes:

- the process for the development of Construction Traffic Management Plans, including consultation with Council, and the process for obtaining Road Occupancy Licences which require approval by the relevant road authority
- minimising movements during school drop off and pick up times
- condition surveys of relevant local roads before and after construction.

Sydney Metro is continuing to investigate change in use and restrictions on Alexandra Avenue and would continue to consult with Cumberland City Council on this matter. Should change in use and restrictions on Alexandra Avenue be progressed, investigations would include consideration of the impact of diverted traffic.

A design response of this proposal includes appropriate modifications to Railway Parade, between Hawkesbury Road and Ashley Lane, to provide a low-speed environment that prioritises pedestrian movements across both sides of the street, and to facilitate the connection between Parramatta Light Rail and Westmead metro station.

This proposal does not include the provision of any park and ride facilities (such as new commuter parking spaces) beyond what is already provided near the proposed metro stations. Park and ride is the lowest priority of all transport modes for the Sydney Metro West project in accordance with the Sydney Metro modal access hierarchy. Given the high accessibility to sustainable transport modes in Sydney, formal parking facilities are only considered outside of major centres where public transport network coverage is limited and have therefore not been considered for this proposal.

Sydney Metro West stations would be designed to promote active and public transport access above the use of private vehicles, in accordance with the Sydney Metro modal access hierarchy. Stations have been planned to integrate with other forms of public transport like light rail, suburban rail and buses. Westmead is well served by bus services, including T-Way services, local buses, school buses, and will be served by the future Parramatta Light Rail Stage 1. To accommodate customers driving to stations, spaces would be provided for pick up and drop off by taxi or kiss and ride.

Sydney Metro would work with Cumberland City Council to minimise the extent of parking changes and help address potential parking impacts on local streets in the vicinity of Westmead metro station.

As identified in the Environmental Impact Statement, the additional mass transit accessibility and amenity provided by this proposal would also provide an opportunity to optimise the bus network. This could include additional feeder services to Sydney Metro West stations. It is expected that bus services and connections to Sydney Metro West stations, including Westmead metro station and Parramatta metro station, would be assessed and reconfigured where necessary by Transport for NSW to support the operation of Sydney Metro West. Sydney Metro is working with other relevant parts of Transport for NSW in relation to the location of any future bus stops near metro stations.

### 7.2.6 Non-Aboriginal heritage

#### Issues raised

Cumberland City Council raised the following issues related to non-Aboriginal heritage:

- Council does not express concern or opposition to this proposal on heritage-related grounds and support the draft Heritage Interpretation Strategy and heritage and archaeology design objectives, principles, and guidelines outlined in the Design Guidelines
- request that care is taken during construction to ensure unnecessary damage/destruction to buried sandstone road surface of local archaeological heritage significance is avoided
- comment that Council has undertaken early consultation on a range of potential heritage items and conservation areas in Westmead and is reviewing submissions received and undertaking further analysis prior to a recommendation on the way forward
- recommendation that the integration of heritage interpretation relating to the history of Westmead be strengthened at the Westmead transport hub and public domain

- support for the identification and categorisation (within the selected sub-themes) of 'key stories' for the Westmead station area. However, the approach proposed for interpretation and story-telling at Westmead station does not appear to emphasise the presence of these 'key stories' and the heritage of the area in a corresponding manner. Council raised several concerns regarding the 'key stories' in the Heritage Interpretation Strategy
- the delivery of Sydney Metro West provides a significant opportunity to deliver a tailored and bespoke celebration of local heritage. Council requests that this opportunity be re-examined for the benefits of local residents and visitors to Westmead.

### Response

The Environmental Impact Statement identifies the potential for archaeological remains associated with former road surfaces. Localised road work for this proposal would be managed in accordance with Sydney Metro's Unexpected Heritage Finds Procedure.

Sydney Metro acknowledges the work Cumberland City Council is carrying out related to potential heritage items and heritage conservation areas, which include some properties along Hawkesbury Road opposite the station. If these items were listed as having heritage significance, there could be potential indirect (visual) impacts from this proposal but these are likely to be minor or negligible, consistent with the potential indirect (visual) impacts identified for currently listed heritage items is close proximity to Westmead metro station (refer to Section 7.7.2 of the Environmental Impact Statement).

Sydney Metro has considered Cumberland City Council's recommendations in the updated Heritage Interpretation Strategy (Appendix L). Appendix 1 of the Heritage Interpretation Strategy includes a detailed history of Westmead. Additional research may be carried out to inform station-specific heritage interpretation planning.

In accordance with Concept conditions of approval C-B6 for the previous Sydney Metro West planning application, the preparation of the Heritage Interpretation Strategy has included engagement with relevant councils (including Cumberland City Council) and regard for any relevant council heritage interpretation guidelines. City of Cumberland Council would continue to be consulted with in regard to station-specific heritage interpretation planning at Westmead metro station.

### 7.2.7 Operational and construction noise and vibration

#### Issues raised

Cumberland City Council raised the following issues related to noise and vibration:

- recommendation that further investigation into noise mitigation measures be undertaken during the next stages of the proposal when detailed construction planning becomes available. This should be consistent with the *Interim Construction Noise Guideline* (ICNG) (Department of Environment & Climate Change, 2009) and specific mitigation measures should be developed and identified based on the exact equipment to be used, the construction methodology, and the specific activities, including duration of activities and locations. This will allow for the minimisation of sleep disturbance impacts
- in relation to ongoing operational noise and vibration from the sites, it is recommended that site specific acoustic assessments are carried out at the design phase to determine impacts on sensitive receivers, and that this is assessed against the *Noise Policy for Industry* (NPfI) (NSW EPA, 2017), relevant vibration guidelines as well as relevant Road and Rail Noise Policies/Guidelines and that there is oversight of this process by the NSW Environment Protection Authority (EPA). Additionally, ongoing acoustic and vibration monitoring results should be made available on request through a publicly accessible website
- provision of several recommendations regarding construction noise and vibration mitigation including provision of alternative accommodation and respite periods (with oversight from the NSW EPA), timing of works and extensive community consultation and a complaints management system. Council also recommends that consultation is undertaken with the Department of Education.

#### Response

Construction noise would be managed in accordance with the Sydney Metro Construction Noise and Vibration Standard (CNVS) (Appendix K). This includes undertaking Detailed Noise and Vibration Impact Statements once the construction equipment and methodologies are confirmed to identify feasible and reasonable mitigation measures (in accordance with the ICNG). This would include further consideration of potential sleep disturbance impacts.

Sydney Metro acknowledges Cumberland City Council's construction noise and vibration mitigation recommendations and notes that these are generally consistent with the measures and intent of the CNVS (Appendix K). Sydney Metro would continue to consult with Department of Education regarding potential impacts to Westmead Public School.

Section 7.6.2 of the Environmental Impact Statement provided the operational noise and vibration assessment for Westmead metro station. The assessment indicated that the predicted noise levels would be compliant with the applicable noise criteria. Noise attenuation has been incorporated into the design to determine the predicted noise levels and includes consideration of the use of large fan attenuators, vent orientation, acoustic louvres and appropriate plant selection. These measures would be further developed throughout the detailed design phase so that compliance with the environmental noise criteria (from the NPfl (NSW EPA, 2017)) is achieved (refer to mitigation measure EIS-NV1 in Appendix C (Revised mitigation measures). There would also be no sources of vibration as part of operation of Westmead metro station that would impact nearby receivers.

An Operational Noise and Vibration Review would be prepared during design development to confirm the mitigation measures required to manage potential airborne and ground-borne noise and vibration impacts from rail operations and stations, in accordance with mitigation measure EIS-NV4. The NSW EPA would be consulted during the preparation of this review. This has been included as an additional mitigation measure in Section 2.14 (Changes to or additional mitigation measures) of this Submissions Report.

Operational noise and vibration monitoring would also be carried out as required by any conditions of approval.

### 7.2.8 Contamination

#### Issues raised

Cumberland City Council raised the following issues related to contamination:

- Council notes that parts of the Cumberland and Parramatta local government areas have been subject to historical uncontrolled filling of chrome waste and asbestos by the former operations of James Hardie Industries. As a result, there is potential for unknown contamination in the fill and groundwater
- any new information which comes to light during site preparation, remediation, demolition, or construction works which has the potential to alter previous conclusions about site suitability and contamination should be reviewed and assessed through an unexpected finds protocol
- there will need to be ongoing groundwater dewatering for the station box throughout the construction and fit out phase. While the groundwater is considered to be low risk and localised, it will need to be monitored in accordance with an approved Environmental Management Plan and collected, treated and discharged at a licensed wastewater treatment plant
- during construction, there may be chemicals and materials required as part of the construction phase. However, these will be managed in accordance with construction environmental management plans
- Council recommends that their engineering teams are consulted where groundwater is required to go to Council's drainage system to ensure the capacity is sufficient. Also, Water NSW should be consulted for any impacts of dewatering on natural groundwater
- Council strongly suggests that oversight of the entire demolition and construction process including initial contamination review phases is undertaken by an NSW accredited site auditor to ensure the contamination aspects are thoroughly reviewed and assessed throughout the project
- the Westmead metro station construction site comprises a mechanical workshop on the corner of Hassall Street. It would need to be ensured that there is appropriate decommissioning of the primary sources of potential contamination and removal and remediation of any soils impacted by any contaminants of potential concern in the immediate vicinity of any Underground Petroleum Storage Systems (UPSS) and associated infrastructure.

## Response

The potential for contamination at the Westmead metro station site is assessed in Technical Paper 7 (Contamination) of the Environmental Impact Statement. This includes the former mechanical workshop which is identified as area of environmental interest (AEI) 2. This AEI is anticipated to contain low risk of groundwater contamination as it would be remediated as part of work under the previous Sydney Metro West planning application. The removal of UPSS infrastructure associated with the former service station site will occur under the previous Sydney Metro West planning application. However, there could be residual groundwater contamination remaining following remediation that may potentially require ongoing management during and post construction activities for this proposal.

AEI 1 is located in the existing rail corridor in the areas of additional footprint required for this proposal, and is identified as containing a moderate risk of soil contamination from use of hazardous building materials and railway activities including lead, asbestos, polychlorinated biphenyl's (PCBs), petroleum hydrocarbons and pesticides. AEI 3, 4 and 5 (located at residential properties and businesses along Hawkesbury Road, Grand Avenue, Bailey Street, Hassall Street, Alexandra Avenue and Railway Parade) are identified as containing a low risk of contamination because of dumped construction waste and hazardous building materials. This is consistent with the risks identified by Cumberland City Council due to historical uncontrolled filling. Overall, the risk of shallow soil contamination or encountering previously dumped construction waste within the existing construction site is expected to be low as it would have been removed or managed prior to construction of this proposal. The Construction Environmental Management Framework (CEMF) (Appendix I) outlines requirements for preparation of a soil and water management plan which would include management measures for contaminated material (soils, water and building materials) and a contingency plan to be implemented in the case of unanticipated discovery of contaminated material during construction.

The CEMF (Appendix I) also sets out the process for management of contamination during construction, including the following mitigation measures:

- CEMF-C1, which requires low risk contamination sites to be managed in accordance with the Soil and Water Management Plan
- CEMF-C2, which requires detailed site investigations for sites where contamination risk is not sufficiently understood
- CEMF-C3, which requires development of a Remedial Action Plan for sites of medium or high contamination risk
- CEMF-C4, which requires review of the Remedial Action Plan by a NSW EPA-accredited Site Auditor.
- CEMF-C5, which requires establishment of an unexpected finds protocol to facilitate the quarantining, isolation and remediation of unexpected contamination. Any unexpected asbestos identified on site would be managed in accordance with applicable regulatory requirements.

In accordance with mitigation measure CEMF-C4 (refer to Appendix I (CEMF)), an accredited Site Auditor would review and approve the Remediation Action Plan and would develop a Site Audit Statement and Site Audit Report upon completion of remediation. This aligns with the risk-based approach adopted in the assessment and further reflects the contamination risk profile that is expected as part of the works for this proposal (i.e. following the major civil construction work being undertaken under the previous Sydney Metro West planning applications).

Additionally, a NSW EPA-accredited Site Auditor will issue Site Audit Statements where required under the previous Sydney Metro West planning applications, prior to work for this proposal commencing. The Site Audit Statements will focus on the assessment, management and remediation of contamination completed in the earlier stages of the Sydney Metro West project. This documentation will inform the contamination management for the work to be conducted under this proposal.

Based on stakeholder consultation as part of the previous Sydney Metro West planning applications, Sydney Metro would consider Site Auditor involvement at the Sampling Analysis and Quality Plan stage for moderate to high risk sites.

As outlined in Section 18.9 of the Environmental Impact Statement, wastewater generated during construction of this proposal (such as groundwater ingress) would be captured, treated and discharged from temporary construction water treatment plants. The water treatment plants would be designed so that wastewater is treated to a level that is compliant with the relevant water quality standards and requirements. The Soil and Water Management Plan would detail discharge points for collected groundwater and surface water during construction.

The catchment of Westmead metro station is highly urbanised and developed with widespread impervious surfaces. The amount of impervious area would not be substantially increased by this proposal and changes to natural hydrological attributes and conveyance capacity of existing stormwater systems would be limited. Mitigation measure CEMF-SSWQ7 identifies that further design development would confirm the local stormwater system capacity to receive construction water treatment plant inflows. In the event there is a stormwater infrastructure capacity issue with existing infrastructure, mitigation measures such as storage detention to control water outflow during wet weather events would be implemented.

Sydney Metro has been and would continue to engage with appropriate NSW government agencies regarding the management of groundwater as part of the previous Sydney Metro West planning applications and this proposal.

### 7.2.9 Erosion and sediment control

#### Issues raised

Cumberland City Council raised the following issues related to erosion and sediment control:

- site specific sediment and erosion control plans should be developed and implemented to manage soil, dust and water runoff impacts including during excavation work in rainy/windy weather
- sediment and erosion control measures should be installed and maintained in accordance with the site's soil and water management plans for the duration of construction to minimise and prevent impacts on waterways.

#### Response

During construction at Westmead metro station, there is the potential for temporary minor soil erosion from the exposure of soil to water runoff and wind during excavation works required for this proposal. This would be adequately managed with the implementation of standard erosion and sediment controls. The CEMF (Appendix I) set out the requirements for development of a soil and water management plan during construction, and the development and implementation of progressive erosion and sediment control plans.

Section 7.10.3 of the Environmental Impact Statement includes further detail on the potential soil impacts of this proposal at Westmead metro station during construction.

### 7.2.10 Air quality

#### Issues raised

Cumberland City Council raised the following issues related to air quality:

- it is expected that nearby receivers (including residential premises, users of public parks, educational facilities and places of public worship) would be exposed to high dust impact during construction
- it will need to be ensured that the measures identified in Appendix B of the CEMF (Appendix I) are implemented throughout the demolition and construction process and that an Air Quality sub-plan is prepared
- Council notes that any operational air quality impacts would be negligible.

#### Response

Receivers around the Westmead metro station construction site would experience medium to high unmitigated dust impacts, and negligible dust impact with mitigation (as identified in Table 18-4 of the Environmental Impact Statement). Sydney Metro is committed to the implementation of the air quality mitigation measures identified in Appendix B of the CEMF (Appendix I). Council's observation that operational air quality impacts would be negligible are noted, and these are consistent with the assessment findings in Section 18.3 of the Environmental Impact Statement.

### 7.2.11 Business impacts

#### Issues raised

Cumberland City Council raised the following issues related to business impacts:

- Council recommends the extension of the proposed business impact assessment area from 400 metres around the site to include the Westmead South area, which is bounded by Alexandra Avenue to the north, Parramatta Park to the east, Bridge Road to the west, and Great Western Highway to the south
- Council is receiving feedback that there is strong demand for retail and commercial space in Westmead South and this is expected to increase with the transformation of the Westmead precinct and the construction and operation of Sydney Metro West. Council supports the provision of mixed-use development on the metro site, particularly as development on this site is expected to catalyse development in the Westmead South precinct
- support for the revitalisation of the Oakes Centre located on 70-78 Hawkesbury Road, improving pedestrian amenity and safety will be important. A minimum footpath width of 3 metres is recommended along the eastern part of Hawkesbury Road (near Alexandra Avenue)
- recommendation that business impacts are mitigated by Sydney Metro and opportunities for Council to work with State agencies to support local businesses is pursued as part of this proposal.

#### Response

A 400 metre business impact assessment study area was established as this is the distance at which businesses are most likely to experience impacts from this proposal. Notwithstanding, the assessment notes where impacts may extend beyond this distance, such as along haul routes. This approach is consistent with the assessment of previous Sydney Metro West planning applications and is considered appropriate for the scale of this proposal.

Mitigation measures to manage impacts to local businesses are identified in the CEMF (Appendix I). The Sydney Metro OCCS (Appendix N) also identifies that a Community Communication Strategy would be prepared and implemented during construction and include requirements related to small business engagement. The Community Communication Strategy would define the location specific measures to be implemented to minimise impacts on individual businesses during construction, taking into account the commercial character of the locality, its general trading profile (daily and annually), and information gained from business profiling.

Sydney Metro notes Cumberland City Council's comments regarding demand for future retail and commercial space in Westmead South, and for the revitalisation of the Oakes Centre. This is beyond the scope of this proposal, although it is expected that Sydney Metro West would support these future and upgraded land uses.

Figure 7-4 of the Environmental Impact Statement identifies potential mixed use land use at Westmead metro station. However, fit out and use of these spaces within the aboveground station infrastructure (e.g. retail, commercial and/or community facilities) and the adjacent station development would be subject to separate approval, where required.

### 7.2.12 Flooding and stormwater

#### Issues raised

Cumberland City Council raised the following issues related to flooding and stormwater:

- critical infrastructure should be protected from Probable Maximum Flood (PMF) events
- site stormwater discharge should comply with Australian and New Zealand Environment Conservation Council (ANZECC) guidelines, both during and post construction
- flooding and stormwater impacts are to be mitigated in accordance with information provided in the Environmental Impact Statement and relevant guidelines and requirements.

#### Response

Critical Sydney Metro West infrastructure would be protected from the higher of the PMF or the one per cent Annual Exceedance Probability (AEP) with climate change plus freeboard. As discussed in Section 7.11.2 of the Environmental Impact Statement, the flood protection levels for Westmead metro station are driven by the one per cent AEP with climate change flood event (plus 300 millimetres of freeboard).

Additional flooding assessment has been undertaken for Westmead metro station in Section 2.2 (Westmead metro station – station and precinct design refinements) to take into account the proposed design refinements since the exhibition of the Environmental Impact Statement. This indicates that the flood protection levels are 38.73 metres Australian Height Datum (AHD) at the entry south of Alexandra Avenue and 31.8 metres AHD at the entry north of Alexandra Avenue as the existing rail corridor is in a cutting at this location. The proposed surface levels at these station entries are around 37.6 metres AHD and 38.6 metres AHD respectively. This indicates the design is marginally below the flood protection level at the southern entry, however the depth of flooding in this location is around 0.01 metres which can be readily mitigated by designing the final surface contours outside of the metro station entry to direct runoff away from the station entry. Design development would include further consideration of flood protection in accordance with mitigation measure EIS-HF1 (refer to Appendix C (Revised mitigation measures)).

Water sensitive urban design features such as gross pollutant traps, grassed swales and bioretention trenches would be provided at stations and ancillary facilities to treat stormwater runoff to required levels prior to discharge into the environment via the local stormwater system.

The construction water treatment plants would be designed so that wastewater is treated to a level that is compliant with the trigger levels from the ANZECC guidelines, the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZG, 2018) and the draft (ANZG, 2020) default guidelines for 95 per cent species protection and 99 per cent species protection for toxicants that bioaccumulate, unless other discharge criteria are agreed with relevant authorities.

### 7.2.13 Biodiversity

#### Issues raised

Cumberland City Council raised the following issues related to biodiversity:

- this project could have the potential to provide biodiversity linkages between Westmead and Parramatta Park
- local plant species should be used in/around the transport hub (where possible) to increase biodiversity
- proposed green infrastructure could also contain habitat for species
- biodiversity impacts are to be mitigated in accordance with information provided in the Environmental Impact Statement and relevant guidelines and requirements.

#### Response

Sydney Metro West would provide landscaping and tree replacement around the station sites. Across this proposal this would achieve a 2:1 replacement ratio as required by the Concept condition of approval C-B8 and with mitigation measure CEMF-LV9 (refer to Appendix I (CEMF)). Local species would be used where appropriate. Biodiversity impacts would also be mitigated with the implementation of a Flora and Fauna Management Plan as outlined in the CEMF (Appendix I).

Tree planting around the station may contribute to a potential biodiversity linkage between Westmead and Parramatta Park, however the full realisation of this link is beyond the scope of this proposal.

## 7.3 City of Parramatta Council

### 7.3.1 General

#### Issue raised

City of Parramatta Council noted that there is an overlap between the ongoing work under the previous Sydney Metro West planning approval, and this proposal. City of Parramatta Council noted a number of areas related to the Environmental Impact Statement that have been superseded by ongoing work related to the previous Sydney Metro West planning approval, particularly the flooding and contamination assessment and that this should be reflected in the Environmental Impact Statement.

#### Response

This proposal is seeking approval for the fit-out of rail infrastructure, stations, precincts and operation of the line. As such, the impact assessment is necessarily focussed on the potential impacts and mitigation approaches for these items. The baseline environment for the various assessments undertaken in the Environmental Impact Statement have considered the impact of the work carried out under the previous Sydney Metro West planning application.

The ongoing work referred to by City of Parramatta Council is related to the previous Sydney Metro West planning application. As part of the previous Sydney Metro West planning application, detailed flood modelling for the Clyde stabling and maintenance facility, and ongoing contamination research and site investigations are being progressed in accordance with the Sydney Metro management frameworks, mitigation measures and conditions of that approval. Sydney Metro is consulting with City of Parramatta Council as required as part of this work.

Further design development and investigations related to potential flooding and contamination impacts for this proposal would be undertaken in accordance with the mitigation measures and any conditions of approval. These would consider assessments undertaken for the previous Sydney Metro West planning applications, where relevant. In accordance with mitigation measure CEMF-C2 (refer to Appendix I (CEMF)), detailed site investigations would be undertaken for sites where contamination risk is not sufficiently understood.

### 7.3.2 Parramatta metro station

#### Issues raised – Civic Link and public domain

City of Parramatta Council raised the following issues related to the Civic Link and public domain:

- support for the provision of enhanced civic-scaled public domain in the centre of the Parramatta CBD, delivery of part of the Civic Link and safeguarding an east-west connection between Smith Street and Church Street, consistent with Council plans and feedback
- comment that while the Environmental Impact Statement acknowledges the importance of the Civic Link and broader public domain outcomes, it does not include details regarding dimensions and alignments required to define the new streets, laneways and squares within the block to ensure consistent outcomes for the Civic Link and the block
- comment that the figures in the Environmental Impact Statement are largely illustrative and scaleless and lack certainty about the proposed built form and public domain outcomes within the metro land
- comment that as Sydney Metro West proposal is staged across an SSI and SSD approval process, there are no consistent drawings that describe the complete staging and outcome for the site
- concern that insufficient description and dimensions is provided in the Design Guidelines for the proposed open spaces, streets, laneways and connections and that this is inconsistent with the Draft Parramatta City Centre Development Control Plan (DCP)
- request that the Environmental Impact Statement safeguard the agreed intent for Civic Link and public domain in accordance with the Civic Link Special Area in the Draft Parramatta City Centre DCP
- recommendation for conditions of approval to ensure detailed design for the metro station incorporates certain public domain elements and associated soil depth requirements.

#### Response – Civic Link and public domain

City of Parramatta Council's support for the proposed public domain elements including part of the Civic Link at Parramatta metro station is noted. This proposal would include the delivery of a section of the Civic Link within the station precinct footprint (between Macquarie and George Streets) in accordance with Concept condition of approval C-B3.

As noted in Chapter 5 (Proposal description – operation) of the Environmental Impact Statement, the description of this proposal is indicative in the Environmental Impact Statement and based on the current level of design. The level of detail is sufficient for the assessment of potential environmental impacts. The level of detail provided and assessed in the Environmental Impact Statement is consistent with the level of detail provided in other major transport project planning approvals, including previous Sydney Metro projects.

Some design elements would continue to be refined as part of the design development process and including ongoing consultation with stakeholders. Sydney Metro would continue to consult with City of Parramatta Council during ongoing design development including consultation related to detailed design and dimensions for public domain elements, as well as how design across this proposal and future over or adjacent station development would be coordinated.

Following development of the design, station design and precinct plans (or equivalent as required by the conditions of approval) would be developed for each metro station to document and illustrate the permanent built works and landscape design. The station design and precinct plan for Parramatta metro station would be prepared in consultation with City of Parramatta Council, the local community and other relevant stakeholders. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

The level of detail requested from the City of Parramatta Council in the Design Guidelines, such as dimensions for public domain areas, is not consistent with the structure and the level of detail for the Design Guidelines (Appendix M). To achieve similar intent, the Draft Parramatta City Centre DCP is included as a reference document in the Design Guidelines. These elements would be confirmed through the station design and precinct plan for Parramatta metro station.

### **Issues raised – provisioning for over station and adjacent station development**

City of Parramatta Council raised the following issues related to the provisioning for over station and adjacent station development:

- the basement structures to support the metro station and future over and adjacent station development must be designed to accommodate adequate soil depth requirements to allow deep soil planting
- recommendation for conditions of approval to provide an adequate slab drop down or other mechanism for providing deep soil provision
- request that an adequate slab drop down or other mechanism is provided for services, with service access provided from surface and no suspended services in underground structures.

### **Response – provisioning for over station and adjacent station development**

Sydney Metro is developing a coordinated design to allow for the basement structures, and the future landscaping requirements around the precinct. Structures and spaces for non-station uses would generally include construction of the structural building elements, and associated utilities and services. Opportunities for deep soil planting would be determined through ongoing design development in consultation with the City of Parramatta Council, in accordance with the Design Guidelines (Appendix M).

Ongoing consultation would be undertaken with City of Parramatta Council regarding these developments.

### **Issues raised – retention of on-grade parking**

City of Parramatta Council raised the following issues related to the retention of on-grade parking:

- concern that proposed retention of the on-grade carpark east of the Roxy Theatre would conflict with the pedestrian movements and is not a desirable outcome in the future high pedestrian city
- noted strong preference to amalgamate the carpark with adjoining properties to facilitate a commercial tower, a new laneway and to enable improved pedestrian safety outcomes
- suggestion that any parking requirements for metro operational use should be located within the building envelope.

### **Response – retention of on-grade parking**

The on-grade car parking east of the Roxy Theatre which is accessed from Macquarie Lane provides car parking and access for existing buildings and properties around the corner of Smith and George Streets and is therefore proposed to be retained during operation of this proposal.

Amalgamation of parking for these existing buildings and properties with over and adjacent development parking is beyond the scope of this proposal. It is proposed to provide amalgamated parking for over and/or adjacent station development within the basement structures (to be provided as part of this proposal).

Sydney Metro would continue to work with City of Parramatta Council regarding the appropriate use of this land as part of any future development of the adjacent sites.

Parking required for metro operational use (for example, for servicing and maintenance) would be provided within the station building envelope.

### Issues raised – Horwood Place share zone treatment

City of Parramatta Council raised the following issues related to the Horwood Place share zone treatment:

- concern that vehicles will travel from the south and west along Horwood Place to George Street as a result of Parramatta Light Rail and that this amount of traffic has not been identified and the implications for the design of Horwood Place are unknown
- note that figures in the Environmental Impact Statement show Horwood Place as both a share zone and a street
- note that there is a preference that Horwood Place be designed with a straight alignment reflecting the urban street grid in Parramatta
- concern that the amended alignment of Horwood Place to the east will impact public domain works completed by Parramatta Light Rail
- comment that the traffic circulation at the intersection (of Horwood Place and Macquarie Street) and the access to the Leigh Memorial Church needs to be assessed and confirmed for the amended street alignment location.

### Response – Horwood Place share zone treatment

The realigned Horwood Place is being designed to allow traffic to travel eastbound along Macquarie Street and then north through to George Street due to the closure of Macquarie Street as part of Parramatta Light Rail. The layout of the realigned Horwood Place would be designed to consider Council's intent for the area, the interface with Kia Ora and the future over station development. It is currently envisaged to be a shared zone.

The operational road network performance for this proposal included the intersections of the realigned Horwood with both Macquarie and George Street. The Horwood Place / George Street and Horwood Place / Macquarie Street intersections are both predicted to operate at a level of service of A during both AM and PM peak hours in 2036, as assessed in Technical Paper 1 (Operational transport) and Section 8.5.2 of the Environmental Impact Statement.

Sydney Metro would continue to undertake appropriate traffic assessments during detailed design to understand the traffic impacts of the Horwood Place realignment so that these are managed where required.

### Issues raised - flood affectation

City of Parramatta Council raised the following issues related to flood affectation:

- concern that as the current proposed station entry levels are below the PMF, if these entry floor levels are amended to meet the PMF, the station entries will sit higher than the surrounding public domain which may result in considerable ramping, stairs or other poor-quality access and visual amenity outcomes in the public domain interface
- support for active flood protection measures (e.g. flood gates) rather than steps and ramps within or adjoining the public domain to transition from street level to a PMF based concourse height.

### Response – flood affectation

Sydney Metro is proposing to protect Parramatta metro station for the PMF event using active measures such as flood barriers (as detailed in Section 8.11.2 of the Environmental Impact Statement) so that the station entries are at the same level as the surrounding public domain. Sydney Metro agree that use of passive measures only at Parramatta metro station would impact urban design and access outcomes.

### Issues raised – building envelope definition

City of Parramatta Council raised the following issues related to building envelope definition:

- details of the proposed building and podium envelopes are presented inconsistently in the Environmental Impact Statement figures and are not sufficient to facilitate future development assessment
- towers and upper-level setbacks are not described in the Environmental Impact Statement, or the Scoping Report for the SSD application and Council requested a coordinated outcome across this proposal and the SSD for the built form in accordance with the Draft Parramatta City Centre DCP
- recommendations for several conditions of approval related to the Civic Link, the Design Guidelines for built form and building envelopes and approval of the Design Guidelines.

## Response – building envelope definition

The figures provided in the Environmental Impact Statement are indicative and provide an appropriate level of detail for a major project of this scale. The figures showing the over station development are intended to show the likely scale of this development only and not building forms. The indicative approach to building setbacks is provided in Figure 4-8 of Appendix B (Revised proposal description) and Section 5.2 of the Design Guidelines (Appendix M). Section 5.2 of the Design Guidelines (Appendix M) provides guidance for setbacks to respond sensitively to heritage items and visual impacts, and to articulate building podiums as separate elements from towers above and use entries, access ways or cut-outs to break the overall length of podiums, where appropriate.

The level of detail requested from the City of Parramatta Council, particularly relating to building footprints and envelopes, is generally not consistent with the structure and the level of detail for the Design Guidelines (Appendix M). To achieve similar intent, the Draft Parramatta City Centre DCP is included as a reference document in the Design Guidelines. These details would be confirmed through the station design and precinct plan for Parramatta metro station. The station design and precinct plan for Parramatta metro station would be prepared in consultation with City of Parramatta Council, the local community and other relevant stakeholders. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

Further detailed information regarding the over station development buildings would be provided in the separate application for this development, as required.

## Issues raised – Design Guidelines

City of Parramatta Council raised the following issues related to the Design Guidelines:

- the Design Guidelines are limited and too general to meaningfully guide the public domain and built form outcomes
- the Parramatta DCP should either be referenced in the Design Guidelines or alternative guidelines with a comparable level of detail to the Parramatta DCP are required to provide certainty across the development stages and approval pathways of the metro station, associated over and adjacent development
- the Environmental Impact Statement states that Design Guidelines can evolve as approved by Sydney Metro's Design Review Panel. Council is a major stakeholder in the outcomes of the broader precinct and the delivery of Civic Link and should have a role in defining the Design Guidelines before development approval stages commence.

## Response – Design Guidelines

The updated Design Guidelines (Appendix M) provide an appropriate level of information to guide the design quality of Sydney Metro West stations and precincts. Sydney Metro is committed to a design approach that includes consultation with relevant government agencies and local councils.

Sydney Metro has considered City of Parramatta Council's comments in the updated Design Guidelines (Appendix M). The level of detail requested from the City of Parramatta Council, particularly relating to building footprints and envelopes, is generally not consistent with the structure and the level of detail for the Design Guidelines (Appendix M). To achieve similar intent, the Draft Parramatta City Centre DCP is included as a reference document in the Design Guidelines.

Sydney Metro would continue to consult with City of Parramatta Council during ongoing design development so that Parramatta metro station is integrated with the existing and planned public domain and the intent of the relevant DCPs are appropriately considered. City of Parramatta Council would also be invited to participate in Design Review Panel meetings as required to advise on local issues and design outcomes as they relate to the local context. The station design and precinct plan for Parramatta metro station would be also prepared in consultation with City of Parramatta Council, the local community and other relevant stakeholders. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

## Issues raised – heritage

City of Parramatta Council raised the following issues related to heritage:

- heritage items Kia Ora, George Street Shops and the Roxy Theatre are not adequately addressed in relation to future built form and curtilage of the items
- concern that the proposed eastern station entry building on the Civic Link encroaches into the Civic Link alignment (established in the 2017 Civic Link Framework Plan) and impacts on views north to the Roxy Theatre
- additional work is required to assess permanent indirect (visual) impacts to the Roxy Theatre, including a viewpoint north from the Civic Link showing the visual impacts of the station entry building on the Roxy Theatre
- Council's Draft Parramatta City Centre DCP establishes a six-storey street wall as a backdrop to the Roxy Theatre and to distinguish between the architectural expression of podiums and towers. The station building envelopes should protect the Civic Link alignment.

## Response – heritage

The non-Aboriginal heritage assessment undertaken as part of the Environmental Impact Statement is consistent with the requirements of the Secretary's environmental assessment requirements. The assessment considered potential direct and indirect impacts of this proposal on the three heritage items located within and immediately adjacent to the site (refer to Section 8.7 of the Environmental Impact Statement for further detail). This included assessment of permanent (indirect) visual impacts to heritage items, including Kia Ora, George Street Shops and the Roxy Theatre.

The Parramatta metro station and surrounding precinct are generally expected to result in positive or negligible visual outcomes for adjacent heritage items including Kia Ora, George Street Shops and the Roxy Theatre when compared to the existing environment or environment prior to the Sydney Metro West project by maintaining and enhancing some views to these heritage items.

The design of Parramatta metro station has and would continue to minimise potential impacts to adjacent heritage items, including Kia Ora, George Street Shops and the Roxy Theatre, for example, by locating station infrastructure to avoid and minimise direct visual impacts. The Environmental Impact Statement has included provisions for future built form at the station precinct to address adjacent heritage items. In accordance with mitigation measure EIS-NAH4, an Adaptive Reuse Strategy and Conservation Management Plan would be prepared for heritage items which would be integrated into the proposed metro station precincts, including the George Street Shops and Kia Ora (refer to Appendix C (Revised mitigation measures)). In accordance with mitigation measure EIS-NAH3, the design of any aboveground station elements would consider setbacks from Kia Ora, in order to respect its heritage setting. The new Civic Link would also incorporate a landscape design that enhances the heritage significant elements and features of the adjacent Roxy Theatre.

While specific viewpoints toward the Roxy Theatre are not individually assessed in the non-Aboriginal heritage assessment, the assessment of impacts to visual amenity for users of the station precinct and surrounding area included a viewpoint from the north of the Civic Link (viewpoint 3 – view south from George Street along Horwood Place). There would be a moderate beneficial impact to this view during operation, as the section of the Civic Link in the centre of this view would provide a new vista and improvements to public domain areas. This would contribute to improvements to the setting of the Roxy Theatre. Further detail on the landscape and visual amenity assessment is included in Section 8.9 of the Environmental Impact Statement.

The Design Guidelines (Appendix M) include a number of urban design strategies related to minimising visual impact and enhancing the setting of adjacent heritage items. This includes the provision of setbacks and sensitive interfaces to heritage items.

### 7.3.3 Land use planning, placemaking and recreation

#### Issues raised – Westmead metro station

City of Parramatta Council raised the following issues related to Westmead metro station:

- acknowledgment that a metro station at Westmead will provide critical transport infrastructure to support the current and future growth of the Westmead Health and Education Precinct and will connect the precinct with the wider metropolitan area
- support for continued investigation by Sydney Metro and recommended provision for an additional southern station entrance

- recommendation for consideration of additional north-south connections to improve pedestrian mobility to the north and south of the transit catchment and create an intermodal transport interchange
- request for further design details on Hawkesbury overbridge upgrade and Hawkesbury Road activation to understand how the design responds to traffic and pedestrian movement
- this proposal should investigate opportunities to further integrate with the surrounding public domain and street network and in particular, any additional land required to increase the public domain in accordance with the Greater Sydney Commission's work to produce a Westmead Public Domain Plan
- this proposal should consider the outcomes of the Draft Westmead Transport Strategy to ensure that any recommended improvements to active transport, road network and/or public transport interchange are considered, or at least aren't precluded from potential future improvements.

### Response – Westmead metro station

Sydney Metro note City of Parramatta Council's support for the Westmead metro station in providing critical transport infrastructure to support and connect the Westmead Health and Education Precinct with the wider metropolitan area.

Table 7-1 of the Environmental Impact Statement identified that Sydney Metro was continuing to investigate the opportunity for an additional southern station entrance. In response to feedback received from the community and key stakeholders including City of Parramatta Council, further design development has been carried out for Westmead metro station. Proposed changes include provision of a new metro station entry from Hawkesbury Road (to the south of Alexandra Avenue), additional transport interchange facilities including additional pedestrian crossings on Alexandra Avenue and Bailey Street, and an additional bicycle parking location to the south of Alexandra Avenue. These additional facilities are associated with the proposed southern entry to the metro station and would support customer access to and from the south. This change is further described and assessed in Section 2.2 (Westmead metro station – station and precinct design refinements) of this Submissions Report.

Section 2.2 (Westmead metro station – station and precinct design refinements) also notes the design of active transport and public domain improvements to Hawkesbury Road overbridge has since been further developed and the proposed bicycle route and public domain upgrades would now be located on the eastern side of Hawkesbury Road. These upgrades to the existing Hawkesbury Road overbridge (on the eastern side) to create expansive pedestrian zones enabling both north-south movement and transfer between buses, Sydney Trains, Sydney Metro and Parramatta Light Rail are proposed as part of this proposal.

Sydney Metro is actively working with key stakeholders, including local councils in relation to the broader precinct planning for the area around Westmead metro station. Ongoing consultation with City of Parramatta Council would occur regarding this matter and during detailed design development of the precinct.

Following development of the design, station design and precinct plans (or equivalent as required by the conditions of approval) would be developed for each metro station to document and illustrate the permanent built works and landscape design. The station design and precinct plan for Westmead metro station would be prepared in consultation with City of Parramatta Council, Cumberland City Council, the local community and other relevant stakeholders. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

### Issues raised – Sydney Olympic Park metro station

City of Parramatta Council raised the following issues related to Sydney Olympic Park metro station:

- the indicative layout plan for the Sydney Olympic Park metro station should show the community centre space that is earmarked to be in the Sydney Metro West building fronting Herb Elliott Avenue consistent with the *Sydney Olympic Park Master Plan 2030* and Interim Metro Review and ensure that it is sufficiently sized to meet community needs
- the community centre must have a defined street address, have high visibility, be fully accessible, operate independently of the metro station and should adjoin proposed open spaces
- site selection and delivery of the community centre space should be consistent with the relevant principles set out in Council's Community Infrastructure Strategy (pg. 63 – 65) for delivery of community infrastructure
- the indicative layout plan for the Sydney Olympic Park metro station should show the central urban park and Council do not support the reduction in the size to 3,500 square metres

- interchange facilities should be sufficiently sized to accommodate increased bus feeder services from surrounding suburbs including Newington and Silverwater
- pre-loading spaces should be sufficiently sized to accommodate the high volume of passengers using the metro during major events
- Council does not support residential use in the vicinity of the metro station
- the indicative layout plan for the Sydney Olympic Park metro station should show active transport connections beyond their current extent between the metro station, train station and future Light Rail stop, specifically along Dawn Fraser Avenue and connections to Sarah Durack Avenue to the south.

### **Response – Sydney Olympic Park metro station**

Sydney Metro have been working collaboratively with Sydney Olympic Park Authority to integrate the Sydney Olympic Park metro station precinct with the *Draft Sydney Olympic Park Master Plan 2030 (Interim Metro Review)*, (Sydney Olympic Park Authority, 2021), including the provision of sufficient public open space and the function of the station and the precinct during major events. The extent of public domain proposed at Sydney Olympic Park metro station is consistent with the *Draft Sydney Olympic Park Master Plan 2030 (Interim Metro Review)*. In accordance with the Design Guidelines (Appendix M), the Central Urban Park would be designed as a centrally located publicly accessible green space, and as a focal point for the town centre which supports a range of informal active and passive recreation activities.

This proposal is not seeking approval for the use of the structures and spaces for non-station use. However, Sydney Metro is not planning for the provision of a community centre in the metro station or adjacent station development buildings. Sydney Olympic Park Authority is reviewing the community space requirements for the broader master plan as part of its current Sydney Olympic Park Master Plan 2050 review. Sydney Metro would continue to consult with Sydney Olympic Park Authority during ongoing design development.

The design of the transport interchange facilities takes into consideration the anticipated bus services to and from the Sydney Olympic Park metro station including during major events.

Active transport connections within the Sydney Metro site (as shown on the indicative layout plan in the Environmental Impact Statement) would be delivered as part of this proposal. Sydney Metro would continue to work with Sydney Olympic Park Authority to coordinate connections delivered by others beyond the Sydney Metro site which are subject to the *Draft Sydney Olympic Park Master Plan 2030 (Interim Metro Review)*.

Following development of the design, station design and precinct plans (or equivalent as required by the conditions of approval) would be developed for each metro station to document and illustrate the permanent built works and landscape design. The station design and precinct plan for Sydney Olympic Park metro station would be prepared in consultation with City of Parramatta Council, Sydney Olympic Park Authority, the local community and other relevant stakeholders. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

### **Issues raised – recreation land offset at Clyde**

City of Parramatta Council raised the following issues related to Clyde:

- the siting and design of the Rosehill services facility should consider the future land uses including community open space infrastructure identified in the *Draft Camellia-Rosehill Place Strategy* to provide recreation land offset for the loss of the Parramatta Speedway. Council notes there is sufficient room on the site for the Rosehill services facility, flood detention basin and the provision of sporting fields
- the indicative layout of the Clyde stabling and maintenance facility should be updated to reflect the community sport and recreational infrastructure on residual Sydney Metro land as identified in the *Draft Camellia-Rosehill Place Strategy*

### **Response – recreation land offset at Clyde**

Sydney Metro is continuing to investigate the appropriate use of residual land at the Clyde stabling and maintenance facility including for potential recreational use and flood storage purposes, to meet Concept condition of approval C-B2 and condition of approval D10 for the previous Sydney Metro West planning application. Sydney Metro would continue to consult with City of Parramatta Council, the NSW Department of Planning and Environment and other relevant stakeholders as part of this investigation.

Sydney Metro is proposing to develop a landscape masterplan to detail how the design would respond to the requirements of Concept condition C-B2 including active transport links, the use of residual land, rehabilitation of the Duck Creek and A'Becketts Creek riparian corridor where it adjoins the Sydney Metro site and how the facility would integrate with the master planning work for the Camellia-Rosehill precinct. An additional mitigation measure (EIS-P2) has been included in relation to the development of the landscape masterplan for the Clyde-Rosehill precinct. The additional mitigation measure is provided in Section 2.14 (Changes to or additional mitigation measures) of this Submissions Report.

### Issues raised – active transport links

City of Parramatta Council raised the following issues related to active transport links:

- the indicative layout of the Clyde stabling and maintenance facility should be updated to reflect the active transport connections as identified in the *Draft Camellia-Rosehill Place Strategy*
- active transport links along Duck Creek should form strategic loops to avoid creating dead ends
- the footprint of these links should be minimised to protect significant riparian corridor vegetation
- recommendations for several conditions of approval related to update of the Clyde stabling and maintenance facility indicative layout consistent with the *Draft Camellia-Rosehill Place Strategy*, the Wilderline, footpaths, shared user and active transport paths, and connections and access through the site.

### Response – active transport links

The proposed design for the Clyde stabling and maintenance facility would not preclude the realisation of active transport links identified in the *Draft Camellia-Rosehill Place Strategy* in this area, such as along Duck Creek, to be investigated separately to this proposal. Sydney Metro is continuing to engage with the NSW Department of Planning and Environment regarding integration with the *Draft Camellia-Rosehill Place Strategy*. Further detail is provided in Section 2.12 (Clyde stabling and maintenance facility and Rosehill services facility – landscape masterplan) of this Submissions Report.

### Issues raised – A'Becketts and Duck Creek riparian corridors

City of Parramatta Council raised the following issues related to A'Becketts Creek and Duck Creek riparian corridors:

- note that construction and operational impacts will potentially impact fish habitat, wildlife movement and reduce water quality in A'Becketts and Duck creeks
- a wider vegetated riparian zone is required for A'Becketts Creek (a minimum of 20 metres) and Duck Creek (a minimum of 30 metres) in accordance with NSW Department of Industry Guidelines for controlled activities on waterfront land - Riparian Corridors (2018) to provide an adequate buffer zone between the proposed stabling and maintenance facility and waterways
- the proposed active transport link should be consolidated along the northern side of Duck Creek to form the boundary between the vegetated riparian zone and adjoining future recreational and infrastructure land uses.

### Response – A'Becketts and Duck Creek riparian corridors

Sydney Metro would carry out localised rehabilitation of Duck Creek and A'Beckett's Creek where they run through or are adjacent to the Sydney Metro site. This would satisfy the requirements of the Concept conditions of approval related to renaturalisation and rehabilitation of these waterways (conditions of approval C-B2(c) and C-B10). The approach has been developed based on the overarching objectives to:

- avoid heavy works or mass disturbance within the riparian area to avoid or minimise any potential impacts to the existing environmental values (particularly existing mangroves and native seedbank)
- avoid dredging or other substantial disturbance of the existing beds of the waterways to maintain their natural state and avoid disturbance of potentially contaminated soils.

Impacts to biodiversity and water quality, including at A'Becketts Creek and Duck Creek, have been assessed in Section 17.14 and Section 18.9 of the Environmental Impact Statement, respectively.

During operation, this proposal may result in changes in the quantity and quality of stormwater runoff leaving the site, resulting in subsequent impacts to nearby aquatic systems such as Duck Creek and A'Becketts Creek. Biodiversity impacts associated with such changes include temporary or permanent inundation of wetland habitat, changes in water chemistry affecting sensitive breeding habitat (e.g. pH changes affecting amphibian breeding and foraging habitat), and changes in turbidity affecting the overall health and productivity of aquatic plants and animals, such as mangroves. This proposal is located within an area that is already highly urbanised and the existing stormwater systems are likely to already be contributing to the impacts described above.

This proposal would seek to manage all operational stormwater effectively and manage the quantity and quality of all water leaving the Clyde stabling and maintenance facility and Rosehill services facility sites, in order to minimise potential biodiversity and water quality impacts. In accordance with mitigation measure EIS-SSWQ2, the operational water treatment plant at Rosehill would be designed so that wastewater is treated during operation to a level that is compliant with the ANZG (2018) default guidelines for 95 per cent species protection and 99 per cent species protection for toxicants that bioaccumulate, unless other discharge criteria are agreed with relevant authorities. A surface water monitoring program would also be implemented to observe any changes in surface water quality associated with operation of this proposal and inform appropriate management responses, in accordance with mitigation measure EIS-SSWQ3. This program would be developed in consultation with the NSW EPA and City of Parramatta Council.

During construction, potential impacts on water quality and aquatic habitat within the adjacent watercourses could arise from stormwater runoff, and accidental leaks and spills of contaminants associated with construction activities. The mobilisation of sediment and contaminants from the construction site during construction would be managed through the implementation of standard mitigation measures outlined in the CEMF (Appendix I). The approach to the riparian rehabilitation of A'Becketts and Duck Creek is provided in Chapter 17 (Clyde stabling and maintenance facility and Rosehill services facility) of the Environmental Impact Statement. This includes the future development of a Rehabilitation Management Plan to guide the riparian rehabilitation and provide further detail on the approach to rehabilitation, in accordance with Concept condition of approval C-B2.

Sydney Metro is proposing to develop a landscape masterplan to detail how the design would respond to the requirements of Concept condition C-B2, including active transport links. An additional mitigation measure (EIS-P2) has been included in relation to the development of the landscape masterplan for the Clyde-Rosehill precinct. The additional mitigation measure is provided in Section 2.14 (Changes to or additional mitigation measures) of this Submissions Report.

#### **Issues raised – inclusion of a metro station at Camellia**

City of Parramatta Council requested the inclusion (or provision for future addition) of a metro station in Camellia to provide access to and support future growth of the precinct, as envisioned in the *Draft Camellia-Rosehill Place Strategy*.

#### **Response – inclusion of a metro station at Camellia**

Sydney Metro undertook a comprehensive analysis of potential station locations (including at Camellia) as part of the strategic planning for Sydney Metro West. This assessment precluded a station at Camellia/Rosehill in 2019 and was documented in the *Sydney Metro West Environmental Impact Statement – Westmead to The Bays and Sydney CBD* (Sydney Metro, 2020a). This assessment considered a range of factors including stakeholder feedback, alignment with key government priorities and project objectives, technical and construction consideration, affordability, economic evaluation and risk assessment.

A station at Camellia was not progressed as there were technical constraints on the constructability due to flood protection requirements, as well as potential impacts on basements associated with the draft *Camellia Town Centre Masterplan* (NSW Department of Planning and Environment, 2018). Significant remediation work would have also been required which would have impacted construction timing.

The NSW Government is delivering Stage 1 of Parramatta Light Rail which will connect Westmead to Carlingford via the Parramatta CBD and Camellia and is due to open in 2023.

The Concept for Sydney Metro West was approved on 11 March 2021 for Stage 1 of the planning approval process. Station location options are beyond the scope of this proposal and the Environmental Impact Statement.

### 7.3.4 Traffic management

#### Issues raised – Westmead operational transport

City of Parramatta Council raised the following issues related to operational transport at Westmead metro station:

- the Environmental Impact Statement is incomplete with respect to analysis and in some cases the modelling undertaken does not adequately assess the existing and future road conditions and traffic impacts (e.g. Hawkesbury Road / Darcy Road is not modelled)
- traffic counts were undertaken in June 2021 during the Covid-19 pandemic which will skew the work and analysis and Council has observed that the intersection of Hawkesbury / Alexandra in 2019 (pre-Covid-19 pandemic) showed northbound delays and queues in the AM peak that were in excess of the 195 metres as modelled for 2021. This should be addressed in the Environmental Impact Statement
- concern the proposal to restrict Alexandra Avenue between Hawkesbury and Hassall to buses and taxis will impact the surrounding road network as general traffic will be required to detour. This should be addressed in the Environmental Impact Statement
- concern the Railway Parade pedestrian crossing will have an adverse impact on traffic movement and the operation of the signals at the Hawkesbury / Railway intersection and that the pedestrian crossing will make it difficult for vehicles to enter/exit Railway Parade as pedestrians will have priority at this location. This doesn't appear to have been considered in the modelling which indicates traffic conditions on Hawkesbury Road / Railway Parade intersection improves which Council considers unlikely. The Environmental Impact Statement should provide the required modelling and options analysis
- suggestion to consider banning the southbound right turn from Hawkesbury Road into Alexandra Avenue to improve traffic flows through this intersection as future upgrades to this intersection are anticipated to include pedestrian protection on all approaches, including this one; and this is a two-lane approach, if both vehicles at the stop line are waiting to turn left or right into Alexandra Avenue, vehicles wishing to continue through the intersection will be blocked
- concern the proposed right turn ban out of Railway Parade into Hawkesbury Road will impact the surrounding road network and it is unclear how many vehicles currently perform this movement and if this impact has been considered in the modelling. This should be addressed in the Environmental Impact Statement
- recommendation for a supplementary traffic analysis which includes updated traffic counts in normalised (outside core Covid-19 pandemic lockdown period) conditions for the matters outlined above is produced and provided to key stakeholders for review.

#### Response – Westmead operational transport

The study area for the operational transport assessment includes intersections and road links likely to be affected by the proposal, proposed station precincts and associated transport infrastructure, as well as transport interchange infrastructure within the study area. This proposal does not include changes to the Darcy Road / Hawkesbury Road intersection. The operational intersection analysis carried out for this proposal provides a quantitative analysis where permanent intersection upgrades, or changes to the transport network are proposed as part of this proposal. The approach to operational intersection analysis is consistent with other major transport projects, including Sydney Metro projects. Further detail on operational intersection analysis for Westmead metro station is included in Section 4.3 of Technical Paper 1 (Operational transport) of the Environmental Impact Statement.

The baseline environment traffic counts undertaken in 2021 were adjusted to account for the effects of the Covid-19 pandemic. The March and June 2021 observed traffic volumes were increased by an amount equivalent to the average monthly reductions for March and June between 2019 (pre-Covid) and 2021. These reduction percentages were identified from NSW permanent traffic counter sites. This is outlined in Section 2.2 of Technical Paper 1 (Operational transport) of the Environmental Impact Statement.

Sydney Metro is continuing to investigate the option of restricting Alexandra Avenue between Hawkesbury and Hassall streets to buses and taxis and would continue to consult with City of Parramatta Council on this matter. Should change in use and restrictions on Alexandra Avenue be progressed, investigations would include consideration of the impact of diverted traffic.

The pedestrian crossing on Railway Parade is an existing feature, which has been considered in the operational intersection analysis in Section 4.3 of Technical Paper 1 (Operational transport) of the Environmental Impact Statement. The assessment indicates that in the 2036 AM peak, the intersection would perform at level of service D in the 'with Sydney Metro West' scenario compared to level of service B in the 'without Sydney Metro West' scenario. In the 2036 PM peak, the intersection would perform at level of service C in the 'with Sydney Metro West' scenario compared to level of service E in the 'without Sydney Metro West' scenario. Sydney Metro is continuing to work with stakeholders to manage congestion issues in the area.

Sydney Metro notes City of Parramatta Council's comments regarding the proposed traffic network changes, including suggested restrictions on turning movements at some intersections. The intersection analysis in Technical Paper 1 (Operational transport) of the Environmental impact statement includes the proposed network changes as part of Sydney Metro West, including the removal of the right turn movement out of Railway Parade at the intersection with Hawkesbury Road. The function of the road network would continue to be considered during detailed design and as part of the broader strategic planning for the Westmead precinct in consultation with Transport for NSW and relevant Councils.

### **Issues raised – Westmead pedestrian and cycling connections**

City of Parramatta Council raised the following issues related to pedestrian and cycling connections at Westmead metro station:

- provision of a grade separated pedestrian access west of Hawkesbury Road should be considered, particularly to the north or an entrance on the south if this is not feasible
- the bike path along Bailey Street should be continued east beyond Hassall Street to meaningfully connect to the regional network
- comment that due to the unique nature of the street network and location trip attractors at Westmead, there is a significant number of pedestrians moving to the north and west, as opposed to Parramatta that has a relatively even distribution to all directions that can be accommodated on the path network
- comment there is an opportunity to improve the safety of pedestrians crossing Railway Parade and traffic conditions on Hawkesbury Road by providing a northbound right turn bay on Hawkesbury Road at the Railway Parade intersection. The nominated upgrade is vague and should be clearly described
- recommendation for an integrated kiss and ride strategy for the Westmead metro station area including kiss and ride facilities on the northern side of Railway Parade near the station entrance to accommodate vehicles that are accessing Railway Parade via Hawkesbury Road.

### **Response – Westmead pedestrian and cycling connections**

Figure 2-2 of this Submissions Report provides the revised precinct plan at Westmead metro station, which includes existing and proposed signalised crossings. The existing and proposed at-grade pedestrian links are adequate and would allow for the safe and efficient movement of pedestrians. Operational pedestrian modelling provided in Technical Paper 1 (Operational transport) of the Environmental Impact Statement shows that all pedestrian areas around the station would operate at level of service A.

Table 7-1 of the Environmental Impact Statement identified that Sydney Metro was continuing to investigate the opportunity for an additional southern station entrance. In response to feedback received from the community and key stakeholders including City of Parramatta Council, further design development has been carried out for Westmead metro station. These changes include an additional southern station entry and an extension of the Bailey Street cycle link across Hassall Street. These changes are further described and assessed in Section 2.2 (Westmead metro station – station and precinct design refinements) of this Submissions Report.

A kiss and ride zone is proposed to the north of the station along Railway Parade (refer to Figure 2-2 of this Submissions Report). Sydney Metro is providing a coordinated approach for the stations, precincts and transport interchange facilities and is continuing to investigate opportunities for additional kiss and ride zones at Westmead metro station.

### Issues raised – Westmead and Parramatta construction traffic impacts

City of Parramatta Council raised the following issues related to construction traffic impacts at Westmead and Parramatta:

- concern that construction traffic modelling is incomplete for the following intersections and should be undertaken to more accurately assess construction traffic impacts in Westmead and Parramatta:
  - Hawkesbury Road / Railway Parade and Hawkesbury Road / Darcy Road (north of the railway line) that will impact the performance of the intersections south of the railway line (particularly Hawkesbury Road / Alexandra Avenue intersection)
  - Great Western Highway / Pitt Street and Pitt Street / Argyle Street / Park Parade that will be impacted by construction traffic for access to the Westmead and Parramatta construction sites
- construction volumes from both Westmead and Parramatta construction sites should be included in the modelling for the intersections of Great Western Highway / Pitt Street and Pitt Street / Argyle Street / Park Parade.

### Response – Westmead and Parramatta construction traffic impacts

The construction intersection analysis carried out for this proposal considers intersections along the primary haul route (between the construction site and the arterial road network) which is consistent with other major projects, including previous Sydney Metro projects, and considered adequate.

Construction volumes from both Westmead and Parramatta construction sites have been considered in the intersection analysis traffic modelling where the primary routes for both sites pass through common intersections. The proposed primary construction haul routes at Westmead metro station are shown in Figure 7-10 of the Environmental Impact Statement are from the east (inbound) and to the south (outbound), and therefore they would not travel through the Hawkesbury Road / Railway Parade and Hawkesbury Road / Darcy Road intersections.

### Issues raised – accessible parking at Westmead during operation

City of Parramatta Council requested consideration of retaining the two accessible parking spaces proposed to be removed from Westmead Station and suggested they be relocated near the station entrance with appropriate footpaths to provide accessible access to Westmead Station.

### Response – accessible parking at Westmead during operation

Sydney Metro is proposing to include accessible parking at Westmead metro station as shown in Figure 2-2 of this Submissions Report. At this stage, it is envisaged that this would be located close to the station entry on Railway Parade. An accessible path would also be provided between this parking and the station entry.

### Issues raised – Parramatta operational transport

City of Parramatta Council raised the following issues related to operational traffic at Parramatta:

- Council notes the modelled results for 2036 traffic movements seem unrealistic and requested modelling inputs and outputs are provided to Council for further review and assessment
- concern that there is no strategy to accommodate the one per cent of forecasted kiss and ride trips for Parramatta metro station and it is unclear how the accessible kiss and ride facilities will operate and how these facilities will be limited to accessible users only. This information should be provided
- it is unclear whether the modelling has considered all of the changes proposed and noted in Figure 78 of the operational transport assessment (e.g. additional signalised midblock crossings on Smith Street and George Street, proposed bicycle route on George Street, etc). This modelling and analysis should be carried out.

### Response – Parramatta operational transport

The 2036 intersection modelling has been carried out using calibrated and validated models which include planned strategic network changes expected to be in place by 2036. This is explained in Section 2.6 of Technical Paper 1 (Operational transport) of Environmental Impact Statement.

The one per cent of forecasted kiss and ride split for Parramatta metro station is a relatively low proportion of total trips made and would be accommodated by existing transport interchange facilities within the Parramatta CBD, (refer to Section 8.5.2 of the Environmental Impact Statement for the 2036 forecast modal breakdown of access and egress for Parramatta metro station). Appropriate regulatory signage would be provided in relation to accessible spaces.

The intersection modelling in Technical Paper 1 (Operational transport) of the Environmental Impact Statement includes the proposed network changes as part of Sydney Metro West.

### **Issues raised – Parramatta construction traffic impacts**

City of Parramatta Council raised the following issues related to construction traffic impacts at Parramatta:

- concern that construction vehicles are proposed to turn right out of Macquarie Lane onto Smith Street as part of a secondary haul route, however there is currently a concrete median and signage at this location which restricts this movement, and this proposed change is not included in the construction transport assessment
- concern there is no mitigation to manage proposed delays and queues at the Pitt Street / Park Parade / Argyle Street intersection due to construction and request to consider upgrading this intersection to mitigate construction traffic impacts
- concern that construction modelling does not reflect intersection arrangements established by Parramatta Light Rail and request that modelling be updated to include these arrangements to assess construction traffic impacts more accurately in the Parramatta CBD
- construction modelling should be updated to consider the traffic impacts of the additional construction traffic utilising secondary inbound/outbound routes (e.g. Parkes Street / Station Street East, Smith Street / Macquarie Street, O'Connell Street / Victoria Road) and provided to Council for review
- suggestion to provide cyclist lanterns at the George Street crossing as Horwood Place is a cycling route
- the width of the temporary pedestrian route needs to be adequate to accommodate cyclists.

### **Response – Parramatta construction traffic impacts**

In the event that the proposed right out of Macquarie Lane onto Smith Street turn is pursued during construction as part of a secondary haul route, Sydney Metro would work with City of Parramatta Council to implement appropriate road network changes.

Mitigation measures to manage the performance of the Pitt Street / Park Parade / Argyle Street intersection would be implemented in accordance with the CTFM (Appendix J). As outlined in Section 3.8.2 (g) of Technical Paper 2 (Construction transport) of the Environmental Impact Statement, this could include managing construction vehicles to minimise movements during peak periods, and traffic signal optimisation at an intersection level.

Intersection modelling includes all strategic network changes from the Transport for NSW strategic model, including those proposed to be implemented by Parramatta Light Rail.

The construction intersection analysis carried out for this proposal considers intersections along the primary haul route (between the construction site and the arterial road network) which is consistent with other major projects, including previous Sydney Metro projects, and considered adequate.

Temporary cycle and pedestrian facilities would be provided as necessary in accordance with the requirements of the CTFM (Appendix J).

### **Issues raised – Sydney Olympic Park construction traffic impacts**

City of Parramatta Council raised the following issues related to construction traffic impacts at Sydney Olympic Park:

- request that construction modelling be updated to consider the additional traffic generated by future developments within the Carter Street precinct
- concern there is no mitigation to manage proposed increased northbound queues at the Edwin Flack Avenue / Shane Gould Avenue / Birnie Avenue intersection which will result in traffic queuing back to Parramatta Road and have flow on effects onto Hill Road. This should be further analysed and options presented.

### **Response – Sydney Olympic Park construction traffic impacts**

The cumulative construction traffic analysis considers known projects that are likely to overlap with the construction of this proposal and does not include proposals at a master planning stage. This is consistent with the requirements of the *Cumulative Impact Assessment Guidelines for State Significant Projects* (NSW Department of Planning and Environment, 2021). Notwithstanding, the analysis does include outputs from the Transport for NSW strategic model in terms of both network changes and growth in traffic demand. Further detail on the cumulative construction traffic analysis is included in Section 3.17 of Technical Paper 2 (Construction transport) of the Environmental Impact Statement.

Mitigation measures to manage the performance of the Flack Avenue / Shane Gould Avenue / Birnie Avenue intersection would be implemented as per the CTMF (Appendix J).

### 7.3.5 Contamination

#### Issues raised

City of Parramatta Council raised the following issues related to the contamination preliminary site investigation:

- lack of a detailed site investigation (DSI) for the construction sites makes it difficult for Council to review the Environmental Impact Statement and it is unclear if a DSI will be conducted for all or any construction sites, particularly high-risk sites
- references to the previous Sydney Metro West planning approval for demolition, tunnel and station box excavation and earth works for construction sites are not helpful when the Environmental Impact Statement doesn't include these processes and studies
- concern investigation detail regarding fit-out of the stations and the Clyde stabling and maintenance facility is missing
- concern regarding the lack of information for areas of additional footprint for this proposal that were not assessed as part of the previous Sydney Metro West planning applications
- justification that site inspections could not be completed to verify the condition of the construction sites to inform the Environmental Impact Statement report due to access constraints and to then note that consideration (only) should be given to conducting a proposal-wide site inspection as part of the next phase of work to confirm site conditions have not significantly changed in the intervening timeframe is inadequate
- it is inadequate to note that additional investigations recommended as part of the previous Sydney Metro West planning applications have not yet been conducted
- noted that significantly high precipitation levels over the last several months may have changed the distribution and movement of groundwater in the soil of the tunnel alignment and assessment area
- comment that a recent pollution event associated with the Sydney Metro work at Clyde resulting in unknown contaminated liquid thought to be associated with rainfall and rising groundwater table entering Duck Creek which demonstrates the risk of desktop reviews and assumptions about existing contamination
- suggestion that given the nature of the contaminated environments in which this proposal will be carried out, particularly the Clyde stabling and maintenance facility, solid actions should be provided including a DSI and these results, analysis and recommendations be incorporated into a supplementary report for review by Council.

#### Response

The contamination assessment undertaken in the Environmental Impact Statement met the requirements of the Secretary's environmental assessment requirements and is considered adequate to identify potential contamination risk at the current stage of proposal development.

The contamination assessment undertaken in the Environmental Impact Statement includes the additional footprint areas associated with this proposal. Contamination risk and potential impacts associated with the additional footprint areas at Westmead metro station and Sydney Olympic Park metro station are assessed in Section 4 and Section 6 of Technical Paper 7 (Contamination) of the Environmental Impact Statement, respectively. The construction sites for this proposal at Parramatta metro station, Clyde stabling and maintenance facility and Rosehill services facility do not include areas of additional footprint compared to the previous Sydney Metro West planning application.

The contamination assessment undertaken in the Environmental Impact Statement includes the Clyde stabling and maintenance facility, and the additional construction footprint areas associated with this proposal. Prior to work for this proposal commencing, bulk excavation work within the station box footprint at the construction sites will have been completed under the previous Sydney Metro West planning application. Major civil construction including levelling of the site, tunnelling work, and the excavation of a services shaft and tunnel dive structure will have also been completed at the Clyde stabling and maintenance facility and Rosehill services facility under the previous Sydney Metro West planning application. Most solid waste remediation in the permanent work area at the construction sites will have been carried out and validated prior to any work under a planning approval for this proposal commencing.

The approach to managing contamination is outlined in Appendix B of the CEMF (Appendix I). This is necessarily a continuation of the management that will commence under the previous Sydney Metro West planning applications and will be in accordance with the relevant conditions of approval for those projects and this proposal. Mitigation measures in the CEMF (Appendix I) include:

- CEMF-C1, which requires low risk contamination sites to be managed in accordance with the Soil and Water Management Plan
- CEMF-C2, which requires detailed site investigations for sites where contamination risk is not sufficiently understood
- CEMF-C3, which requires development of a Remedial Action Plan for sites of medium or high contamination risk
- CEMF-C4, which requires review of the Remedial Action Plan by a NSW EPA-accredited Site Auditor. This aligns with the risk-based approach adopted in the assessment
- CEMF-C5, which requires establishment of an unexpected finds protocol to facilitate the quarantining, isolation and remediation of unexpected contamination. Any unexpected asbestos identified on site would be managed in accordance with applicable regulatory requirements.

This staged and risk based assessment approach (with preliminary site investigations completed for the Environmental Impact Statement) is appropriate for this phase where design information is indicative. This approach has been consistently adopted on major transport infrastructure projects in NSW.

### 7.3.6 Flooding

#### Issue raised – Clyde flood modelling

City of Parramatta Council notes the Environmental Impact Statement refers consistently to the previous Sydney Metro West planning approval for the flooding assessment. Council requests that a supplementary report discussing recent flood studies including the GRC Hydro concept hydraulic model work for the Clyde stabling and maintenance facility should be included in this Environmental Impact Statement and issued to Council for review.

#### Response – Clyde flood modelling

The approved major civil construction work between Westmead and The Bays includes work to raise the Clyde stabling and maintenance facility above the PMF level and assesses the potential flood impacts at this site. The mitigation measures and conditions of approval (conditions D10 and D12) for the previous Sydney Metro West planning application establish an appropriate process to manage potential flood impact at the Clyde stabling and maintenance facility and Rosehill services facility. The additional flood studies referred to by City of Parramatta Council are being appropriately progressed in accordance with the requirements of that approval. Sydney Metro are engaging with City of Parramatta Council and other relevant stakeholders as part of that process.

## 7.4 Strathfield Council

### 7.4.1 Operational transport

#### Issues raised

Strathfield Council requested further detail on how stations such as North Strathfield metro station and Burwood North Station would provide connectivity to areas beyond the inner zone of influence. For example, further analysis on how connectivity is achieved between North Strathfield with DFO Homebush, Sydney Markets and Parramatta Road Corridor, particularly noting initiatives to improve pedestrian and bicycle connectivity through the Parramatta Road network as a result of the *Parramatta Road Corridor Urban Transformation Strategy* (NSW Government, 2016).

#### Response

This proposal includes local connections at and around each station precinct including transport interchange facilities. Broader connections are beyond the scope of Sydney Metro West, however Sydney Metro would work with local councils to coordinate active transport connections beyond the station precincts which are to be provided by others. Information on how Sydney Metro West supports planned land use changes in the corridor is provided in the *Sydney Metro West Environmental Impact Statement – Westmead to The Bays and Sydney CBD* (Sydney Metro, 2020a).

## 7.4.2 Construction transport

### Issues raised

Strathfield Council raised concern over potential road network and pedestrian impacts for residents and businesses from construction vehicle movements.

### Response

The CTMF (Appendix J) outlines the requirements for preparation of traffic management plan to show how construction traffic would be managed where construction works could impact the surrounding road network. These plans would describe the work activities being proposed, their impact on the roadway and on road users, and how these impacts are being addressed.

As part of the traffic management strategy outlined in the CTMF (Appendix J), priority would be given to providing adequate guidance to pedestrians, cyclists, drivers and the community prior to the commencement of any works. This may include provision of directional signage and line marking for safe alternative routes, forward notification of proposed changes on affected receivers and ensuring that safe access to existing properties and businesses is maintained during the period of the works, or a suitable alternative is provided.

Construction traffic impacts at North Strathfield metro station and Burwood North Station were assessed in Section 10.5.3 and 11.5.3 of the Environmental Impact Statement.

## 7.4.3 Opportunities for businesses and residents in Strathfield Council

### Issues raised

Strathfield Council requested that opportunities for businesses and residents in Strathfield Council (i.e. beyond station precinct locations) should be considered in the proposal.

### Response

Information on how Sydney Metro West supports planned land use changes in the corridor including potential benefits to businesses is provided in Section 2.4.3 of the *Sydney Metro West Environmental Impact Statement – Westmead to The Bays and Sydney CBD* (Sydney Metro, 2020a).

Positive social impacts and opportunities for local businesses have been identified in the social impact and local business impact sections in Part B (Environmental assessment) of the Environmental Impact Statement for this proposal.

## 7.5 City of Canada Bay Council

### 7.5.1 Support for Sydney Metro West

#### Issues raised

City of Canada Bay Council expressed its support for the Sydney Metro West project, noting that it would provide increased connectivity through a public transport option for residents, businesses and visitors.

#### Response

City of Canada Bay Council's support for the Sydney Metro West project is noted.

### 7.5.2 Inadequate information

#### Issues raised

City of Canada Bay Council raised the following issues relating to inadequate information in the Environmental Impact Statement:

- the figures provided in the Environmental Impact Statement are inadequate and do not provide sufficient detail to understand or assess impacts (e.g. compliance with relevant planning standards and overshadowing)
- the following basic information should be provided prior to project determination (cannot be referred to detailed design phase):
  - building height in metres or RLs
  - scales on all figures
  - dimensions illustrating the proposed setback of new buildings from boundaries

- dimensions illustrating the proposed upper-level setbacks of buildings
- dimensions illustrating the width of new service laneways, pedestrian links and new public space.

## Response

The description of this proposal in the Environmental Impact Statement is indicative and based on the current level of design. The level of detail is sufficient for the assessment of potential environmental impacts, including landscape and visual impacts such as overshadowing. The level of design detail provided and assessed in the Environmental Impact Statement is consistent with the level of design detail in other major transport project planning approvals, including previous Sydney Metro projects.

Overshadowing analysis has been carried out for precincts where there is potential for this proposal to overshadow existing adjacent residential properties and public domain areas identified for solar access protection in local planning guidance (as outlined in Section 2.2 of Technical Paper 6 (Landscape and visual amenity) of the Environmental Impact Statement)). This has included overshadowing analysis for Burwood North Station and Five Dock Station, with consideration of the City of Canada Bay DCP. The overshadowing assessments for Burwood North Station and Five Dock Station are included in Section 8.4.3 and Section 9.4.4 of Technical Paper 6 (Landscape and visual amenity) of the Environmental Impact Statement, respectively. Design Guidelines (Appendix M) and relevant mitigation measures (refer to Appendix C (Revised mitigation measures)) would be applied so potential landscape and visual impacts are appropriately mitigated.

The figures provided in the Environmental Impact Statement are indicative and provide an appropriate level of detail for a major project of this scale. The figures showing the over station development (subject to separate approval) are intended to show the likely scale of this development only and not building forms.

Sydney Metro has and would continue to consider the intent of relevant local planning controls during the ongoing design development of this proposal. Section 5 of the Design Guidelines (Appendix M) reference the local council planning documents which have been considered in the development of place and design principles and urban design strategies for each station precinct. These include the *City of Canada Bay Development Control Plan* (City of Canada Bay, 2020), *Canada Bay Local Environmental Plan 2013* and other local planning guidance.

The indicative approach to building setbacks at North Strathfield metro station, Burwood North Station and Five Dock Station is provided in Figure 6-6, Figure 7-6 and Figure 12-6 of Appendix B (Revised proposal description), respectively. These are also included in Section 5 of the Design Guidelines (Appendix M).

Station and precinct descriptions in the Environmental Impact Statement include descriptions of the indicative heights of aboveground structures. As discussed in Section 2.13.1 (Station and precinct descriptions – height of aboveground structures) of this Submissions Report, the heights are described in terms of the number of typical residential and/or commercial storeys that the structure would be equivalent to (indicatively about 3-4 metres per storey). The purpose of this description was to give an indication of the scale of the structures, rather than describe the physical number of storeys which would be included in the structure. For example, a storey in a station services building may be higher than that of a typical residential building. Appendix B (Revised proposal description) has been revised to describe the indicative heights of aboveground structures in metres.

As noted in Chapter 5 (Proposal description – operation) of the Environmental Impact Statement, some design elements would continue to be refined as part of the design development process and including ongoing consultation with stakeholders. Sydney Metro would continue to consult with City of Canada Bay Council during ongoing design development including consultation related to detailed design and dimensions for station and precinct elements. City of Canada Bay Council would also be invited to participate in Design Review Panel meetings as required to advise on local issues and design outcomes as they relate to the local context.

Following development of the design, station design and precinct plans (or equivalent as required by the conditions of approval) would be developed for each metro station to document and illustrate the permanent built works and landscape design. The station design and precinct plans for North Strathfield metro station, Burwood North Station and Five Dock Station would be prepared in consultation with City of Canada Bay Council, the local community and other relevant stakeholders. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

### 7.5.3 Strategic plans

#### Issues raised

City of Canada Bay Council raised the following issues relating to strategic plans:

- City of Canada Bay Council's Community Strategic Plan *Your Future 2030* (2018) should be used as a reference to guide the land use vision and aspirations for Sydney Metro West including for detailed design of the station, ancillary buildings and station precincts
- the Environmental Impact Statement should be updated prior to determination to provide basic information where consent is sought for envelopes relating to metro station/services facilities and precinct related infrastructure.

#### Response

As the most recent planning document, Sydney Metro has referred to the *City of Canada Bay Local Strategic Planning Statement* (LSPS) (City of Canada Bay Council, 2020) as part of guiding the land use vision for the Sydney Metro West stations within City of Canada Bay Council local government area (LGA). The City of Canada Bay LSPS was informed by *Your Future 2030* (City of Canada Bay Council, 2018). *Your Future 2030* was also considered as part of the social impact assessment carried out as part of the Environmental Impact Statement to gain an insight into the aspirations of the local Canada Bay community.

Sydney Metro would continue to consult with City of Canada Bay Council during ongoing design development including consultation related to detailed design and dimensions for station and precinct elements. City of Canada Bay Council would also be invited to participate in Design Review Panel meetings as required to advise on local issues and design outcomes as they relate to the local context.

The station design and precinct plans (or equivalent as required by the conditions of approval) for North Strathfield metro station, Burwood North Station and Five Dock Station would also be prepared in consultation with City of Canada Bay Council. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

### 7.5.4 Naming of Burwood North Station

#### Issue raised

City of Canada Bay Council suggest the name of Burwood North Station should be 'Concord Oval' and requested that Council and the community are consulted on the final name of Burwood North Station prior to any application being made to the Geographical Names Board.

#### Response

Operational station names would be defined closer to the commencement of operations and would be subject to consultation with the Geographical Names Board of NSW, having regard to community and stakeholder feedback.

### 7.5.5 Stakeholder engagement

#### Issues raised

City of Canada Bay Council raised the following issues relating to stakeholder engagement:

- the Stakeholder Engagement Plan should be extended to include the following stakeholders:
  - Five Dock Chamber of Commerce
  - Concord Chamber of Commerce
  - Our Lady of the Assumption Catholic Primary School
  - Concord High School
  - St Marys Catholic Primary
  - Rosebank College
  - Domremy College
  - BayBUG (Canada Bay Bicycle User Group)
  - Canada Bay Access and Inclusion Committee
  - Co.As.It. Italian Association of Assistance

- the NSW Government should continue to implement and promote the availability of a Complaints Management System to address concerns experienced by community affected by the works associated with Sydney Metro West project.

### Response

Sydney Metro would continue consult with all relevant stakeholders in the vicinity of Sydney Metro West stations and infrastructure. Site-specific Community Communications Strategies would also be prepared in accordance with the OCCS (Appendix N) which would identify relevant stakeholders for each site. The Community Communications Strategies would be informed by engagement with directly affected communities and stakeholders and would be monitored and reviewed periodically to consider the appropriateness of mitigation measures and lessons learnt. A complaint management system would be in place through the duration of construction of the Sydney Metro West project, as outlined in Section 3.3.4 (Consultation and complaints during construction) of this Submissions Report.

### 7.5.6 Transport assessment methodology

#### Issues raised

City of Canada Bay Council raised the following issues relating to the operational and transport assessment methodology in the Environmental Impact Statement:

- more detailed assessment of parking is required, particularly due to the increase in parking demand as a result of park-and-ride customers using the stations
- the impacts of construction worker parking has not been assessed and workers should not park in and around town centres adjacent to the construction sites to avoid exacerbating existing parking issues
- the scope of more detailed parking studies should be determined in consultation with City of Canada Bay Council.

#### Response

An assessment of the potential parking impacts during operation at the station precinct is provided in Technical Paper 1 (Operational transport) of the Environmental Impact Statement. The selection and location of interchange facilities has been planned to achieve the Sydney Metro modal access hierarchy, which prioritises walking and cycling as the most efficient and sustainable access modes, and is subject to ongoing design. Park and ride is the lowest priority of all transport modes for the Sydney Metro West project.

Commuter parking would not be provided at Sydney Metro West stations. All Sydney Metro West stations are designed to promote active and public transport access above the use of private vehicles. Stations have been planned to integrate with other forms of public transport like light rail, suburban rail, and buses. Station precincts would be designed in consultation with councils to provide for easy connections to walking and cycling links. To accommodate customers driving to stations, spaces would be provided for pick up and drop off by taxi or kiss and ride.

Sydney Metro would work with City of Canada Bay Council to help address potential parking impacts that may arise from customers using neighbouring residential streets to park and ride at Five Dock (in accordance with mitigation measure EIS-TT3 (refer to Appendix C (Revised mitigation measures)). EIS-TT3 has also been amended to include example measures that could be considered (refer to Section 2.14 (Changes to or additional mitigation measures) of this Submissions Report. A qualitative analysis of potential parking impacts during construction is provided in Technical Paper 2 (Construction transport) of the Environmental Impact Statement.

The CTMF (Appendix J) outlines the requirement for preparation of parking management plans, where required. These plans would identify requirements for on-site and off-site parking during construction and associated impacts; remote parking arrangements and associated access between sites and public transport nodes; alternate parking arrangements for displaced parking; and communication and parking management measures.

The CTMF also sets out mitigation measures for how worker access and parking would be managed including investigating opportunities to provide parking at construction sites, identification of remote parking areas for workers and encouraging workers to use public transport when travelling to and from the work sites.

Sydney Metro would continue to consult with City of Canada Bay Council throughout construction, including matters related to construction parking impacts.

### 7.5.7 Station and precinct design

#### Issues raised

City of Canada Bay Council requested more detailed design for station precincts should be provided to ensure the precincts interface seamlessly with Council's public domain and comply with relevant planning controls at each precinct.

#### Response

The description of this proposal is indicative in the Environmental Impact Statement and based on the current level of design. The level of detail is sufficient for the assessment of potential environmental impacts. The level of design detail provided and assessed in the Environmental Impact Statement is consistent with the level of design detail in other major transport project planning approvals, including previous Sydney Metro projects. Design Guidelines (Appendix M) and relevant mitigation measures (refer to Appendix C (Revised mitigation measures)) would be applied so that potential impacts are appropriately mitigated.

Sydney Metro would continue to consult with City of Canada Bay Council during design development including in relation to the integration of the station with the broader precincts. Sydney Metro has and would continue to consider the intent of relevant local planning controls during the ongoing design development of this proposal. The Design Guidelines (Appendix M) reference the local council planning documents which have been considered in the development of place and design principles and urban design strategies for each station precinct.

As noted in Chapter 5 (Proposal description – operation) of the Environmental Impact Statement, some design elements would continue to be refined as part of the design development process. The design process would follow robust internal review processes and independent review through the use of a Design Review Panel (as described in Table 5-5 of the Environmental Impact Statement). City of Canada Bay Council would be invited to participate in Design Review Panel meetings as required to advise on local issues and design outcomes as they relate to the local context.

Following development of the design, station design and precinct plans (or equivalent as required by the conditions of approval) would be developed for each metro station to document and illustrate the permanent built works and landscape design. The station design and precinct plans for North Strathfield metro station, Burwood North Station and Five Dock Station would be prepared in consultation with City of Canada Bay Council, the local community and other relevant stakeholders. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

### 7.5.8 Proposal description – operation

#### Issues raised

City of Canada Bay Council raised the following issues relating to the description of this proposal during operation:

- a condition of approval for this proposal should include consultation with City of Canada Bay regarding heritage interpretation devices for each relevant station precinct
- City of Canada Bay Council should be consulted in the investigation of appropriate uses and maintenance of residual land following construction of this proposal, to ensure land uses are complementary to the surrounding area
- the Environmental Impact Statement does not mention how the relevant local planning controls within City of Canada Bay would be addressed in further design development
- all designs within the City of Canada Bay Council area should be subject to Council approval prior to consideration of the Sydney Metro Design Advisory Panel.

#### Response

Sydney Metro has and would continue to consult with the relevant local councils including City of Canada Bay Council regarding the Heritage Interpretation Strategy (Appendix L). This would include consideration of relevant council heritage interpretation guidelines in accordance with Concept condition of approval C-B6(e).

Sydney Metro only acquires the land necessary to construct and operate the Sydney Metro West project. There is not anticipated to be any residual land at the station precincts within the City of Canada Bay Council LGA. Adjacent station development would be subject to separate assessment and approval.

Sydney Metro has and would continue to consider the intent of relevant local planning controls during the ongoing design development of this proposal. The Design Guidelines (Appendix M) reference the local council planning documents which have been considered in the development of place and design principles and urban design strategies for each station precinct. Sydney Metro would continue to consult with City of Canada Bay Council regarding station design. Relevant councils and key stakeholders would be invited to participate in Design Review Panel meetings as required to advise on local issues and design outcomes as they relate to the local context.

The station design and precinct plans (or equivalent as required by the conditions of approval) for North Strathfield metro station, Burwood North Station and Five Dock Station would also be prepared in consultation with City of Canada Bay Council. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

### 7.5.9 Proposal description – construction

#### Issues raised

City of Canada Bay Council raised the following issues relating to the construction description of this proposal:

- waste management plans should be updated to include details on volumes, temporary storage, transport and destination to ensure health and wellbeing impacts on the local community are minimised
- ongoing monitoring of waste management and mitigation needs to be undertaken and clearly articulated through regular public reporting and updates.

#### Response

Waste management plans would be developed in accordance with the requirements of the CEMF (Appendix I). These plans would provide further details regarding waste volumes, storage and management, requirements for compliance record generation and management. All waste removed from the site would be appropriately tracked for the full journey lifecycle using waste tracking docketts.

Chapter 18 (Proposal-wide) of the Environmental Impact Statement provides further detail on waste management and resource use during construction.

### 7.5.10 North Strathfield metro station

#### Issues raised – Design Guidelines

City of Canada Bay Council raised the following issues relating to the Design Guidelines for North Strathfield metro station:

- the Design Guidelines for North Strathfield metro station should include:
  - the public domain fronting Pomeroy Street should be activated to provide improved safety and amenity outcomes
  - more activation and surveillance to improve the safety and the amenity of the Hamilton Street entrance and improve wayfinding for customers entering the western side of the station
- the figures in the Environmental Impact Statement do not effectively communicate the scale of the proposed station building and these should be updated to confirm the maximum building height for all aboveground structures at North Strathfield prior to proposal approval.

#### Response – Design guidelines

Sydney Metro has considered City of Canada Bay Council's recommendations regarding activation and surveillance in updating the Design Guidelines (Appendix M), although some of the areas identified by Council for activation are outside of the Sydney Metro site.

As noted in Chapter 5 (Proposal description – operation) of the Environmental Impact Statement, the description of this proposal is indicative in the Environmental Impact Statement and based on the current level of design. Some design elements would continue to be refined as part of the design development process and including ongoing consultation with stakeholders.

The level of detail provided in the figures in the Environmental Impact Statement is sufficient for the assessment of environmental impacts and is consistent with the level of design detail provided in other major transport project planning approvals, including previous Sydney Metro projects. Appendix B (Revised proposal description) has been revised to describe the indicative heights of aboveground structures in metres.

Sydney Metro would continue to consult with City of Canada Bay Council during design development, including in relation to the detailed design of stations and associated structures. City of Canada Bay Council would also be invited to participate in Design Review Panel meetings as required to advise on local issues and design outcomes as they relate to the local context.

The station design and precinct plans (or equivalent as required by the conditions of approval) for North Strathfield metro station, Burwood North Station and Five Dock Station would also be prepared in consultation with City of Canada Bay Council. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

### **Issues raised – landscape and visual**

City of Canada Bay Council raised the following issues relating to landscape and visual impacts at North Strathfield metro station:

- plans should be prepared in consultation with Council to demonstrate:
  - the location and inventory of all trees proposed to be removed from the site
  - how the project will increase the number of mature trees to a ratio of 2:1 and result in a net increase in tree canopy coverage over a 9 or 10 year period.

### **Response – landscape and visual**

The number and locations of trees that would be required to be removed for this proposal would be confirmed during detailed design, and detailed in station design and precinct plans to be prepared for each station. In the areas of additional footprint for this proposal, opportunities for the retention and protection of existing trees would be identified during detailed construction planning. Sydney Metro would provide replacement trees across the whole project at a 2:1 ratio resulting in a net increase in tree canopy cover across the project in accordance with Concept condition of approval C-B8.

### **Issues raised – non-Aboriginal heritage**

City of Canada Bay Council raised the following issues relating to non-Aboriginal heritage at North Strathfield metro station:

- it is Council's preference to retain the heritage gardens associated with North Strathfield metro station and/or reinstate the gardens as part of future public domain for the metro station
- significant heritage elements should be protected from damage during construction
- the design of the station should be sympathetic to the heritage values of the existing North Strathfield Railway Station.

### **Response – non-Aboriginal heritage**

Sydney Metro is proposing to remove the heritage gardens at North Strathfield Station to provide sufficient space for the metro station. This impact has been assessed as a minor direct impact in the non-Aboriginal heritage assessment carried out to inform the Environmental Impact Statement (refer to Section 8.4 of Technical Paper 5 (Non-Aboriginal heritage) of the Environmental Impact Statement). Although the fan garden is of heritage significance, and this proposal would complete its removal, given other high heritage value elements are being retained (such as the existing brick platform coping and station platform building), the overall the direct impact to the North Strathfield Railway Group as a result of this proposal is considered minor.

The design has been developed to be sympathetic to the heritage significance of North Strathfield Station and has aimed to retain significant heritage elements where possible. The updated Design Guidelines (Appendix M) include a number of urban design strategies related to integrating with and celebrating the heritage elements of the station precinct. In addition, in accordance with mitigation measure EIS-LV8 (refer to Appendix C (Revised mitigation measures)), opportunities to provide gardens within the areas adjoining the heritage listed areas of the station, or in the vicinity, would be investigated as part of design development to reflect the local values of the community and reinforce the sense of place for the North Strathfield local centre.

### Issues raised – local business

City of Canada Bay Council raised the following issues relating to local business impacts at North Strathfield metro station:

- loss of parking on the eastern side of Queen Street will have a significant impact on local businesses
- the Environmental Impact Statement needs to be updated to demonstrate how it mitigates impact to customer car parking and phasing the loss of car parking during construction.

### Response – local business

Sydney Metro acknowledges that the loss of parking on the eastern side of Queen Street would have a potential impact to businesses as noted in Section 10.13 of the Environmental Impact Statement. Mitigation measures to manage this impact are included in the OCCS (Appendix N) which includes preparation of a Small Business Owners Engagement Plan to mitigate possible impacts to businesses that are potentially impacted by construction activities. Mitigation measures would also be detailed through a specific Community Communications Strategy prepared for the site, which would be informed by stakeholder engagement and include tailored mitigation measures to mitigate impacts at North Strathfield during construction. These would be evaluated and reviewed periodically in accordance with the OCCS.

### Issues raised – transport

City of Canada Bay Council raised the following issues relating to transport at North Strathfield metro station:

- the proposal shows the removal of two kiss and ride spaces on the eastern side of North Strathfield Station with no additional spaces provided to supplement this loss
- the proposal shows the extension of kiss and ride spaces on the western side of the station but this conflicts with the existing timed parking that is heavily utilised by the adjoining school and nearby childcare centre
- cyclist access to the metro station should be reviewed in light of changes to Council's proposed cycle network (including the route along Pomeroy Street) as exhibited in *Strategic Bike Plan Review* (City of Canada Bay Council, 2014)
- the adequacy of footpaths, kiss and rides and bus stops surrounding the station needs to be re-evaluated to meet accessibility standards and to cater for high pedestrian volumes, including using the criteria set out in the *Walking Space Guide* (Transport for NSW, 2020d)
- a taxi rank needs to be provided within line of sight of the station
- clarification is sought regarding whether cycle parking to the south of North Strathfield Station will be retained during construction and operation
- construction haul routes should be reviewed to ensure they are suitable for construction vehicles, including Pomeroy Street based on the mass limit for Powells Creek bridge.

### Response – transport

The proposed transport integration facilities shown on Figure 10-1 of the Environmental Impact Statement such as kiss and ride, taxi zone and bus stops have been informed by the modal breakdown of forecast passenger access and egress. The selection and indicative location of interchange facilities, as outlined in Section 10.5.2 of the Environmental Impact Statement, has been planned to achieve the Sydney Metro modal access hierarchy which prioritises walking and cycling as the most efficient and sustainable access modes and is subject to ongoing design.

The *Walking Space Guide* (Transport for NSW, 2020d) is not intended to be used for assessing transport facilities or interchanges. *Fruin Level of Service* (Fruin, 1971) is the appropriate criteria to assess transport interchanges. For stations with over and/or adjacent station development, further assessment would be undertaken during design development considering the use of Transport for NSW *Walking Space Guide*, where applicable, in consultation with key stakeholders.

Existing bike parking at North Strathfield Station would not be impacted during construction. During operation, new bicycle parking would be provided close to the station entry as shown on Figure 10-1 of the Environmental Impact Statement.

Sydney Metro has developed the construction haul routes in consultation with key stakeholders, including other parts of Transport for NSW, to minimise construction traffic impacts on the road network. Construction haul routes would be identified in the construction traffic management plan(s) for each construction site.

Sydney Metro would continue to look for opportunities to minimise impacts, including working with key stakeholders to modify construction haul routes as required.

### Issues raised – flooding and hydrology

City of Canada Bay Council raised the following issues relating to flooding and hydrology at North Strathfield metro station:

- baseline flood modelling needs to be updated to accurately reflect existing conditions and remove the assumption that the station box is blocked from floodwater as part of the baseline conditions. This makes difficult to compare to existing conditions
- Council's Concord West Flood Study (Jacobs, 2015) shows that the station box is located in the 1% AEP flow path. The Environmental Impact Statement assessment has not clearly shown the impact of the station box and associated civil works within the flood path area on flow distribution and flow diversion through the precinct
- the Environmental Impact Statement identifies Powells Creek as moderately sensitive however this should be higher based on sedimentation levels
- existing hydrology description identifies 0.3 metres of ponding at Queen Street; this is high enough to warrant more detailed description of baseline flooding conditions including flow velocities are associated with this increase
- mitigation is not identified for the reduction in flood storage and potential blocking of drainage during construction at North Strathfield metro station, including evacuation of construction workers during flood events.

### Response – flooding and hydrology

The North Strathfield station box would be protected from either the PMF or the one per cent AEP with climate change plus freeboard as part of the work under the previous Sydney Metro West planning application. As such, that forms the baseline environment for consideration of flood impact from this proposal. Notwithstanding, the assessment in Section 5.2.11 of Technical Paper 8 (Hydrology, flooding and water quality) of the Environmental Impact Statement also provides the cumulative impact assessment which considered the impact of all stages of Sydney Metro West combined.

The sensitivity rating of Powells Creek was identified in Technical Paper 8 (Hydrology, flooding and water quality) of the Environmental Impact Statement as moderately sensitive based on several factors including the surface water features, aquatic habitat and current condition of the waterway and is considered appropriate.

Further consideration of flood risks would occur during detailed design and during detailed construction planning in accordance with the CEMF (Appendix I).

Mitigation measure EIS-HF1 (Appendix C (Revised mitigation measures)) requires measures to be identified during further design development to not worsen flood impacts on the community and on other property and infrastructure, up to and including the one per cent AEP flood event. Design development would also identify measures to provide flood protection for the nominated station or facility entry threshold level. Mitigation measure EIS-HF2 (Appendix C (Revised mitigation measures)) requires emergency management arrangements to be developed to manage flood risks to people and vehicles accessing stations and ancillary facilities.

#### 7.5.11 Burwood North Station

### Issues raised – landscape and visual

City of Canada Bay Council raised the following issues relating to landscape and visual impacts at Burwood North Station:

- heights of the aboveground station infrastructure are unable to be confirmed through the figures in the Environmental Impact Statement, and therefore compliance with relevant planning controls and strategic plans
- the use of generic references to 'storeys' is unhelpful and creates uncertainty given floor to ceiling heights can vary considerably, particularly due to the unique needs of station buildings and services associated with the metro
- the dimensions of setbacks should be confirmed as this is fundamental information required for project approval, noting any planned increase in the Parramatta Road reserve should not be at the cost of the setbacks for the station buildings

- the setback of the station entry from Burwood Road should be increased to improve line-of-sight and legibility of the station entrance
- Sydney Metro should explore station entrances from Burwood/Burton Lanes or in the absence of a new station entrance, ensure that there is a direct pedestrian connection from the new lane and through site links to the station entrance on Burwood Road
- the amount of active uses on the ground floor of the station precinct within laneways and through site links should be increased to achieve better safety and passive surveillance.

### **Response – landscape and visual**

The level of detail provided in the figures in the Environmental Impact Statement is sufficient for the assessment of potential environmental impacts and consistent with the level of design detail provided in other major transport project planning approvals, including previous Sydney Metro projects. The figures in the Environmental Impact Statement are indicative and are intended to show the likely scale of this development only and not building forms.

The number of storeys referred to in the Environmental Impact Statement was to an equivalent number of storeys of a typical residential building. This has been clarified in Chapter 2 (Environmental Impact Statement clarifications) of this Submissions Report. Appendix B (Revised proposal description) has also been revised to describe the indicative heights of aboveground structures in metres.

Sydney Metro would continue to consult with City of Canada Bay Council during design development including in relation to the detailed design of stations and associated structures. City of Canada Bay Council would also be invited to participate in Design Review Panel meetings as required to advise on local issues and design outcomes as they relate to the local context. The station design and precinct plan (or equivalent as required by the conditions of approval) for Burwood North Station would also be prepared in consultation with City of Canada Bay Council. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

Figure 11-1 of the Environmental Impact Statement shows the intent for the station buildings to be set back from Burwood Road and Parramatta Road with areas of public domain at ground level. Figure 11-1 also shows pedestrian connections from the Burwood/Burton Lanes to the station entry. In accordance with the Design Guidelines (Appendix M), wayfinding and signage would enable customers to easily navigate each station as part of a cohesive journey.

The indicative area for active uses at ground level are shown in Figure 11-4 of the Environmental Impact Statement. Sydney Metro would maximise active uses at ground level along pedestrian laneways and through site links where possible, noting the need to balance this with providing for the operational infrastructure and services required for the station.

### **Issues raised – transport**

City of Canada Bay Council raised the following issues relating to transport at Burwood North Station:

- the existing kiss and ride zone is located away from the station and will encourage illegal parking closer to the station
- the location of the proposed kiss and ride zone may impact traffic flows during peak periods once the intersection of Burwood Road and Burton Street is signalised. Council's preference would be for both southbound lanes on approach to be continuous travel lanes
- proposed cyclist connections for this proposal are not integrated with Council's most recent cycle planning (in response to exhibition of Parramatta Road Corridor Urban Transformation Strategy) which include new cycle routes identified through the station precinct including continuous cycle route on northern side of Parramatta Road
- the retention of the existing pedestrian crossings at Parramatta Road and Burwood Road should include upgrade of these crossings to ensure they are compliant with current design standards
- clarification is sought on the location of proposed metro station entries as these are shown differently on Figure 11-1, Table 11-1, Section 11.2.2 and Figure-11-3 of the Environmental Impact Statement.

## Response – transport

The transport interchange facilities at Burwood North Station including the proposed kiss and ride zone are indicative. Sydney Metro would consider City of Canada Bay Councils feedback on this matter and continue to review the location of these facilities in line with the Sydney Metro modal access hierarchy which prioritises walking and cycling as the most efficient and sustainable access modes. At Burwood North Station, the metro station located is adjacent to two heavily trafficked roads and a busy intersection which constrains the safe location of some interchange facilities in the immediate proximity of the station.

Sydney Metro would consider City of Canada Bay Councils feedback on the proposed cyclist connections and would continue to consult with Council regarding integration with other proposed cycleways being delivered by others.

Sydney Metro would continue to investigate the potential upgrade of the existing pedestrian crossings at Parramatta Road and Burwood Road during detailed design for the interchange access plans.

Proposed metro station entries would be located on the north-east corner of Burwood Road and Parramatta Road and on the south-east corner of Burwood Road and Parramatta Road. Specific detail on the permanent built works and design of station entries would be confirmed through the development of station design and precinct plans (or equivalent as required by the conditions of approval), which would involve consultation with City of Canada Bay Council. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

## Issues raised – flooding and hydrology

City of Canada Bay Council raised the following issues relating to flooding and hydrology at Burwood North Station:

- baseline flood modelling needs to be updated to accurately reflect existing conditions and remove the assumption that the station box is blocked from floodwater as part of the baseline conditions. This makes it difficult to compare to existing conditions
- mitigation is not identified for the potential impacts to flood storage and blocking of drainage during construction at Burwood North Station, including evacuation of construction workers during flood events
- further design work needs to be undertaken to reduce the increase in flood levels around the precinct which current modelling indicates would have an adverse impact on residents in the precinct and reduce flood depth that would overtop existing kerbs
- an evacuation strategy for high-hazard flood events (which can reach H5 in the five per cent AEP) is required and needs to be addressed in design.

## Response – flooding and hydrology

The Burwood North station box will be protected from either the PMF or the one per cent AEP with climate change plus freeboard as part of the work under the previous Sydney Metro West planning application. As such, that forms the baseline environment for consideration of flood impact from this proposal.

Notwithstanding, the assessment in Section 5.2.11 of Technical Paper 8 (Hydrology, flooding and water quality) of the Environmental Impact Statement also provides the cumulative impact assessment which considered the impact of all stages of Sydney Metro West combined.

Chapter 11 (Burwood North Station) of the Environmental Impact Statement identifies that further design refinement would occur to manage potential local flooding impacts at Burwood North Station. Further consideration of flood risks would occur during detailed design and during detailed construction planning in accordance with the CEMF (Appendix I).

Flood modelling in Technical Paper 8 (Hydrology, flooding and water quality) of the Environmental Impact Statement indicated that the flood hazard around the site is generally considered low in events up to and including the one per cent AEP. During the PMF flood event there would be areas of high flood hazard within the streets adjacent to the site, particularly within the kerb and gutter of Burton Street, Parramatta Road and Burwood Road. It is expected with the further design development that flows would be contained within the minor and major (road) urban drainage system.

Mitigation measure EIS-HF1 requires measures to be identified during further design development to not worsen flood impacts on the community and on other property and infrastructure, up to and including the one per cent AEP flood event. Design development would also identify measures to provide flood protection for the nominated station or facility entry threshold level. Mitigation measure EIS-HF2 (Appendix C (Revised mitigation measures)) requires emergency management arrangements to be developed to manage flood risks to people and vehicles accessing stations and ancillary facilities.

### 7.5.12 Five Dock Station

#### Issues raised – Fred Kelly Place

City of Canada Bay Council raised the following issues relating to Fred Kelly Place:

- Council is strongly supportive of Sydney Metro realising the extension of Fred Kelly Place as part of the station development in Five Dock. Conditions of approval for this proposal should include that the extension of Fred Kelly Place be undertaken in close liaison and cooperation with City of Canada Bay Council
- the proposed extension will need to consider location of public amenities, planting, finishes, materials and the delivery of a space that avoids the use of steps or significant change in levels.

#### Response – Fred Kelly Place

City of Canada Bay Council's support for the Fred Kelly Place extension is noted. Sydney Metro would continue to consult with City of Canada Bay Council as part of detailed design for the extension of Fred Kelly Place within the Sydney Metro site and to manage interface with surrounding public domain areas. City of Canada Bay Council would also be invited to participate in Design Review Panel meetings as required to advise on local issues and design outcomes as they relate to the local context.

The station design and precinct plan for Five Dock Station (or equivalent as required by the conditions of approval) would also be prepared in consultation with City of Canada Bay Council. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

#### Issues raised – local businesses

City of Canada Bay Council raised the following issues relating to local business impacts during construction at Five Dock Station:

- local businesses have concerns about construction noise, dust, traffic, decreasing visitor numbers to the centre, loss of customer confidence, decreased amenity of outdoor dining and poor customer access
- additional car parking should be provided to replace car parking for customers during and after construction
- clear and timely notifications should be provided to businesses so they can effectively plan and manage short term impacts during construction
- support for businesses to grow new trade channels online, in the evening and extend trading windows
- provision of effective and ongoing destination marketing to attract people to the centre
- enhancement of the centre's appearance through art lighting and hoarding programs, vacant shop, and site initiatives.

#### Response – local businesses

Sydney Metro acknowledges that construction would affect local businesses, including due to continuation of redistribution of trade, temporary traffic congestion, impacts on parking and access and reduced local amenity. These impacts are considered in Section 12.13 of the Environmental Impact Statement to be slight to moderate negative.

The CTMF (Appendix J) outlines the requirements for parking management plans, where required. These plans would identify parking requirements, on-site and off-site parking arrangements and associated impacts; remote parking arrangements and associated access between sites and public transport nodes; alternate parking arrangements for displaced parking; and communication and parking management measures. For any proposed kerbside use impacts within a town centre or other activity centre, a proposal for relocation of impacted users may be required. Consultation would also be carried out with the City of Canada Bay Council to investigate opportunities to provide alternative parking facilities during construction.

Mitigation measures to manage impacts to local businesses are identified in the CEMF (Appendix I). In accordance with the OCCS (Appendix N), Sydney Metro would work with local businesses so that communication and engagement is tailored to their specific needs, including through the preparation of a Small Business Owners Engagement Plan to mitigate potential impacts to businesses that are potentially impacted by construction activities. Sydney Metro's overarching approach to business engagement is to:

- identify and document potentially impacted businesses prior to project commencement
- provide early advice to businesses of upcoming projects

- provide businesses with information about the project and its long terms benefits
- provide businesses with information about construction progress
- ensure businesses understand the scope of the work and mitigation measures contractors can provide
- ensure businesses understand the proposed timing of the work
- consult with businesses and take steps to minimise potential impacts
- ensure the project team understands the operational requirements and sensitivities of businesses around each site.

Sydney Metro has a proven track record of working closely with the neighbouring communities and businesses on both Sydney Metro Northwest and Sydney Metro City & Southwest projects.

### **Issues raised – Five Dock Library**

City of Canada Bay Council raised the following issues relating to impacts to Five Dock Library during construction:

- signage and hoarding artwork should be provided on the acoustic shed to enhance the presence of, and provide safe access to, Five Dock Library during construction
- specific noise impacts to Five Dock Library need to be considered, as noise impacts will negatively affect community use of the Library
- the noise assessment currently does not separate noise impacts on the library from impacts on residents, and specific levels of noise to the library are not identified
- Five Dock Library is an appropriate location for the promotion of the Sydney Metro West phone number to direct concerns and feedback relating to this proposal.

### **Response – Five Dock Library**

Sydney Metro acknowledges City of Canada Bay Council's concerns regarding Five Dock Library and would continue to consult with Council regarding strategies to increase the visibility of the library during construction. Safe access to the library would be maintained at all times during construction.

As part of the construction noise and vibration assessment, mixed use buildings have been classified based on the most sensitive known receiver type (meaning the most stringent criteria is applied) across all noise and vibration study areas. In the case of Five Dock Library, the building has been assessed based on the residential receivers in the same buildings with a daytime noise management level of 53 dBA. If assessed individually, the library would have a less stringent noise management level of either 60 dBA or 55 dBA (classified as either a 'public space' or 'reading area' respectively from AS2107, conservatively assuming a 10 dB facade reduction). Therefore, construction noise impacts at the library can be considered as equal to or less than the daytime impacts presented for that building in the Environmental Impact Statement.

### **Issue raised – noise and vibration**

The City of Canada Bay Council requested that the engagement of a Noise Advisor, Acoustic and Noise Program, and Construction Working Hours as specified within the Concept and Stage 1 conditions of approval, must continue to apply to all works associated with construction of stations, precincts and ancillary structure.

### **Response – noise and vibration**

Conditions of approval are a matter for the NSW Department of Planning and Environment to consider during its assessment of this proposal. Sydney Metro anticipates that conditions of approval for this proposal would require an Independent Acoustic Advisor, Construction Noise and Vibration Management Plans (including monitoring) and would include requirements regarding construction working hours. Construction of this proposal would be carried out in accordance with the conditions of approval.

### Issues raised – landscape and visual

City of Canada Bay Council raised the following issues relating to landscape and visual impacts at Five Dock Station:

- the heights of buildings in metres or RLs, ground level setbacks and upper level setbacks from buildings should be clarified and provided
- building heights and setbacks are currently inconsistent with the controls prescribed in the *Canada Bay Local Environmental Plan 2013* and City of Canada Bay DCP, resulting in overshadowing of Fred Kelly Place that is not compliant with applicable development controls
- the design of the aboveground station infrastructure should avoid any additional overshadowing impacts to Fred Kelly Place other than those contemplated in the City of Canada Bay DCP
- the nature of the active street frontage between the station and St Albans Church is not adequately described in the Environmental Impact Statement. Further clarification is sought to the nature of the proposed active street frontage facing into the St Albans Church complex.

### Response – landscape and visual

The description of this proposal is indicative in the Environmental Impact Statement and based on the current level of design. As noted in Chapter 5 (Proposal description – operation) of the Environmental Impact Statement, some design elements would continue to be refined as part of the design development process and including ongoing consultation with stakeholders.

The level of detail provided and assessed in the Environmental Impact Statement is consistent with the level of detail provided in other major transport project planning approvals, including previous Sydney Metro projects. The figures in the Environmental Impact Statement are indicative and are intended to show the likely scale of this development only and not building forms. Design Guidelines (Appendix M) and relevant mitigation measures (refer to Appendix C (Revised mitigation measures)) would be applied so potential landscape and visual impacts are appropriately mitigated.

Appendix B (Revised proposal description) has been revised to describe the indicative heights of aboveground structures in metres. As noted in Appendix B (Revised proposal description), the aboveground station infrastructure (including the station services and space for non-station use) at Five Dock Station would be, subject to design development, about 17 metres above street level. Station building heights would consider the local planning controls subject to ongoing consultation with Canada Bay Council.

The indicative approach to ground level and upper level building setbacks is shown on Figure 12-6 of the Environmental Impact Statement and in Section 5.6 of the Design Guidelines (Appendix M). Section 5.6 of the Design Guidelines (Appendix M) also provides guidance for setbacks to respond sensitively to heritage items and visual impacts. The City of Canada Bay DCP is included as a reference document in the Design Guidelines.

The height and scale of the aboveground infrastructure at Five Dock Station would recognise the local planning controls and local setting of the area, responding to the local village character and minimising visual and overshadowing impacts. The landscape and visual assessment carried out to inform the Environmental Impact Statement also acknowledges that a large useable area of Fred Kelly place would receive sunlight throughout the day. Further detail on the overshadowing analysis for Five Dock Station is provided in Section 9.4.4 of Technical Paper 6 (Landscape and visual amenity) of the Environmental Impact Statement. Upper level setbacks would be provided from Fred Kelly Place as shown indicatively in Figure 12-5 of the Environmental Impact Statement.

Sydney Metro would continue to consult with City of Canada Bay Council regarding the detailed design for the station precinct, including Fred Kelly Place extension and the interface with St Albans Church. A pedestrian link with ground level active uses addressing St Albans Church is identified on Figure 12-1 and Figure 12-4 of the Environmental Impact Statement, and in the Design Guidelines (Appendix M).

City of Canada Bay Council would also be invited to participate in Design Review Panel meetings as required to advise on local issues and design outcomes as they relate to the local context. The station design and precinct plan (or equivalent as required by the conditions of approval) for Five Dock Station would also be prepared in consultation with City of Canada Bay Council. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

### Issues raised – non-Aboriginal heritage

City of Canada Bay Council raised the following issues relating to non-Aboriginal heritage impacts at Five Dock Station:

- a more suitable location for the bicycle parking should be identified that will not impact on the visual amenity of St Albans Church
- sensitive interface with St Albans Church should extend to its full façade and its grounds
- heritage interpretation devices should not visually dominate St Albans Church.

### Response – non-Aboriginal heritage

Sydney Metro acknowledges City of Canada Bay Council's comments regarding the proposed location of bicycle parking and would continue to consult with Council regarding strategies to minimise impacts to St Albans Church while also achieving the outcomes of the modal access hierarchy which prioritises walking and cycling as the most efficient and sustainable access modes.

The proposed setback of the Five Dock station building would improve the visual setting of the adjacent St Albans Church. The sensitive design interface adjacent to St Albans Church has been extended for the full length of the station along this boundary. Sydney Metro would continue to consider strategies regarding a sensitive design interface along this boundary to enhance the setting of the church in its heritage context, in accordance with the Design Guidelines (Appendix M).

Sydney Metro acknowledges City of Canada Bay Council's comments regarding heritage interpretation devices.

### Issues raised – transport

City of Canada Bay Council raised the following issues relating to transport at Five Dock Station:

- Sydney Metro should liaise with the City of Canada Bay Council to discuss contribution towards the provision of car parking for the Five Dock Town Centre to offset the lack of parking for non-station uses and reduction in on-street parking
- the location of kiss and ride facilities should be repositioned closer to the station and to ensure they are located in streets with capacity to accommodate the demand, and so they do not impact driveway access
- the opportunity to relocate some kiss and ride zones to the location of the existing bus zone on Great North Road between Garfield Street and the existing pedestrian crossing should be considered in further planning
- the proposed taxi rank is a significant distance from the station and not visible from the station entry
- the proposal indicates that the existing bus zone on the western side of Great North Road (between Garfield Street and the pedestrian crossing) will no longer be required, however it is unclear what the proposed function of this kerbside space will be
- the proposed cycle route on East Street should be extended to connect to the existing cycle network at Henry Street and should be made compliant with relevant safety standards
- suitable conditions should be imposed to ensure that space for loading/unloading and other service vehicles is provided for each metro station so as to minimise impact on the public domain and the operation of surrounding streets
- request for Sydney Metro to follow Council's previous streetscape design along Great North Road for the streetscape works in the vicinity of the station
- the use of Barnstaple Road as a secondary construction vehicle route is inappropriate as it uses roads that are narrow and residential, including Second Avenue, Waterview Street and Ingham Street
- the construction haul routes should be re-evaluated due to the use of Lyons Road West and Harris Road being constrained by the size of the roundabout at the intersection of these two roads
- the construction traffic management arrangements for services at St Albans Church should be extended to cover the Sunshine childcare centre during weekdays due to the equivalent levels of traffic congestion during weekday peaks.

## Response – transport

Sydney Metro acknowledges that the loss of parking as a result of this proposal and are committed to ongoing collaboration with Council regarding strategies to manage this impact (considering parking and other matters related to pedestrian modelling and transport interchange). Contribution towards the provision of car parking for the Five Dock Town Centre is beyond the scope of the Sydney Metro West project.

The transport interchange facilities at Five Dock Station are indicative. Sydney Metro would consider City of Canada Bay Councils feedback on these design elements and would continue to review the location of these facilities in line with the modal access hierarchy which prioritises walking and cycling as the most efficient and sustainable access modes. This would also involve consideration of the layout of access for service vehicles.

The extension of the cycle link on East Street to Henry Street is outside the scope of the Sydney Metro West project. In accordance with mitigation measure EIS-TT2, potential opportunities to connect active transport measures with the wider active transport network would be further investigated in consultation with key stakeholders, which would include City of Canada Bay Council where relevant (refer to Appendix C (Revised mitigation measures)).

Sydney Metro acknowledges Council's request related to the streetscape design along Great North Road and would continue to consult with Council regarding final streetscape design in the vicinity of the station.

In the event that Barnstaple Road and/or Lyons Road West and Harris Road is pursued during construction as part of a secondary haul route, Sydney Metro would work actively with City of Canada Bay Council to manage potential road network and local traffic impacts. Sydney Metro has developed the construction haul routes in consultation with key stakeholders, including other parts of Transport for NSW, to minimise construction traffic impacts on the road network. Construction haul routes would be identified in the construction traffic management plan(s) for each construction site. Sydney Metro would continue to look for opportunities to minimise impacts, including working with key stakeholders to modify construction haul routes as required.

The construction traffic mitigation measure specific to services at St Albans Church is due to the proximity of the church exit driveway to the Sydney Metro construction vehicles egress on Great North Road. The Sunshine childcare centre is located on the western side of East Street and would not have a direct interface with the proposed construction haul route. Notwithstanding, Sydney Metro would continue to consult with the childcare centre to manage potential construction impacts.

## Issues raised – flooding and hydrology

City of Canada Bay Council raised the following issues relating to flooding and hydrology at Five Dock Station:

- baseline flood modelling needs to be updated to accurately reflect existing conditions and remove the assumption that the station box is blocked from floodwater as part of the baseline conditions. This makes it difficult to compare to existing conditions
- further mitigation detail should be provided for reductions in flood storage, blocking of drainage and evacuation of workers during flood events
- further design work should be undertaken to reduce the increase in flood levels around the precinct which current modelling indicates would have an adverse impact on residents in the precinct and reduce flood depth that would overtop existing kerbs.

## Response – flooding and hydrology

The Five Dock station box would be protected from the one per cent AEP with climate change plus freeboard as part of the work under the previous Sydney Metro West planning application. As such, that forms the baseline environment for consideration of flood impact from this proposal. Notwithstanding, the assessment in the Environmental Impact Statement also provides a cumulative impact assessment to consider the impact of all stages of Sydney Metro West combined.

Chapter 12 (Five Dock Station) of the Environmental Impact Statement identifies that further design refinement would occur to manage potential local flooding impacts at Five Dock Station. Further consideration of flood risks would occur during detailed design and during detailed construction planning in accordance with the CEMF (Appendix I).

Flood modelling in the Environmental Impact Statement indicated that the flood hazard around the site is generally considered low in events up to and included the one per cent AEP. During the PMF flood event there would be areas of high flood hazard within the streets adjacent to the site. It is expected with the further design development that flows would be contained within the minor and major (road) urban drainage system.

Mitigation measure EIS-HF1 (Appendix C (Revised mitigation measures)) requires measures to be identified during further design development to not worsen flood impacts on the community and on other property and infrastructure, up to and including the one per cent AEP flood event. Design development would also identify measures to provide flood protection for the nominated station or facility entry threshold level. Mitigation measure EIS-HF2 (Appendix C (Revised mitigation measures)) requires emergency management arrangements to be developed to manage flood risks to people and vehicles accessing stations and ancillary facilities.

### 7.5.13 Proposal-wide impacts

#### Issues raised

City of Canada Bay Council raised the following issues relating to proposal-wide impacts of this proposal:

- more details should be provided around waste generation, storage and collection during operation of the proposal.
- a detailed breakdown of the waste generation totals should be provided to show the total amount of waste in each stream as well as details regarding the temporary storage transport and destination of construction waste to ensure that community impacts are minimised.

#### Response

Potential waste management impacts during operation would be avoided by designing and operating this proposal so that wastes are managed according to the waste hierarchy and implementing the management and mitigation measures. Resource use initiatives would also be implemented in accordance with the Sydney Metro West Sustainability Plan. Environmental performance during operation would be managed by the implementation of an Operational Environmental Management Plan or System.

During construction, waste management plans would be developed in accordance with the requirements of the CEMF (Appendix I). These plans would provide further details regarding waste volumes, storage and management, requirements for compliance record generation and management. All waste removed from the site would be appropriately tracked for the full journey lifecycle using waste tracking dockets.

Waste management and resource use during construction and operation is assessed in Section 18.5 of the Environmental Impact Statement.

### 7.5.14 Overarching Community Communications Strategy

#### Issues raised

City of Canada Bay Council raised the following issues related to the OCCS:

- extend the radius of notifications for works from 100m to 200m and from 200m to 400m for day and night works respectively
- change the timeframe for notification letters from “sent at least 7 days prior to works” to “delivered 7 days prior to works”.
- further clarification is also sought regarding the print distribution and timelines for the project newsletters.

#### Response

Sydney Metro’s communication approach continues to evolve so that communities have access to a variety of platforms that provide a personalised approach to community engagement. Sydney Metro would continue to monitor the communication landscape to provide best practice solutions to engagement.

The area for notification of works is generally aligned to the areas that are most likely to experience impacts. The area of notifications can also be adjusted on a case-by-case basis based on the anticipated impacts.

Sydney Metro West notifications are accessible to all community members. Notifications are available on the Sydney Metro website and are also distributed via the Sydney Metro Connect App and email alerts. Community members can receive project information in their local language by downloading the Sydney Metro Connect App on the App Store or Google Play and signing up for email alerts on the Sydney Metro website.

Sydney Metro dedicated place managers continue to be available to the help the community access project information as required.

In relation to the timeframe for notifications, the intention is to deliver the notification 7 days prior to works. Email notifications are sent 7 days prior to works.

Newsletters are generally used to communicate project milestones and are in addition to project works notifications. The timing and distribution for newsletters would be dependent on the purpose of the newsletter.

### 7.5.15 Environmental risk analysis results

#### Issues raised

City of Canada Bay Council raised the following issues related to the environmental risk analysis results:

- the greenhouse gas assessment for this proposal should be revised to compare to a baseline scenario without the proposal during construction and operation, in line with NSW Climate Change Policy Framework and Net Zero Plan Stage 1 2020-2030 Implementation Update
- the proposal should commit to publishing peer-reviewed statements on climate change impacts, risks and adaptation for Sydney Metro West every two years, including more strategic considerations of proposal-wide risks in line with the international Task Force on Climate-Related Financial Disclosures recommendations
- the greenhouse gas assessment should include an assessment of materials to be used in this proposal, their embodied energy and carbon and articulate how the sustainable procurement plan will deliver leading practice in low carbon and low embodied energy materials
- the assessment of the proposal omits risks associated with sourcing certain materials due to supply chain constraints. There is a significant opportunity for such a largescale project to generate demand for locally sourced materials that generate demand for circular economy products and services. The assessment of the proposal should be revised to include a quantified circular economy assessment of materials. This should identify risks and opportunities associated with local sourcing and circular economy products, in line with the NSW Circular Economy Policy
- the proposal should include a commitment to an Infrastructure Sustainability Council of Australia (ISCA) rating for all stages of the project. This commitment to achieve a leading ISCA rating score should match or exceeding other ISCA certified projects, such as the Bexley North and Petersham Station upgrades, which achieved scores in excess of 90.

#### Response

The greenhouse gas assessment undertaken as part of the Environmental Impact Statement is consistent with the requirements of the Secretary's environmental assessment requirements and is appropriate for a major project of this scale. Details of how Sydney Metro would manage greenhouse gas emissions during the operation and construction phases are detailed in Section 18.4.4 of the Environmental Impact Statement.

Sydney Metro has carried out a climate change risk assessment (CCRA) for this proposal which is provided in Chapter 18 (Proposal-wide) of the Environmental Impact Statement. Climate change risks would continue to be assessed throughout design development and risk treatments would be progressively incorporated as appropriate as CCRA is an iterative process.

Sydney Metro has developed an *Environment and Sustainability Statement of Commitment* (Sydney Metro, 2020c) which states the social and environmental sustainability objectives of Sydney Metro. The policy reflects a commitment in the delivery of the Sydney Metro program to optimising sustainability outcomes and developing effective and appropriate responses to the challenges of climate change. The policy is included in the *Sydney Metro West Environmental Impact Statement – Westmead to The Bays and Sydney CBD* (Sydney Metro, 2020a).

The Sydney Metro West Sustainability Plan outlines the sustainability principles, objectives and initiatives including performance targets and outcomes which would be adopted from planning, procurement, design, construction and operations to end-of-life. This encompasses all three aspects of sustainability – environmental, social and economic. Sydney Metro would undertake lifecycle assessments and minimise the embodied impacts of materials, through the selection of low carbon alternatives and considering durability and, where possible, investigate opportunities for local sourcing. In relation to carbon emissions:

- embodied carbon would be reduced through selection of low carbon alternatives and considering durability and local sourcing. Embodied impacts of concrete would be minimised through the adoption of project-wide supplementary cementitious materials use target and targets for the use of alternate binder systems on non-structural elements. Embodied impacts of steel would be minimised through maximising the use of recycled steel and steel produced using energy-reducing processes. Sydney Metro would also engage with industry bodies to identify best practice low-impact alternative materials and prioritise products made from recycled content

- at least a 20 per cent reduction in carbon emissions associated with operations, when compared to business as usual and 25 per cent of the greenhouse gas emissions associated with consumption of electricity during construction would be offset. An Electricity and Offsets Procurement and Management Strategy would be developed
- Sydney Metro would use zero emission electricity for its metro operations.

Procurement strategies would be consistent with ISO: 20400 Sustainable Procurement. Sydney Metro would investigate opportunities to improve on supply chain transparency, and would align with relevant human rights legislation and environmental standards.

Concept condition of approval C-B7 requires Sydney Metro West to achieve a minimum Infrastructure Sustainability Council (ISC; formerly ISCA) Infrastructure Sustainability rating of 75 (Version 1.2) (or equivalent level of performance using a demonstrated equivalent rating tool); or a 5-Star Green Star rating (or equivalent level of performance using a demonstrated equivalent rating tool). Sydney Metro West (including this proposal) have committed to achieve an equivalent or improved level of sustainability performance compared to previous metro projects. This would include achieving a 'leading' ISC rating (Version 1.2) for relevant infrastructure components of this proposal and a 5-Star Green Star rating for relevant buildings and precincts.

### 7.5.16 Operational transport technical paper

#### Issues raised

City of Canada Bay Council raised the following issues related to Technical Paper 1 (Operational transport) of the Environmental Impact Statement:

- more detailed parking demand management plans are required to address the significant increase in parking demand, that is anticipated as a result of the increased park and ride travel demand as the station precinct already experiences issues with constrained supply of on-street parking
- constrained parking would push customers away from using park and ride towards other transport options such as walking and cycling, which is likely to mean cycling and walking provisions are inadequate
- the adequacy of footpaths surrounding the stations should be re-evaluated against the standards for footpath design as outlined in the *Walking Space Guide* (Transport for NSW, 2020d) as *Fruin Level of Service* (Fruin, 1971) is outdated and no longer accepted for this purpose
- the Environmental Impact Statement does not identify how the frequency and coverage of bus services will change to respond to the new public transport demand created by the stations and associated development uplift
- request that Sydney Metro West undertake further analysis identifying the future demand for active transport uses in getting to and from the station. In particular, the number of bicycle parking spaces undercover, the width of pedestrian paths and circulation space for pedestrian movements.

#### Response

As identified in the operational transport assessment in Section 4.2 Technical Paper 1 (Operational transport) of the Environmental Impact Statement, park and ride is the lowest priority of all transport modes under the Sydney Metro modal access hierarchy which prioritises walking and cycling as the most efficient and sustainable access modes. The operational transport assessment identifies that there is potential for increased parking demand at some stations due to potential park and ride, and includes the forecast proportion of customers who would access and egress each station via park and ride in 2036 (refer to Section 4 of Technical Paper 1 (Operational transport) of the Environmental Impact Statement).

This proposal does not include the provision of any park and ride facilities (such as new commuter parking spaces) beyond what is already provided near the proposed metro stations. All Sydney Metro West stations are designed to promote active and public transport access above the use of private vehicles. Stations have been planned to integrate with other forms of public transport like light rail, suburban rail, and buses. Station precincts would be designed in consultation with councils to provide for easy connections to walking and cycling links. To accommodate customers driving to stations, spaces would be provided for pick up and drop off by taxi or kiss and ride.

Sydney Metro would work with City of Canada Bay Council to help address potential parking impacts that may arise from customers using neighbouring residential streets to park and ride at Five Dock (in accordance with mitigation measure EIS-TT3 (refer to Appendix C (Revised mitigation measures))). EIS-TT3 has also been amended to include example measures that could be considered (refer to Section 2.14 (Changes to or additional mitigation measures) of this Submissions Report. Cycling provisions at Sydney Metro West stations would be provided based on forecast demand numbers and in accordance with relevant Transport for NSW policies/guidelines. Cycling provision at stations would consider the following guidelines:

- Transport for NSW *Cycleway Design Toolkit* (2020)
- Austroads *Bicycle Parking Facilities: Guidelines for Design and Installation* (2016)
- Australian Standards – AS2890.3 Parking Facilities: Bicycle Parking (2015).

The *Walking Space Guide* (Transport for NSW, 2020d) is not intended to be used for assessing transport facilities or interchanges. *Fruin Level of Service* is the appropriate criteria to assess transport interchanges. For stations with over and/or adjacent station development, further assessment would be undertaken during design development considering the use of Transport for NSW *Walking Space Guide*, where applicable, in consultation with key stakeholders.

As identified in the Environmental Impact Statement, the additional mass transit accessibility and amenity provided by this proposal would also provide an opportunity to optimise the bus network. This could include additional feeder services to Sydney Metro West stations. It is expected that bus services and connections to Sydney Metro West stations would be assessed and reconfigured where necessary by Transport for NSW to support the operation of Sydney Metro West. Sydney Metro is working with other relevant parts of Transport for NSW in relation to the location of any future bus stops near metro stations.

As outlined in Chapter 2 (Methodology) of Technical Paper 1 (Operational transport) of the Environmental Impact Statement, forecast demand numbers including access and egress mode split has been determined based on the Transport for NSW Public Transport Projects Model (PTPM). PTPM 2036 future year strategic transport model ran 'with' and 'without the proposal' scenarios to assess the potential impacts in the vicinity of station precincts. The 'with the proposal' scenario included additional land use growth that would not be possible without the proposal and associated induced traffic demands. This information was used to inform transport interchange requirements and subsequent pedestrian modelling around the station precincts. Sydney Metro would continue to undertake additional transport modelling during detailed design.

### 7.5.17 Construction transport technical paper

#### Issues raised

City of Canada Bay Council raised the following issues related to Technical Paper 2 (Construction transport) of the Environmental Impact Statement:

- request for clarity on whether State roads would be used for construction haul routes to avoid damage to local road pavements
- Sydney Metro should undertake condition assessments for pavements and bridges on local roads used for construction haulage to determine their condition before and after construction and used as the basis for compensation to Council for any decline in the structural integrity of these assets
- the community and local businesses are already experiencing reduction in available parking including for customers in the vicinity of construction sites due to the work carried out under the previous Sydney Metro West planning application, and Council therefore requests that conditions of approval for this proposal require implementation of a Construction Parking Strategy which requires construction workers to limit impacts on local streets
- financial compensation is sought from Sydney Metro to alleviate negative local business and community impacts from the loss of parking, and this financial compensation could be used to provide alternative car parking arrangements
- a transitional car parking plan for local businesses should be prepared to ensure local businesses are supported through each phase of construction, and business viability will not be affected.

#### Response

The proposed construction haul routes are identified in the relevant chapters of the Environmental Impact Statement, and Section 3 of Technical Paper 2 (Construction transport) of the Environmental Impact Statement. Where possible, the objective of the selected haul routes minimises the use of local roads and uses the most efficient route to the arterial road network to minimise potential road network and safety impacts.

Road condition surveys would be carried out before and after construction in accordance with the CTMF (Appendix J). Damage attributed to construction works would be rectified and/or compensated by the construction contractor.

The CTMF also sets out mitigation measures for how worker access and parking would be managed including investigating opportunities to provide parking at construction sites, identification of remote parking areas for workers and encouraging workers to use public transport when travelling to and from the work sites. Sydney Metro would continue to consult with City of Canada Bay Council throughout construction, including on matters related to construction parking impacts.

Section 2.13 (Minor corrections and clarifications) of this Submissions Report provides further clarity regarding the indicative permanent and temporary potential parking impacts of this proposal. The potential social and business impacts associated with parking changes at the precinct are considered in Section 13.12 and Section 13.13 of the Environmental Impact Statement, respectively.

Sydney Metro acknowledges that the loss of parking may have a potential impact to businesses as noted in the local business assessment carried out as part of the Environmental Impact Statement. Mitigation measures to manage this impact are included in the OCCS (Appendix N) which includes preparation of a Small Business Owners Engagement Plan to mitigate potential impacts to businesses that are potentially impacted by construction activities.

Conditions of approval are a matter for the NSW Department of Planning and Environment during its assessment of this proposal.

### 7.5.18 Landscape and visual technical paper

#### Issues raised

City of Canada Bay Council raised the following issues related to Technical Paper 6 (Landscape and visual amenity) of the Environmental Impact Statement:

- the proposal will result in a significant reduction in trees in North Strathfield and there is no certainty there will be increase in tree canopy coverage at either Burwood North Station or Five Dock Station
- request for a condition of approval that requires:
  - a plan to be prepared that illustrates the location and inventory of all trees proposed to be removed
  - a plan to be prepared that illustrates the location and inventory of all replacement trees to be planted. This plan should demonstrate how the project will provide an increase in the number of mature trees to a ratio of 2:1 and result in a net increase in tree canopy coverage over a 9 or 10 year period.
- City of Canada Bay Council provided specific suggestions regarding tree replacement strategy, including the spacing of mature trees, soil volumes and green walls.

#### Response

The number and locations of trees that would be required to be removed for this proposal would be confirmed during detailed design. Sydney Metro would provide replacement trees across the whole project at a 2:1 ratio resulting in a net increase in tree canopy cover across the project in accordance with condition C-B8 of previous Sydney Metro West planning approval. Sydney Metro would consider opportunities to provide trees and other landscaping elements within the station precincts, where possible. In the areas of additional footprint for this proposal, opportunities for the retention and protection of existing trees would be identified during detailed construction planning.

Sydney Metro notes City of Canada Bay Council's specific suggestions regarding a tree replacement strategy.

Detail on the landscape design at each metro station, including vegetation and proposed landscaping, would be confirmed as part of the station design and precinct plans (or equivalent as required by the conditions of approval), which would be prepared in consultation with the City of Canada Bay Council. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

### 7.5.19 Hydrology, flooding and water quality technical paper

#### Issues raised – flooding

City of Canada Bay Council raised the following issues related to Technical Paper 8 (Hydrology, flooding and water quality) of the Environmental Impact Statement:

- revised flood modelling should be undertaken which takes into account the following:
  - existing flooding conditions in addition to the assumed baseline scenario
  - rainfall intensity and sea-level rise due to climate change as separate variables
  - roughness sensitivity
  - variation in drainage blockages: blockages as per ARR2019
  - reports flood hazards in line with the City of Canada Bay DCP flood risk hazard levels.
- the station precinct designs should be amended to ensure no rise in flood level with the proposal
- in cases where no flood information or previous flood study has been undertaken (e.g., Five Dock) a pre-flood analysis of existing conditions should be undertaken to validate the baseline scenario
- the results of and revised modelling to address these factors, along with the modelling should be provided to Council for review prior to approval of construction
- the Environmental Impact Statement does not provide sufficient information regarding the design of water quality and drainage infrastructure to adequately determine whether flooding impacts have been satisfactorily mitigated
- it is unclear from the Environmental Impact Statement whether water quality mitigation and monitoring plans have been developed in consultation with Water Quality Australia; it is Council's expectation that this consultation would be undertaken prior to release of the Environmental Impact Statement
- further detail of flood levels around station precinct should be provided that include flow velocity plots and tabular V\*D values for areas of concern around each station box and also to extend further into flood risk areas than currently shown in the Environmental Impact Statement
- further work is required to identify the stormwater drainage to Council's drainage system. A condition should be placed on the proposal for an approval under section 68 of the *Local Government Act 1993* prior to the completion of stormwater drainage design
- the station groundwater discharge should drain to the tunnel groundwater drainage system and not into Council's stormwater systems, as this water would increase risks of flooding if it is diverted to the Council stormwater system.

#### Response – flooding

The flooding assessment undertaken as part of the Environmental Impact Statement is consistent with the requirements of the Secretary's environmental assessment requirements and is appropriate for a major project of this scale.

Sydney Metro West station boxes would be protected from either the PMF or the one per cent AEP with climate change plus freeboard as part of the work under the previous Sydney Metro West planning application. As such, that forms the baseline environment for consideration of flood impact from this proposal. Notwithstanding, the assessment in Section 5.2.11 of Technical Paper 8 (Hydrology, flooding and water quality) of the Environmental Impact Statement also provides the cumulative impact assessment which considered the impact of all stages of Sydney Metro West combined.

Where required, the Environmental Impact Statement identifies that further design refinement would occur to manage potential local flooding impacts at Sydney Metro West stations. Further consideration of flood risks would occur during detailed design and during detailed construction planning in accordance with the CEMF (Appendix I).

The level of detail provided for the design of water quality and drainage infrastructure to adequately determine whether flooding impacts have been satisfactorily mitigated in the Environmental Impact Statement is adequate for a major infrastructure project and is consistent with the level of detail provided in other major project planning approvals, including previous Sydney Metro projects. Sydney Metro has been consulting with the NSW EPA regarding appropriate water quality discharge criteria for this proposal.

In relation to construction, as outlined in Section 18.9 of the Environmental Impact Statement, the water treatment plants would be designed so that wastewater is treated with the objective of meeting the trigger levels from the Australian and New Zealand Environment Conservation Council (ANZECC) guidelines, the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZG, 2018) and the draft (ANZG, 2020) default guidelines for 95 per cent species protection and 99 per cent species protection for toxicants that bioaccumulate, unless other discharge criteria are agreed with relevant authorities.

For operations, in accordance with mitigation measure EIS-SSWQ1 (Appendix C (Revised mitigation measures)), water quality measures such as gross pollutant traps, bio-retention swales and Water Sensitive Urban Design features would be investigated during design development and implemented where feasible and reasonable. In accordance with mitigation measure EIS-SSWQ2 (Appendix C (Revised mitigation measures)), the operational water treatment plant would be designed so that wastewater is treated with the objective of meeting the ANZG (2018) default guidelines for 95 per cent species protection and 99 per cent species protection for toxicants that bioaccumulate unless other discharge criteria are agreed with relevant authorities.

The catchments of the metro stations are highly urbanised and developed with widespread impervious surfaces. The amount of impervious area would not be substantially increased by this proposal and changes to natural hydrological attributes and conveyance capacity of existing stormwater systems would be limited. Mitigation measure CEMF-SSWQ7 identifies that further design development would confirm the local stormwater system capacity to capacity receive construction water treatment plant inflows. In the event there is a stormwater infrastructure capacity issue with existing infrastructure, mitigation measures such as storage detention to control water outflow during wet weather events would be implemented. Sydney Metro would continue to consult with City of Canada Bay Council during detailed design regarding potential impacts and interface with council drainage infrastructure.

Mitigation measure EIS-HF1 (Appendix C (Revised mitigation measures)) requires measures to be identified during further design development to not worsen flood impacts on the community and on other property and infrastructure, up to and including the one per cent AEP flood event.

#### **Issues raised – additional comments specific to flooding at North Strathfield metro station**

City of Canada Bay Council raised the following issues relating to flooding at North Strathfield metro station:

- plots of the one per cent, five per cent AEP, Probable Maximum Flood and flood velocity should be extended at North Strathfield metro station to show more of Queen Street and Beronga Street north of the station box
- further design work needs to be undertaken to reduce the increase in flood levels around the precinct which current modelling indicates would have an adverse impact on residents in the precinct, and to reduce the flood impact at the Wellbank Street- Queen Street intersection and Queen Street-Beronga Street intersections due to post development flow distribution
- a review of the existing public stormwater drainage system is to be evaluated and upgraded.

#### **Response – additional comments specific to flooding at North Strathfield metro station**

The flooding assessment undertaken to inform the Environmental Impact Statement is consistent with the requirements of the Secretary's environmental assessment requirements and is considered adequate at this stage of the proposal.

Chapter 10 (North Strathfield metro station) of the Environmental Impact Statement identifies that further design refinement would occur to manage potential local flooding impacts at North Strathfield metro station. Further consideration of flood risks would occur during detailed design and during detailed construction planning in accordance with the CEMF (Appendix I).

Upgrade or modification of the existing public stormwater drainage system is outside the scope of the Sydney Metro West project.

#### **Issues raised – additional comments specific to flooding at Burwood North Station**

City of Canada Bay Council raised the following issues relating to flooding at Burwood North Station:

- properties along Burton Street will be required to obtain an easement over the Burwood North Station site to drain their surface stormwater flow to a legal point of stormwater discharge, in accordance with the City of Canada Bay DCP

- information and data have not been provided in relation to existing flood conditions, and only show the change in hazard levels, in order to determine full flooding impacts
- the assessment of flood levels has not been adequately undertaken despite flooding maps showing water levels to be above kerb levels.

### **Response – additional comments specific to flooding at Burwood North Station**

Sydney Metro notes City of Canada Bay Council's comments regarding the stormwater discharge from properties located along Burton Street. This would be further considered during detailed design in consultation with council.

The existing flood conditions at Burwood North Station are described in Section 11.11.1 of the Environmental Impact Statement.

The flooding assessment undertaken to inform the Environmental Impact Statement is consistent with the requirements of the Secretary's environmental assessment requirements and is considered adequate at this stage of the proposal.

### **Issue raised – groundwater**

City of Canada Bay Council requested to be included in any groundwater investigations and act as an approval authority for any investigations and works that will impact groundwater.

### **Response – groundwater**

The CEMF (Appendix I) outlines the process for ongoing groundwater monitoring and the development of Groundwater Management Plans. Sydney Metro would consult with City of Canada Bay Council on the outcomes of further groundwater investigations and proposed mitigation measures.

## **7.5.20 Social impacts technical paper**

### **Issue raised**

City of Canada Bay Council requested that the area around Burwood North is identified as an area with linguistic diversity (around 16 per cent of residents are not fluent in English) and therefore ensure that community engagement materials are translated into the relevant languages.

### **Response**

City of Canada Bay Council's comments regarding the linguistic diversity around Burwood North Station are noted. The OCCS (Appendix N) provides requirements for working for culturally and linguistically diverse and languages other than English communities, including the translation of engagement materials. A site-specific Community Communications Strategy would be prepared in accordance with the OCCS, and would identify affected communities, including vulnerable or marginalised groups and outline site-specific and proportionate mitigation measures to manage construction impacts.

## **7.6 Burwood Council**

### **7.6.1 Support for Sydney Metro West**

#### **Issues raised**

Burwood Council expressed their support for the Sydney Metro West project, and noted that it will deliver significant benefits for the current and future residents of Burwood. The Sydney Metro West project would support and reinforce the identification of Burwood Town Centre as a Strategic Centre, and would facilitate urban renewal opportunities consistent with the *Parramatta Road Corridor Urban Transformation Strategy* (NSW Government, 2016).

#### **Response**

Council's support for the Sydney Metro West project is noted.

## 7.6.2 Urban design vision, objectives and principles

### Issues raised

Burwood Council raised the following issues in relation to urban design vision, objectives and principles:

- the Environmental Impact Statement does not provide a clear, contextually based assessment of urban design vision outcomes for the Burwood North Station site
- only the landholding for the station is considered and local and regional scale factors are not considered, for example local school, key land uses (Westfield Shopping Centre) or other infrastructure such as key north-south connections provided by Burwood Road
- further consideration of the infrastructure required to support transport integration to the station is required in order to meet the station design element 'door to door journey' in Section 3.1.1 of the Design Guidelines (Appendix M)
- Council has noted that the urban design objectives and principles identified for this proposal would need to be developed in consultation with Burwood Council and aligned with the review Council is currently undertaking for the wider Burwood North precinct.

### Response

The Environmental Impact Statement provides the necessary information to assess the potential impacts of the fit-out of rail infrastructure, stations, precincts and operation of the line at Burwood North Station and is appropriately focused on the Sydney Metro station sites. This assessment is included in Chapter 11 (Burwood North Station) of the Environmental Impact Statement. Other land uses in the vicinity are considered where appropriate such as in the social impact assessment in Technical Paper 9 (Social impacts) of the Environmental Impact Statement. In addition, Section 5.5 of the Design Guidelines (Appendix M) includes consideration of the broader context of Burwood North Station.

The level of design detail provided and assessed in the Environmental Impact Statement is sufficient for the assessment of potential environmental impacts and consistent with the level of design detail in other major transport project planning approvals, including previous Sydney Metro projects. Design Guidelines (Appendix M) and relevant mitigation measures (refer to Appendix C (Revised mitigation measures)) would be applied so potential impacts are appropriately mitigated.

This proposal includes local connections at and around each station precinct including transport interchange facilities. Broader integration and connections are beyond the scope of Sydney Metro West. Notwithstanding, information on how Sydney Metro West supports planned land use changes in the corridor is provided in the *Sydney Metro West Environmental Impact Statement – Westmead to The Bays and Sydney CBD* (Sydney Metro, 2020a).

As identified in Chapter 5 (Proposal description – operation) of the Environmental Impact Statement, some design elements of this proposal would continue to be refined as part of the design development process. Sydney Metro is committed to a design approach that includes consultation with relevant government agencies and local councils. Sydney Metro would continue to consult with Burwood Council during ongoing design development so that Burwood North Station is integrated with the existing and planned public domain.

The design process would follow robust internal review processes and independent review through the use of a Design Review Panel (as described in Table 5-5 of the Environmental Impact Statement). Burwood Council would be invited to participate in Design Review Panel meetings as required to advise on local issues and design outcomes as they relate to the local context.

Following development of the design, station design and precinct plans (or equivalent as required by the conditions of approval) would be developed for each metro station to document and illustrate the permanent built works and landscape design. The station design and precinct plan for Burwood North Station would be prepared in consultation with Burwood Council and City of Canada Bay Council, the local community and other relevant stakeholders. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

### 7.6.3 Detailed station design

#### Issues raised

Burwood Council raised the following issues in relation to detailed station design:

- the Environmental Impact Statement does not provide a sufficient level of detail or detailed design intent for Burwood Council to make meaningful comments with respect to the overall design and the delivery of activated spaces
- a station design and precinct plan must be developed to detail the design of the station and adjoining precinct including:
  - clear design of the internal space standards of all Burwood North Station entrances, which should be a continuation of external public plazas
  - clarity on how vertical pedestrian movements would be managed or describe the quality of the pedestrian environment within the tunnel link (the design of the tunnel should be a standard comparable to Wynyard Station tunnel link to Barangaroo)
  - clarity on orientation of southern station entry
  - identify design opportunities including incorporation of public art, wayfinding
  - outline implementation of the plan, including maintenance and monitoring
  - detailed design of the precinct include land outside of the area required by this proposal
- the detailed design of the station precinct should be developed in consultation with Council.

#### Response

The description of this proposal is indicative in the Environmental Impact Statement and based on the current level of design. As noted in Chapter 5 (Proposal description – operation) of the Environmental Impact Statement, some design elements would continue to be refined as part of the design development process and including ongoing consultation with stakeholders. The level of design detail provided and assessed in the Environmental Impact Statement is sufficient for the assessment of potential environmental impacts and consistent with the level of design detail in other major transport project planning approvals, including previous Sydney Metro projects.

Sydney Metro expect the conditions of approval for this proposal would require the development of a station design and precinct plan (or similar) and would continue to consult with Burwood Council during ongoing design development including consultation related to detailed design of Burwood North Station precinct. Burwood Council would also be invited to participate in Design Review Panel meetings as required to advise on local issues and design outcomes as they relate to the local context.

Following development of the design, station design and precinct plans (or equivalent as required by the conditions of approval) would be developed for each metro station to document and illustrate the permanent built works and landscape design. The station design and precinct plan for Burwood North Station would be prepared in consultation with Burwood Council, City of Canada Bay Council, the local community and other relevant stakeholders. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

### 7.6.4 Space for non-station use

#### Issues raised

Burwood Council raised the following issues in relation to the spaces for non-station use:

- the southern station entry site is constrained (only one road frontage available) and no viability testing has been undertaken to demonstrate how the development above the station entry would be delivered
- space for non-station use would be more suitable on the opposite side of Parramatta Road
- Figure 11-17 of the Environmental Impact Statement does not show adequate setbacks or an acceptable podium and tower arrangement
- the proposed southern station building should be designed to comply with separation requirements of the Apartment Design Guide

- no specific details have been provided with respect to the overall height of the southern station building or how the building might be stepped and articulated to minimise impacts (e.g. overshadowing to mixed use development at 8 Burwood Road, Burwood)
- the detailed design of non-station use should be developed in consultation with Council to ensure future development is designed to deliver design excellence and minimise amenity impacts on neighbouring properties to the south
- there is a lack of detail regarding what approval pathway would be followed for future over station development.

### Response

To provide a consistent design across the precinct and deliver the desired place outcomes, Sydney Metro is proposing to undertake the structural works for the building above the station entry (the 'space for non-station use') at a similar time as constructing the station building, and are seeking approval to construct the structure as part of this proposal. As outlined in Section 5.4.3 of the Environmental Impact Statement, fit-out and use of the space for non-station use would be subject to separate approval as appropriate.

Figure 11-17 in the Environmental Impact Statement is an indicative photomontage which shows the general massing of the buildings. The height of this building is consistent with proposed controls as part of the *Parramatta Road Corridor Urban Transformation Strategy* (NSW Government, 2016).

Appendix B (Revised proposal description) has been revised to describe the indicative heights of aboveground structures in metres. The aboveground station infrastructure located south of Parramatta Road (including the station entry, services and space for non-station use) would be, subject to design development, indicatively around 31 metres above Burwood Road.

Figure 11-1 of the Environmental Impact Statement shows the intent for the station buildings to be set back from Burwood Road and Parramatta Road with areas of public domain at ground level. Figure 11-6 of the Environmental Impact Statement shows the built form design intent at a high level including upper level setbacks to Burwood Road and Parramatta Road.

As noted in Chapter 11 (Burwood North Station) of the Environmental Impact Statement, the total separation between the southern station building and adjacent residences would be consistent with setback standards identified in the State Environmental Planning Policy No 65 – Design Quality of Residential Apartment Development.

Sydney Metro would continue to consult Burwood Council as part of the ongoing design process for Burwood North Station, including the southern station building. Burwood Council would also be invited to participate in Design Review Panel meetings as required to advise on local issues and design outcomes as they relate to the local context.

Following development of the design, station design and precinct plans (or equivalent as required by the conditions of approval) would be developed for each metro station to document and illustrate the permanent built work and landscape design, including spaces for non-station use. The station design and precinct plan for Burwood North Station would be prepared in consultation with Burwood Council, City of Canada Bay Council, the local community and other relevant stakeholders. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

### 7.6.5 Provision of additional public open space

#### Issues raised

Burwood Council has raised the following issues in relation to the provision of additional public open space:

- the Environmental Impact Statement does not describe the opportunities for additional open space within the station precinct in detail
- the provision of public plaza is shown to the Burwood Road and Parramatta Road frontages of the southern station entrance however there is no analysis of how these spaces might be used, activated or designed
- the new public spaces should have sufficient size and scale to be viewed as contributory areas of public open space within the Burwood North precinct.

## Response

Public domain areas at the entry to the station would provide space for customers to enter and exit the station, and circulation space around the station. In the vicinity of Burwood North Station, the precinct design responds to the planned future Burton Street plaza (proposed as part the *Parramatta Road Corridor Urban Transformation Strategy* (NSW Government, 2016)) as shown on Figure 11-4 of the Environmental Impact Statement. This would be delivered by others.

### 7.6.6 Strategic planning

#### Issues raised

Burwood Council raised the following issues relating to alignment with strategic planning documents:

- page xvi of the Environmental Impact Statement mentions alignment with the *City of Canada Bay Local Strategic Planning Statement* (LSPS) (City of Canada Bay Council, 2020) but not with the Burwood LSPS (Burwood Council, 2020). Consistency should be provided throughout the suite of documents to refer to consistency with the Burwood LSPS.

#### Response

Sydney Metro acknowledges this omission from the executive summary of the Environmental Impact Statement. The Burwood LSPS is considered in Section 11.3.1 of the Environmental Impact Statement and in the Design Guidelines (Appendix M).

### 7.6.7 Bath Arms Hotel

#### Issues raised

Burwood Council raised the following issues in relation to the Bath Arms Hotel:

- the new southern station entry building could visually compete with the heritage listed Bath Arms Hotel and its prominent corner location
- request for additional details of the proposed height of the southern station building and entry so that Burwood Council is able to provide an informed response on the visual impact on the heritage listed Bath Arms Hotel.

#### Response

The indicative height of the southern station building is provided in Technical Paper 6 (Landscape and visual amenity) of the Environmental Impact Statement as about 31 metres. Appendix B (Revised proposal description) has been revised to describe the height of this building in metres.

The non-Aboriginal heritage assessment carried out as part of the Environmental Impact Statement acknowledges that the new southern station entry could visually compete with the heritage listed Bath Arms Hotel and its prominent corner location. This is considered to result in a minor permanent indirect (visual) impact to the Bath Arms Hotel. The design of the station would be consistent with the principles and outcomes presented in the Design Guidelines developed for Sydney Metro West, including place-specific design principles that respond to contextual factors (refer to Appendix E (Design Guidelines)).

### 7.6.8 T1 Western Line services

#### Issues raised

Burwood Council recommended that consideration is given to reviewing the T1 Western Line timetable to ensure Burwood Station is reinstated as a stop on the express train services to Parramatta and Western Sydney.

#### Response

Timetable changes to existing Sydney Trains services are outside the scope of the Sydney Metro West project.

### 7.6.9 Noise sensitive receivers

#### Issues raised

Burwood Council requested there needs to be an additional sensor location identified to ensure that the residents of the mixed-use development at 8 Burwood Road, Burwood are not adversely impacted.

## Response

The noise logging locations shown in Figure 11-12 of the Environmental Impact Statement are for the purposes of establishing the background noise levels for the noise and vibration assessment carried out to inform the Environmental Impact Statement. Noise monitoring would be carried out during construction of this proposal in accordance with the CNVS (Appendix K).

### 7.6.10 Viewpoints

#### Issues raised

Burwood Council raised concern that no representative viewpoints have been identified to inform the daytime visual impact assessment on the southern side of the precinct. Council requests that consideration be given to including an additional representative viewpoint looking south directly to the mixed-use development at 8 Burwood Road, Burwood to the south. This viewpoint could align with the eastern boundary of the southern station entry site.

#### Response

The visual impact assessment includes a number of representative viewpoints to assess potential impacts of the station. In particular, viewpoint 7 is considered sufficient as a representative viewpoint to capture the changes to the views from Burwood Road from the southern station entry. The sensitivity and visual impact ratings for both construction (being minor adverse) and operation (being minor beneficial) of views from the south would be consistent with viewpoint 7. The station building would also be consistent with the building form and scale intended by the precinct planning for this area, and the existing higher density buildings to the south.

## 7.7 Inner West Council

### 7.7.1 Support for Sydney Metro West

#### Issue raised

Inner West Council expressed its support for the Sydney Metro West project, which is essential to realising the revitalisation of The Bays precinct and improvement of connectivity between key economic centres in the region.

#### Response

Inner West Council's support for the Sydney Metro West project is noted.

### 7.7.2 General

#### Issues raised

Inner West Council raised the following issues in relation to the project approval and design process:

- Sydney Metro should not select successful tenderer/joint venture partner before detailed development and construction planning is completed
- appointing the successful tenderer prior to finalisation of designs often leads to a reluctance to modify designs in a manner which, though they may benefit the community and the final outcome, are also likely to result in increased cost
- Inner West Council request that a commitment from the NSW Government is made to ensure that sufficient budget is provided to permit design refinement and redesign to be successfully conducted and implemented
- Inner West Council request that recognition is given to the current master planning process being undertaken for The Bays West Precinct, which has an established working group guiding the total area's development.

#### Response

Design quality assurance is important in the delivery of Sydney Metro West given design quality is integral to the achievement of the government's value for money. Design value is a balance of social, economic and environmental factors. For Sydney Metro West, these may include how well the metro performs, how efficiently the metro operates, and what benefits the metro generates for the community and the environment.

Section 5.2.7 of the Environmental Impact Statement describes how ongoing design development would be managed, including by design and construction contractors to maintain high quality standards throughout the whole design process. This process would be guided by a suite of documents which would be used to review the design at relevant stages in the design process including:

- Sydney Metro design objectives (outlined in Table 5-2 of the Environmental Impact Statement)
- Design quality framework (described in Table 5-4 of the Environmental Impact Statement)
- Design Guidelines, including the place and design principles for Sydney Metro West (Appendix M).

These documents, along with community and stakeholder engagement, internal review processes and independent review through the use of a Design Advisory Panel/Design Review Panel (as described in Table 5-5 of the Environmental Impact Statement) would allow for high quality standards throughout the whole design process. The ongoing design development of the stations and precincts would be informed by the design objectives and principles, as well as feedback from community and stakeholders. Inner West Council would also be invited to participate in Design Review Panel meetings as required to advise on local issues and design outcomes as they relate to the local context.

Following development of the design, station design and precinct plans (or equivalent as required by the conditions of approval) would be developed for each metro station to document and illustrate the permanent built works and landscape design. The station design and precinct plan for The Bays Station would be prepared in consultation with Inner West Council, the Department of Planning and Environment, the local community and other relevant stakeholders. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

Accountability for invested public funds and delivering value-for-money outcomes is a key focus for Sydney Metro, including during the detailed design, construction planning and construction phases of projects. Sydney Metro undertakes all construction contractor procurement in accordance with the relevant NSW Government policies and guidelines, however the construction procurement process is beyond the scope of the planning application for this proposal.

Sydney Metro has and would continue to work with the NSW Department of Planning and Environment and other relevant stakeholders regarding alignment with the *Bays West Place Strategy* (NSW Department of Planning, Industry and Environment, 2021a) and associated draft *Bays West Urban Design Framework* (NSW Department of Planning, Industry and Environment, 2021b), sub-precinct master plans, and the future rezoning process for the relevant sub-precinct, as outlined in Chapter 13 (The Bays Station) of the Environmental Impact Statement and Section 2.8 (The Bays Station – alignment with master planning work) of this Submissions Report.

### 7.7.3 Accessibility

#### Issues raised

Inner West Council raised the following issues in relation to accessibility:

- accessible adult change facilities should be incorporated into station facilities and for construction workers during construction
- suitable wayfinding and other access applications should be provided at stations, especially at The Bays where a site-specific wayfinding and access plan should be prepared
- glass and reflective surfaces combined with other transport arrangements may unnecessarily complicate effective and safe wayfinding
- shared spaces approaching the station often don't function reliably or efficiently with large numbers of people and therefore detailed design work for the station should embrace leading practice accessibility, exploring opportunities beyond DDA compliance.

#### Response

Toilets and worker amenities would be provided at construction sites. The nature of these facilities would be determined by the relevant construction contractor(s).

Toilet facilities would be provided at all Sydney Metro West stations (including accessible toilets). Change facilities are not proposed at stations. These facilities are more appropriately provided at the start or end of a trip such as within surrounding developments separate to this proposal.

Sydney Metro West stations and precincts would include an easy, intuitive and consistent wayfinding system that would facilitate efficient customer movements to, from and through all metro stations, in accordance with section 3.1.3 of the Design Guidelines (Appendix M). Furthermore, Sydney Metro would work with relevant stakeholders to minimise, where possible, the impact on customers transferring between services at interchanges, for example by providing legible wayfinding between nodes.

Clear wayfinding with legible station entries and appropriately scaled spaces around the station and along key pedestrian routes would be further refined during detailed design of the stations. Wayfinding would clearly demarcate dedicated pedestrian and cyclist areas and shared zones as appropriate to the local context.

Station materials and finishes would be determined during detailed design in accordance with the Design Guidelines (Appendix M), in particular Section 3.2.

Sydney Metro would continue to implement Customer Centred Design as described in Section 5.2.8 of the Environmental Impact Statement, which process aims to deliver an easy experience across the entire customer door-to-door journey. Sydney Metro would continue ongoing research to collect feedback from a wide representation of the community, including Aboriginal and Torres Strait Islander peoples, culturally and linguistically diverse community members, vulnerable or marginalised people, people with a disability and elderly people to enhance customer experience through detailed design of the stations and precincts.

#### 7.7.4 Active transport during construction

##### Issues raised

Inner West Council raised the following issues in relation to active transport during construction:

- request that the hierarchy of access framework, for construction traffic management, is included as a condition of approval for this proposal
- it is essential that safe, reliable, legible routes for public and active transport be maintained at all times
- request that future Construction Traffic Management Plans and active transport planning consider:
  - safety of temporary footpath closures and diversions
  - providing a minimum of two weeks advanced notice to users
  - likelihood that Rozelle Parklands and the various active transport links being delivered by WestConnex will be operational during construction of this proposal, and if so this would increase the number of impacted pedestrians and cyclists using this area
- James Craig Road and Roberts Street have been noted to be highly utilised by cyclists and therefore cyclists should be made aware of potential conflicts on these streets
- all existing pedestrian and bicycle routes around the construction sites should be maintained throughout construction.

##### Response

Construction traffic management would be managed in accordance with the CTMF (Appendix J). This includes the hierarchy of access framework, requirements regarding the provision of safe alternate pedestrian and cycle routes, and notification requirement to the public. The CTMF (Appendix J) requires that consideration of safety and security issues for pedestrians and cyclists would occur at all construction sites. For those footpath or specific cycle facility areas which would be impacted by construction work, the contractor would undertake a condition assessment so that they remain suitable for use. This would include an assessment of the paving and lighting of the footpath/cycleway to maintain a safe and suitable passage.

Site specific Construction Traffic Management Plans would be prepared by the Principal Contractor for each site and would include the development of pedestrian and cycle movement plans where it is necessary to divert or warn pedestrian and/or cyclists around the worksite. At The Bays, this would include consideration of the existing and new cycleway links (delivered by others) and popular on-road circuits.

Construction transport impacts at The Bays Station were assessed in Section 13.5.3 the Environmental Impact Statement.

As shown in Figure 3-54 of Technical Paper 2 (Construction transport) of the Environmental Impact Statement, the cycle network identified surrounding The Bays Station includes the use of James Craig Road and Robert Street as cycle routes. Technical Paper 2 (Construction transport) of the Environmental Impact Statement acknowledges that the future active transport network near The Bays Station construction site would be modified as part of WestConnex Rozelle Interchange, which is part of the WestConnex program of work. These changes would be implemented by the time construction of this proposal starts.

### 7.7.5 Active transport during operation

#### Issues raised

Inner West Council raised the following issues in relation to active transport during operation:

- consistent with the hierarchy of movement, it is essential that:
  - pedestrians and cyclists are prioritised, particularly adjacent to the station
  - spaces which pedestrians and cyclists share with motor vehicles should not be included in the design
  - public transport should be accommodated ahead of private vehicles
  - where possible cyclists and pedestrians should be physically separated
- the proponent should provide traffic signals at the existing intersection at Mullens and Robert, incorporating both a pedestrian and cycle crossing
- three sets of escalators to access the platform may be a deterrent for some passengers
- all traffic signals in the vicinity (existing and future) should include the following and be developed in consultation with Transport for NSW:
  - pedestrian crossings on all approaches/legs of all signalised intersections
  - automatic and generous green walk times
  - lead pedestrian intervals and short signal cycles to provide frequent phasing
  - cycle lanterns if on or near cycle routes.
- the new precinct street needs to be legibly designed for slow driving speeds
- conflicts between pedestrians and cyclists, such as at station entries and retail areas, need to include sophisticated design outcomes instead of prohibitive restrictions and signage such as “cyclists dismount”
- the “through site link for connection to buses to be provided” shown in Figure 13-1 should be a walking/bike link only (not accessible by motor vehicles)
- weather-protected and secure bike parking should be provided adjacent to the station entry
- the public space in front of the station (as well as other all public spaces) should provide seating with tables to increase the liveability of the spaces and support local retail businesses
- the project should include provision for an all-weather active transport link between the proposed Bays Station and the Inner West Light Rail
- in accordance with current active transport planning for the Bays West Precinct, it is essential that Glebe Island Bridge be reinstated as an integrated element of the area’s walking and riding network
- consideration should be given to the introduction of a one-way street pattern around the station provided that speed and safety issues can be resolved.

#### Response

Sydney Metro has and would continue to consider the modal access hierarchy which prioritises walking and cycling as the most efficient and sustainable access modes in the detailed design development of each station and precinct. Operational transport impacts at The Bays Station were assessed in Section 13.5.2 of the Environmental Impact Statement.

Options to improve the performance of the Mullens Street / Robert Street intersection (including potential signalisation) would be investigated in consultation with key stakeholders including Inner West Council, Transport for NSW, NSW Department of Planning and Environment and Port Authority of NSW to improve capacity for future demand and to provide safe crossing for pedestrians and cyclists (refer to mitigation measure EIS-TT9 in Appendix C (Revised mitigation measures)).

The proposed arrangement of escalators at The Bays Station is subject to detailed design, however Sydney Metro note that three sets of escalators is relatively common for underground metro railway stations. An alternative path of travel would also be available to customers who wish to use a single lift trip to access the platforms from ground level.

Sydney Metro notes Inner West Council's comments regarding traffic signalling and would work with relevant stakeholders in relation to future traffic signals and appropriate signal phasing.

The Bays Station precinct would be designed to accommodate pedestrian, cyclists and shared users with sign-posted speed limits, wayfinding and user signage. Cycling provision at stations would consider the following guidelines:

- Transport for NSW *Cycleway Design Toolkit* (2020)
- Austroads *Bicycle Parking Facilities: Guidelines for Design and Installation* (2016)
- Australian Standards – AS2890.3 *Parking Facilities: Bicycle Parking* (2015).

The following responses are provided to specific items raised by Inner West Council:

- a key design intent of Sydney Metro West station precincts is to provide continuous cycle links in and around the stations without the need for cyclists to dismount
- the through-site link for connection to buses to be provided shown in Figure 13-1 is intended to be a pedestrian link between the station and the bus stops that is not accessible by motor vehicles
- bicycle parking at The Bays Station would be weather protected and close to the station entry in line with the modal access hierarchy
- public domain around the stations is subject to detailed design and would depend on the intended use of each space. Sydney Metro note Inner West Council's comments regarding provision of seating and tables at The Bays Station would consider this feedback in the detailed design for the station precinct
- an all-weather active transport link between The Bays Station and the Inner West Light Rail is beyond the scope of the Sydney Metro West project. Active transport users would be able to make this connection using a combination of the active links provided as part of this proposal, and those being provided as part of the WestConnex Rozelle Interchange project
- the potential reinstatement of Glebe Island Bridge as an active transport link and general street pattern around The Bays Station is being investigated as part of the *Bays West Place Strategy* and is beyond the scope of the Sydney Metro West project
- the new precinct street would sit at the perimeter of the precinct, separating transport (movement) requirements from place outcomes that focus on the station precinct. Sydney Metro is continuing to work closely with the NSW Department of Planning and Environment and Transport for NSW to align with the *Bays West Stage 1 draft Master Plan and Urban Design Framework* (NSW Department of Planning and Environment, 2022) in relation to the overall street network (including active transport links) for the precinct including the configuration of the new precinct street.

The station design and precinct plans (or equivalent as required by the conditions of approval) for The Bays Station would include details of active transport connections. The station design and precinct plan for The Bays Station would be prepared in consultation with Inner West Council, the Department of Planning and Environment, the local community and other relevant stakeholders. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

### 7.7.6 Air quality

#### Issues raised

Inner West Council requested that a real-time monitoring of air quality including particulates, dust and odours, and for a rapid response mechanism to be put in place to ensure immediate amelioration of resident and business concerns.

## Response

An Air Quality Management Plan would be prepared to manage potential air quality impacts, consistent with the CEMF (Appendix I). This plan would detail specific quality and dust monitoring requirements for each construction site. A range of measures would be implemented to control dust including wetting down of exposed surfaces and adjusting work practices during adverse weather conditions. Where provided, such as at The Bays, acoustic sheds would also effectively control dust.

As a requirement of the OCCS (Appendix N), contractors would be required to adhere to a Construction Complaints Management System which would outline the framework for managing complaints, enquiries and escalation processes throughout the project lifecycle. Complaints about dust would be managed through this framework.

### 7.7.7 Biodiversity and ecology

#### Issues raised

Inner West Council raised the following issues relating to biodiversity and ecology:

- cumulative impacts on biodiversity in this area will result in further deterioration and fragmentation of vegetation that is already segmented from projects such as Rozelle Interchange. While the vegetation is described as 'highly degraded' in the previous Sydney Metro West planning application, it is nevertheless habitat for numerous forms of fauna and should be preserved wherever possible
- specific attention should be paid to the potential for smaller animals that have now relocated to this site from vegetated areas that existed prior to the work carried out under the previous Sydney Metro West planning application
- consideration should be given to potential disturbance to small birds and microbats their habitat during construction, for example the vulnerable Southern Myotis and other threatened species are found in the Inner West and may use the area for foraging, nesting or roosting
- any vegetation to be removed should be removed in a phased manner to permit sufficient time for embedded fauna to relocate. This phasing should include remediation measures and vegetation should be replaced equivalent to the amount being removed
- all significant trees on, or adjacent to, The Bays Station construction site should be retained, however if construction activities necessitate their removal there should be a 5:1 tree replacement policy.

#### Response

Chapter 19 (Cumulative impacts) of the Environmental Impact Statement provides a cumulative impact assessment which considers the impact of all stages of Sydney Metro West combined on biodiversity.

The Bays Station construction site is being established under the previous Sydney Metro West planning application. As a result, the majority of the vegetation located within The Bays Station construction site has been previously assessed and approved for removal. Two additional footprint areas containing some urban/exotic vegetation would be cleared as part of this proposal. Vegetation in these areas have been recently subject to disturbance and partial clearance associated with the construction of the M4-M5 Link Rozelle Interchange project. Potential impacts to biodiversity arising from this proposal are anticipated to be minimal.

Biodiversity mitigation measures would be implemented in accordance with the requirements of the CEMF (Appendix I) which includes procedures for the clearing of vegetation and the relocation and management of flora and fauna, and discovery of unexpected threatened species.

In the areas of additional footprint for this proposal, opportunities for the retention and protection of existing trees would be identified during detailed construction planning. Sydney Metro would provide replacement trees across the whole project at a 2:1 ratio resulting in a net increase in tree canopy cover across the project in accordance with condition C-B8 of the previous Sydney Metro West planning application.

### 7.7.8 Community and stakeholder consultation

#### Issues raised

Inner West Council raised the following issues relating to community consultation:

- request to be actively involved in the overall coordination of the Sydney Metro West project and numerous other state and private projects currently underway within the Bays Precinct, and that the NSW Department of Planning and Environment are involved as appropriate

- consultation should be used to:
  - identify opportunities to support delivery of the *Bays West Place Strategy*, associated urban design framework and relevant sub-precinct master plans throughout different stages of construction and planning
  - provide ongoing feedback on road layout and interchange facilities, land use, detailed built form, public and active transport enhancements and landscape design
  - ensure a coordinated approach to construction which guarantees local residents and businesses significant periods of complete respite.
- a comprehensive community engagement process should be adhered to throughout the planning and construction phase of the project, and this engagement process should be transparent and adaptive in a manner which permits it to rapidly respond to changing circumstances
- Inner West Council requests that ongoing discussions continue with relevant Council officers particularly in relation to construction impacts on the community, traffic, groundwater, flora and fauna, noise and vibration, water and air quality.

### Response

Inner West Council is a key stakeholder for this proposal and has been consulted with since 2017. Consultation would continue to occur with local councils during the development and construction of this proposal, including within The Bays, through regular meetings, including Inner West Council officer attendance at monthly Traffic Control Group and Traffic and Transport Liaison Group meetings, briefings and other forms of communication such as phone calls and emails.

The OCCS (Appendix N) has been prepared to guide Sydney Metro's approach to stakeholder and community liaison, including engagement with communities, stakeholders and businesses. Section 11 of the OCCS provides process for monitoring, auditing and review of the effectiveness of engagement strategies so that they remain effective throughout construction (Appendix N).

### 7.7.9 Construction activity

#### Issues raised

Inner West Council raised the following issues relating to construction activity:

- concern about potential impacts to road and public transport access and safety for residents and businesses on the northern side of Robert Street during construction has not been adequately addressed
- impacts for residents working from home must be considered and minimised (e.g. noise exceedances during the day)
- consultation should be carried out with local businesses north of the site, to ensure that construction impacts do not significantly inhibit operations
- the Environmental Impact Statement should clearly state:
  - the number of parking spaces to be lost, their location and any compensatory parking to be provided
  - details regarding the management of bus stops at Robert Street before Victoria Road and Robert Street at Crescent Street to ensure safety of passengers
- a pedestrian and cyclist management plan should be produced to ensure safety (including of construction workers) and minimise conflict at crossing facilities, particularly those near bus stops
- residents and businesses should be provided with a minimum of two weeks' notice prior to commencement of any changes to advertised construction activity, most particularly in relation to noise exceedance events, general noise and vibration impact and peak periods of noise and vibration impact
- Inner West Council does not consider sleep disturbance events acceptable
- construction impacts should be minimised particularly noting cumulative impacts from other projects occurring around White Bay and Rozelle Bay.

## Response

Potential impacts to road and public transport access and safety for residents and businesses on the northern side of Robert Street during construction is assessed in Chapter 13 (The Bays Station) of the Environmental Impact Statement which has been prepared in accordance with the Secretary's environmental assessment requirements.

The noise assessment considers potential impacts to residential receivers during all time periods where work is proposed. As a result, the impacts to people who may be occupying residential properties during the day, including residents who work from home, have been considered.

Mitigation measures to manage potential impacts to local businesses, including those north of The Bays Station construction site, are included in the OCCS (Appendix N). This includes preparation of a Small Business Owners Engagement Plan to mitigate potential impacts to businesses that are potentially impacted by construction activities.

Potential impacts to parking spaces at The Bays during construction are identified in Section 13.5.3 of the Environmental Impact Statement. Section 2.13 (Minor corrections and clarifications) of this Submissions Report provides further clarity regarding the indicative permanent and temporary potential parking impacts of this proposal, including at The Bays. In addition to the parking spaces that would be permanently removed on Robert Street (about 72 spaces total, east of Mullens Street), there may be some additional on-street parking spaces impacted by short-term closures (for around a few months) along Robert Street to facilitate construction works for the new precinct street / Robert Street intersection. The number of spaces removed would likely change throughout construction depending on work being undertaken on Robert Street. The potential social and business impacts associated with parking changes at the precinct are considered in Section 13.12 and Section 13.13 of the Environmental Impact Statement, respectively.

There are no changes proposed to existing bus stops around The Bays Station during construction.

Potential impacts to pedestrians and cyclists would be managed in accordance with the CTMF (Appendix J). The CTMF requires that consideration of safety and security issues for pedestrians and cyclists would occur at all construction sites. Site specific Construction Traffic Management Plans would be prepared by the Principal Contractor for each site and would include the development of pedestrian and cycle movement plans where it is necessary to divert or warn pedestrian and/or cyclists. At The Bays Station, this would include consideration of existing and new cycleway links and popular on-road circuits. The CTMF (Appendix J) also includes requirements for activity-specific communications strategies to be developed prior to traffic events, and for activity-specific notifications to be developed and issued to directly impacted properties prior to works commencing.

Community notification would be carried out as per the OCCS (Appendix N). Notifications would generally occur seven days prior to work commencing, except for emergency works. This is consistent with the notifications process for other major projects, including previous Sydney Metro projects.

Inner West Council's comments regarding sleep disturbance are noted. Justification for out of hours work is provided in Section 6.5.1 of the Environmental Impact Statement and Section 4.4.1 of Technical Paper 4 (Construction noise and vibration) of the Environmental Impact Statement. Completing out of hours work would reduce the overall program of this proposal. Earlier completion would bring considerable benefits to the community (in terms of reducing the construction period) and would reduce the duration of construction related disruption. The CNVS (Appendix K) would be implemented to manage these temporary impacts and further investigation of minimising sleep disturbance would be completed during detailed construction planning when further information becomes available.

Sydney Metro is committed to coordinating and consulting with relevant stakeholders to manage the interface of projects under construction at the same time, including around The Bays Station. This would include:

- provision of regular updates to the detailed construction program, construction sites and haul routes
- identification of key potential conflict points with other construction projects
- developing mitigation strategies in order to manage potential conflicts.

### 7.7.10 Construction traffic and traffic control measures

#### Issues raised

Inner West Council raised the following issues relating to construction traffic:

- concern about the increase in traffic congestion resulting from construction vehicle movements on Robert Street (35 second average delay per vehicle in AM peak, and 20 second average delay per vehicle in PM peak), and the resulting impacts on local businesses, visitors, and residents
- concern about traffic congestion impacting on local businesses, visitors and residents through increased travel times, delays or hindered access to workplaces or servicing areas, and efficiency of deliveries
- concern about pedestrian safety due to increase in construction vehicle movements, and request that improved pedestrian facilities (barricades or protective measures) should be provided to ensure separation between pedestrians and cyclists and construction vehicles
- request that the CTMF includes:
  - all heavy vehicle drivers including subcontractors be required to undertake cycle and pedestrian awareness training, as well as supervised route orientation training
  - all construction vehicles must be clearly identified for the project and relevant construction site, and with contact details for the complaints/compliments hotline
  - all heavy vehicles should have both high- and low-level mirrors to assist in reducing blind spots which may limit visibility of pedestrians and cyclists
  - all heavy vehicles should be fitted with active, real-time GPS tracking
  - consideration should be given to the provision of GPS guided routing which specifically uses only the approved haul routes for each site
- request that potential construction traffic impacts on active transport, public transport and parking are considered for when Iron Cove Link and Rozelle Parklands is open
- any future reopening of vehicular access out of Robert Street would not be supported by Inner West Council due to traffic and safety concerns and therefore all construction access should be via James Craig Road.

#### Response

Inner West Council's comments regarding Robert Street are noted. Construction transport impacts at The Bays Station were assessed in Section 13.5.3 of the Environmental Impact Statement. Robert Street does not form part of the primary construction haul route and is not expected to be used day to day for access to The Bays Station construction site. Some precinct construction works along and fronting Robert Street would require access via Robert Street and this would be managed in accordance with the CTMF (Appendix J). Sydney Metro would work with Inner West Council to manage potential road network and local traffic impacts for any works requiring heavy vehicle access on Robert Street.

Potential impacts to businesses and residents from construction traffic congestion are considered in Chapter 13 (The Bays Station) of the Environmental Impact Statement, including a summary of the business impact assessment and the social impact assessment. These impacts would be managed in accordance with the CTMF (Appendix J), the OCCS (Appendix N) and site-specific Community Communications Strategy which would guide Sydney Metro's approach to stakeholder and community liaison, including engagement with communities, stakeholders and businesses.

Construction traffic management would be managed in accordance with the CTMF (Appendix J). This includes the hierarchy of access framework, requirements regarding the provision of safe alternate pedestrian and cycle routes, and notification requirement to the public. The CTMF (Appendix J) requires that consideration of safety and security issues for pedestrians and cyclists would occur at all construction sites. For those footpath or specific cycle facility areas which would be impacted by construction work, the contractor would undertake a condition assessment to ensure that they remain suitable for use.

Driver training and vehicle requirements are outlined in the Sydney Metro Principal Contractor Health and Safety Standard. As required by the CTMF (Appendix J), heavy vehicle drivers would be made fully aware by the contractor of the construction site traffic management arrangements and site-access requirements, including approach and departure routes and any heavy vehicle noise management measures required. Driver training would consider current best practice and information, including cycle awareness training. The contractor must ensure that regular briefings are provided to drivers on routes, potential changes and impacts on the routes in the form of toolbox talks. Contractors must ensure mandatory completion of the Sydney Metro project-specific heavy vehicle driver introduction training and are required to have systems in place to monitor vehicle locations at all times and report and address any identified non-conformances.

Construction traffic mitigation measures would be implemented to manage all relevant construction traffic aspects including for when Iron Cove Link and Rozelle Parklands is open.

### 7.7.11 Construction parking impacts

#### Issues raised

Inner West Council raised the following issues relating to parking during construction:

- concern that no details are currently provided regarding the management of construction worker parking, and that Inner West Council would like to review the parking management plan, which should include measures to reduce private car dependency
- Inner West Council supports no parking on the new precinct street
- concern that the removal of parking spaces on Roberts Street will increase parking demand on Mullens Street, Crescent Street and Buchanan Street (and possibly other local streets)
- request for compensatory parking to assist local businesses
- reduced parking availability should be matched by increased frequencies of public transport services to meet the needs of access for local businesses, visitors, residents and construction workers
- request that a detailed parking plan be provided showing where and how many parking spaces will be temporarily and permanently removed
- request that a detailed construction worker parking management scheme be included as a condition of approval.

#### Response

The CTMF (Appendix J) sets out mitigation measures for how worker access and parking would be managed including investigating opportunities to provide parking at construction sites, identification of remote parking areas for workers and encouraging workers to use public transport when travelling to and from the work sites. Construction worker parking impacts associated with this proposal were assessed in Section 18.7 of the Environmental Impact Statement.

Potential impacts to parking spaces at The Bays during construction are identified in Section 13.5.3 of the Environmental Impact Statement. Section 2.13 (Minor corrections and clarifications) of this Submissions Report provides further clarity regarding the indicative permanent and temporary potential parking impacts of this proposal, including at The Bays. In addition to the parking spaces that would be permanently removed on Robert Street (about 72 spaces total, east of Mullens Street), there may be some additional on-street parking spaces impacted by short-term closures (for around a few months) along Robert Street to facilitate construction works for the new precinct street / Robert Street intersection. The number of spaces removed would likely change throughout construction depending on work being undertaken on Robert Street. The potential social and business impacts associated with parking changes at the precinct are considered in Section 13.12 and Section 13.13 of the Environmental Impact Statement, respectively.

Sydney Metro would continue to consult with Inner West Council throughout construction, including matters related to construction parking impacts.

The CTMF (Appendix J) outlines the requirement for preparation of parking management plans, where required. These plans would identify requirements for on-site and off-site parking during construction and associated impacts; remote parking arrangements and associated access between sites and public transport nodes; alternate parking arrangements for displaced parking; and communication and parking management measures.

Mitigation measures to manage potential local business impacts are included in the OCCS (Appendix N) which includes preparation of a Small Business Owners Engagement Plan where Sydney Metro to mitigate potential impacts to businesses that are potentially impacted by construction activities (such as temporary loss of parking).

No car parking is proposed to be provided in the new precinct street.

### 7.7.12 Construction noise and vibration

#### Issues raised

Inner West Council raised the following issues relating to construction noise and vibration:

- sleep disturbance impacts are unacceptable (particularly for residents north of the construction site)
- heavy vehicle movements should be arranged to avoid sleep disturbances and only minimal night-time impacts to residents
- no road work activities should exceed 20dB
- all affected residential receivers should receive at least two weeks' notice of the times of day to expect forecasted high noise levels and any severe noise impact time periods
- noise and vibration monitoring stations should be established during the construction period for residential properties, businesses, heritage buildings, and monitoring results should be made publicly available
- vibration monitoring should be undertaken for operational train movements
- impacts that may result in unacceptable vibration impacts should not be carried out during sleep hours or at night-time
- a public health analysis be carried out and that this analysis include consideration of both this proposal and the cumulative impact of infrastructure projects in the Balmain, Rozelle and White Bay area.

#### Response

Inner West Council's comments regarding sleep disturbance are noted. The CNVS (Appendix K) would be implemented to manage these temporary impacts and to further investigate minimising sleep disturbance during detailed construction planning when further information becomes available. Section 7.7.9 provides a further response to comments from Inner West Council regarding sleep disturbance.

During construction, road work activities are predicted to result in exceedances of noise management levels of greater than 20 dB for some receivers for short periods of time during peak construction work when concrete saws or rockbreakers are being used. The total duration of this work is expected to be about around nine months, however the use of rockbreakers and concrete saws would be intermittent during this period. These works have generally been restricted to daytime hours. Alternative construction methodologies and measures that minimise noise and vibration levels during noise intensive work would be investigated and implemented where feasible and reasonable, in accordance with mitigation measure CEMF-NV25 in the CEMF (Appendix I).

Construction vibration monitoring would be managed in accordance with the CNVS (Appendix K). This includes undertaking Detailed Noise and Vibration Impact Statements, once the construction equipment and methodology are confirmed, to identify feasible and reasonable mitigation measures to manage potential impacts to residential properties, businesses and heritage buildings.

Dedicated Sydney Metro place managers would continue to engage with the community, address concerns, and to understand community preferences for mitigation and management measures related to construction noise and vibration impacts.

Community notification would be carried out as per the OCCS (Appendix N). Notifications would generally occur seven days prior to work commencing, except for emergency works. This is consistent with the notifications process for other major projects, including previous Sydney Metro projects. Consultation regarding out of hours work would occur in accordance with the Sydney Metro West Out of Hours Work Protocol and would include the provision of the following to the surrounding community:

- a progressive schedule for periods no less than three months of likely out of hours work
- a description of the potential work, location and duration of the out of hours work
- the noise characteristics and likely noise levels of the work

- likely mitigation and management measures which aim to achieve the relevant noise management levels
- specific notification of out of hours work at least seven days prior to the work commencing along with information regarding expected impacts, mitigation measures and contact details for enquiries or complaints.

Sydney Metro West is required to demonstrate that operational noise and vibration is in keeping with levels identified during the planning and assessment process, and in line with regulatory guidelines. An Operational Noise and Vibration Review would be prepared during design development to confirm the mitigation measures required to manage potential airborne and ground-borne noise and vibration impacts from rail operations and stations, in accordance with mitigation measure EIS-NV4. The NSW EPA would be consulted during the preparation of this review. This has been included as an additional mitigation measure in Section 2.14 (Changes to or additional mitigation measures) of this Submissions Report. Vibration monitoring of operational trains would be carried out in accordance with the requirements of any conditions of approval.

Cumulative impacts around The Bays have been considered in Chapter 19 (Cumulative impacts) of the Environmental Impact Statement. This includes consideration of the potential impacts associated with construction of a number of other infrastructure projects in the vicinity of The Bays. The cumulative assessment was prepared in accordance with the Secretary's environmental assessment requirements and the *Cumulative Impact Assessment Guidelines for State Significant Projects* (NSW Department of Planning and Environment, 2021), neither of which require a public health analysis to be carried out for this proposal.

### 7.7.13 Cumulative construction impacts

#### Issues raised

Inner West Council raised the following issues relating to cumulative construction impacts:

- request for a systematic approach for dealing with cumulative impacts of existing and potential new, less predictable infrastructure projects in the Balmain, Rozelle and White Bay area, where residents have been exposed to continuous extensive construction activity
- it is essential that all developers, government and private, work together to coordinate activity to ensure that distinct respite periods are available where local residents are not subjected to any construction activity
- request that the overall impacts of the Sydney Metro West project are considered as one (rather than three separate Environmental Impact Statements), as well as the cumulative impacts with all other construction projects in the vicinity
- comprehensive cumulative impact assessment should include consideration of:
  - cumulative construction fatigue
  - public health impacts including both physiological and psychological
  - management and coordination of respite periods
  - overall social impacts
  - air and water quality
  - groundwater, hydrology and flooding
  - noise and vibration
  - sustainability and biodiversity
  - waste management
  - general environmental and amenity aspects.
- the cumulative impact assessment should detail which days and nights in which multiple activities from multiple projects will occur, otherwise it is possible there will be multiple noise level exceedances occurring on consecutive nights
- coordination between NSW Government and private companies to ensure distinct, regular and well notified respite periods and no night-time construction activity.

## Response

The cumulative assessment was prepared in accordance with the Secretary's environmental assessment requirements and the *Cumulative Impact Assessment Guidelines for State Significant Projects* (NSW Department of Planning and Environment, 2021). This methodology included development and application of screening criteria to determine which projects should be included in the cumulative impact assessment. These criteria were:

- spatial relevance: if the project overlaps with or occurs in close proximity to this proposal
- timing: where timing of a project overlaps with or occurs consecutively to construction or operation of this proposal
- scale: where a project is State significant development; State significant infrastructure; designated development; requires assessment under Division 5.1 of the NSW Environmental Planning and Assessment Act 1979 and is likely to significantly affect the environment and require an Environmental Impact Statement; declared to be a controlled action under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*; constitutes major development (as identified through consultation with stakeholders and government agencies)
- status: where there is sufficient publicly available information about a project to inform a cumulative impact assessment at the time of preparation of the Environmental Impact Statement (such as timing of construction and operation and identification of potential key issues or impacts).

Based on these criteria, the projects considered in the cumulative impact assessment for The Bays Station were:

- the previous Sydney Metro West planning applications
- WestConnex M4-M5
- Western Harbour Tunnel and Warringah Freeway Upgrade
- The new Sydney Fish Market.

Chapter 19 (Cumulative impacts) of the Environmental Impact Statement also considered potential construction fatigue as an impact of this proposal.

Sydney Metro acknowledges coordination between proponents is required to manage potential cumulative construction impacts. These impacts would be managed through the implementation of mitigation measure CEMF-CI1 outlined in the CEMF (Appendix I). This includes consultation with the stakeholders where required to manage the interface of projects under construction at the same time, and the coordination of works and traffic arrangements between projects. Sydney Metro is also continuing to engage regularly with Port Authority of NSW, Place Management NSW and other parts of Transport for NSW to coordinate construction and mitigate traffic impacts.

Section 9 of the OCCS (Appendix N) outlines processes for the coordination of consultation where cumulative impacts may occur. The site-specific Community Communications Strategy prepared for The Bays Station would also consider cumulative impacts and include tailored mitigation measures specific to the site. These would be reviewed and evaluated through construction to consider the appropriateness of mitigation measures and lessons learnt.

The planning applications and environmental impact assessment for Sydney Metro West has been staged in recognition of the size of the project. Staged infrastructure applications can be made under section 5.20 of the *Environmental Planning & Assessment Act 1979*. All three stages of Sydney Metro West have been adequately considered in Chapter 19 (Cumulative impacts) of the Environmental Impact Statement and no further cumulative impact assessment is proposed as part of this proposal. Other relevant projects were also considered in the cumulative assessment as listed in Table 19-1 of the Environmental Impact Statement.

The cumulative impact assessment includes consideration of the technical items raised by Inner West Council in their submission.

### 7.7.14 Flood management and stormwater design

#### Issues raised

Inner West Council raised the following issues relating to flood management and stormwater design:

- ongoing consultation should be maintained regarding flood management and stormwater design
- adequate justification is not provided for the flood protection level at The Bays Station (i.e. one per cent AEP with climate change (plus 0.3 metres freeboard)), noting the PMF has a significant increase in flood depth
- Inner West Council has only supported a reduction in the freeboard from 500 millimetres to 300 millimetres where the depth of flow is 300 millimetres or less and where the overland flow rate is less than 2 cm/sec, with adequate flow paths being available
- reliance on external bunding and perimeter drainage is not considered sufficient to address long term flooding, particularly in areas identified for potential future development south of the station
- request for specific details on the additional open channel through the site, and note that the Leichhardt Floodplain Risk Management Plan proposed an additional culvert within the site
- consideration should be given to designing and constructing the proposed open channel as a naturalised channel to improve local amenity and reduce risk from entry without requiring the channel to be fenced off
- request for information on who would be responsible for maintaining the new open channel. Inner West Council would not take on ownership of an end of line asset where the existing network was under the ownership and maintenance of Sydney Water
- Inner West Council assumes Sydney Metro will consult further with them about the design of the realigned road and the associated drainage, and requests clarity on whether the road would be handed over to Council as part of precinct development or remain responsibility of Transport for NSW.

#### Response

Sydney Metro would continue to consult with Inner West Council and the NSW Department of Planning and Environment regarding flood management and stormwater design including the open channel through The Bays site and who would be the future owner of this asset, the realigned road and associated drainage.

The flood protection level for The Bays Station is the one per cent AEP with climate change plus 500 millimetres freeboard. This was incorrectly noted as 300 millimetres in Chapter 13 (The Bays Station) of the Environmental Impact Statement.

Mitigation measure EIS-HF1 requires measures to be identified during further design development to not worsen flood impacts on the community and on other property and infrastructure, up to and including the one per cent AEP flood event. Mitigation measure EIS-HF2 (Appendix C (Revised mitigation measures)) requires emergency management arrangements to be developed to manage flood risks to people and vehicles accessing stations and ancillary facilities. Sydney Metro would continue to work with the NSW Department of Planning and Environment and other key stakeholder in relation to long term flood management for The Bays West precinct as part of the *Bays West Place Strategy*.

### 7.7.15 Aboriginal heritage

#### Issues raised

Inner West Council raised the following issues relating to Aboriginal heritage:

- anecdotal advice from the local Aboriginal community indicates that the area is particularly significant and should be dealt with sensitively and in accordance with all necessary protocols
- issues of Aboriginal heritage are continually oversimplified and Inner West Council requests the following:
  - great care should be taken with all excavation, regardless of the depth (noting that there is potential for artefact finds in the top 1m in this area) and that all appropriate archaeological protocols should be adhered to throughout the project's construction phase. This is particularly relevant as the Environmental Impact Statement tends to highlight known sites; however Council's experience is that sites are likely to be distributed throughout the White Bay area

- comprehensive Aboriginal consultation should always take place when a project is located near any existing, or past, waterway in the Inner West, as these waterways were the “life blood” of Sydney’s Indigenous People and are highly likely to include sensitive sites and yield artefacts.

### Response

Sydney Metro acknowledges the need for sensitivity regarding Aboriginal heritage and the need to follow all necessary protocols. The previous Sydney Metro West planning application identified an area of low to moderate archaeological potential and an area of moderate archaeological significance (refer to Technical Paper 4 (Cultural heritage assessment) of *Sydney Metro West Environmental Impact Statement – Major civil construction between The Bays and Sydney CBD* (Sydney Metro, 2020a)). This area of archaeological potential extends into the additional footprint required for this proposal, which has been assessed in Section 13.8 of the Environmental Impact Statement.

In accordance with mitigation measure AH2 for the previous Sydney Metro West planning application, archaeological test excavation (and salvage when required) at The Bays Station under the previous Sydney Metro West planning application would be carried out where intact natural profiles with the potential to contain significant archaeological deposits are encountered. Excavations would be conducted in accordance with the Aboriginal archaeological test excavation methodology as required by condition of approval D22 for the previous Sydney Metro West planning application and in consultation with Registered Aboriginal Parties.

Consistent with the impact assessment and mitigation measures in the previous Sydney Metro West planning application, should archaeological deposits be identified within the areas of additional footprint required for this proposal, and if excavation is proposed to reach 2.8 metres below ground level, further archaeological investigation of The Bays Station construction site may be required prior to construction.

Consultation with Registered Aboriginal Parties has been carried out in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (Department of Environment, Climate Change and Water, 2010). Details of this consultation are provided in Section 13.8.1 of the Environmental Impact Statement.

Ongoing consultation would occur in accordance with mitigation measures CEMF-H5, CEMF-H6 and CEMF-H7 in the CEMF (Appendix I).

Sydney Metro is also consulting with Aboriginal heritage knowledge holders as part of design development, including for the purposes of better understanding cultural values and addressing the Connecting with Country framework (Government Architect, 2020b).

#### 7.7.16 Non-Aboriginal heritage

##### Issues raised

Inner West Council emphasises the need to ensure that the construction does not impact, in any way, on the numerous heritage structures in the vicinity (including White Bay Power Station, Island Bridge and the Silos). Council therefore requests that vibration monitoring stations be established on or immediately adjacent to any significant heritage structures and that regular dilapidation analysis be carried out during the tunnelling and construction period to ensure that any cracking or disfigurement is detected immediately.

##### Response

Potential heritage impacts have been avoided and minimised where possible. Potential heritage impacts at The Bays Station were assessed in the Section 13.7 of the Environmental Impact Statement including the White Bay Power Station and associated inlet and outlet canals, and the Glebe Island Silos. The Glebe Island Bridge is not included within the non-Aboriginal heritage assessment study area for this proposal, as it is located over 50 metres away from The Bays Station construction site (including areas of additional footprint for this proposal).

Some construction work would be required within the heritage curtilage of the White Bay Power Station for the construction. The construction site and has been moved as far away as possible from the curtilage while taking into account the necessary construction activities, the operational requirements of surrounding port activities and the outcomes to be achieved as part of the operational station. No significant buildings or structures in the curtilage of the White Bay Power Station would be directly affected.

Throughout detailed design development, the project team would look for opportunities to further minimise impacts to heritage items.

Non-Aboriginal heritage impacts would be managed in accordance with the CEMF (Appendix I), which includes heritage management objectives to minimise impacts on heritage items, avoid accidental impacts on heritage items, and maximise workers' awareness of Aboriginal and non-Aboriginal heritage. The CEMF (Appendix I) also requires archival recordings of all heritage items affected by the work prior to commencement of work and includes mitigation measures CEMF-NV14 and CEMF-NV15 related to managing vibration impacts (including to nearby heritage items) and CEMF-NV28 related to undertaking building condition surveys including specific requirements for heritage items.

### 7.7.17 Impacts on nearby businesses

#### Issues raised

Inner West Council raised the following issues relating to nearby businesses:

- business impacts to Roberts Street business precinct should be minimised and the businesses should be extensively consulted regarding any potential impacts
- potential impacts on the Cruise Passenger Terminal should be specifically considered, particularly noting the recent upgrading of its conference/function centre
- potential impacts to residents working from home during the construction period should be specifically considered, including construction noise and vibration, power outages and utility interruptions, traffic congestion impacts on home-office deliveries
- more detailed analysis of access and loading limitations is required for Robert Street businesses on occasions that Robert Street may be used by construction traffic
- particular attention should be paid to managing activities and events associated with festive periods such as New Year's Eve and Australia Day in The Bays area.

#### Response

Potential impacts to local businesses, including the White Bay Cruise Terminal, would be minimised through mitigation measures for traffic and amenity related issues (such as noise, traffic, visual and air quality) as well as the specific business impact related measures CEMF-BI1 and CEMF-BI2 in the CEMF (Appendix I). Sydney Metro is and would continue to consult with the Port Authority of NSW regarding the management of impacts to the White Bay Cruise Terminal. Sydney Metro would maintain access to the White Bay Cruise Terminal during construction via the Ports Access Road which traverses the Sydney Metro construction site. Responses to issues raised by the Port Authority of NSW are provided in Section 8.10 (Port Authority of NSW). Potential business impacts at The Bays Station were assessed in the Section 13.13 of the Environmental Impact Statement including businesses along Robert Street.

The OCCS (Appendix N) also identifies that a Community Communication Strategy would be prepared and implemented during construction and include requirements related to small business engagement. The OCCS (Appendix N) also requires preparation of a Small Business Owners Engagement Plan to mitigate potential impacts to businesses that are potentially impacted by construction activities. Sydney Metro's overarching approach to business engagement is to:

- identify and document potentially impacted businesses prior to project commencement
- provide early advice to businesses of upcoming projects
- provide businesses with information about the project and its long terms benefits
- provide businesses with information about construction progress
- ensure businesses understand the scope of the work and mitigation measures contractors can provide
- ensure businesses understand the proposed timing of the work
- consult with businesses and take steps to minimise potential impacts
- ensure the project team understands the operational requirements and sensitivities of businesses around each site.

Sydney Metro has a proven track record of working closely with the neighbouring communities and businesses on both Sydney Metro Northwest and Sydney Metro City & Southwest projects.

The noise assessment considers potential impacts to residential receivers during all time periods where work is proposed. As a result, the impacts to people who may be occupying residential properties during the day, including residents who work from home, have been considered.

Robert Street does not form part of the primary construction haul route and is not expected to be used day to day for access to The Bays Station construction site. Some precinct construction works along and fronting Robert Street would require access via Robert Street. Potential impacts to businesses on Robert Street from construction traffic would be managed via the CTMF (Appendix J) and OCCS (Appendix N).

Consultation would occur with organisers of major events, and (as relevant) with Transport for NSW to provide appropriate management of construction vehicle movements to address potential impacts to event patrons, the public and manage construction work. Measures to manage special events are outlined in the CTMF (Appendix J).

#### 7.7.18 Operational traffic

##### Issues raised – proposed signalised intersection of Robert Street and New precinct street

Inner West Council raised the following issues relating to the signalised intersection of Robert Street and New precinct street:

- concern regarding reduction of parking and access impacts for businesses on Robert Street
- loss of on-street parking is unacceptable and this must be significantly reduced or compensatory parking should be provided
- proposed traffic signals should include on-street bicycle facilities and pedestrian crossing legs on all approaches.

##### Response – proposed signalised intersection of Robert Street and New precinct street

Parking removal along Robert Street is required to facilitate new access to the Bays West precinct. Options to minimise parking loss would be explored in consultation with the NSW Department of Planning and Environment as part of master planning work for Bays West. Further design development and the preparation of the station design and precinct plan for The Bays Station would aim to minimise parking impacts, while also considering the directions in the *Bays West Place Strategy*, including to prioritise walking, cycling and public transport by capitalising on the new metro station, rather than private vehicle travel.

In accordance with mitigation measure EIS-TT3, measures to address potential parking impacts arising from a loss of on-street parking in the vicinity of station precincts, as well due to potential park and ride in residential streets would be developed, where required, in consultation with relevant local councils. This could include:

- identifying opportunities to minimise potential parking loss during detailed design where possible, having regard to the Sydney Metro modal access hierarchy (e.g. kiss and ride spaces being available for general parking outside of the AM and PM peak periods)
- detailed interchange access planning including consideration of any local council initiated residential parking schemes.

The need for pedestrian crossing facilities at the Robert Street / New precinct street intersection would be investigated in consultation with Inner West Council, Transport for NSW, NSW Department of Planning and Environment and Port Authority of NSW (as per mitigation measure EIS-TT8 (Appendix C (Revised mitigation measures))).

##### Issues raised – intersection of Robert Street and Mullens Street

Inner West Council raised the following issues relating to the intersection of Robert Street and Mullens Street:

- there is a need to signalise the intersection of Mullens Street and Roberts Street to accommodate the expected traffic flows
- the existing dedicated right turn lane, from Robert Street northbound to Robert Street eastbound, will also need to be lengthened
- while carrying out this work the opportunity should be taken to realign and reconfigure the intersection, taking into consideration likely bus, taxi and private vehicles movements from Victoria Road to The Bays Station pickup locations. Additionally, the operation of the White Bay Cruise Terminal will generate movements through and to the end of Robert Street
- the existing kerb and gutter should be realigned along the south side of Robert Street to provide a continuation of a wider shared path from Victoria Road
- the signalisation should include pedestrian and cycle crossing legs on all approaches at this intersection.

### **Response – intersection of Robert Street and Mullens Street**

Options to improve the performance of the Mullens Street / Robert Street intersection (including potential signalisation) would be investigated in consultation with key stakeholders including Inner West Council, Transport for NSW, the NSW Department of Planning and Environment and Port Authority of NSW to improve capacity for future demand and to provide safe crossing for pedestrians and cyclists (refer to EIS-TT9 in Appendix C (Revised mitigation measures)).

### **Issues raised – Robert Street**

Inner West Council raised the following issues relating to Robert Street:

- all existing footpaths and lighting should be upgraded along Robert Street, and new footpath should be provided where there is currently no existing footpath (e.g. on the south side)
- connection to the existing and future active transport links to Rozelle Parklands and Victoria Road is essential
- connection to existing cycle routes along Buchanan Street is required
- the footpath along the north side is currently substandard with angle parking and at times vehicles overhang into the footpath areas. These areas should be reviewed to ensure a balance between walking, vehicle loading and on-street parking for businesses
- consideration should be given to reducing the speed limit on Robert Street to 40 or 30km per hour.

### **Response – Robert Street**

Where changes to the existing transport network are being provided on Robert Street, localised upgrades to existing footpaths would be confirmed during detailed design. Changes to the speed limit on Robert Street are beyond the scope of the Sydney Metro West project.

This proposal includes:

- cyclist and pedestrian infrastructure (connecting with existing or proposed facilities), which reinforce access to and connection with Rozelle Parklands located to the south-west of The Bays Station site
- an active transport link through the station precinct which connects to the existing cycle route on Robert Street. Sydney Metro would continue to consult with Council regarding the integration of the station precinct with the local cycle network.

### **Issues raised – intersection of Robert Street and Victoria Road**

Inner West Council raised the following issues relating to the intersection of Robert Street and Victoria Road:

- request that the current shared path along White Bay Power Station frontage should be widened or ideally constructed as a separated cycleway
- the part-time operation of the right turn phase from Robert Street to Victoria Road should be re-examined as part of this proposal to improve intersection performance
- a bicycle lantern should be provided across Robert Street / Victoria Road intersection
- the pedestrian crossing across Robert Street / Victoria Road intersection should be repositioned further away from the Victoria Road carriageway.

### **Response – intersection of Robert Street and Victoria Road**

Changes to the Robert Street and Victoria Road intersection are beyond the scope of the Sydney Metro West project.

### **Issues raised – The Bays Station, new precinct street and internal roads**

Inner West Council raised the following issues relating to the station, new precinct street and internal roads:

- the proposed roundabout within new precinct street should be built in a way that provides a turnaround area, without the need to access James Craig Road
- the absence of restrictions imposed for vehicles connecting to James Craig Road, from new precinct street is likely to result in an undesirable rat run with safety and amenity consequences particularly for businesses along James Craig Road
- Inner West Council requests that the proposed bicycle parking in The Bays Station be provided with superior end-of-trip facilities, lockable and secure facilities to encourage active travel.

### Response – The Bays Station, new precinct street and internal roads

The function of the road network is subject to master planning work for Bays West and is beyond the scope of the Sydney Metro West project. The precinct street delivered as part of this proposal would be designed to enable vehicles to turn around at the roundabout to exit the precinct, without the need to access James Craig Road.

Change facilities are not proposed at stations. These facilities are more appropriately provided at the start or end of a trip such as within surrounding developments separate to this proposal.

### Issues raised – general operational conditions

Council requested that the future planning for the site include:

- traffic calming measures such as speed humps and lane narrowing
- high frequency buses at new bus stops
- increased bus services at new bus stops
- enhanced pedestrian and cycle safety measures
- examination of reduce speed limits.

### Response – general operational conditions

The layout and function of the road network is subject to the *Bays West Place Strategy*. Sydney Metro has and would continue to work with the NSW Department of Planning and Environment and other relevant stakeholder regarding integration of The Bays Station with the *Bays West Place Strategy* and associated draft *Bays West Urban Design Framework* and sub-precinct master plans, as outlined in Chapter 13 (The Bays Station) of the Environmental Impact Statement and Section 2.8 (The Bays Station – alignment with master planning work) of this Submissions Report.

#### 7.7.19 Public domain and station design

### Issues raised

Inner West Council raised the following issues relating to public domain and station design:

- the Environmental Impact Statement does not address connectivity with the areas beyond the metro station site and a more detailed review should be carried out to maximise access for nearby communities
- the height of the station building (seven to eight storeys) is likely to exceed the maximum RL as specified in the *Bays West Place Strategy*. The height of the station building and the traction substation will impact on views from the Anzac Bridge accessway
- the design of the station building and traction substation has been carried out in isolation and should be redesigned in accordance with the *Bays West Place Strategy* and urban design framework, in consultation with Inner West Council and the community
- connections from the Rozelle Parklands to the White Bay area are not direct enough and will not encourage optimised use or attract new users
- the function of the proposed public domain adjacent to the proposed traction substation should be clarified
- the location of the traction substation forms a barrier to direct active transport links
- the metro station site should retain key views to and through the White Bay area as detailed in the *Bays West Place Strategy* and associated urban design framework
- the mitigation measures identified to manage permanent indirect visual impacts to the White Bay Power Station rely on heritage design guidance, however this is unlikely to overcome the proposed building height and building envelope.

## Response

The Environmental Impact Statement addresses the facilities and infrastructure proposed to be delivered by Sydney Metro. Connections delivered by Sydney Metro are being coordinated with the NSW Department of Planning and Environment and other relevant stakeholders to provide coordinated outcomes with broader connections to be delivered as part of the *Bays West Place Strategy* and associated draft Urban Design Framework. Sydney Metro would work with local councils (including Inner West Council) to coordinate active transport connections beyond the station precincts which are to be provided by others.

The height of station buildings and design of the traction substation has been developed consistently with the *Bays West Place Strategy* and associated draft Urban Design Framework and relevant sub-precinct master plans, and based on feedback from the Design Advisory Panel. Landscape and visual impacts and non-Aboriginal heritage impacts at The Bays Station are assessed in Section 13.9 and 13.7 of the Environmental Impact Statement, respectively.

The public domain area around the traction substation would be coordinated with broader public domain outcomes as part of the *Bays West Place Strategy*, associated draft Urban Design Framework and relevant sub-precinct master plans. This public domain area would also connect with the active transport links being delivered as part of the Rozelle Interchange project.

The Bays Station has been designed, where possible, to retain key view corridors as identified in the White Bay Power Station Conservation Management Plan and master planning work for Bays West. There would, however, be moderate indirect (visual) impacts to the former White Bay Power Station mainly associated with the traction substation located to the south, as detailed in Section 13.7 of the Environmental Impact Statement.

Sydney Metro is continuing to work with the NSW Department of Planning and Environment and Transport for NSW to align with the *Bays West Stage 1 draft Master Plan and Urban Design Framework*, including in relation to the location and design of the traction substation, configuration of the street network and other required links (e.g. pedestrian and cycle), and the design interface with public domain areas that are beyond the scope of Sydney Metro West. Section 2.8 (The Bays Station – alignment with master planning work) of this Submissions Report provides further detail on ongoing work to align The Bays Station design with ongoing master planning work.

The indicative layout of key design elements of The Bays Station (as exhibited in the Environmental Impact Statement) is broadly consistent with the *Bays West Stage 1 draft Master Plan and Urban Design Framework* (NSW Department of Planning and Environment, 2022), including in relation to the location and indicative heights of aboveground station buildings, and preservation of significant view corridors were possible.

The design of The Bays Station and precinct would continue to consider community and stakeholder engagement and follow robust internal review processes and independent review through the use of a Design Advisory Panel/Design Review Panel (as described in Table 5-5 of the Environmental Impact Statement). This would allow for high quality standards throughout the whole design process. Inner West Council would also be invited to participate in Design Review Panel meetings as required to advise on local issues and design outcomes as they relate to the local context. The station design and precinct plan (or equivalent as required by the conditions of approval) for The Bays Station would be prepared in consultation with Inner West Council, the Department of Planning and Environment, the local community and other relevant stakeholders. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

### 7.7.20 Public health

#### Issues raised

Inner West Council requested that a public health analysis be undertaken of impacts from noise, vibration, dust, light impacts and general lifestyle disruption. This should include consideration of work carried out under previous Sydney Metro West planning applications and the cumulative impact of other infrastructure projects underway in the area.

#### Response

The Environmental Impact Statement provides an assessment of potential noise and vibration, dust and lighting impacts in Chapter 13 and in the relevant technical papers. Human health considerations are a key contributor in the establishment of appropriate noise and air quality criteria, while the social impact assessment (Technical Paper 9 (Social impacts) of the Environmental Impact Statement) has included consideration of community cohesion and health and wellbeing.

Mitigation measures to minimise potential impacts associated with construction noise and vibration, air quality and lighting impacts on nearby sensitive receivers are outlined in the CEMF (Appendix I) and CNVS (Appendix K).

Cumulative impacts around The Bays have been considered in Chapter 19 (Cumulative impacts) of the Environmental Impact Statement. The cumulative assessment was prepared in accordance with the Secretary's environmental assessment requirements and the *Cumulative Impact Assessment Guidelines for State Significant Projects* (NSW Department of Planning and Environment, 2021), neither of which require a public health analysis to be carried out for this proposal.

### 7.7.21 Public transport

#### Issues raised

Inner West Council raised the following issues regarding public transport:

- construction of the proposal will impact on the reliability of bus services in the area of The Bays Station
- additional bus priority measures should be installed on Victoria Road during construction, including B-signals
- any temporary relocation of bus stops should be communicated a minimum of two weeks in advance to permit the travelling public to adjust their travel behaviour
- consideration should be given to either adjusting bus schedules, to recognise the increased delays resulting from likely increased congestion, or introduction of higher frequency, turn-up-and-go services along Victoria Road
- special consideration should be given improving reliability of the 442 bus service, which uses Mullins and Robert streets, due to the likelihood of increased congestion and queuing at the Roberts Street / Victoria Road intersection.

#### Response

The primary haul route to and from The Bays Station construction site is proposed to be via James Craig Road and City West Link.

Construction traffic impacts at The Bays Station were assessed in Section 13.5.3 of the Environmental Impact Statement. Construction of this proposal is anticipated to result in minimal impacts on buses which would be limited to a potential minor increase in travel time due to the additional construction vehicles on the road network. No impacts are anticipated on the operation of bus stops and therefore additional bus priority measures on Victoria Road are not considered necessary.

In accordance with the CTMF (Appendix J) (and having regard to Transport for NSW bus disruption protocols), any temporary closure or relocation of bus stops would be carried out in consultation with Transport for NSW, the relevant local council and bus operators. Wayfinding and customer information would be provided to notify customers of relocated bus stops.

Any changes to the bus network, service frequency and bus priority measures (including B-signals) would be reviewed by Transport for NSW in the wider transport network context.

### 7.7.22 Additional considerations

#### Issues raised

Inner West Council raised the following additional considerations:

- environmental issues associated with White Bay and contamination in the vicinity of White Bay Power Station must be carefully managed and a real time, publicly available response mechanism should be created
- the NSW Government should include Inner West Council's direct involvement in the coordination of construction activity and construction traffic in the vicinity of The Bays Precinct and Rozelle Interchange
- Inner West Council requests that all of the concerns expressed in this submission are satisfactorily addressed prior to commencement of the proposed works and that both Council and the community continue to be consulted throughout the Sydney Metro West project.

#### Response

The CEMF (Appendix I) provides a robust framework for the management of contamination during construction.

The CEMF also sets out the following mitigation measures in relation to contamination:

- CEMF-C1, which requires low risk contamination sites to be managed in accordance with the Soil and Water Management Plan
- CEMF-C2, which requires detailed site investigations for sites where contamination risk is not sufficiently understood
- CEMF-C3, which requires development of a Remedial Action Plan for sites of medium or high contamination risk
- CEMF-C4, which requires review of the Remedial Action Plan by a NSW EPA-accredited Site Auditor. This aligns with the risk-based approach adopted in the assessment
- CEMF-C5, which requires establishment of an unexpected finds protocol to facilitate the quarantining, isolation and remediation of unexpected contamination. Any unexpected asbestos identified on site would be managed in accordance with applicable regulatory requirements.

This Submissions Report provides a response to each of the matter raised in the Inner West Council submission.

Inner West Council is considered as a key stakeholder for this proposal and has been consulted since 2017. The Sydney Metro OCCS (Appendix N) has been prepared to guide Sydney Metro's approach to stakeholder and community liaison, including engagement with stakeholders.

Chapter 3 (Stakeholder and community engagement) of this Submissions Report also details consultation undertaken to support public exhibition of the Environmental Impact Statement and the plans for ongoing consultation including consultation with local councils and other key stakeholders. A briefing was held with Inner West Council to support public exhibition, which was aimed at ensuring Council were appropriately informed about the Environmental Impact Statement and received the relevant information to make a submission. Should this proposal be approved, Sydney Metro would continue to consult with Inner West Council during detailed design development and construction.

## 7.8 City of Sydney Council

### 7.8.1 General

#### Issue raised

City of Sydney expressed their support for this proposal, which it notes will assist in ensuring connectivity to the Sydney CBD and to other employment zones.

#### Response

City of Sydney's support for this proposal is noted.

### 7.8.2 Transport and access

#### Issues raised

City of Sydney is eager to work with Sydney Metro to make the most of this opportunity as a key city-shaping project. City of Sydney has provided information on its vision for the public domain around the Pyrmont Station and Hunter Street Station (Sydney CBD), provided a detailed response to the Environmental Impact Statement and made several recommendations (detailed in Section 7.8.12).

#### Response

Sydney Metro acknowledges City of Sydney's information on its vision for the public domain and recommendations regarding transport and city access. Responses to these recommendations are provided in Section 7.8.12. Sydney Metro would continue to consult with City of Sydney regarding the detailed design development and construction of Pyrmont Station and Hunter Street Station (Sydney CBD). City of Sydney would also be invited to participate in Design Review Panel meetings as required to advise on local issues and design outcomes as they relate to the local context.

Following development of the design, station design and precinct plans (or equivalent as required by the conditions of approval) would be developed for each metro station to document and illustrate the permanent built works and landscape design. The station design and precinct plans for Pyrmont Station and Hunter Street Station (Sydney CBD) would be prepared in consultation with City of Sydney, the local community and other relevant stakeholders. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

### 7.8.3 Design Guidelines

#### Issues raised

City of Sydney noted its ability to provide meaningful comments on this proposal is limited without detailed Design Guidelines and architectural drawings. City of Sydney has provided comments on specific elements of the Design Guidelines relating to commitment to sustainability, customer circulation, comfort and amenity, customer safety, security, station buildings/precinct development and lighting. These comments were included in Attachment B of the submission.

#### Response

The description of this proposal is indicative in the Environmental Impact Statement and based on the current level of design. The level of detail provided and assessed in the Environmental Impact Statement is sufficient for the assessment of potential environmental impacts, and is consistent with the level of detail provided in other major transport project planning approvals, including previous Sydney Metro projects.

As noted in Chapter 5 (Proposal description – operation) of the Environmental Impact Statement, some design elements would continue to be refined as part of the design development process and including ongoing consultation with stakeholders. The design process would follow robust internal review processes and independent review through the use of a Design Review Panel (as described in Table 5-5 of the Environmental Impact Statement). City of Sydney would be invited to participate in Design Review Panel meetings as required to advise on local issues and design outcomes as they relate to the local context. The station design and precinct plans for Pyrmont Station and Hunter Street Station (Sydney CBD) (or equivalent as required by the conditions of approval) would also be prepared in consultation with City of Sydney, the local community and other relevant stakeholders. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

Sydney Metro has considered City of Sydney's recommendations in the updated Design Guidelines (Appendix M).

City of Sydney's feedback on the commitment to sustainability is being considered in the development of the Sydney Metro West Sustainability Plan (refer to Section 7.8.10 for further detail).

City of Sydney's feedback has informed refinements to the comfort and amenity guidelines for stations.

Recommendations for the precinct-wide sections of the Design Guidelines (Section 3 and Section 4) have not been adopted as these guidelines represent Sydney Metro line-wide requirements and specifications applicable to all precincts. City of Sydney's feedback on consideration of built form context and streetwall heights have informed revised guidelines for places and spaces at Hunter Street Station (Sydney CBD), which have been included in the Section 5.9 of the Design Guidelines (Appendix M).

Further design development for the station and over station development (subject to separate approval) would consider the precinct-specific issues raised by City of Sydney in their recommendations, such as consideration of relevant local guidelines and mitigation of wind impacts, as required. The location of security measures (such as hostile vehicle mitigation measures and CCTV systems within public domain outside of stations) would be determined as part of detailed design. City of Sydney would be consulted as part of this process. Section 7.8.12 also includes a response to City of Sydney's suggested application of the Transport for NSW *Walking Space Guide* in design.

### 7.8.4 Urban design

#### Issues raised – general comments on Pyrmont Station and Hunter Street Station (Sydney CBD)

City of Sydney raised the following issues in relation to the general urban design of Pyrmont Station and Hunter Street Station (Sydney CBD):

- the Design Guidelines have insufficient information to guide ongoing design development as they are too generic to guide good design outcomes
- City of Sydney supports the Design Review Panel process, subject to a City of Sydney nominated panel member and provision being made for an observer from the City of Sydney to be present
- more detailed place specific Design Guidelines are to be developed and detailed drawings are required
- City of Sydney provided a detailed mark-up of recommended changes to the Design Guidelines (Attachment B to the submission).

## Response – general comments on Pyrmont Station and Hunter Street Station (Sydney CBD)

Sydney Metro has considered City of Sydney Council's recommendations in the updated Design Guidelines (Appendix M). City of Sydney's feedback on consideration of built form context and streetwall heights have informed revised guidelines for places and spaces at Hunter Street Station (Sydney CBD), which have been included in the Section 5.9 of the Design Guidelines (Appendix M). Other suggestions from City of Sydney were preferential wording with the same design intent, were too detailed for this stage of design development, or were related to items beyond the scope of the Sydney Metro West project.

The Design Guidelines are one aspect of ensuring good design outcomes. Along with other mechanisms such as design review panels, they provide an appropriate level of detail and applicable design objectives to guide ongoing design development for this proposal. For Pyrmont Station, Sydney Metro is also working with the NSW Department of Planning and Environment regarding coordination with the *Pyrmont Peninsula Place Strategy* (NSW Department of Planning, Industry and Environment, 2020) and *Draft Pyrmont Peninsula Design Guidelines* (NSW Department of Planning, Industry and Environment, 2021e). Where relevant, City of Sydney's feedback on the Design Guidelines would also be considered to guide future design development of over station development (subject to separate approval).

Design quality assurance is important in the delivery of Sydney Metro West. Section 5.2.7 of the Environmental Impact Statement describes how ongoing design development would be managed, including by the design and construction contractors to maintain high quality standards throughout the whole design process. This process would be guided by a suite of documents which would be used to review the design at relevant stages in the design process including:

- Sydney Metro design objectives (outlined in Table 5-2 of the Environmental Impact Statement)
- Design quality framework (described in Table 5-4 of the Environmental Impact Statement)
- Design Guidelines, including the place and design principles for Sydney Metro West (Appendix M).

These documents, along with community and stakeholder engagement, internal review processes and independent review through the use of a Design Advisory Panel/Design Review Panel would allow for high quality standards throughout the whole design process. The ongoing design development of the stations and precincts would be informed by the design objectives and principles, as well as feedback from community and stakeholders.

As noted in Table 5-5 of the Environmental Impact Statement, relevant councils and key stakeholders including City of Sydney would be invited to participate in Design Review Panel meetings as required to advise on local issues and design outcomes as they relate to the local context.

Following development of the design, station design and precinct plans (or equivalent as required by the conditions of approval) would be developed for each metro station to document and illustrate the permanent built works and landscape design. The station design and precinct plans for Pyrmont Station and Hunter Street Station (Sydney CBD) (or equivalent as required by the conditions of approval) would also be prepared in consultation with City of Sydney, the local community and other relevant stakeholders.

Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

### Issues raised – Pyrmont Station

City of Sydney raised the following issues in relation to the urban design of Pyrmont Station:

- the drawings provided lack clarity and need to better consider the public domain, footpath widths to accommodate pedestrians, replacement tree planting and appropriate setbacks
- proposed over station development is presented in Figures 14-2, 14-3 and 14-4 of the Environmental Impact Statement figures extending to the kerb which would result in a poor urban design outcome inconsistent with the surrounding urban fabric
- the station envelope's relationship to the public domain appears not to have been adequately considered
- City of Sydney recommends greater consideration of the public domain including clear drawings which communicate proposed footpath widths, street tree planting and adequate setbacks of the station building envelope. Further drawings are required to enable to provide meaningful comments.

## Response – Pyrmont Station

The description of this proposal in the Environmental Impact Statement is indicative and based on the current level of design. As noted in Chapter 5 (Proposal description – operation) of the Environmental Impact Statement, some design elements would continue to be refined as part of the design development process and including ongoing consultation with stakeholders.

The level of detail provided in the Environmental Impact Statement is adequate for a major infrastructure project and is consistent with the level of detail provided in other major transport project planning approvals, including previous Sydney Metro projects. Sydney Metro would continue to consult with City of Sydney regarding the interface of the station with the adjacent public domain.

Figures 14-2, 14-3 and 14-4 in the Environmental Impact Statement are indicative and are intended to show the likely location and scale of over station development only and not any future building form. Potential setbacks are shown in Figure 14-7 of the Environmental Impact Statement and the building form would be further detailed in future State significant development applications for Pyrmont Station.

Further detail on the permanent built works and landscape design for Pyrmont metro station, including detail on building forms and public domain, would be incorporated in the station design and precinct plan (or equivalent as required by the conditions of approval). City of Sydney would be consulted as part of the development of the station design and precinct plan. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

## Issues raised – Hunter Street Station (Sydney CBD)

City of Sydney raised the following issues in relation to the urban design of Hunter Street Station (Sydney CBD):

- this proposal should consider opportunities to coordinate pedestrian connections at ground level, below ground and above ground with the planning proposal at 15-25 Hunter Street and 105-107 Pitt Street. The planning proposal should be considered in the cumulative impact assessment for this proposal and coordination is required between the two sites to ensure that pedestrian connections are direct, clear and easy to use at ground level, below ground and above ground level
- the Design Guidelines do not show vehicular access for Hunter Street Station (Sydney CBD) and more information is required to clarify any vehicular access locations. Opportunities for access from George Street, Hunter Street and Bligh Street are constrained by existing buildings, underground infrastructure, flooding and Richard Johnson Square
- conflicts between pedestrians and vehicles are to be minimised in accordance with Objective 1 of the Design Guidelines – ‘Ensuring an easy customer experience’
- consideration should be made for a break-through clause for vehicular access from the planning proposal site located to the east that provides vehicular access from Pitt Street (subject to further traffic impact consideration and assessment)
- Objective 4 of the design guideline is “being responsive to distinct contexts and communities” does not include the word ‘heritage’ while both Hunter Street Station (Sydney CBD) sites have heritage items on and adjoining their sites
- detailed Design Guidelines are required for the over station development to protect the Tank Stream from excavation, construction and structures
- the street frontage heights for the western site are to match the Former Skinners Family Hotel and 15-17 Hunter Street
- the eastern site is to respect the alignment and street frontage height of 12-16 O’Connell Street and 31 Bligh Street and consider the interface with Richard Johnson Square
- the western site over station development appears to be aligned parallel to George Street but not to Hunter Street in the Design Guidelines. Hunter Street is spatially defined by buildings predominantly aligned parallel with a street frontage height of around 45 metres. Any future over station development and Design Guidelines should reinforce the alignment of Hunter Street.

## Response – Hunter Street Station (Sydney CBD)

Sydney Metro notes the planning proposals at 15-25 Hunter Street and 105-107 Pitt Street were not publicly available at the time of development of the Environmental Impact Statement. Therefore, they were not considered in the cumulative impact assessment as they didn't meet the status criteria. That is, there was not sufficient publicly available information about the project to inform a cumulative impact assessment at the time of preparation of the Environmental Impact Statement.

Sydney Metro would continue to consult with City of Sydney and the proponent regarding the interface of this proposal with the planning proposal at 15-25 Hunter Street and 105-107 Pitt Street to proactively manage potential cumulative impacts.

The design of the Hunter Street Station (Sydney CBD) western site provides for through site links to connect to future links to Pitt Street (which are to be provided by others). This is shown on Figure 15-1 and 15-6 of the Environmental Impact Statement. The planning proposal for this adjacent site has been released since public exhibition of the Environmental Impact Statement. A review of the planning proposal identifies a proposed pedestrian connection to Pitt Street along Empire Lane. This aligns with the potential future pedestrian connection shown on Figure 15-1 of the Environmental Impact Statement. Sydney Metro would also consult with City of Sydney and the proponents of relevant developments to provide coordinated outcomes in relation to through site links.

Vehicular / services entry locations for Hunter Street Station (Sydney CBD) are shown on Figure 15-6 of the Environmental Impact Statement. Proposed vehicle access for the western site would be from Hunter Street, and for the eastern site from O'Connell Street. Sydney Metro is continuing to consider vehicle access arrangements for the western and eastern site. Construction traffic management plans would be prepared in accordance with the CTMF and would include measures to manage risks to pedestrians and cyclists, as outlined in Section 9.5 of the CTMF (Appendix J).

Sydney Metro is designing the stations and precincts to appropriately manage conflicts between pedestrians and vehicles in accordance with section 4.2 of the Design Guidelines (Appendix M).

Sydney Metro is designing the station and over station development to be able to be realised independently of any other developments which may occur nearby in the future. Notwithstanding, Sydney Metro would consult with adjoining landowners where they are a proponent of an advanced development proposal to provide coordinated and mutually beneficial outcomes where possible. Any potential basement breakthroughs along the eastern boundary of the western station site would also need consider potential impacts to other underground infrastructure such as the State heritage listed Tank Stream.

Objective 4 in the Design Guidelines (Appendix M) is referring to the overall Sydney Metro wide design objectives. Local context would include heritage considerations where relevant. The place specific Design Guidelines for Hunter Street Station (Sydney CBD) (Section 5.9 of the Design Guidelines) provide a number of urban design strategies related to heritage items adjacent to the Hunter Street Station (Sydney CBD) sites.

The Tank Stream would be protected throughout the development and construction of this proposal. Potential impacts on the Tanks Stream from this proposal have been assessed as neutral in Chapter 15 (Hunter Street Station (Sydney CBD)) of the Environmental Impact Statement.

The Design Guidelines (Appendix M) include a number of urban design strategies regarding the adjacent Skinners Family Hotel and Richard Johnson Square including:

- integration of the former Skinners Family Hotel and Richard Johnson Square into the design of the station precinct
- on the eastern site set the building back from Bligh Street to align with the adjoining heritage building (Lowy Institute Building) to celebrate this heritage façade and promote a visual connection to Richard Johnson Square.

The figures in the Design Guidelines (Appendix M) are indicative and intended to illustrate the key urban design strategies. The alignment of the over station development in relation to Hunter Street Station (Sydney CBD) would be confirmed as part of future State significant development applications.

### 7.8.5 Heritage

#### Issues raised – Pyrmont Station western station building

City of Sydney raised the following issues in relation to the non-Aboriginal heritage impacts of the Pyrmont Station western station building:

- the proposed station building will occupy a visually prominent corner within the heritage conservation area and is adjacent to a number of heritage items
- demolition of the two sympathetic buildings will erode the character of the Pyrmont Heritage Conservation Area
- the proposed station building has the potential to overscale the surrounding built form within the Pyrmont Heritage Conservation Area and overscale heritage listed buildings within the visual curtilage of the site
- the proposed height and scale of the proposed station building is excessive in terms of the historic built form of its context
- justification in Technical Paper 5 (Non-Aboriginal heritage) of the Environmental Impact Statement that the proposed station building will not have a significant impact as it is on the periphery of the heritage conservation area is not considered adequate
- the proposed Design Guidelines are generic in terms of strategies on the form of new buildings, lacking essential definitions on the specific scale, articulation and materiality.

#### Response – Pyrmont Station western station building

The Design Guidelines (Appendix M) include a number of requirements for the station building to respond to the local heritage conservation area setting including consideration of a high-quality façade design which aligns with the heritage values, manages the visual impact of station services to the street and enhances the character and amenity of its setting. Details regarding scale, articulation and materiality of the station would be determined as part of detailed design in accordance with these requirements of the Design Guidelines (Appendix M). Heritage interpretation would occur in accordance with the Heritage Interpretation Strategy (Appendix L). Potential heritage impacts at Pyrmont Station were assessed in Section 14.7 of the Environmental Impact Statement.

Potential non-Aboriginal heritage impacts including demolition of existing buildings and structures at the Pyrmont Station western site were addressed under the previous Sydney Metro West planning application. The heritage impact assessment in the Environmental Impact Statement assessed the impacts as minor because the proposed building is similar in height to the existing building and existing developments to the north-east (on Pyrmont Street) and south-east (on Pyrmont Bridge Road) of the site, in addition to being located on the boundary of the heritage conservation area. As the station building would be on the boundary of the heritage conservation area, any potential visual impact the heritage conservation area would be localised to the immediate streetscapes, rather than the whole heritage conservation area which expands over about five hectares of the Pyrmont area. Detailed design would take into account the character of the heritage conservation area, as identified in Section 5.8 of the Design Guidelines (Appendix M).

#### Issues raised – proposed Pyrmont Station building recommendations

City of Sydney makes the following recommendations for the Pyrmont Station western and eastern station buildings:

- the height, scale and bulk of the proposed western entry building should be modified to not exceed 12 metres or three storeys to provide a transition of scale between the surrounding heritage items
- the bulk and form of both proposed station buildings should be articulated to reflect the narrow frontages of historic development in the vicinity of the site
- specific Design Guidelines should be developed for each site considering each site has a different heritage context. The guidelines should aim to enhance the predominant low scale and height, the predominant modulation reflecting early subdivision patterns, the robust articulation of heritage buildings and the low ratios of walling to glazing. Materiality should respond to those that predominate the context including sandstone, face brick and stucco, and the low ratio of walling to glazing. Proportions should be vertical to further reinforce the surrounding historic built form
- City of Sydney should be consulted during the design development.

### **Response – proposed Pyrmont Station building recommendations**

The Design Guidelines include a number of requirements for the station building to respond to local heritage and the heritage conservation area. Sydney Metro would continue to consult with City of Sydney regarding the detailed design of Pyrmont Station and the interface with the heritage conservation area.

### **Issues raised – Pyrmont Station visual impacts during construction**

City of Sydney raised concern that during construction, construction hoarding will be visible from outside of the Pyrmont Station construction sites; and be visually prominent from the streets surrounding the two sites and in significant views to nearby terrace housing and heritage items.

Council raised concern that mitigation measure CEMF-LV4 of the CEMF (Appendix I) requiring all construction structures to be finished in a colour which aims to minimise their visual impact, if visible from areas external to the construction site, is considered inadequate to mitigate the visual impacts to the surrounding heritage conservation area and heritage items.

Council recommended the design of the hoardings should be consistent with the *City of Sydney Hoardings and Scaffolding Policy 2017* and the *Guidelines for hoardings and scaffolding*, by integrating public art, high quality graphics, historic images and heritage interpretation with temporary structures to mitigate visual impacts and enrich and vitalise the public place to give added creativity, interest and meaning to Sydney's culture, vibrancy and history.

### **Response – Pyrmont Station visual impacts during construction**

Visual impacts during construction would be managed through the implementation of the range of mitigation measures provided in the CEMF (Appendix I) and any conditions of approval. Construction hoardings would be designed in accordance with mitigation measure CEMF-LV6 (refer to CEMF (Appendix I)) which states 'Construction site hoardings would be designed in accordance with Sydney Metro Brand Design Guidelines and opportunities for public art on hoardings would be considered in locations of high pedestrian use'.

### **Issues raised – Pyrmont Station settlement and vibration impacts during construction**

City of Sydney raised the following issues in relation to settlement and vibration impacts during construction:

- concern regarding the lack of a separate vibration assessment for Pyrmont Station due to the assumption that construction of the station services infrastructure would not result in vibration impacts or settlement and that analysis of the structures around the Pyrmont sites should be provided
- the standard mitigation measures outlined in the Environmental Impact Statement and CEMF (Appendix I) are considered inadequate at this stage as the effects of vibration from excavation and construction work may impact upon the integrity of the building which may be compromised through structural or cosmetic damage
- recommendation that specific mitigation and protection measures be developed for the early structures surrounding the two Pyrmont sites and above the proposed tunnels and that these measures are based on investigation and analysis by a suitably structural engineer experienced in heritage buildings, of the nature of the footings and above ground construction of each early structure surrounding to the two Pyrmont sites, and in close vicinity as well as early structures above the proposed tunnels
- recommendation that the potential of rock growth and the impact of associated ground movements generated be assessed
- recommendation that investigation and analysis of each of the early built structures around the two Pyrmont sites should inform the design and offset distances of excavation from early buildings.

### **Response – Pyrmont Station settlement and vibration impacts during construction**

Construction work for this proposal at Pyrmont Station would not involve major sources of vibration-generating equipment. As such, potential vibration impacts are anticipated to be negligible at Pyrmont Station and would be managed in accordance with the requirements of the CNVS (Appendix K). As per the CNVS, heritage buildings and structures would be assessed as per a specific screening criteria. If a heritage building or structure is found to be structurally unsound (following inspection) a more conservative cosmetic damage criteria of 2.5 mm/s peak component particle velocity (from DIN 4150) would be considered. Mitigation measures CEMF-NV14 and CEMF-NV15 (refer to CEMF (Appendix I)) also outline requirements for attended vibration monitoring where there is potential for exceedances of the vibration objectives and a more detailed assessment of the structure and vibration monitoring where vibration levels are predicted to exceed the screening criteria. Mitigation measure CEMF-NV28 requires building condition surveys and includes specific requirements for heritage items.

Potential ground movement and associated settlement impacts would be associated with tunnelling and excavation work which was assessed as part of the previous Sydney Metro West planning application.

### **Issues raised – protection of 127 Pyrmont Street terrace**

City of Sydney raised the following issues in relation to protection of 127 Pyrmont Street terrace:

- the early masonry footings of this item may be not properly engineered, meaning that it may be sensitive and vulnerable to construction vibration
- upon demolition of the buildings adjacent to this terrace, the south party wall will become exposed to the weather and being single skin rather than cavity construction, the wall will become vulnerable to falling and lateral damp which could impact the interior fabric
- recommendation that a vibration control standard and measure be prepared specifically for the 127 Pyrmont Street terrace to ensure it is sufficiently protected during construction. The measures should be based on a thorough structural assessment of the existing building.

### **Response – protection of 127 Pyrmont Street terrace**

Potential vibration at Pyrmont Station from this proposal would be managed in accordance with the requirements of the CNVS (Appendix K). As per the CNVS, heritage buildings and structures would be assessed as per a specific screening criteria. If a heritage building or structure is found to be structurally unsound (following inspection) a more conservative cosmetic damage criteria of 2.5 mm/s peak component particle velocity (from DIN 4150) would be considered. Mitigation measures CEMF-NV14 and CEMF-NV15 (refer to CEMF (Appendix I)) also outline requirements for attended vibration monitoring where there is potential for exceedances of the vibration objectives and a more detailed assessment of the structure and vibration monitoring where vibration levels are predicted to exceed the screening criteria.

If construction activities have the potential to cause damage through vibration to heritage items such as the 127 Pyrmont Street terrace, an Existing Condition Inspection would be undertaken in accordance with AS 4349.1 “Inspection of Buildings” except where a planning approval specifies an alternate process.

Potential heritage impacts to the 127 Pyrmont Street terrace from demolition of existing buildings and structures at The Pyrmont Station sites were addressed under the previous Sydney Metro West planning application.

### **Issues raised – Pyrmont Station heritage interpretation**

City of Sydney makes the following recommendations regarding heritage interpretation:

- Aboriginal and non-Aboriginal heritage interpretation should be a key consideration in the design of the buildings, in conjunction with the proposed strategy
- the strategy should be further developed to inform the station design in addition to the initiatives detailed in the Environmental Impact Statement
- opportunities to integrate interpretation with public art consistent with the City of Sydney’s Public Art Policy should be explored
- specific interpretation devices should be developed in consultation with Council.

### **Response – Pyrmont Station heritage interpretation**

Sydney Metro has considered City of Sydney’s recommendations in the final Heritage Interpretation Strategy (Appendix L). Sydney Metro would continue to consult with the City of Sydney in the development of detailed Heritage Interpretation Plans. The Heritage Interpretation Plans would be developed alongside design.

In accordance with Section 4.1.6 of the Design Guidelines (Appendix M), public art would be integrated within stations, plazas and precincts to elevate the customer experience and enhance sense of place. Public art is also identified as a potential heritage interpretation device in the Heritage Interpretation Strategy (Appendix L).

In accordance with Concept conditions of approval C-B6 for the previous Sydney Metro West planning application, the preparation of the Heritage Interpretation Strategy has included engagement with relevant councils (including City of Sydney Council) and regard for any relevant council heritage interpretation guidelines.

Sydney Metro would continue to consult City of Sydney regarding the Heritage Interpretation Strategy and opportunities for heritage interpretation at Pyrmont Station.

### **Issues raised – Pyrmont Station archaeology**

City of Sydney makes the following recommendations regarding archaeology:

- an Aboriginal and non-Aboriginal archaeological assessment should be undertaken prior to further development of the proposals
- if Aboriginal archaeological site/s are recovered during test excavation (and salvage, if required), results would be incorporated into Aboriginal heritage interpretation in consultation with registered Aboriginal parties
- if Aboriginal archaeological remains are recovered during construction, results would be incorporated into the project specific 'Designing with Country' strategy in consultation with Aboriginal knowledge holders
- if non-Aboriginal archaeological relics are recovered during excavation, information should be recorded and relics, and incorporated into heritage interpretation in consultation with NSW Heritage.

### **Response – Pyrmont Station archaeology**

Potential archaeological impacts have been considered as part of the previous Sydney Metro West planning application which included all excavation work at Pyrmont Station. Sydney Metro acknowledges City of Sydney's comments regarding archaeology and heritage interpretation and notes these suggestions are generally consistent with Sydney Metro's mitigation measures and heritage interpretation approach. Should archaeological remains be recovered during construction, they would be addressed in heritage interpretation planning for the station, depending on the archaeology recovered.

### **Issues raised – Pyrmont Station wayfinding signage, lighting and advertising**

City of Sydney raised the following issues regarding wayfinding signage, lighting and advertising:

- wayfinding signage, lighting and advertising may have potential adverse impacts upon the character, views and settings of the heritage conservation area and heritage items in the vicinity and should be responsive to the distinctive heritage context
- all external signage should be consistent with the policies within Sydney DCP 2012 for the heritage conservation areas
- a brass plaque relating to the history of the site must be installed on the facade of the building prior to occupation. The design, location and wording must be submitted for City of Sydney for approval prior to an Occupation Certificate being issued.

### **Response – Pyrmont Station wayfinding signage, lighting and advertising**

Wayfinding signage, lighting and advertising would be implemented in accordance with the Design Guidelines (Appendix M). This would consider potential impacts on the character, views and settings of the heritage conservation area and heritage items in the vicinity of Pyrmont Station. Sydney Metro would continue to consult City of Sydney regarding detailed design and opportunities for heritage interpretation at Pyrmont Station.

### **Issues raised – Hunter Street Station (Sydney CBD) design development**

City of Sydney raised concern it is unclear whether the heritage items are to be incorporated into the future over station development applications.

### **Response – Hunter Street Station (Sydney CBD) design development**

Sydney Metro is designing the station and over station development to appropriately consider the adjacent heritage items. Potential permanent visual impact to heritage items from the station infrastructure is assessed in Chapter 15 (Hunter Street Station (Sydney CBD)) of the Environmental Impact Statement. Potential impacts from the over station development would be considered and assessed as part of future State significant development applications.

### **Issues raised – Hunter Street Station (Sydney CBD) sensitive design zones**

City of Sydney raised concern that no sensitive design zones are identified for the western site, despite containing the Skinners Family Hotel which is an early Victorian building and that the juxtaposition of the fine grained Victorian building and the modern civic building will need meticulous design considerations.

City of Sydney recommended the north-west portion of the new building on the north and west sides of the pedestrian links be identified as sensitive design zones to ensure the new building responds sympathetically to the low scale heritage building at 296 George Street. A separation of the heritage building from the new building by pedestrian links may be considered a preferred option.

#### **Response – Hunter Street Station (Sydney CBD) sensitive design zones**

Sydney Metro has considered City of Sydney Council's recommendation and have updated the figures in the Design Guidelines (Appendix M) to include 'sensitive interfaces' around the Skinners Family Hotel.

#### **Issues raised – Hunter Street Station (Sydney CBD) site-specific guidelines**

City of Sydney supports the proposed pedestrian links connecting to the existing or planned laneways, however, notes the Design Guidelines appear to be generic in terms of strategies on the form of new buildings, lacking essential definitions on the specific scale, articulation and materiality.

City of Sydney recommended:

- a detailed urban design study of the existing streets and environment be undertaken to inform further development of the Design Guidelines
- further design of any over-station buildings should respect the local characteristics and be based on proper urban design studies
- City of Sydney should be consulted in the design development.

#### **Response – Hunter Street Station (Sydney CBD) site-specific guidelines**

Further details regarding scale, articulation and materiality of Hunter Street Station (Sydney CBD) would be determined as part of detailed design in accordance with the requirements of the Design Guidelines (Appendix M). Sydney Metro would continue to consult with City of Sydney during development of the design. City of Sydney would also be invited to participate in Design Review Panel meetings as required to advise on local issues and design outcomes as they relate to the local context.

#### **Issues raised – protection of Skinners Family Hotel**

City of Sydney raised concern that the Skinners Family Hotel early masonry construction may be not properly engineered, meaning that it may be sensitive and vulnerable to construction vibration and recommended that:

- the building be investigated and assessed by a suitably structural engineer experienced in heritage buildings to help specify building protection requirements
- a specific vibration control standard and measure be prepared for the Skinners Family Hotel to ensure it is sufficiently protected during construction which is based on a thorough structural assessment of the existing building.

#### **Response – Protection of Skinners Family Hotel**

Potential vibration at Hunter Street Station (Sydney CBD) from this proposal would be managed in accordance with the requirements of the CNVS (Appendix K). As per the CNVS, heritage buildings and structures would be assessed as per a specific screening criteria. If a heritage building or structure is found to be structurally unsound (following inspection) a more conservative cosmetic damage criteria of 2.5 mm/s peak component particle velocity (from DIN 4150) would be considered. Mitigation measures CEMF-NV14 and CEMF-NV15 (refer to CEMF (Appendix I)) also outline requirements for attended vibration monitoring where there is potential for exceedances of the vibration objectives and a more detailed assessment of the structure (in consultation with a structural engineer) and vibration monitoring where vibration levels are predicted to exceed the screening criteria.

#### **Issues raised – Hunter Street Station (Sydney CBD) heritage interpretation strategy**

City of Sydney noted the proposed through-site/pedestrian links provide opportunity for incorporating heritage interpretations and public art and recommended:

- the interpretations at Hunter Street Station should make best use of the through site links
- the interpretation strategy be further developed to detail specific interpretation devices.

## Response – Hunter Street Station (Sydney CBD) heritage interpretation strategy

Sydney Metro has considered City of Sydney's recommendations in the updated Heritage Interpretation Strategy (Appendix L). Heritage interpretation would occur in accordance with this strategy. Sydney Metro would continue to consult City of Sydney regarding the station specific heritage interpretation plans and opportunities for heritage interpretation at Hunter Street Station (Sydney CBD).

### 7.8.6 Landscape

#### Issues raised – general comments related to landscape

City of Sydney raised the following issues in relation to landscaping:

- detailed Design Guidelines are required to further confirm how the urban heat island effect would be mitigated and what greening is proposed to manage comfort and amenity
- any landscape on slab (roofs, podium or walls) needs to make allowance for site microclimate, available light levels, planters with adequate soil volume, slab capacity and drainage
- detailed Design Guidelines are required to ensure that turnstiles at the station entry are integrated and can be secured, when necessary, rather than reliance on vehicle hostile barriers that clutter the public domain with obstacles that fail to meet Australian Standards and safety requirements for vision impaired users
- the surrounding quality of the public domain is to be well organised and designed with equitable and safe access for all users
- the interface between the metro station buildings and associated precinct development should prioritise tree canopy and greening to combat urban heat island effect, warmer climate and the need for respite of shaded streets and public domain
- detailed Design Guidelines should require best practice design of streets, plaza layouts with canopy trees and functional design for shade relief, not simply for wind mitigation, and contribute to NSW Government and City of Sydney urban canopy targets
- Section 4.1.5 of the Design Guidelines related to environment and sustainability are generic and do not demonstrate integration of landscape design excellence. A commitment to best practice sustainable design solutions including the integration of water sensitive urban design, green infrastructure, improved biodiversity, green roofs/walls, plantings and shade trees must be demonstrated by measurable Design Guidelines, known targets and minimum requirements for each precinct
- the landscape design discussion in Section 4.3.1 of the Design Guidelines (Appendix M) is generally acceptable, however where trees are proposed in deep soil the design must ensure that services are coordinated; and where trees are located on slab, soil depths and volumes should comply with the Sydney Landscape Code. Details demonstrating consideration of this are to be provided to City of Sydney
- where green infrastructure, green roofs and walls are proposed, the design must consider available lift levels, depth of structure and drainage and ongoing safe maintenance working at heights. Details demonstrating consideration of this are to be provided to City of Sydney
- it is questioned why tree planting in plazas/forecourts at grade and on structure require a minimum set down of 1.6 metres as soil depths greater than one metre are generally anaerobic
- tree pit design is to make allowance for required soil volumes and if trafficable pavements are used, strata cell is encouraged. Street tree species selection is to be consistent with the Street Tree Masterplan
- clarification is requested regarding the soil depths provided, tree pit design and street tree species as outlined above.

#### Response – general comments related to landscape

Sydney Metro notes City of Sydney's comments related to landscape. These items are subject to further detailed design in accordance with section 4.3 of the Design Guidelines (Appendix M). Sydney Metro would continue to consult with City of Sydney as part of this process. City of Sydney would also be invited to participate in Design Review Panel meetings as required to advise on local issues and design outcomes as they relate to the local context.

The landscape design for each station would be incorporated in the station design and precinct plans (or equivalent as required by the conditions of approval). City of Sydney would be consulted as part of the development of the station design and precinct plans for Pyrmont Station and Hunter Street Station (Sydney CBD). Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

### **Issues raised – Hunter Street Station (Sydney CBD) landscape**

City of Sydney raised the following issues in relation to landscaping specific to Hunter Street Station (Sydney CBD):

- structures and features such as coffee kiosks should be aligned with street furniture zone to reduce clutter
- landscape and trees on the podium rooftop terrace must be designed to consider wind impacts at the base of over station development, with planting designed for longevity, in compliance with the Sydney Landscape Code
- City of Sydney requested further details to address the comments above, including the location of structures and features on the street and landscape and trees on the podium rooftop.

### **Response – Hunter Street Station (Sydney CBD) landscape**

Sydney Metro notes City of Sydney's comments related to landscape. These items are subject to further detailed design. Sydney Metro would continue to consult with City of Sydney as part of this process. City of Sydney would also be invited to participate in Design Review Panel meetings as required to advise on local issues and design outcomes as they relate to the local context.

The landscape design for Hunter Street Station (Sydney CBD) would be incorporated in the station design and precinct plan (or equivalent as required by the conditions of approval). City of Sydney would be consulted as part of the development of the station design and precinct plan. Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

## **7.8.7 Public domain**

### **Issue raised**

City of Sydney noted further details of public domain works are required to provide more detailed feedback and recommended several suggestions including City of Sydney involvement in the preparation of the site precinct plans for each of the stations and City of Sydney review of concept public domain plans to address specific items included in its submission.

### **Response**

Sydney Metro notes City of Sydney's comments related to public domain. These items are subject to further detailed design in accordance with section 4.3 of the Design Guidelines (Appendix M). As noted in Chapter 5 (Proposal description – operation) of the Environmental Impact Statement, the description of this proposal is indicative in the Environmental Impact Statement and based on the current level of design. Some design elements would continue to be refined as part of the design development process and including ongoing consultation with stakeholders.

The level of detail provided in the Environmental Impact Statement is adequate for a major infrastructure project and is consistent with the level of detail provided in other major transport project planning approvals, including previous Sydney Metro projects. Sydney Metro would continue to consult with City of Sydney during design development including in relation to the integration of the station with the broader precincts. City of Sydney would also be invited to participate in Design Review Panel meetings as required to advise on local issues and design outcomes as they relate to the local context.

## **7.8.8 Hydrology, flooding and water quality**

### **Issue raised**

City of Sydney requested additional information documenting alternative options considered for the flood gates proposed for at Pyrmont Station and Hunter Street Station (Sydney CBD) and further details of flood mitigation measures.

## Response

Sydney Metro would continue to consider the most appropriate flood protection options for Pyrmont and Hunter Street stations. Design development would include further consideration of flood protection in accordance with mitigation measure EIS-HF1 (refer to Appendix C (Revised mitigation measures)). This would consider the potential to use passive protection measures while also achieving urban design outcomes.

### 7.8.9 Construction traffic

#### Issue raised

City of Sydney recommended several suggestions for the construction transport assessment to consider including carrying out work in accordance with City of Sydney's Construction Traffic Management Plan Standard Requirements, protocols for parking changes and construction speed limits.

#### Response

Construction traffic management would be undertaken in accordance with CTMF (Appendix J) and any conditions of approval. Sydney Metro would continue to consult with City of Sydney regarding construction traffic issues.

### 7.8.10 Environmental sustainability

#### Issues raised

City of Sydney raised the following issues in relation to environmental sustainability:

- the commitment to achieve a minimum Infrastructure Sustainability Council IS Design and As Built Rating of 75 points is supported
- Sydney Metro should be fully transparent in its offset strategy and commit to robust evidence-based offsets, instead of theoretical carbon-savings
- a strong focus should be applied to energy efficiency in all operations and commitments to offsetting carbon emissions will adhere to robust, verifiable and well governed offsetting
- design detail should respond to the specific impacts of climate change affecting the locality, especially more intense rainfall events, more frequent extreme heat days and more common heatwave events.

#### Response

The City of Sydney's support for the ISC rating is noted. Sydney Metro has a strong history in delivering transparent and evidence based offset strategies on its projects. This would also be applied to this proposal.

Sydney Metro has developed an *Environment and Sustainability Statement of Commitment* (Sydney Metro, 2020c) which states the social and environmental sustainability objectives of Sydney Metro. The policy reflects a commitment in the delivery of the Sydney Metro program to optimising sustainability outcomes and developing effective and appropriate responses to the challenges of climate change.

A Sydney Metro West Sustainability Plan is being developed to set out the sustainability principles, objectives and initiatives including energy efficiency and renewable energy / offset targets which would be adopted from planning, procurement, design, construction and operations to end-of-life. This encompasses all three aspects of sustainability – environmental, social and economic.

Sustainability principles, initiatives and targets for Sydney Metro West identified as part of the development of the Sydney Metro West Sustainability Plan are discussed in Section 18.4.2 of the Environmental Impact Statement.

Sydney Metro has undertaken a climate change risk analysis to inform the design of the project with the results documented in Section 18.4 of the Environmental Impact Statement. Climate change risks would be assessed throughout design development and risk treatments would be progressively incorporated as appropriate.

The climate change assessment is detailed in Section 18.4.2 of the Environmental Impact Statement and takes into consideration future climate including rising temperatures, less frequent but more intense rainfall events and increase in sea level rise. To effectively manage potential climate change risks, each stage in the design and delivery of the project would consider the most up to date climate change projections and would be subject to ongoing review and response by designers and constructors. Climate change risk treatments would be confirmed and incorporated into the detailed design.

### 7.8.11 Waste management

#### Issues raised

City of Sydney noted there is limited information provided in Section 18.5 of the Environmental Impact Statement regarding the operational management of waste at Pymont Station and Hunter Street Station (Sydney CBD) and requested further information regarding loading demands, size of waste collection areas and methods of collection to/from and within the sites.

#### Response

Potential waste management impacts during operation would be avoided by designing and operating this proposal so that wastes are managed according to the waste hierarchy and implementing the management and mitigation measures. Resource use initiatives would also be implemented in accordance with the Sydney Metro West Sustainability Plan. Environmental performance during operation would be managed by the implementation of an Operational Environmental Management Plan or System.

Sydney Metro would consult with City of Sydney as part of design development in relation to waste management.

### 7.8.12 Attachment A – City Access response

#### Issues raised

The City of Sydney submission included an Attachment (Attachment A) with detailed comments and recommendations from a transport and access perspective. Recommendations made within this Attachment are:

1. Transport for NSW to develop a Precinct Access Plan for the area within 500 metres of Hunter Street Station in collaboration with the City of Sydney and Sydney Metro.
2. Transport for NSW to develop a Precinct Access Plan for the area within 500 metres of the Pymont Station in collaboration with the City and Sydney Metro.
3. That NSW Department of Planning and Environment establish governance to support the Environmental Impact Statement conditions of consent. For example, a regular working group between Transport for NSW, Sydney Metro and the City could be established by a condition of consent and that the decisions of the working group be adopted into the design process. The purpose of the working group would be to:
  - track responses/progress on key conditions
  - develop the Precinct Access Plans for Hunter Street and Pymont Metro Stations per Recommendations 1 and 2
  - address key design requirements in the immediate vicinity of the metro stations, including:
    - footpath widths
    - reconfiguration or partial closure of streets fronting the metro station
    - public domain treatments including hostile vehicle measures
    - specific mitigation measures proposed in Environmental Impact Statement (EIS-TT11 to EIS-TT13) (refer to Appendix C (Revised mitigation measures)).
4. That NSW Department of Planning and Environment requires all actions related to the station precincts along with the funding and delivery body and mechanism to have been agreed prior to Sydney Metro contracts being awarded for Stage 3 works.
5. That Transport for NSW/Sydney Metro mitigate impacts on key walking routes for the metro stations and that Sydney Metro work with the City to determine actions that are needed within the red line boundary as per Recommendations 3 and 4.
6. That Sydney Metro re-do the pedestrian level of service assessment using the methodology in Transport for NSW's *Walking Space Guide: Towards Pedestrian Comfort and Safety* (Transport for NSW, 2020d) as per the Secretary's environmental assessment requirements. We expect footpaths within the immediate vicinity of the station (<100m) to target LoS A, and those in the vicinity of the station (100-400m) to target LoS B. We would expect no lower than LoS C in any location.

7. That Sydney Metro work collaboratively with the City to on all changes to street and footpaths that are needed along key walking routes as a result of the assessment required in Recommendation 6. At a minimum, the City would expect the design to include:
  - footpath widths to allow groups to comfortably pass each other (>4m)
  - maximum wait times of 60 seconds at signalised pedestrian crossings
  - maximum vehicle speeds of 40km/h
  - no slip lanes
  - pedestrian crossings on all approaches of signalised intersections
  - continuous footpath treatment on non-signalised side streets.
8. That further evidence is provided showing that the pedestrian modelling around Pymont is based on: (i) an accurate network, (ii) a land use scenario that includes uplift in Pymont as per the *Pymont Peninsula Place Strategy* and (iii) reasonable routing choices. The analysis must be revised by the proponent if issues are found.
9. If Sydney Metro determines that hostile vehicle mitigation is required, it must be incorporated within the building envelope or through preventing vehicle access into metro frontage roads.
10. That key future bus corridors are identified as part of the Precinct Network and Operations Plan process (see recommendations 1 and 2) and that any future bus corridors on Sydney Metro station frontage routes are identified so that provision can be made for stops that are easily accessible to metro.
11. That the measures for offsetting the impact of the parking removed around the Pymont Station would need to be agreed with the City.
12. That Sydney Metro to work collaboratively with the City on elements of the station design that interface with the street environment, as per Recommendations 3 and 4.
13. That the design of the through-site link from Pitt to George Street be considered as a project separate to Sydney Metro requiring coordination between Sydney Metro, City Planning and the developer.
14. That Transport for NSW bring the proposed Sydney Metro West extension to the South East forward to 2030-1.
15. Consider the demand for share bikes at Pymont Station and ensure that adequate space is provided to accommodate them in the public domain.
16. That NSW Department of Planning and Environment require commitment to action rather than investigation in all mitigation measures.
17. That specific plans of proposed mitigation measures developed as part of the Precinct Network and Operations Plan as per Recommendations 1 and 2, and that the City is involved in the solution design, as per Recommendations 3 and 4.
18. The planning and design for mitigation measures proposed for Pymont Bridge Road / Union Street intersection should be undertaken as part of the Precinct Access Plan for Pymont as per Recommendation 2. At a minimum, the intersection design should include the design elements listed in Recommendation 7. The City must be involved in the design process, as per Recommendations 3 and 4.
19. That footpath width and signal phasing at the Bligh Street / Hunter Street intersection be considered part of EIS-TT12 and that the City is involved in the solution design, as per Recommendations 3 and 4.
20. That actions, delivery and funding body must be agreed with the City and Transport for NSW on any and all proposed footpath changes prior signing of contracts for Stage 3 works. See Recommendations 3 and 4.

## Response

Sydney Metro anticipates that conditions of approval for this proposal would require the development of station design and precinct plans and interchange access plans (or similar). Sydney Metro is committed to ongoing consultation with City of Sydney as part of detailed design of the stations and development of station design and precinct plans. The station design and precinct plans for Pymont Station and Hunter Street Station (Sydney CBD) would be prepared in consultation with City of Sydney, the local community and other relevant stakeholders. City of Sydney would also be invited to participate in Design Review Panel meetings as required to advise on local issues and design outcomes as they relate to the local context.

Further detail on ongoing design development and the development of station design and precinct plans is included in Chapter 5 (Feedback on placemaking and design of stations and precincts) of this Submissions Report.

Sydney Metro acknowledges City of Sydney's comments on key walking routes and the design of streets and footpaths. As part of ongoing design development, Sydney Metro would continue to consult with City of Sydney to provide appropriate outcomes for pedestrians on key routes in the immediate vicinity of stations, and regarding areas that interface with the street environment. Changes to speed limits beyond the station precinct are beyond the scope of this proposal.

Sydney Metro undertakes all construction procurement in accordance with relevant NSW Government procurement guidelines, however the construction procurement process is beyond the scope of the planning application for this proposal. Design outcomes are assured through the design process and design review processes as outlined in Chapter 5 (Proposal description – operation) of the Environmental Impact Statement.

The *Walking Space Guide* (Transport for NSW, 2020d) is not intended to be used for assessing transport facilities or interchanges. *Fruin Level of Service* is the appropriate criteria to assess transport interchanges. For stations with over and/or adjacent station development, further assessment would be undertaken during design development considering the use of Transport for NSW *Walking Space Guide*, where applicable, in consultation with key stakeholders.

Sydney Metro would work with the NSW Department of Planning and Environment regarding coordinated outcomes with the *Pymont Peninsula Place Strategy*, including in relation to adequate pedestrian links and optimising pedestrian connectivity.

The location of hostile vehicle mitigation measures would be determined as part of detailed design, and incorporated in the station design and precinct plan (or equivalent as required by the conditions of approval). City of Sydney would be consulted as part of this process. The Design Guidelines (Appendix M) include guidance to contain security and pedestrian management devices within the station development site, where possible, and for bollards not to impede safe pedestrian movement.

Future bus corridors are beyond the scope of the Sydney Metro West project. It is expected that bus services and connections to Sydney Metro West stations would be assessed and reconfigured where necessary by Transport for NSW to support the operation of Sydney Metro West. Sydney Metro is working with other relevant parts of Transport for NSW in relation to the location of any future bus stops near metro stations.

Sydney Metro would work with City of Sydney Council to help address potential parking impacts that may arise from a loss of on-street parking in the vicinity the Pymont Station (in accordance with mitigation measure EIS-TT3 (refer to Appendix C (Revised mitigation measures))). EIS-TT3 has also been amended to include example measures that could be considered (refer to Section 2.14 (Changes to or additional mitigation measures) of this Submissions Report).

The design of the Hunter Street Station (Sydney CBD) western site provides for through site links to connect to future links to Pitt Street (which would be provided by others). The planning proposal for this adjacent site has been released since public exhibition of the Environmental Impact Statement. A review of the planning proposal identifies a proposed pedestrian connection to Pitt Street along Empire Lane. This aligns with the potential future pedestrian connection shown on Figure 15-1 of the Environmental Impact Statement. Sydney Metro would continue to consult with City of Sydney and the proponents of relevant future developments in relation to through site links.

The timing of any potential extension of Sydney Metro West to the south-east is beyond the scope of this proposal and the Environmental Impact Statement. Stub tunnels are being provided as part of the Sydney Metro West project at the end of the line to enable an efficient extension in the future.

Pymont Station would include appropriate bike parking near the station entry.

Sydney Metro has proposed a range of mitigation measures, some with firm commitments and some to undertake further investigation where appropriate. It is Sydney Metro's intention to implement appropriate actions based on the outcome of these investigations.

As per mitigation measure EIS-TT11, Sydney Metro would undertake further investigation to determine appropriate treatments of the Pymont Bridge Road / Union Street intersection in consultation with City of Sydney and other relevant parts of Transport for NSW.

Sydney Metro acknowledges the City of Sydney's recommendation and has amended mitigation EIS-TT12 to include consideration of signal phasing (refer to Section 2.14 (Changes to or additional mitigation measures) of this Submissions Report).

## 8.0 Key stakeholder submissions

### 8.1 Overview of submissions received

Submissions were received from the following key stakeholders:

- Accor Vacation Club
- Australian Turf Club
- Brookfield
- GPT Group
- The McDonald College
- Sydney Fish Market
- Western Sydney Leadership Dialogue.

The approach to processing and responding to these submissions is described in Chapter 4 (Analysis of submissions) of this Submissions Report. A summary of the issues raised in key stakeholder submissions and a response to the issues raised is provided in the following sections.

### 8.2 Accor Vacation Club

#### 8.2.1 Noise and vibration

##### Issues raised

Accor Vacation Club raised the following issues relating to noise and vibration impacts:

- it appears that the classification for highly noise affected receivers in the construction noise and vibration assessment only applies to residential premises, and not to the guests and members of The Sebel who are equally as sensitive to noise and vibration impacts
- the use of the terms 'low and 'moderate' to describe noise and vibration impacts are unlikely to align with communication expectations, as explained by the NSW Environment Protection Authority (EPA) in their submission in relation to the previous Sydney Metro West planning application for major civil construction between The Bays and Sydney CBD
- impacts classified as low or moderate would likely still be very noticeable and intrusive
- the noise impact categories are applied to airborne noise, ground borne noise and sleep disturbance which cannot be assessed using the same generic definition of impacts
- the noise impact categories do not take account of other important factors such as the period in which the noise takes place, the duration, the characteristics, and any community feedback that would inform the identification and selection of feasible and reasonable mitigation measures
- as the NSW EPA has noted in their submission to the previous Sydney Metro West planning application, an impact requiring alternative accommodation to be offered could not be reasonably considered to be moderate
- it is unclear how the conclusion regarding the extension of working hours on a Saturday being beneficial to the community has been reached
- the Department of Planning and Environment should include conditions of approval to ensure that feasible and reasonable mitigation is applied, which considers community views where appropriate, rather than allowing Sydney Metro to simply refer to generic mitigation measures outlined in the Sydney Metro Construction Noise and Vibration Standard (CNVS)
- construction work should be undertaken within acoustic sheds for the duration of construction and triple glazed windows installed throughout each of the apartments at The Sebel prior to construction commencing

- in the absence of a technical solution to mitigate the level of impacts predicted in the Environmental Impact Statement, appropriate compensation should be paid to Accor Vacation Club in recognition of the ongoing business risk to The Sebel and the experience of its members
- the requirement to provide appropriate compensation should begin prior to the commencement of work proposed under the previous Sydney Metro West planning application, and this should include a dispute resolution mechanism should agreement not be able to be reached between Sydney Metro and Accor Vacation Club as to the appropriate level of compensation.

## Response

The *Interim Construction Noise Guideline* (ICNG) (Department of Environment and Climate Change, 2009) defines highly noise affected as applying to residential receivers. Table 7 of Technical Paper 4 (Construction noise and vibration) of the Environmental Impact Statement outlines that hotels have their own noise management level (for daytime, evening and night-time) which is in accordance with *AS2107:2016 Acoustics – Recommended design sound levels and reverberation times for building interiors*. The assessment of construction noise impacts at The Sebel has been appropriately undertaken against these noise management levels.

The impact gradings 'low' and 'moderate' represent a likely response to noise and are aligned with bands of noise management level exceedance. Technical Paper 4 (Construction noise and vibration) of the Environmental Impact Statement acknowledges that the response would vary and depends on the period in which the impacts occur.

The assignment of impact grades would be further refined for reporting of construction impacts and identification of feasible and reasonable mitigation in Detailed Noise and Vibration Impact Statements in accordance with the requirements of the CNVS (Appendix K). This would account for the varying factors to be considered such as location, type/sensitivity of receiver, amenity objectives for area, extent of exceedance, duration and time periods.

Exceedance noise management levels, rather than the impact gradings used in the Environmental Impact Statement, would be the basis for implementing feasible and reasonable mitigation measures during construction.

The extended Saturday hours from 1pm to 6pm would be consistent with the conditions of approval for the previous Sydney Metro West planning application. Completing work out of hours would reduce the overall construction program of this proposal. Earlier completion of the proposal would bring considerable benefits to the community (in terms of reducing the construction period and earlier realisation of the overall Sydney Metro West project benefits) and would reduce the duration of construction related disruption. Appropriate acoustic mitigation measures would be implemented to minimise impacts.

The ICNG requires that all feasible and reasonable mitigation measures are put in place to manage potential noise and vibration impacts. The Construction Environmental Management Framework (CEMF (Appendix I) provides standard mitigation measures that would be implemented to minimise potential noise and vibration impacts during construction. Sydney Metro would also determine feasible and reasonable mitigation for specific activities based on Detailed Noise and Vibration Impact Statements developed in accordance with the CNVS. This would include the identification of additional mitigation measures where there is a potential exceedance of the construction noise and vibration management levels.

This approach has been successfully applied on previous Sydney Metro projects.

As station building work needs to progress aboveground and requires activities such as large crane lifts, works within an acoustic shed would not be feasible during station building activities at the Pymont Station construction sites. Sydney Metro would implement all feasible and reasonable noise and vibration mitigation measures in accordance with the CNVS (Appendix K).

The Overarching Community Communications Strategy (OCCS) (Appendix N) has been prepared to guide Sydney Metro's approach to stakeholder and community liaison including engagement with businesses. Sydney Metro's overarching approach to business engagement is to:

- identify and document potentially impacted businesses prior to project commencement
- provide early advice to businesses of upcoming projects
- provide businesses with information about the project and its long terms benefits
- provide businesses with information about construction progress
- ensure businesses understand the scope of the work and mitigation measures contractors can provide

- ensure businesses understand the proposed timing of the work
- consult with businesses and take steps to minimise potential impacts
- ensure the project team understands the operational requirements and sensitivities of businesses around each site.

The OCCS (Appendix N) also requires contractors to adhere to a Construction Complaints Management System which would outline the framework for managing complaints, enquiries and escalation processes throughout the project lifecycle. Complaints about noise and vibration would be managed through this framework.

Sydney Metro carries out a rigorous process when planning construction activities and adheres to strict conditions so that construction impacts are minimised and mitigated. Financial compensation is not proposed. Sydney Metro has a proven track record of working with the neighbouring communities and businesses on both Sydney Metro Northwest and Sydney Metro City & Southwest projects.

Conditions of approval are a matter for the Department of Planning and Environment to consider during its assessment of this proposal.

## 8.2.2 Transport and traffic

### Issues raised

Accor Vacation Club raised the following issues relating to transport and traffic impacts:

- the transport and traffic impacts identified in the Environmental Impact Statement have the potential to have a significant impact on The Sebel and Accor Vacation Club's business during the lengthy construction period
- specific mitigation and compensation measures should be identified for The Sebel to guarantee continuity of business operations
- unobstructed access should be provided to The Sebel on Pyrmont Street and Edward Street and all areas leading up to these access points at all times.

### Response

Sydney Metro acknowledges the potential transport impacts to local businesses during construction of this proposal, which are assessed in Section 14.13 of the Environmental Impact Statement. The assessment notes that some businesses may experience slight negative impacts associated with traffic congestion and increased travel times, which are continued impacts from the work carried out under the previous Sydney Metro West planning application.

Sydney Metro would endeavour to minimise impacts on individual businesses during construction. The Construction Traffic Management Framework (CTMF) (Appendix J) includes mitigation measures requiring maintenance of access to nearby businesses and properties. The OCCS (Appendix N) has been prepared to guide Sydney Metro's approach to stakeholder and community liaison including engagement with businesses.

In accordance with the OCCS (Appendix N), Sydney Metro would work with local businesses so that communication and engagement is tailored to their specific needs. Sydney Metro's overarching approach to business engagement is detailed further in the response to the issues raised Section 8.2.1.

Sydney Metro carries out a rigorous process when planning construction activities and adheres to strict conditions so that construction impacts are minimised and mitigated. Financial compensation is not proposed.

Access would be maintained to nearby businesses, including The Sebel, during construction. Where existing access points are impacted, Sydney Metro would consult with impacted businesses so that suitable alternatives are provided.

### 8.2.3 Visual amenity and light pollution

#### Issues raised

Accor Vacation Club raised the following issues relating to visual amenity and light pollution:

- concern regarding the minor to moderate impacts to landscape character and visual amenity associated with the presence of construction work, in particular to the Pymont Street, Pymont Bridge Road, Union Street and Edward Street streetscapes
- concern regarding light pollution impacts on The Sebel during night works at the Pymont Station construction sites.

#### Response

Some minor and moderate landscape and day-time visual impacts have been identified due to the presence of construction work at Pymont Station construction sites. Additional lighting at the Pymont Station construction sites would be largely consistent with the light levels within the area where the light levels are that of a dense urban setting. Potential landscape and visual impacts at Pymont Station construction sites are discussed further in Section 14.9.3 of the Environmental Impact Statement and in Technical Paper 6 (Landscape and visual amenity), including impacts to landscape character, daytime visual amenity and night-time visual amenity.

During construction of this proposal, landscape and visual amenity impacts would be managed in accordance with measures CEMF-LV1 to CEMF-LV4 identified in the Construction Environmental Management Framework (CEMF) (Appendix I). In accordance with mitigation measures CEMF-LV5, lighting of construction sites would be orientated to minimise glare and light spill impacts on adjacent receivers and would be installed and operated in accordance with *AS4282:1997 Control of the Obtrusive Effect of Outdoor Lighting*.

### 8.2.4 Business impacts

#### Issues raised

Accor Vacation Club raised the following issues relating to business impacts:

- the local business impact assessment in the Environmental Impact Statement concludes that most businesses in the area are resilient to construction impacts and that reduced local amenity and visibility are unlikely, but this is not correct for The Sebel which is located directly adjacent to the construction sites and heavily reliant on amenity
- local business risk assessment ratings for continued temporary reduced local amenity do not accurately reflect the significant impacts to be experienced by The Sebel
- appropriate compensation should be provided to The Sebel for the potential impacts of this proposal on their ability to operate and cancellations from customers
- it is unclear why assistance to business owners is only restricted to small businesses
- the proposed local business mitigation measures fall short of what is required in the case to adequately compensate Accor Vacation Club for the impacts to The Sebel, and it is possible The Sebel will have to cease operations.

#### Response

Sydney Metro acknowledges that the statement regarding the resilience of most businesses to construction impacts may not apply to all businesses. The Environmental Impact Statement identifies that most of the businesses in this locality would be resilient to construction impacts due to the nature of the businesses, the existing environment and because a large portion of the businesses are destination businesses that do not rely on passing trade or amenity.

Sydney Metro would endeavour to minimise impacts on individual businesses during construction, including through the management frameworks provided in the CEMF (Appendix I), CTMF (Appendix J) and CNVS (Appendix K). The OCCS (Appendix N) has also been prepared to guide Sydney Metro's approach to stakeholder and community liaison including engagement with businesses.

In accordance with the OCCS (Appendix N), Sydney Metro would work with local businesses so that communication and engagement is tailored to their specific needs. Sydney Metro's overarching approach to business engagement is detailed further in the response to the issues raised in Section 8.2.1.

Sydney Metro carries out a rigorous process when planning construction activities and adheres to strict conditions so that construction impacts are minimised and mitigated. Financial compensation is not proposed.

### 8.2.5 Air quality

#### Issues raised

Accor Vacation Club raised the following issues relating to air quality:

- given the close proximity of The Sebel to both Pymont Station construction sites and the construction haul routes for these sites, the proposal will generate significant dust impacts, therefore adversely impacting upon amenity
- conditions of approval for this proposal should include requirement for Sydney Metro to facilitate and pay for building cleaning services and 5-year warranty on all such equipment and machinery.

#### Response

Potential dust impacts associated with construction of this proposal are anticipated to be negligible and manageable through implementation of the standard air quality mitigation measures, particularly CEMF-AQ1, provided in the CEMF (Appendix I). Table 18-6 of the Environmental Impact Statement provides further discussion of the potential air quality impacts during construction of this proposal.

Sydney Metro would endeavour to minimise impacts on individual businesses during construction. The OCCS (Appendix N) has also been prepared to guide Sydney Metro's approach to stakeholder and community liaison including engagement with businesses. Sydney Metro's approach to business engagement is detailed further in the response to the issues raised Section 8.2.1.

Conditions of approval are a matter for the Department of Planning and Environment to consider during its assessment of this proposal.

### 8.2.6 Cumulative impacts

#### Issues raised

Accor Vacation Club requested that in determining the appropriate mitigation measures for this proposal, Sydney Metro should consider the cumulative impacts of this proposal and the work carried out under the previous Sydney Metro West planning applications, which would result in a total of seven years of construction.

#### Response

The cumulative impact assessment provided in Chapter 19 (Cumulative impacts) of the Environmental Impact Statement considered the cumulative impacts of this proposal together with the work that would be carried out under the previous Sydney Metro West planning applications. The potential cumulative impacts associated with the previous Sydney Metro West planning applications are mainly related to the continuation of construction activities over a longer timeframe. However, the construction impacts associated with this proposal would be generally more confined and of a less intensive nature. In addition, the final stage of construction of this proposal (the final one to two years) would involve finishing, testing and commissioning which would have reduced impact compared to the preceding construction work.

Sydney Metro would endeavour to minimise impacts on individual businesses during construction, including through the management frameworks provided in the CEMF, CTMF and CNVS. The OCCS (Appendix N) has also been prepared to guide Sydney Metro's approach to stakeholder and community liaison including engagement with businesses.

Sydney Metro has a proven track record of working with the neighbouring communities and businesses on both Sydney Metro Northwest and Sydney Metro City & Southwest projects.

## 8.3 Australian Turf Club

### 8.3.1 General

#### Issues raised

Australian Turf Club (ATC) raised the following issues related to stakeholder consultation:

- Australian Turf Club as the owners and operators of Rosehill Gardens racecourse considers itself a critical stakeholder in the planning process for the Sydney Metro West project
- consultation to date between Australian Turf Club, Sydney Metro and the Department of Planning and Environment regarding the impact of the Sydney Metro West project on Rosehill Gardens racecourse has been undertaken with a great spirit of cooperation and transparency and Australian Turf Club appreciates and supports ongoing consultation
- support for the NSW Government's significant infrastructure investment in Western Sydney
- support for delivery of the project in a way that minimises potential impacts to the ongoing operation of Rosehill Gardens racecourse, the welfare of thoroughbred racehorses stabled at Rosehill Gardens racecourse and staff working on site.

#### Response

Sydney Metro notes Australian Turf Club's comments regarding consultation undertaken to date for the Sydney Metro West project and its support for the project. Sydney Metro would continue to consult with Australian Turf Club to manage potential impacts to their operations. In accordance with the OCCS, Sydney Metro would work with local businesses so that communication and engagement is tailored to their specific needs (Appendix N).

### 8.3.2 Rosehill Gardens Racecourse access

#### Issues raised

Australian Turf Club raised the following issues related to access:

- the racecourse and railway line are intricately linked and this access must be maintained to preserve the site's history and maintain safe and easy access to the site at all times
- decommissioning of Rosehill Station and the T6 Carlingford rail corridor has reduced convenient public transport access to the Rosehill Gardens racecourse entrance on James Ruse Drive
- it is important to maintain safe and satisfactory access to Rosehill Gardens racecourse primary entrance into the spectator precinct facing James Ruse Drive to minimise impacts to the business
- requested further details of the access arrangement during operation of this proposal, particularly from a customer experience and safety perspective and a future redevelopment perspective
- concern related to general access impacts resulting from construction.

#### Response

Sydney Metro would provide ongoing access to the Rosehill Gardens racecourse during construction and operation of this proposal in consultation with Australian Turf Club. The CTMF (Appendix J) includes mitigation measures regarding maintenance of access to nearby businesses and properties, whereby access would be maintained where possible or suitable alternative arrangements would be provided.

New permanent pedestrian access would be provided to Rosehill Gardens racecourse from James Ruse Drive to replace the previous access over the former Rosehill Station footbridge (which would be removed as part of work under the previous Sydney Metro West planning application). This permanent access would be subject to further detailed design of the Clyde stabling and maintenance facility, so that safe and satisfactory access would be provided to Rosehill Gardens racecourse. Sydney Metro would consult the Australian Turf Club during this detailed design process. An additional mitigation measure (EIS-P2) has been included in relation to the development of a landscape masterplan for the Clyde-Rosehill precinct. The additional mitigation measure is provided in Section 2.14 (Changes to or additional mitigation measures) of this Submissions Report. Chapter 17 (Clyde stabling and maintenance facility and Rosehill services facility) of the Environmental Impact Statement provides further details on the active transport provisions and operational transport impacts during operation.

### 8.3.3 Health impacts on thoroughbred racehorses

#### Issues raised

Australian Turf Club raised concern regarding potential health impacts on thoroughbred racehorses located at the site as a result of:

- potential construction noise and vibration, particularly in relation to the tunnelling work and construction of the Clyde stabling and maintenance facility to the south of Rosehill Gardens racecourse
- potential air quality impacts.

#### Response

Sydney Metro is committed to ongoing consultation with Australian Turf Club to manage potential health impacts (including noise and vibration and air quality impacts) to racehorses stabled at the Rosehill Gardens racecourse.

'Low' temporary noise impacts are predicted at one horse stable at Rosehill Gardens racecourse during construction. This is due to a gap in the acoustic hoarding around the site to allow for the realigned Unwin Street. Potential noise and vibration impacts during construction of this proposal are discussed further in Section 17.6 of the Environmental Impact Statement. Construction noise and vibration impacts would be managed through the implementation of standard and additional mitigation measures in accordance with the CEMF (Appendix I) and the CNVS (Appendix K). This includes undertaking Detailed Noise and Vibration Impact Statements once construction equipment and methodologies are confirmed to identify feasible and reasonable mitigation measures (in accordance with the ICNG).

Potential impacts from tunnelling activities have been assessed as part of the previous Sydney Metro West planning application.

Potential air quality impacts during construction of this proposal are anticipated to be negligible and manageable through implementation of the standard air quality mitigation measures provided in the CEMF (Appendix I). This would include regularly wetting down exposed and disturbed areas and adjusting construction activities based on observed dust levels and weather forecasts. Further discussion on the potential air quality impacts of this proposal is provided in Section 18.3 of the Environmental Impact Statement.

### 8.3.4 Rosehill Gardens Racecourse operations

#### Issues raised

Australian Turf Club raised the following issues regarding operation of the Rosehill Gardens racecourse:

- concern related to how day-to-day operations would be impacted as a result of the potential access, noise and vibration and air quality impacts outlined above, including potential impacts on stabling of horses on raceday and non-raceday events
- concern regarding potential financial impacts.

#### Response

Sydney Metro would endeavour to minimise impacts on individual businesses during construction. The Construction Traffic Management Framework (CTMF) (Appendix J) includes mitigation measures requiring maintenance of access to nearby businesses and properties. The OCCS (Appendix N) has been prepared to guide Sydney Metro's approach to stakeholder and community liaison including engagement with businesses. Where existing access points are impacted, Sydney Metro would consult with the Australian Turf Club so that suitable alternatives are provided so day to day operations are maintained as far as practicable.

The Environmental Impact Statement assessed impacts of this proposal during construction and operation, including consideration of impacts to day-to-day operations of the Rosehill Gardens racecourse where relevant.

Impacts to transport and access are assessed in Section 17.5 of the Environmental Impact Statement. New permanent pedestrian access would be provided to Rosehill Gardens racecourse from James Ruse Drive to replace the previous access over the former Rosehill Station footbridge (refer to Section 8.3.2). Construction impacts on traffic, parking, public transport, pedestrians and cyclists would be minimal, including during major events at Rosehill Gardens racecourse. The CTMF outlines mitigation measures to minimise potential impacts, including during special events.

Potential noise and vibration impacts, including to the Rosehill Gardens racecourse, are assessed in Section 17.6 of the Environmental Impact Statement. Additional assessment of operational noise has also been undertaken in Section 2.11 (Clyde stabling and maintenance facility and Rosehill services facility – operational water treatment plant relocation) of this Submissions Report to assess the proposed relocation of the operational water treatment plant.

The results of the additional assessment indicate that the predicted noise levels during operation would be compliant with the applicable noise criteria at the nearest sensitive receivers during all periods for the year of opening (2030) and the year of design (2040), apart from a minor two decibel (dB) exceedance of the applicable noise criteria at the Rosehill Gardens racecourse stables. The minor increase in noise levels at the Rosehill Gardens racecourse stables (when compared to the Environmental Impact Statement noise levels) is due to the location of the traction substation (the noisiest source) and the relocated water treatment plant both being within Rosehill services facility contributing to noise levels in the area. However, noise attenuation measures would be further developed throughout the detailed design phase so that compliance with the environmental noise criteria is achieved, including the identification of appropriate noise mitigation measures such as a noise barrier and positioning of equipment within the site to mitigate any potential exceedance to the racecourse. In accordance with mitigation measure EIS-NV1, the infrastructure at Rosehill services facility would be designed to meet the applicable noise criteria derived from the *Noise Policy for Industry* (NSW EPA, 2017) (refer to Appendix C (Revised mitigation measures)).

Construction noise and vibration impacts would be managed through the implementation of standard and additional mitigation measures in accordance with the CEMF (Appendix I) and the CNVS (Appendix K) respectively. This includes undertaking Detailed Noise and Vibration Impact Statements once construction equipment and methodologies are confirmed to identify feasible and reasonable mitigation measures (in accordance with the ICNG).

Potential air quality impacts during construction of this proposal are anticipated to be negligible and manageable through implementation of the standard air quality mitigation measures provided in the CEMF (Appendix I). This would include regularly wetting down exposed and disturbed area and adjusting construction activities based on observed dust levels and weather forecasts. Further discussion on the potential air quality impacts of this proposal is provided in Section 18.3 of the Environmental Impact Statement.

In accordance with the OCCS (Appendix N), Sydney Metro would work with local businesses so that communication and engagement is tailored to their specific needs. Sydney Metro's overarching approach to business engagement is detailed further in the response to the issues raised Section 8.3.2.

Sydney Metro has a proven track record of working with the neighbouring communities and businesses on both Sydney Metro Northwest and Sydney Metro City & Southwest projects.

## 8.4 Brookfield

### 8.4.1 Operational impacts to small businesses

#### Issues raised

Brookfield raised the following issues related to operational impacts on tenants of the Brookfield Place:

- concern that removal of an unpaid underground connection to Wynyard Station using the existing tunnel under George Street (Hunter Street Connection) by turning it into a paid connection on the Sydney Metro Hunter Street Station side will significantly impact the volume and type of foot traffic that access the tunnel, which existing small business retailers rely on for customers
- request that the section of tunnel under George Street remains open and connected to Wynyard Station to be used as dining and seating for Brookfield tenants' customers to help offset the reduction in foot traffic by creating a destination dining precinct to attract customers
- request for pedestrian volume modelling relevant to the tunnel under George Street
- request that the previous Sydney Metro West planning approval condition D105 related to temporary placemaking initiatives be applied to this proposal with specific reference to Hunter Street Station and retailers in the disconnected ends of the existing Hunter Connection Tunnel.

## Response

Sydney Metro acknowledges that during the work carried out under the previous Sydney Metro West planning application, the underground pedestrian link between Wynyard Station and Hunter Connection (with entrances to Hunter Connection located on Hunter Street, Pitt Street and George Street) would be closed, with pedestrians required to travel via surface footpaths along Hunter Street, Pitt Street and George Street. This closure would continue during construction of this proposal. Sydney Metro has proactively engaged with impacted businesses at and near Hunter Street Station (Sydney CBD) since 2020 when the station location was announced. Ongoing engagement has included outreach by Sydney Metro place managers such as door knocking, provision of information about planning and early investigations, emails and phone calls.

Impacts to businesses at Hunter Street Station (Sydney CBD) are described in Section 15.13 of the Environmental Impact Statement. Overall, the nature of the businesses across the local business study area at Hunter Street Station (Sydney CBD) and the existing environment suggests most of the businesses would be resilient to potential construction impacts. Notwithstanding, the OCCS (Appendix N) includes a commitment to small business owner engagement. Sydney Metro would provide assistance if required to small business owners located near Sydney Metro construction sites, where they may be potentially impacted by construction activities. Potential activities to support to eligible businesses may include small business education and mentoring, activation events, business engagement events and marketing and promotion.

In addition, Sydney Metro carries out a rigorous process when planning construction activities and adheres to strict conditions so that construction impacts to businesses are minimised and mitigated. In accordance with the OCCS (Appendix N), Sydney Metro's overarching approach to business engagement is to:

- identify and document potentially impacted businesses prior to project commencement
- provide early advice to businesses of upcoming projects
- provide businesses with information about the project and its long terms benefits
- provide businesses with information about construction progress
- ensure businesses understand the scope of the work and mitigation measures contractors can provide
- ensure businesses understand the proposed timing of the work
- consult with businesses and take steps to minimise potential impacts
- ensure the project team understands the operational requirements and sensitivities of businesses around each site.

During operation of this proposal, the underground concourse level would provide an unpaid connection into Wynyard Station (via the existing underground pedestrian connection under George Street). This connection is expected to be used by customers interchanging between Sydney Metro services and Sydney Trains services at Wynyard, although it would remain open and accessible to the general public including customers of businesses. The expected foot traffic using the underground connection could lead to an increase in passing trade for businesses.

Figure 114 of Technical Paper 1 (Operational transport) of the Environmental Impact Statement provides the indicative numbers of customers forecast to access and egress Hunter Street Station during the AM peak in 2036. This includes forecasts for numbers interchanging between Wynyard Station and Hunter Street Station (Sydney CBD) and from other connections at Wynyard (such as Wynyard Walk). It is likely that the majority of these customers would use the underground pedestrian connection under George Street to make this interchange.

Sydney Metro would continue to consult with stakeholders and landowners (including Brookfield) to develop adequate pedestrian links and optimise pedestrian connectivity, including through to Pitt Street. Figure 15-1 of the Environmental Impact Statement shows the existing and proposed pedestrian links at Hunter Street Station (Sydney CBD) and potential future pedestrian connections, including those to be delivered by others.

## 8.4.2 Construction hoarding

### Issues raised

Brookfield made the following requests in relation to construction hoarding:

- ongoing consultation is carried out with Brookfield to ensure the hoarding used to separate our property from the construction site maximises reduction of construction noise in that retail area
- Brookfield requests to determine the visual treatment on the Wynyard Station side of that hoarding
- requests signage is provided on George Street construction hoarding to confirm Brookfield Place Hunter Concourse tenants remain open.

### Response

Construction noise levels at the majority of receivers at Hunter Street Station (Sydney CBD) are predicted to comply with the noise management levels. Sydney Metro would implement all feasible and reasonable noise mitigation measures through the processes outlined in the CEMF (Appendix I) and the CNVS (Appendix K).

Construction hoarding would be designed in accordance with CEMF-LV6, which requires construction site hoardings to be designed in accordance with Sydney Metro Brand Design Guidelines and opportunities for public art on hoardings to be considered in locations of high pedestrian use.

The OCCS (Appendix N) has been prepared to guide Sydney Metro's approach to stakeholder and community liaison including engagement with businesses. Sydney Metro's overarching approach to business engagement is detailed further in the response to the issues raised Section 8.4.1.

In accordance with CEMF-BI2, hoarding and screening impacting the visibility of business would be minimised where feasible and reasonable, without compromising public safety or the effective management of construction airborne noise. Clear pathways and signage would be implemented around construction sites to maximise visibility of retained businesses.

## 8.5 GPT Group

### 8.5.1 Support for Sydney Metro West

#### Issues raised

GPT Group expressed its support for the Sydney Metro West project, noting it would ensure the long-term productivity, liveability and sustainability of the region by providing a fast, reliable and frequency rail service.

#### Response

GPT Group's support for Sydney Metro West is noted.

### 8.5.2 Precinct, placemaking and approach to design

#### Issues raised

GPT Group raised the following issues relating to precinct, placemaking and approach to design:

- appropriate representation by Sydney Olympic Park Authority should be included in the Design Advisory Panel and future Design Review Panel in relation to Sydney Olympic Park metro station
- there is no detail provided in the Environmental Impact Statement around the expected use and function of the space for non-station use above ground level and active uses at ground level
- GPT Group would appreciate being briefed on proposed uses and to discuss relationship to GPTs future plans
- placemaking for the proposal should consider and be aligned with the Place Vision & Strategy currently being led by Sydney Olympic Park Authority
- further detail could be provided around the basis for the identified passenger demand forecast for the 2036 AM peak (2,700 customers accessing the metro station and 3,810 customers egressing)
- positioning and focusing the day-to-day entries and associated pedestrian movements to the northern and southern ends is a missed opportunity and will potentially undermine the objective to create an activated and vibrant town centre

- GPT Group assume Precinct Street A is to be delivered as part of the Sydney Olympic Park over and adjacent station development (SSD-35283699) and GPT Group request to be consulted on the design of this shared zone
- GPT Group are seeking clarity on expectations and timing for the eastern edge of the new public domain to the north-east of Sydney Olympic Park metro station.

## Response

Sydney Metro has worked consistently with key stakeholders at Sydney Olympic Park including Sydney Olympic Park Authority and GPT Group as an adjoining landowner. Sydney Metro would continue to consult with Sydney Olympic Park Authority and GPT Group regarding detailed design of the station and precinct to align with master planning, including the responsibility for delivery of the new Precinct Street A and design and staging of Central Urban Park which sits partially on GPT land. Sydney Metro is not reliant on the development of this site for opening of Sydney Metro West and Sydney Olympic Park metro station, however Sydney Metro acknowledge it is an adjoining site where design and operational interfaces would continue to be coordinated with Sydney Olympic Park Authority. Responses to the issues raised in Sydney Olympic Park Authority advice is provided in Section 8.12.

The fit-out and use of space for non-station use does not form part of this proposal and would be subject to a separate approval process. The space for non-station use is intended to provide activation to the overall station precinct and would be in accordance with the *Draft Sydney Olympic Park Master Plan 2030 (Interim Metro Review)* (Sydney Olympic Park Authority, 2021). Sydney Metro notes that the *Sydney Olympic Park Master Plan 2030 (Interim Metro Review)* (Sydney Olympic Park Authority, 2022) has been finalised since the exhibition of the Environmental Impact Statement.

Passenger operational demands for each station, sourced from 2036 Public Transport Projects Model (PTPM) strategic transport model outputs, have been extracted using the Transport Modelling Analytics Platform (TMAP) tool to determine the number of customers entering and leaving proposed stations during the morning peak. Forecast mode of arrival has been used to inform infrastructure requirements, such as the need for bus infrastructure, kiss and ride facilities and footpath widening. Section 2.3 of Technical Paper 1 (Operational transport) of the Environmental Impact Statement further describes the methodology for passenger demand modelling.

Based on feedback received during public exhibition of the Environmental Impact Statement, Sydney Metro is reviewing station entries (including day to day operations and event mode) at Sydney Olympic Park with the intent of all entries being available for day to day operations and to optimise precinct outcomes and align with Sydney Olympic Park Authority master planning. These specific design elements would be incorporated through the station design and precinct plan, which would be prepared in consultation with Sydney Olympic Park Authority (refer to Section 5.2 (Ongoing design development) of this Submissions Report for further detail). A minor clarification has been included in Section 2.13 (Minor clarifications and corrections) of this Submissions Report to acknowledge that Sydney Metro is reviewing the function of station entries at Sydney Olympic Park metro station, in consultation with Sydney Olympic Park Authority.

### 8.5.3 Construction activities – impact to local occupants

#### Issues raised

GPT Group raised the following issues relating to construction activities:

- GPT Group look forward to open communication with Sydney Metro regarding construction activities, measures to minimise impacts and potential disruption to existing tenants on 6 Herb Elliott Avenue and 3 Figtree Drive
- the primary construction egress and access points are generally supported by GPT Group
- advance notice of when secondary egress and access are planned to be used should be provided
- as part of developing a parking management plan, existing tenants should be notified of when on-street parking spaces are being removed
- further detail is requested regarding the approach to retaining and protecting existing trees along the eastern boundary of the construction site to mitigate impacts on existing tenants
- assurance is sought that all reasonable and feasible measures will be employed to minimise and mitigation potential noise impacts which would adversely impacts the environment of adjacent commercial buildings. Adoption of suitable respite periods across the day will be necessary to minimise impacts.

## Response

The OCCS (Appendix N) has been prepared to guide Sydney Metro's approach to stakeholder and community liaison including engagement with businesses. Sydney Metro would continue to consult with key stakeholders at Sydney Olympic Park including GPT Group as an adjoining landowner.

In accordance with the OCCS (Appendix N), Sydney Metro would work with local businesses so that communication and engagement is tailored to their specific needs. Sydney Metro's overarching approach to business engagement is to:

- identify and document potentially impacted businesses prior to project commencement
- provide early advice to businesses of upcoming projects
- provide businesses with information about the project and its long terms benefits
- provide businesses with information about construction progress
- ensure businesses understand the scope of the work and mitigation measures contractors can provide
- ensure businesses understand the proposed timing of the work
- consult with businesses and take steps to minimise potential impacts
- ensure the project team understands the operational requirements and sensitivities of businesses around each site.

Sydney Metro notes GPTs support for the primary construction egress and access points.

The requirement for the development of parking management plans is outlined in the CTMF (Appendix J). Notification would be provided to the community and nearby receivers in advance of any changes to parking arrangements and road network changes.

Vegetation clearing along the eastern boundary of Sydney Olympic Park metro station construction site is part of the work carried out under the previous Sydney Metro West planning application. No vegetation clearing along the eastern boundary is required during construction of this proposal. In accordance with mitigation measure CEMF-FF1 in the CEMF (Appendix I), vegetated areas to be maintained would be fenced off prior to works to prevent damage or accidental over clearing.

Sydney Metro would implement all feasible and reasonable noise mitigation measures in accordance with the CEMF (Appendix I) and through the processes outlined in the CNVS (Appendix K), including respite periods.

## 8.6 The McDonald College

### 8.6.1 Consultation

#### Issues raised

The McDonald College raised the following issues relating to consultation:

- concern about the lack of consultation undertaken by Sydney Metro, which has resulted in the impacts during construction and operation being inadequately considered and assessed in the Environmental Impact Statement
- Sydney Metro provided assurances during consultation undertaken for the previous Sydney Metro West planning application that The McDonald College would be directly consulted but this has not occurred
- the mitigation measure proposing "ongoing engagement with the NSW Department of Education to investigate feasible and reasonable mitigation measures" is not adequate as both schools are non-Government schools and not funded by or under the control of the NSW Department of Education.

#### Response

Sydney Metro is committed to ongoing consultation about potential impacts of this proposal and the previous planning application with The McDonald College and Our Lady of the Assumption Catholic Primary School. to identify appropriate mitigation measures and suitable respite periods to minimise impacts as much as is feasible and reasonable.

Sydney Metro place managers met with The McDonald College and Our Lady of the Assumption Catholic Primary School prior to public exhibition of the Environmental Impact Statement and a briefing was offered to each school when the Environmental Impact Statement was lodged for public exhibition.

The briefings prior to public exhibition focused on:

- upcoming construction activities and potential impacts
- construction program including scheduling around HSC studies
- early design considerations and opportunities to provide feedback during public exhibition of the Environmental Impact Statement.

Sydney Metro place managers also met with The McDonald College following public exhibition to discuss the issues raised in their submission (refer to Chapter 3 (Stakeholder and community engagement) of this Submissions Report. Potential noise and vibration impacts have been reassessed based on feedback from The McDonald College regarding boarders on site (refer to Section 8.6.2 for further discussion).

The OCCS (Appendix N) has been prepared to guide Sydney Metro's approach to stakeholder and community liaison including engagement with businesses.

In accordance with the OCCS (Appendix N), Sydney Metro would work with local schools so that communication and engagement is tailored to their specific needs. Sydney Metro's overarching approach to business engagement is to:

- identify and document potentially impacted businesses prior to project commencement
- provide early advice to businesses of upcoming projects
- provide businesses with information about the project and its long terms benefits
- provide businesses with information about construction progress
- ensure businesses understand the scope of the work and mitigation measures contractors can provide
- ensure businesses understand the proposed timing of the work
- consult with businesses and take steps to minimise potential impacts
- ensure the project team understands the operational requirements and sensitivities of businesses around each site.

Sydney Metro has a proven track record of working with the neighbouring communities and businesses on both Sydney Metro Northwest and Sydney Metro City & Southwest projects.

Mitigation measure EIS-S2 related to ongoing investigation into feasible and reasonable mitigation measures for nearby schools has been revised (refer to Appendix C (Revised mitigation measures)) to include consultation with 'other affected schools' (in addition to consultation with NSW Department of Education).

### 8.6.2 Construction impacts

#### Issues raised

The McDonald College raised the following issues relating to construction impacts:

- the Environmental Impact Statement does not include assessment of dust pollution impacts or mitigation measures, which is a risk for students and staff with respiratory conditions and allergies
- concern about the noise and vibration impacts and sleep disturbance during rail possessions at night, given the hours of operation of the campus and boarding on site, which have not been considered in the Environmental Impact Statement due to lack of consultation
- sleep disturbance for students during critical examination periods such as the HSC has the potential to significantly impact their performance and HSC assessment.

#### Response

Activities more likely to generate dust such as tunnelling and excavation work for the station box will be largely completed as part of the previous Sydney Metro West planning application.

Potential impacts from dust during construction are anticipated to be negligible and manageable through implementation of the standard air quality mitigation measures provided in the CEMF (Appendix I). This would include regularly wetting down exposed and disturbed area and adjusting construction activities based on observed dust levels and weather forecasts. Further discussion on the potential air quality impacts of this proposal is provided in Section 18.3 of the Environmental Impact Statement.

The clarification in Section 2.7 (North Strathfield metro station – reclassification of The McDonald College) of this Submissions Report provides additional assessment of the potential noise and vibration impacts on The McDonald College. The College has been re-classified as a residential receiver for the purposes of out of hours noise and vibration assessments to acknowledge that boarders sleep at the site during school terms. Some 'high' impacts in the evening and night-time are predicted during noisy work for rail possessions, when equipment such as grinders are being used. The impacts during 'typical' work, which does not require noise intensive equipment, are predicted to reduce, with noise levels predicted to result in 'moderate' impacts. 'Low' to 'moderate' sleep disturbance impacts are also identified during rail possessions. Section 10.6.3 of the Environmental Impact Statement identifies that there are expected to be 16 short-term rail possessions at North Strathfield over the construction period for this proposal.

These potential impacts at The McDonald College are similar to the predicted impacts at other nearby residential receivers detailed in the Environmental Impact Statement. The updated assessment completed also assumes that the boarders are located in the closest building to the rail corridor within The McDonald College campus. Feedback received during consultation with The McDonald College after public exhibition of the Environmental Impact Statement indicates that the boarders are located in a building set back from the construction site and fronting George Street. As such, the assessment is considered to be conservative and potential impacts during the evening and night-time would likely be lower than those presented in Section 2.7 (North Strathfield metro station – reclassification of The McDonald College) of this Submissions Report.

Temporary construction noise and vibration impacts would be managed through the implementation of standard in accordance with the CEMF (Appendix I) and additional mitigation measures the CNVS (Appendix K). Potential mitigation measures include the use of acoustic blankets and the provision of respite periods from noisy work.

Further investigation of minimising sleep disturbance would also be completed as detailed construction planning information becomes available. Sydney Metro has a proven track record of working with the neighbouring communities, including schools and businesses, on both Sydney Metro Northwest and Sydney Metro City & Southwest projects.

### 8.6.3 Access

#### Issues raised

The McDonald College raised the following issues relating to access:

- the Environmental Impact Statement does not adequately assess access impacts for The McDonald College
- the existing access gate from the school campus to North Strathfield Station should be retained as it provides a safer option for students not having to use surrounding streets
- concerns regarding the poor capacity and weather protection of the overhead pedestrian bridges, and the potential for crowd crush when events are on at Sydney Olympic Park
- the narrow pathway next to the rail corridor also does not provide a very good level of safety for users, particularly at night.

#### Response

Access to neighbouring properties would be maintained during construction, in accordance with the CTMF (Appendix J). In the event that an existing access point cannot be maintained during certain construction activities, Sydney Metro would consult with The McDonald College regarding provision of appropriate alternative access points. Sydney Metro would also consult with The McDonald College regarding the retention of this access or provision of an alternative access during operation.

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

A new pedestrian footbridge would be provided (to the north of the existing station building) to provide an interchange connection between Sydney Metro and Sydney Trains services and connect to the existing station entry from the west via Pomeroy Street. The new pedestrian footbridge is being designed to be weather protected and to cater for the forecast demand in pedestrians. During events at Sydney Olympic Park, marshalling of interchange crowds may be required at North Strathfield metro station.

The existing footbridge that connects Queen Street, the Sydney Trains station platforms, and the public footpath access to the west of the station (between Pomeroy Street and Hamilton Street East), would also provide a connection to the metro station. As identified in Chapter 10 (North Strathfield metro station) of the Environmental Impact Statement, the existing pedestrian footbridge may require upgrades/replacement including the potential widening of the footbridge to provide improved interchange capacity (to be further investigated subject to detailed design and further stakeholder consultation).

#### 8.6.4 Traffic impacts

##### Issues raised

The McDonald College raised the following issues relating to traffic impacts:

- the construction traffic assessment in the Environmental Impact Statement ignores the impacts of construction workers traveling to site by car, on the premise they will be encouraged to travel to site by train
- construction vehicle movements appear arbitrary and without support as to how these have been estimated, and there is no estimate of the workforce during construction
- the construction traffic assessment offers no mitigation for the traffic and parking impacts of construction workers taking up all day parking in surrounding streets
- the statement in the Environmental Impact Statement that concludes all other intersections would perform at the same level of service with or without construction traffic is misleading because the intersections already operate at level of service F and there is no service level after F
- overall, the true impact of construction traffic and worker parking has not been assessed adequately and the gridlock in surrounding streets will have a large impact on students, staff and parents trying to access to the school.

##### Response

The construction phase intersection performance modelling undertaken for this proposal includes both heavy and light vehicles (including construction workers) travelling to and from the sites. Construction vehicle movements are based on the anticipated vehicles movements to carry out the various construction activities, including vehicles for construction workers. The construction phase intersection performance modelling is summarised in Section 10.5.3 of the Environmental Impact Statement for North Strathfield metro station.

A number of intersections at North Strathfield metro station would experience a temporary reduction in performance due to the introduction of construction vehicles. The assessment includes a number of intersection parameters such as average delay and queue length to adequately assess the potential transport impacts where level of service is F with and without this proposal. Technical Paper 2 (Construction transport) of the Environmental Impact Statement provides further detail on the performance of intersections during construction at North Strathfield metro station.

Construction transport impacts would be managed through implementation of the CTMF (Appendix J). The CTMF (Appendix J) sets out mitigation measures for how worker access and parking would be managed. The includes requirement for preparation of parking management plans, where required. These plans would identify requirements for on-site and off-site parking during construction and associated impacts; remote parking arrangements and associated access between sites and public transport nodes; alternate parking arrangements for displaced parking; and communication and parking management measures.

North Strathfield metro station is well serviced by public transport including the existing North Strathfield Station.

#### 8.6.5 Parking

##### Issues raised

The McDonald College raised the following issues relating to:

- the Environmental Impact Statement does not identify replacement of the removal of on-street parking spaces on Queen Street
- the removal of parking will push commuters into an already congested George Street seeking parking and presenting a safety hazard for The McDonald College students

- the location of the proposed kiss and ride is a poor option as it is a relatively narrow and short cul-de-sac street and will conflict with students drop offs at the school
- the location of the proposed kiss and ride will impact student safety and traffic flow on George Street at peak times, and no mitigation has been proposed.

### Response

Replacement of the on-street parking spaces removed on Queen Street is not proposed. Sydney Metro West stations would be designed to promote active and public transport access above the use of private vehicles, in accordance with the modal access hierarchy. To accommodate customers driving to stations, spaces would be provided for pick up and drop off by taxi or kiss and ride (refer to Section 10.5.2 of the Environmental Impact Statement and Section 4.6 of Technical Paper 1 (Operational transport) of the Environmental Impact Statement). Sydney Metro would consider opportunities to minimise parking impacts as part of interchange access planning while achieving the outcomes of the modal access hierarchy.

Sydney Metro would work with City of Canada Bay Council to help address potential parking impacts that may arise from a loss of on-street parking in the vicinity of North Strathfield metro station, as well due to potential park and ride in residential streets (in accordance with mitigation measure EIS-TT3 in Appendix C (Revised mitigation measures)). EIS-TT3 has also been amended to include example measures that could be considered (refer to Section 2.14 (Changes to or additional mitigation measures) of this Submissions Report).

The forecast passenger mode of arrival and departure at North Strathfield metro station is strongly weighted to walking, followed by bus customers (refer Technical Paper 1 (Operational transport) of the Environmental Impact Statement). The proposed design responds to these modes. Sydney Metro would continue to consider the location of kiss and ride facilities at stations, taking into account the need to manage potential impacts and achieving the outcomes of the modal access hierarchy. Sydney Metro notes there is an existing kiss and ride facility on Hamilton Street East which is proposed to be expanded as part of this proposal (refer to Figure 10-1 of the Environmental Impact Statement).

### 8.6.6 Safety

#### Issues raised

The McDonald College commented that the Environmental Impact Statement does not adequately assess increased safety risks for school students resulting from construction vehicles in surrounding streets.

#### Response

Pedestrian safety would be managed through the implementation of the CTMF (Appendix J) including Section 9.5 regarding managing risks to vulnerable road users (such as pedestrians) and Section 10 requiring road safety audits for site specific construction traffic management plans. Site specific Construction Traffic Management Plans would be prepared by the Principal Contractor for each site and would include the development of pedestrian and cycle movement plans where it is necessary to divert or warn pedestrian and/or cyclists. Potential traffic safety impacts to pedestrians, cyclists and other road users are considered further in Section 3.3 of Technical Paper 2 (Construction transport) of the Environmental Impact Statement.

### 8.6.7 Built form impacts

#### Issues raised

The McDonald College raised the following issues relating to built form impacts:

- the Environmental Impact Statement is misleading in terms of the height of the station building on Queen Street as Section 10.2.2 states the building will rise six or seven storeys above street level, yet the massing shown in Figure 10.2 and Section 10.9 indicates significantly smaller structure of around three storeys
- the Environmental Impact Statement does not define what floor to floor heights the six to seven storeys will be
- an overshadowing analysis should be undertaken of the aboveground station infrastructure to understand impacts on surrounding properties including the eastern play spaces at The McDonald College
- there is no commentary on impacts to the vegetation along the boundary of The McDonald College and the rail corridor, which currently provides privacy screening
- the Environmental Impact Statement provides no details on what the height of the new pedestrian bridge would be, or an assessment of potential privacy issues for The McDonald College.

## Response

The number of storeys described in the Environmental Impact Statement included a description of the indicative heights of aboveground structures. The heights are described in terms of the number of typical residential and/or commercial storeys that the height of the structure would be equivalent to (indicatively about 3-4 metres per storey). The purpose of this description was to give an indication of the scale of the structures, rather than describe the physical number of storeys which would be included in the structure. For example, a storey in a station services building may be higher than that of a typical residential building. Section 10.2.2 of the Environmental Impact Statement refers to an equivalent height in typical residential storeys (which is around six to seven storeys). The station building height is also identified in Technical Paper 6 (Landscape and visual amenity) of the Environmental Impact Statement as about 25 metres at the northern end and would reduce as the building form transitions along Queen Street to the south. Sydney Metro has provided clarifications regarding building heights in Section 2.13.1 (Station and precinct descriptions – height of aboveground structures) of this Submissions Report and an updated description for building heights in Appendix B (Revised proposal description).

Overshadowing analysis has been carried out for precincts where there is potential for this proposal to overshadow existing adjacent residential properties and public domain areas identified for solar access protection in local planning guidance (as outlined in Section 2.2 of Technical Paper 6 (Landscape and visual amenity) of the Environmental Impact Statement)). The station building height at North Strathfield metro station would be, subject to design development, indicatively around 25 metres at the northern end and would reduce to indicatively around 10 metres high as the building form transitions along Queen Street to the south. Any overshadowing from the station building in a westerly direction would only occur during the AM period would be likely to extend into the existing rail corridor only, which has a width of around 28 metres. The station is unlikely to result in overshadowing to adjacent properties or public domain areas. In accordance with the Sydney Metro West corridor-wide urban design principles, the scale of station development would aim to reflect existing and desired future character of station precincts. The urban design strategies for North Strathfield metro station (refer to the Design Guidelines in Appendix M) also include requirements related to integrating the station design and interchange with the existing precinct and celebrating the heritage value of the existing station. This would involve consideration of the bulk and scale and of the new station infrastructure.

Sydney Metro would consult with The McDonald College in relation to managing the potential impacts of this vegetation removal, including in relation to the potential replacement plantings as part of the final station design. In accordance with Concept condition of approval C-B8, as many mature trees as practicable would be retained. In addition, within ten years of the date of the Concept approval or no later than the commencement of operation of Sydney Metro West (whichever is earlier), there must be a net increase in the number of mature trees provided at a ratio of 2:1. The landscape and visual impact assessment provided in Technical Paper 6 (Landscape and visual amenity) of the Environmental Impact Statement has considered the removal of vegetation within the rail corridor adjacent to The McDonald College.

Sydney Metro would consult with The McDonald College during detailed design of the new pedestrian footbridge. In accordance with the Design Guidelines (Appendix M), bridges are to integrate structural and architectural elements to create high quality, simple and elegant pieces of infrastructure, presenting as coherent, well-proportioned, symmetrical structures. Potential visual impacts from the new pedestrian footbridge at North Strathfield metro station are assessed in Technical Paper 6 (Landscape and visual amenity) of the Environmental Impact Statement.

### 8.6.8 Structural damage risk

#### Issues raised

The McDonald College raised the following issues relating to structural damage:

- there is no consideration in the Environmental Impact Statement of the risk of structural damage to The McDonald College's buildings, despite the closest construction work proposed occurring only a few short metres from some buildings
- there has been no consideration of mitigation measures to protect The McDonald College's buildings from damage.

#### Response

The works closest to The McDonald College would include station platforms and footpath upgrades and construction of the new aerial pedestrian footbridge. These activities are not expected to use major sources of vibration generating equipment and therefore vibration impacts are anticipated to be minor, as outlined in Section 10.6.3 of the Environmental Impact Statement.

Sydney Metro would offer condition surveys of The McDonald College buildings near to the construction site before and after construction of this proposal, in accordance with CEMF-NV28 (refer to Appendix I (CEMF)).

Potential vibration impacts would be managed in accordance with the requirements of the CEMF (Appendix I) and mitigation measures CEMF-NV14 and CEMF-NV15, which require:

- where there is potential for exceedances of the vibration objectives, attended monitoring would be undertaken at the commencement of vibration generating activities to confirm site laws. If, following confirmation of site laws, there continues to be a potential for exceedances, continuous vibration monitoring including audible and visible alarms would be conducted at the nearest sensitive receivers
- where vibration levels are predicted to exceed the screening criteria, a more detailed assessment of the structure (in consultation with a structural engineer) and vibration monitoring would be carried out to ensure vibration levels remain below appropriate limits for that structure.

## 8.7 Sydney Fish Market

### 8.7.1 Support for Sydney Metro West

#### Issues raised

Sydney Fish Market expressed their support for the Sydney Metro West project, noting it would support transit-orientated development and renewal at Blackwattle Bay.

#### Response

Sydney Fish Market's support for Sydney Metro West is noted.

### 8.7.2 Transport connections

#### Issues raised

Sydney Fish Market commented that it is important the design of Pymont Station provides appropriate pedestrian and cyclist connections and wayfinding to the new Sydney Fish Market for visitors and tourists.

#### Response

Wayfinding signage around Pymont Station would be provided in and around the station in accordance with the Sydney Metro West Design Guidelines (Appendix M). Station information is to include but not be limited to, trip planning including real time information including for local destinations.

Sydney Metro would continue to work with City of Sydney Council and the Department of Planning and Environment regarding coordination with the *Pymont Peninsula Place Strategy* (NSW Department of Planning, Industry and Environment, 2020) and Draft *Pymont Peninsula Design Guidelines* (NSW Department of Planning, Industry and Environment, 2021e), including integration with other proposed active transport links being delivered by others. However, pedestrian and cyclist connections from Pymont Station to the new Sydney Fish Market is beyond the scope of the Sydney Metro West project.

### 8.7.3 Considerations during construction phase

#### Issues raised

Sydney Fish Market raised the following issues relating to the construction phase:

- temporary footpath closures would require appropriate alternative routes and wayfinding to the Sydney Fish Market
- operations of the current Sydney Fish Market and construction of the new Sydney Fish Market must remain uninterrupted during construction of this proposal, noting operations of the Sydney Fish Market are highly contingent on the reliability of the road network and transport access.

#### Response

Alternative pedestrian routes would be provided for any temporary footpath closures required during construction, in accordance with the CTMF (Appendix J).

The construction of Pymont Station is not expected to result in interruptions to the operation of the existing or the construction of the new Sydney Fish Market. Potential construction traffic impacts at Pymont Station are assessed in Section 14.5.3 of the Environmental Impact Statement and would be managed in accordance with the CTMF (Appendix J). Sydney Metro is proposing some refinements to the construction haul routes at Pymont Station to minimise traffic network impacts. This clarification is described and assessed in Section 2.9 (Pymont Station – construction haul route refinement) of this Submissions Report.

In accordance with the OCCS (Appendix N), Sydney Metro’s overarching approach to business engagement during construction is to:

- identify and document potentially impacted businesses prior to project commencement
- provide early advice to businesses of upcoming projects
- provide businesses with information about the project and its long terms benefits
- provide businesses with information about construction progress
- ensure businesses understand the scope of the work and mitigation measures contractors can provide
- ensure businesses understand the proposed timing of the work
- consult with businesses and take steps to minimise potential impacts
- ensure the project team understands the operational requirements and sensitivities of businesses around each site.

Sydney Metro has a proven track record of working with the neighbouring communities and businesses on both Sydney Metro Northwest and Sydney Metro City & Southwest projects.

#### 8.7.4 Public transport network

##### Issues raised

The Sydney Fish Market continues to advocate for the provision of a ferry service at the new Sydney Fish Market which features a ferry wharf in its design. A ferry service will enhance the public transport connectivity for the Sydney Metro West project.

##### Response

Potential ferry services to and from the new Sydney Fish Market are beyond the scope of the Sydney Metro West project.

## 8.8 Western Sydney Leadership Dialogue

### 8.8.1 Support for Sydney Metro West

##### Issues raised

Western Sydney Leadership Dialogue expressed its support for the Sydney Metro West project, noting that it would unlock economic opportunity, particularly in Greater Western Sydney.

##### Response

Western Sydney Leadership Dialogue’s support for Sydney Metro West is noted.

### 8.8.2 Social value

##### Issues raised

Western Sydney Leadership Dialogue commented that Sydney Metro West provides the perfect opportunity to capture social value along the corridor to ensure substantial community dividend, in accordance with their previous recommendations to the government in the form of their discussion paper *Humanising Infrastructure* (Western Sydney Leadership Dialogue, 2021).

##### Response

Sydney Metro notes the Western Sydney Leadership Dialogue’s comments. Sydney Metro has a number of initiatives that are aligned with the themes in the *Humanising Infrastructure* discussion paper including through its workforce development and Aboriginal participation in construction programs, social and environmental sustainability initiatives and targets, and community benefits plan.

### 8.8.3 Parramatta Light Rail Stage 2

##### Issues raised

Western Sydney Leadership Dialogue welcomes the inclusion of the planned Parramatta Light Rail Stage 2 in the Sydney Olympic Park metro station plan, however it notes this project has been deferred indefinitely.

## Response

The Parramatta Light Rail project is beyond the scope of Sydney Metro West and the Environmental Impact Statement. Planning and development work for Stage 2 of the Parramatta Light Rail is underway and the NSW Government is committed to commencing a detailed planning process to move ahead with the project.

### 8.8.4 Housing

#### Issues raised

Western Sydney Leadership Dialogue raised the following issues in relation to housing:

- there has been no specific consideration given to social and affordable housing along the Sydney Metro West project
- while beyond the scope of the Environmental Impact Statement, the volume of development generated by this proposal will demand further discussion around the scale and nature of residential development
- Western Sydney Leadership Dialogue recommends a 30 per cent inclusionary zoning mandate within a 1-kilometre radius of new metro stations is considered in the future when planning over and adjacent station developments, including the full range of affordable housing typologies.

#### Response

Provision of housing types and any associated rezoning around the station precincts is beyond the scope of this proposal and the Environmental Impact Statement. As outlined in Section 2.6 of the Environmental Impact Statement, future over and/or adjacent station development would be subject to separate planning approval process in accordance with the provisions of the *Environmental Planning and Assessment Act 1979*.

## 9.0 Government agency advice

### 9.1 Overview of submissions received

The Department of Planning and Environment received advice regarding this proposal from the following NSW government agencies:

- Ausgrid
- Department of Planning and Environment – Water
- Department of Planning and Environment – Biodiversity and Conservation
- Department of Primary Industries – Fisheries
- Heritage Council of NSW – non-Aboriginal cultural heritage
- Heritage NSW – Aboriginal cultural heritage
- NSW Environment Protection Authority
- Place Management NSW
- Port Authority of NSW
- Sydney Olympic Park Authority
- Sydney Water.

The approach to processing and responding to these submissions is described in Chapter 4 (Analysis of submissions) of this Submissions Report. A summary of the issues raised in government agency advice and a response to the issues raised is provided in the following sections.

### 9.2 Ausgrid

The submission notes that Ausgrid have no comments on this proposal.

### 9.3 Department of Planning and Environment – Water

#### 9.3.1 Groundwater

##### Issues raised

The Environmental Impact Statement notes for many of the stations that there will be minor to negligible impacts on groundwater. These impacts are not further quantified. Therefore, the proponent should provide more explanation as to why there will be minor to negligible impacts on groundwater and quantify the amount of take if it will occur.

##### Response

Excavation of station boxes and tunnelling would be completed as part of the previous Sydney Metro West planning applications and predicted groundwater inflows are provided in the previous Environmental Impact Statements. Once constructed the tunnels and dive structure portals, retaining walls and some stations would generally comprise tanked structures which would prevent groundwater from entering the structure. Groundwater inflow and level is assumed to remain consistent or slightly improve at the commencement of construction of this proposal.

Only limited areas of additional excavation are proposed at some station sites (e.g. for an underground concourse at Westmead metro Station, excavation for basement structures at Parramatta metro station and for a traction substation at The Bays Station) as part of this proposal.

Sydney Metro would also prepare and submit an updated Groundwater Modelling Report to the Department of Planning and Environment prior to bulk excavation at the relevant construction locations in accordance with condition of approval D122 of the previous Sydney Metro West planning application. Condition of approval C17 of the previous Sydney Metro West planning application outlines the requirements of the Groundwater Construction Monitoring Program that would be implemented to monitor groundwater inflow during construction.

As identified in Section 7.10.2 and 8.10.2 of the Environmental Impact Statement, groundwater predictive modelling carried out under the previous Sydney Metro West planning application would be reviewed and updated to incorporate the scope of this proposal at Westmead metro station and Parramatta metro station. Since the exhibition of the Environmental Impact Statement, further assessment (including groundwater modelling) has been carried out to assess the potential impacts to groundwater associated with the underground concourse at Westmead metro station and excavation for basement structures at Parramatta metro station. Results of this analysis is provided in Section 2.3 (Westmead metro station – additional assessment of groundwater and ground movement impacts) and 2.5 (Parramatta metro station – additional assessment of groundwater and ground movement impacts) of this Submissions Report. This additional modelling identifies that the groundwater drawdown from the underground concourse at Westmead and the basement structures at Parramatta would be considerably less than that predicted for the excavation of the stations as part of the previous Sydney Metro West planning application. This confirms the outcomes from the Environmental Impact Statement.

### 9.3.2 Compliance

#### Issues raised

The proponent must ensure sufficient water entitlement is held in a Water Access Licence/s to account for the maximum predicted take for each water source prior to take occurring unless an exemption under the Water Management (General) Regulation 2018 applies.

#### Response

Sydney Metro notes the Department of Planning and Environment – Water’s comments and would continue to liaise with the Department of Planning and Environment – Water to confirm water licensing requirements for this proposal.

## 9.4 Department of Planning and Environment – Biodiversity and Conservation

### 9.4.1 Flood protection at station entrances

#### Issues raised

Department of Planning and Environment – Biodiversity and Conservation raised the following requests related to flooding protection at station entrances:

- request for further information be provided to assess:
  - the level of passive flood protection afforded
  - the frequency of inundation or flood immunity
  - how often active protection (flood barriers) would be needed.
- recommendation that all proposed freeboard height should be explicitly stated for each entry and if a reduced freeboard is proposed it should be noted and justified. The Department of Planning and Environment – Biodiversity and Conservation requests that the following information should be provided for each entry:
  - five per cent annual exceedance probability climate change flood level (may not be relevant for all stations)
  - one per cent annual exceedance probability climate change flood level
  - adopted freeboard
  - one per cent annual exceedance probability climate change flood level plus freeboard
  - intermediate event levels if relevant (Parramatta metro station)
  - Probable Maximum Flood level
  - design level.
- recommendation that flood levels for events more frequent than the five per cent AEP flood for stations experiencing frequent flooding are included.

## Response

The flooding assessment in the Environmental Impact Statement has been completed in accordance with the Secretary's environmental assessment requirements. Appendix A (Assessment requirements) of the Environmental Impact Statement provides an overview of where the Secretary's environmental assessment requirements have been addressed. The range of flood events and flood criteria included in the flooding assessment are consistent with the assessment approach undertaken for other major transport project planning approvals, including previous Sydney Metro projects.

Details regarding the level of passive protection and how often active protection measures would be required at each station would be confirmed during further design development.

All metro stations and other critical infrastructure are protected from the higher of either the Probable Maximum Flood (PMF) or the one per cent Annual Exceedance Probability (AEP) climate change flood event, plus freeboard. The proposed protection level for each metro station is provided in Section 5.2 of Technical Paper 8 (Hydrology, flooding and water quality) of the Environmental Impact Statement. This includes justification for where a reduced freeboard is proposed (from 500 mm to 300 mm). Sydney Metro would continue to consider the appropriate freeboard for each station during further design development.

The flooding assessment in Technical Paper 8 (Hydrology, flooding and water quality) of the Environmental Impact Statement has considered the five per cent AEP, one per cent AEP and PMF flood events. Climate change has been directly incorporated into each assessment as relevant. The assessment considers an appropriate full range of flood events from smaller more frequent events (the five per cent AEP), the event that is typically used for land use planning (the one per cent AEP) and the largest flood that could conceivably occur (the PMF). The range of flood events and flood impact criteria included in the flooding assessment have been selected to be consistent with the assessment approach undertaken for other major transport project planning approvals, including previous Sydney Metro projects. Flood levels for each event with and without this proposal are provided in the Appendices of Technical Paper 8 (Hydrology, flooding and water quality) of the Environmental Impact Statement.

### 9.4.2 Flood barriers

#### Issues raised

Department of Planning and Environment – Biodiversity and Conservation raised the following issues related to flooding barriers:

- the use of active flood protection (flood barriers) is generally not supported or acceptable and should be investigated further due to the significant additional risk compared to passive protection (such as by designing floor and entry levels to prevent the ingress of floodwater)
- the Environmental Impact Statement proposes flood barriers at three stations – Parramatta, Pyrmont and Hunter Street, where the flood or flood planning level is higher than the design levels (or finished floor levels) of the station entries. It is not clear whether flood barriers would be required at The Bays Station. The Environmental Impact Statement indicates that the flood protection level would be higher than the station entry level at The Bays. However, Table 5-16 of Technical Paper 8 (Hydrology, flooding and water quality) of the Environmental Impact Statement indicates that the flood level would be lower than the station entry level
- the proposed flood barriers, particularly at Parramatta metro station, would likely prevent or restrict access by emergency services, which would add new risks to commuters and workers within the station. This includes the potential failure or malfunction of the barriers, and potential activation in false alarms
- recommendation that the Environmental Impact Statement should state if and how each station will remain accessible to the public and emergency services when flood barriers are activated, including schematics and plots at the locations of the proposed flood barriers along with the following details based on a comprehensive analysis of:
  - design levels at entries of these stations
  - the flood immunity or frequency of inundation
  - rise and fall of floodwater for the modelled events including the PMF event (i.e., time versus water level). The critical storm for peak flood levels is unlikely to be the same as the critical storm for rate of rise of floodwaters
  - duration of inundation and/or expected time for isolation when the barriers are active
  - the potential for failure of the flood barriers as this would have effects like dam break conditions

- an estimate of the volume of floodwater that would enter the station (and tunnel) during failure conditions of a flood barrier
- duration of dewatering following a flood event and impacts on operation of the metro
- the number of commuters and workers that would be isolated when flood barriers are activated at different times, i.e. during peak and low traffic conditions in weekdays and weekends, under the full range of flooding conditions at these station
- whether the stations will continue to operate once flood barriers have been deployed
- undertake the above assessment for the full range of flooding events including the PMF event.

### Response

The Environmental Impact Statement identifies that flood barriers may be incorporated into the design of Parramatta metro station, Pyrmont Station and Hunter Street Station (Sydney CBD) to help mitigate flood impacts. In accordance with mitigation measure EIS-HF1 (refer to Appendix C (Revised mitigation measures)), the appropriate measures (e.g. the need for flood barriers) would be confirmed during further design development so that the flooding performance outcomes are achieved, and that flood protection is provided for the nominated station or facility entry threshold level.

The flood protection level for The Bays Station is the one per cent AEP with climate change plus 500 mm freeboard (this was incorrectly noted as 300 mm freeboard in Chapter 13 (The Bays Station) of the Environmental Impact Statement). Table 5-16 of Technical Paper 8 (Hydrology, flooding and water quality) identified that the one per cent AEP with climate change flood level is 3.69 mAHD. With 500 mm freeboard added to this, the flood protection level is 4.19 mAHD. As discussed in Section 13.11.2 of the Environmental Impact Statement, this means the existing surface levels (4.0 mAHD) at the station entrance for The Bays Station is below the required flood protection level. In accordance with mitigation measure EIS-HF1 (refer to Appendix C (Revised mitigation measures)), further design refinement would be carried out to identify the appropriate measures so that the flood protection level for each station entry is achieved. Where possible, this would be achieved through passive measures, however flood barriers may be required.

In some cases, designing the levels of station entries to passively prevent floodwater ingress would impact urban design and access outcomes, and create difficulty in integrating station entries into the wider precinct.

In accordance with mitigation measure EIS-HF3 (refer to Appendix C (Revised mitigation measures)), ongoing consultation would occur with the NSW State Emergency Services and relevant councils in relation to potential impacts to existing community emergency management arrangements for flooding at relevant station precincts.

In accordance with mitigation measure EIS-HF2 (refer to Appendix C (Revised mitigation measures)), emergency management arrangements would be developed to manage flood risks to people and vehicles accessing stations and ancillary facilities. Egress arrangements would consider flood hazard in nearby streets particularly where active flood measures are employed. They would be designed so that the inclusion of flood barriers at relevant access points does not interfere with the egress strategy. Emergency management arrangements would also be integrated across this proposal and consider such matters as the relative degree of isolation of stations or ancillary facilities due to inundation by floodwaters.

### 9.4.3 Climate change and sea level rise

#### Issues raised

Department of Planning and Environment – Biodiversity and Conservation raised the following issues related to flooding due to climate change and sea level rise:

- recommendation that flooding conditions under projected climate change scenarios should be evaluated for the full design operational phase of the infrastructure. This is required for the development of adaptive and long-term flood risk mitigation measures. The Environmental Impact Statement only discusses climate change to 2090 for rainfall intensity and 2100 for sea level rise, which will be less than 80 years from the completion of the project
- recommendation that increases to both rainfall intensity and sea level rise projected to the year 2150 are considered. Modelling should be undertaken using data from the latest IPCC reporting for the SSP5-8.5 scenario using at least the mid-range estimates for medium confidence processes. Projected temperature increases may be used to calculate rainfall intensity increases in accordance with the methodology in Australian Rainfall and Runoff

- recommendation that while additional measures beyond 2100 may not need to be implemented immediately, proof of concept should be developed now to ensure future flood risk is not inadvertently introduced
- request for clarification is sought on this statement 'Climate change has been incorporated into the PMF event by applying elevated tailwater boundary conditions as appropriate'. Department of Planning and Environment – Biodiversity and Conservation requests detail on the sea level rise adopted for the PMF. Given the PMF represents a worst-case scenario, particular consideration should be given to sea level rise, and especially with flood barriers.

### Response

Sydney Metro West would be designed to withstand known impacts associated with climate change to year 2100, including sea level rise, in accordance with Concept condition of approval C-B11.

Sydney Metro has undertaken a climate change risk assessment to inform the design of this proposal (refer to Section 18.4.2 of the Environmental Impact Statement). Climate change risks would be assessed throughout design development and risk treatments would be progressively incorporated as appropriate.

Given the expected design life of the infrastructure varying across proposal elements and the available climate data, the time periods selected for climate risk assessment were 2030 (an average of the period from 2020 to 2039), 2070 (an average the period from 2060 to 2079), and 2090 (an average of the period from 2080 to 2100). This accounts for shorter design elements, such as signalling and cabling, with longer design elements, such as pavements, rail and structures, as well as providing for a design that can withstand the known impacts from climate change through to 2100.

Data and projections presented in Table 18-9 of the Environmental Impact Statement are based on the Representative Concentration Pathway (RCP) 8.5 and regional climate models for the Sydney region (regionalised to a local level based on the Intergovernmental Panel on Climate Change Fifth Assessment Report (2014)).

The PMF models use year 2100 tailwater levels. At The Bays, the model includes high tailwater level which also account for storm surge and sea level rise.

#### 9.4.4 Emergency management

##### Issues raised

Department of Planning and Environment – Biodiversity and Conservation raised the following issues related to emergency management:

- recommendation that this proposal must not increase the existing risk to life and evacuation potential for the full range of flood events up to the PMF level
- recommendation that local flood emergency plans and flood emergency response be considered as some metro stations would be surrounded by flood waters, and the redistribution of flood waters due to flood barriers could place people in harm's way
- the Environmental Impact Statement indicates that a shelter in place strategy would be adopted at some stations during hazardous flooding without mentioning the PMF. The impacts of major and extreme flood events in isolating and trapping commuters and workers at some critical stations will need to be evaluated
- recommendation that the cumulative impacts of developments on emergency response planning assessed by considering the capacity of emergency management services, evacuation routes and shelter-in-place capacities (and adequacies) for stations, which are subject to significant flooding risks
- recommendation that early advice be sought on emergency management measures from the NSW State Emergency Service
- recommendation that staff at metro stations be educated on the potential flood risk within and outside the vicinity of the stations, before, during and after a flood event. A flood emergency management plan including community education and awareness should also be discussed with the NSW State Emergency Service.

## Response

The NSW State Emergency Service were briefed during the Environmental Impact Statement exhibition period (refer to Section 3.2 (Consultation to support Environmental Impact Statement exhibition) of this Submissions Report). Briefings with stakeholders during exhibition were designed to ensure stakeholders were appropriately informed about the Environmental Impact Statement and received the relevant information to make a submission.

Technical Paper 8 (Hydrology, flooding and water quality) of the Environmental Impact Statement identified some stations that would provide the opportunity for shelter in place arrangements during extreme flood events as surrounding streets would be high hazard. These include Parramatta metro station, Five Dock Station, The Bays Station, Pyrmont Station and Hunter Street Station (Sydney CBD).

In accordance with mitigation measure EIS-HF3 (refer to Appendix C (Revised mitigation measures)), ongoing consultation would occur with the NSW State Emergency Service and relevant councils in relation to potential impacts to existing community emergency management arrangements for flooding at relevant station precincts.

In accordance with mitigation measure EIS-HF2 (refer to Appendix C (Revised mitigation measures)), emergency management arrangements would be developed to manage flood risks to people and vehicles accessing stations and ancillary facilities. Egress arrangements would consider the potential flood hazard in nearby streets particularly where active flood measures are employed. They would be designed so that the inclusion of flood barriers at relevant access points does not interfere with the egress strategy. Emergency management arrangements would also be integrated across this proposal and consider such matters as the relative degree of isolation of stations or ancillary facilities due to inundation by floodwaters. As metro tunnels and other critical infrastructure would be protected from the Probable Maximum Flood (PMF), or the one per cent AEP flood level with climate change plus 500 mm freeboard (whichever is greater), emergency management arrangements would consider the potential use of the metro to provide evacuation during flood events.

### 9.4.5 Offsite flood impacts

#### Issues raised

Department of Planning and Environment – Biodiversity and Conservation raised the following issues related to offsite flood impacts:

- across several stations, flood level increases of more than 10 millimetres are reported. Recommendation that for those stations, any change in hazard category (H1-H6) should also be mapped and discussed
- recommendation that if the hazard category increases with this proposal, additional mitigation measures should be developed to avoid that impact
- for North Strathfield metro station and Burwood North Station, significant unacceptable increases in flood levels have been reported, with the comment hydraulic impacts will be mitigated as part of ongoing design. Recommendation that the Environmental Impact Statement is the appropriate stage to demonstrate that the stations can be constructed with an acceptable level of flood impacts
- recommendation that the conditions of approval for the Concept and Stage 1 (SSI-10038) are adopted for this proposal.

#### Response

The change in flood hazard levels with the proposal are discussed in Section 5.2 of Technical Paper 8 (Hydrology, flooding and water quality) of the Environmental Impact Statement and are mapped in the Appendices of Technical Paper 8 (Hydrology, flooding and water quality).

Mitigation measure EIS-HF1 requires measures to be identified during further design development to not worsen flood impacts on the community and on other property and infrastructure, up to and including the one per cent AEP flood event (refer to Appendix C (Revised mitigation measures)). The reported increases in flood levels at North Strathfield metro station and Burwood North Station are localised and relatively minor would be mitigated as part of ongoing design development through the implementation of this mitigation measure. Design development would include consideration of relevant best practice guidelines and include identification of measures to not worsen flood impacts on the community and on other property and infrastructure, up to and including the one per cent AEP flood event.

### 9.4.6 Westmead metro station

#### Issues raised

The Environmental Impact Statement has adequately considered flooding impacts on Westmead metro station and the impact of the project on surrounding properties and infrastructure. However, ongoing consultation with the NSW State Emergency Service and council in relation to potential impacts to existing community emergency management arrangements for flooding is supported.

#### Response

The Department of Planning and Environment – Biodiversity and Conservation’s comment regarding the adequacy of flooding assessment at Westmead metro station is noted. In accordance with mitigation measure EIS-HF3 (refer to Appendix C (Revised mitigation measures)), ongoing consultation would be carried out with NSW State Emergency Services and relevant councils in relation to potential impacts to existing community emergency management arrangements for flooding.

### 9.4.7 Parramatta metro station

#### Issues raised

Department of Planning and Environment – Biodiversity and Conservation raised the following issues related to Parramatta metro station:

- recommendation that the large change in flood behaviour between the one per cent AEP flood event and PMF at Parramatta metro station is unique among the stations and warrants further consideration
- recommendation that to properly satisfy the Secretary’s environmental assessment requirements the ‘full range of flood events’, intermediate events between the one per cent AEP event and the PMF should be modelled (such as the 0.5 per cent, 0.2 per cent and 0.1 per cent AEP, including flood depths). Recommendation that City of Parramatta Council should be consulted for advice on which events impact the area
- the site is described as just downstream of the Charles Street weir; however, it is just downstream of the Marsden Street weir and upstream of the Charles Street weir
- clarification is sought regarding the level of impact of the station on evacuation routes. The Environmental Impact Statement states that Church Street is an evacuation route and that all streets adjacent to the station are feeder routes. The Environmental Impact Statement shows an increase in PMF levels in Church Street, Macquarie Street and George Street adjacent to the site of 0.1 to 0.2 metres, which could have an impact on evacuation
- the impact on peak PMF levels for evacuation is not as important as understanding the impact on levels at the initial phase of flooding, during which evacuation can still occur
- it would be beneficial to illustrate impacts for short and long duration events, rather than solely the critical duration for flood levels. Once impacts are understood, the need for any mitigation measures can be assessed
- further information and flood impact mapping is sought regarding the statement ‘it is not expected that additional buildings would be impacted where they were not previously’
- recommendation that cumulative impacts of Sydney Metro West should not be hidden or disguised through a series of planning applications
- recommendation that the reasons for cumulative impacts should be further explained, beyond reference to increased conveyance at Horwood Place
- cumulative impacts are significant and, in some cases, worse than reported for this proposal alone. Recommendation that the Environmental Impact Statement should clearly state what permanent changes are being made aboveground that influence flooding in addition to those included in this stage.

#### Response

Section 5.2.2 of Technical Paper 8 (Hydrology, flooding and water quality) of the Environmental Impact Statement provides the flooding assessment for Parramatta metro station. During operation, the following potential impacts were identified:

- during the one per cent AEP event, the site would be affected by shallow ponding and flooding from direct rainfall on the site, and there would be no overland flows through the site. Potential minor reductions in flood levels of up to about 0.04 metres in George Street and Smith Street are predicted

- during the PMF event, the site would be affected by flooding in excess of one metre. Redirection of flows compared to the baseline scenario would result in increases in flood levels to the west of the site with reductions in flood level to the east
- inundation of the site and the surrounding Parramatta CBD would occur during the PMF event both with and without this proposal
- during the one per cent AEP event, potential increases in the flood extent in the kerb and gutter of George Street and potential decreases in flood extent on Macquarie Street
- during the PMF event, substantial inundation would be experienced across the Parramatta CBD without this proposal. The flood extent would not be considerably increased as a result of this proposal with some increases are predicted in areas within the site on George Street
- minor change in duration of inundation as a result of this proposal in all flood events
- there are not anticipated to be any newly flood-affected private properties as a result of this proposal.

The flooding assessment in the Environmental Impact Statement has been completed in accordance with the Secretary's environmental assessment requirements, which requires assessment of flood behaviour during construction and operation for a full range of flood events up to the PMF (taking into account sea level rise and storm intensity due to climate change). The assessment considers an appropriate full range of flood events from smaller more frequent events (the five per cent AEP), the event that is typically used for land use planning (the one per cent AEP) and the largest flood that could conceivably occur (the PMF). The range of flood events and flood impact criteria included in the flooding assessment have been selected to be consistent with the assessment approach undertaken for other major transport project planning approvals, including previous Sydney Metro projects. Sydney Metro would continue to work with City of Parramatta Council regarding potential flooding impacts at Parramatta metro station.

The Department of Planning and Environment – Biodiversity and Conservation's comment regarding the position of the site in relation to the Charles Street weir is noted. This does not affect the outcome of the flooding assessment presented in the Environmental Impact Statement.

The assessment in Section 5.2.11 of Technical Paper 8 (Hydrology, flooding and water quality) of the Environmental Impact Statement also provides the cumulative impact assessment which considered the impact of all stages of Sydney Metro West combined, as well as consideration of other projects that have the potential to result in cumulative flooding impacts (e.g. Parramatta Leagues Club Hotel at Parramatta metro station).

Mitigation measure EIS-HF1 requires consideration to be given to flood risk at all sites during further design development (refer to Appendix C (Revised mitigation measures)). Mitigation measure EIS-HF2 requires emergency management arrangements to be developed to manage flood risks to people and vehicles accessing stations and ancillary facilities. Mitigation measure EIS-HF3 requires consultation to be undertaken with NSW State Emergency Services and relevant councils in relation to potential impacts to existing community emergency management arrangements for flooding.

#### 9.4.8 North Strathfield metro station

##### Issues raised

Department of Planning and Environment – Biodiversity and Conservation raised the following issues related to North Strathfield metro station:

- recommendation that the flooding assessment should note the nature of properties impacted by predicted flood level increases, including whether any sensitive or critical uses are present
- recommendation that flooding impacts should be resolved in the Environmental Impact Statement, rather than delayed to a future stage
- cumulative flooding impacts at North Strathfield metro station are very high and are concerning, but it is anticipated that the impacts in the PMF would also be reduced with work to reduce impacts in the one per cent AEP flood event. Recommendation that PMF impacts should also be reviewed following further design.

## Response

There is potential for several private residential properties on Beronga Street and on Queen Street (south of Wellbank Street) to experience increased inundation during flood events as a result of the proposal at North Strathfield metro station (refer to Chapter 10 (North Strathfield metro station) of the Environmental Impact Statement). With the exception of one of these properties, these private properties currently experience inundation during flood events.

Further design refinement would be carried out during detailed design so that no additional private properties would be affected by flooding up to and including the one per cent AEP due to permanent infrastructure delivered as part of this proposal.

The Secretary's environmental assessment requirements required the assessment of flood behaviour during construction and operation for a full range of flood events up to the probable maximum flood (taking into account sea level rise and storm intensity due to climate change). Appendix A (Assessment requirements) of the Environmental Impact Statement outlines where the flooding assessment requires are addressed. The flooding assessment undertaken in the Environmental Impact Statement has been completed in accordance with the Secretary's environmental assessment requirements, is consistent with the assessment approach undertaken for other major transport project planning approvals including previous Sydney Metro projects, and is considered adequate to identify potential flooding risk at the current stage of design development.

As outlined in Chapter 19 (Cumulative impacts) of the Environmental Impact Statement, the potential cumulative flood impacts at North Strathfield metro station are expected to be minor and localised. These potential impacts would generally be contained to the metro site and/or the existing drainage system. Mitigation measure EIS-HF1 requires consideration of the flood risk at all sites during detailed design including identification of measures to not worsen flood impacts on the community and on other property and infrastructure, up to and including the one per cent AEP flood event (refer to Appendix C (Revised mitigation measures)).

### 9.4.9 Burwood North Station

#### Issues raised

Department of Planning and Environment – Biodiversity and Conservation raised the following issues related to Burwood North Station:

- aboveground station infrastructure at Burwood North Station will lead to inundation of additional properties under the PMF event and increase hazard and risks at Parramatta Road which is a regional evacuation route
- recommendation that the Environmental Impact Statement should include mitigation measures for incremental flood risks based on alteration of overland flow paths instead of deferring it to detailed design development stage.

#### Response

The flooding assessment undertaken in the Environmental Impact Statement has been undertaken in accordance with the requirements of the Secretary's environmental assessment requirements and is considered adequate to identify potential flooding risk at the current stage of design development. As outlined in Chapter 11 (Burwood North Station) of the Environmental Impact Statement, flood impacts are expected to be minor and consistent with the previous Sydney Metro West planning application. As a result, the impacts to flood evacuation routes such as Parramatta Road are generally expected to be unlikely or minor.

Mitigation measure EIS-HF1 requires consideration of the flood risk at all sites during detailed design including identification of measures to not worsen flood impacts on the community and on other property and infrastructure, up to and including the one per cent AEP flood event (refer to Appendix C (Revised mitigation measures)).

Mitigation measures EIS-HF2 and EIS-HF3 would also guide emergency management arrangements for this proposal and ongoing consultation with NSW State Emergency Services and relevant councils in relation to potential impacts to existing community emergency management arrangements for flooding (refer to Appendix C (Revised mitigation measures)).

### 9.4.10 The Bays Station

#### Issues raised

Department of Planning and Environment – Biodiversity and Conservation raised the following issues related to The Bays Station:

- recommendation that the suitability and adequacy of the shelter-in-place option for The Bays Station under major flood events should be investigated further as The Bays Station will be a multi-storey complex and a number of commuters, workers and visitors may be isolated for an extended duration
- recommendation that an assessment of the required duration of the shelter-in-place for all flooding events should be undertaken, including consideration of provisions for emergency services
- some people may choose to leave the station despite of hazardous and high-risk flooding if the duration of the shelter-in-place is long. This may add additional responsibilities to the emergency management services when rescue operations are required
- a comprehensive assessment will be required for the development of flood risk management options at The Bays Station, which will be integrated with the *Bays West Place Strategy*.

#### Response

Section 5.2.7 of Technical Paper 8 (Hydrology, flood and water quality) of the Environmental Impact Statement provides the flooding assessment for The Bays Station. No potential flooding impacts to the major road or rail transport routes critical infrastructure identified in the *South West Metropolitan Emergency Management Plan* (South West Metropolitan Regional Emergency Management Committee, 2017) would occur as a result of this proposal.

The issue of flood protection at station entries and mitigation options would continue to be investigated during ongoing design development, in accordance with mitigation measure EIS-HF1 (refer to Appendix C (Revised mitigation measures)). Sydney Metro would continue to work with Department of Planning and Environment on outcomes for the wider Bays West precinct in relation to flooding. Shelter-in-place is identified as a potential option for emergency response considering the station would be protected from flood events.

Mitigation measure EIS-HF2 requires emergency management arrangements to be developed to manage flood risks to people and vehicles accessing stations and ancillary facilities (refer to Appendix C (Revised mitigation measures)). Mitigation measure EIS-HF3 requires consultation to be undertaken with NSW State Emergency Service and relevant councils in relation to potential impacts to existing community emergency management arrangements for flooding (refer to Appendix C (Revised mitigation measures)).

### 9.4.11 Clyde stabling and maintenance facility and Rosehill services facility

#### Issues raised

Department of Planning and Environment – Biodiversity and Conservation raised the following issues related to the Clyde stabling and maintenance facility and Rosehill services facility:

- the Department of Planning and Environment – Biodiversity and Conservation provided previous advice on the Sydney Metro West Concept and Stage 1 regarding potential impacts at this site. It is understood that further design and modelling has been undertaken and some of these impacts may have been improved with refined design. Recommendation that the results of the latest relevant design and modelling should be documented for review.

#### Response

The approved major civil construction work between Westmead and The Bays includes work to raise the Clyde stabling and maintenance facility above the PMF level and assesses the potential flood impacts at this site.

The mitigation measures and conditions of approval (conditions D10 and D12) for the previous Sydney Metro West planning application establish an appropriate process to manage potential flood impact at the Clyde stabling and maintenance facility and Rosehill services facility. The additional flood studies referred to by Department of Planning and Environment – Biodiversity and Conservation are being appropriately progressed in accordance with the requirements of that approval. Sydney Metro is engaging with Department of Planning and Environment – Biodiversity and Conservation and other relevant stakeholders as part of that process.

## 9.5 Department of Primary Industries – Fisheries

### 9.5.1 Biodiversity

#### Issues raised

Department of Primary Industries – Fisheries noted that while *Fisheries Management Act 1994* applies to this proposal, Department of Industries – Fisheries understands that no additional impacts to marine vegetation are proposed, so there are no offset considerations. Department of Industries – Fisheries further understands that these impacts have been fully considered and offset under the previous Sydney Metro West planning applications.

#### Response

The Department of Primary Industries – Fisheries submission is noted.

## 9.6 Heritage Council of NSW – non-Aboriginal cultural heritage

### 9.6.1 Archaeological remains

#### Issues raised

Heritage Council of NSW raised the following issues in relation to non-Aboriginal archaeological remains:

- the Heritage Council of NSW supports that any archaeological remains still present at the Parramatta metro station construction site are proposed to be managed under the approved archaeological research design (ARD) and excavation methodology (GML Heritage, 2021) developed in response to condition of approval D25 of the previous Sydney Metro West planning application
- recommendation that any addendum to the existing ARD and methodology prepared under condition of approval D25 of the previous Sydney Metro West planning application for management of archaeological remains present within The Bays Station construction site will need to be submitted to the Heritage Council of NSW for review prior to approval
- support for the provisions under the draft Heritage Interpretation Strategy.

#### Response

Heritage Council's support for the management of archaeological remains present at Parramatta in accordance with condition of approval D25 for the previous Sydney Metro West planning application is noted. This approach is outlined in mitigation measure EIS-NAH6 (refer to Appendix C (Revised mitigation measures)).

Heritage Council's support for an addendum to the ARD or a new ARD for management of archaeological remains present at The Bays (as proposed in mitigation measure EIS-NAH8 detailed in Appendix C (Revised mitigation measures)) is noted. Sydney Metro would submit this addendum to Heritage Council NSW for review.

Heritage Council's support for the provisions under the draft Heritage Interpretation Strategy is noted. An updated Heritage Interpretation Strategy is provided in Appendix L.

### 9.6.2 White Bay Power Station

#### Issues raised

Heritage Council of NSW raised the following issues in relation to the White Bay Power Station curtilage encroachment:

- the Heritage Council of NSW is concerned about curtilage encroachment on the White Bay Power Station (which was also expressed during the assessment of Sydney Metro West Stage 1 (SSI 10038))
- the current curtilage was established to retain the setting, visibility to and prominence of the White Bay Power Station as a harbourside landmark. The Conservation Management Plan (CMP) notes that White Bay Power Station should not be substantially obscured by any development on nearby sites

- the current expanded construction footprint as proposed for The Bays Station construction site would require the construction zone to extend further into the White Bay Power Station curtilage, which would further adversely impact the setting and context of the White Bay Power Station and potentially diminish its overall massing, configuration, and visibility
- no mitigation measures are proposed for the impacts to White Bay Power Station
- recommendation that consideration be given to reducing the construction zone within the White Bay Power Station Stage Heritage Register curtilage.

## Response

Sydney Metro has minimised the size of the construction site and the operational station precinct where possible. The construction site and the operational station precinct has been moved as far away as possible from the White Bay Power Station curtilage while taking into account the necessary construction activities, the operational requirements of surrounding port activities and the outcomes to be achieved as part of the operational station. Sydney Metro has aimed to avoid impacts to the White Bay Power Station and other heritage items where possible, and no significant buildings or structures in the curtilage of the White Bay Power Station would be directly affected.

Elements of this proposal that would be located within the heritage curtilage of the White Bay Power Station include the traction substation to the south, new drainage infrastructure to the north as well as new public domain and an active transport link to the north to connect Robert Street to The Bays Station.

Construction of the traction substation would require excavation within the heritage curtilage and would result in the alteration of the yard area (part of areas assessed as having little to moderate heritage significance within the White Bay Power Station Conservation Management Plan), however no built fabric of the item would be directly impacted by these works.

Excavation work for new drainage infrastructure to the north of the former White Bay Power Station may directly impact part of the Inlet Canal. In accordance with revised mitigation measure EIS-NAH8 (refer to Appendix C (Revised mitigation measures)), an addendum to the existing ARD(s) or a new ARD(s) would be prepared to identify the excavation methodology for predicted non-Aboriginal archaeological remains for the additional footprint area at The Bays Station construction site. This would include provision for the early investigation of areas where the 'White Bay Power Station (Inlet) Canal' may potentially be impacted within the additional footprint area. The assessment undertaken in the Environmental Impact Statement has conservatively assumed there could be moderate direct impact to this item.

The indicative layout of key design elements of The Bays Station is broadly consistent with the *Bays West Stage 1 draft Master Plan and Urban Design Framework* (NSW Department of Planning and Environment, 2022) which was exhibited from 4 May to 31 May 2022, including with respect to the preservation of significant view corridors where possible, including to the silhouette and chimney stacks of the former White Bay Power Station.

The design of the station and precinct has considered the important view corridors to and from the State heritage listed former White Bay Power Station. There would, however, be some minor direct and moderate indirect impacts to the former White Bay Power Station mainly associated with the new traction substation located to the south. Key view lines to the White Bay Power Station from Anzac Bridge (east) have been retained. Key view lines from the south and south east have been retained although they would be impacted to some degree by the traction substation. Key view corridors would be reinforced through the precinct structure and layout during detailed design.

Sydney Metro is continuing to consider the location, size and design of the traction substation to minimise impacts to the adjacent heritage listed White Bay Power Station. Consideration of alternative locations would consider potential locations outside of the White Bay Power Station heritage curtilage.

Potential impacts to the White Bay Power Station curtilage and buildings would be managed in accordance with the following mitigation measures (refer to Appendix C (Revised mitigation measures)):

- mitigation measure EIS-NAH2, which requires detailed design for aboveground station elements, ancillary facilities and public domain and landscaping work located in or near to heritage significant items to respond to relevant heritage guidelines and existing Conservation Management Plans during design development in order to minimise indirect (visual) impacts
- mitigation measure EIS-NAH10, which requires opportunities to minimise the scale or alter the siting of the proposed traction substation to be considered so that the prominence of White Bay Power Station is not obstructed on significant view lines from the south and south-east would be explored during detailed design.

In addition, the Design Guidelines (Appendix M) note that the design would ensure that primary view corridors are maintained and impacts to secondary view corridors are minimised, as identified in the White Bay Power Station Conservation Management Plan and the *Bays West Place Strategy* (NSW Department of Planning, Industry and Environment, 2021a) and associated draft *Bays West Urban Design Framework* (NSW Department of Planning, Industry and Environment, 2021b).

Mitigation measure EIS-LV9 would also mitigate potential visual impacts on the White Bay Power Station, which requires design of the traction substation building to have an industrial character with a high quality architectural finish and not detract from the visual prominence of the existing power station façade and silhouette of the twin stacks (refer to Appendix C (Revised mitigation measures)). Potential vibration impacts to the White Bay Power Station would be managed by mitigation measures CEMF-NV14 and CEMF-NV15 in the Construction Environmental Management Framework (CEMF) (Appendix I). Where vibration levels are predicted to exceed the screening criteria, these measures require detailed assessment of the structure and vibration monitoring so that vibration levels remain below appropriate limits for that structure. In relation to heritage items, this includes specific consideration of heritage values.

### 9.6.3 Maritime archaeological potential at The Bays Station construction site

#### Issues raised

Heritage Council of NSW raised the following issues in relation to maritime archaeological potential at The Bays Station construction site:

- the supporting non-Aboriginal heritage assessment has not considered maritime archaeological potential within reclaimed land at The Bays Station. This is part of non-Aboriginal heritage Secretary's environmental assessment requirements 1(b) and 2
- support for large parts of the construction site, including parts of the additional footprint areas as discussed in the supporting assessment, to constitute land reclaimed in the 1850-70s (Artefact 2022, s. 11.5). Previous investigations of similar sites have shown that such areas have potential to contain archaeological remains of watercraft of potential State heritage significance (e.g. the Barangaroo boat)
- such potential (including potential for maritime infrastructure and pre-1840s shipwrecks or parts thereof) has been identified as 'very likely' by recent assessments of adjacent sites (Cosmos Archaeology 2020, p. 87), however this has not been assessed in the Environmental Impact Statement
- recommendation that any future addendum ARDs and methodologies to be prepared for the management of archaeological relics within the additional footprints at The Bays Station construction site, should contain clear site-specific research including provisions and procedures pertaining to the management of maritime archaeological potential within the construction site.

#### Response

Sydney Metro notes Heritage Council's comments regarding the maritime archaeological potential at The Bays Station construction site.

The non-Aboriginal heritage assessment in the Environmental Impact Statement has been completed in accordance with the Secretary's environmental assessment requirements, which require assessment of historical and/or maritime archaeology (including reclaimed land and foreshore areas).

Additional footprint areas for this proposal are located to the north and south of White Bay Power Station and setback some distance from White Bay. The southern section of the additional footprint is not within reclamation fill as it is within the landform of Glebe Island and the former foreshore area. The northern section of the additional footprint area is partly infilled, however was formerly a creek mouth and would have been a tidal flat, not conducive to wharfage. This small area that would have been infilled has a low potential for maritime archaeology.

Technical Paper 5 (Non-Aboriginal heritage) of the Environmental Impact Statement included an archaeological impact assessment for the additional footprint areas at The Bays Station construction site. While this assessment does not include a maritime archaeological assessment given the low potential for maritime archaeology in the areas of additional footprint within reclaimed land, the maritime archaeological potential of the broader Bays Station construction site is assessed in the revised ARD prepared to meet condition D25 of the previous Sydney Metro West planning application.

The revised ARD which was prepared in consultation with Heritage NSW identifies the potential for maritime archaeological resources such as wharf infrastructure and disused boats in reclamation fill. There are also research questions in the revised ARD that respond to the maritime archaeological potential of the site.

Mitigation measure EIS-NAH8 for this proposal requires the preparation of an addendum to the existing ARD(s) or a new ARD(s) to identify the excavation methodology for the additional footprint area at The Bays Station construction site as part of this proposal (refer to Appendix C (Revised mitigation measures)). The addendum or new ARD(s) would include clear site specific research and provisions for the management of the maritime archaeological potential of the additional areas as required consistent with the existing revised ARD for the previous Sydney Metro West planning application.

## 9.7 Heritage NSW – Aboriginal cultural heritage

### 9.7.1 Aboriginal heritage

#### Issues raised

Heritage NSW support the mitigation measures outlined in the Environmental Impact Statement and conditions of approval for the previous Sydney Metro West planning applications and recommends that consultation with the relevant Registered Aboriginal Parties continues to aid the implementation of the Heritage Interpretation Strategy.

#### Response

Heritage NSW's support for the Aboriginal heritage related mitigation measures in the Environmental Impact Statement and conditions of approval for the previous Sydney Metro West planning application are noted.

Ongoing consultation would be carried out with the Aboriginal community as per the relevant mitigation measures in the CEMF (Appendix I). This includes:

- mitigation measure CEMF-H5 which requires that Aboriginal community consultation process would continue with Aboriginal heritage knowledge holders (including Registered Aboriginal Parties) as per the Aboriginal Cultural Heritage Consultation Requirements for Proponents (Department of Environment, Climate Change and Water, 2010)
- mitigation measure CEMF-H6 which relates to the results of any Aboriginal archaeological test excavation (and Salvage if required) being incorporated into Aboriginal heritage interpretation in consultation with registered Aboriginal parties
- mitigation measure CEMF-H7 which identifies that, if Aboriginal archaeological remains are recovered during construction, results would be incorporated into the project specific Designing with Country strategy in consultation with Aboriginal knowledge holders.

## 9.8 NSW Environment Protection Authority

### 9.8.1 Surface water quality

#### Issues raised

EPA noted that an appropriate level of waterway protection has been adopted and water treatment has been proposed for this proposal and therefore wastewater discharges are unlikely to pose a risk to receiving waterways and no further assessment of potential water pollution impacts is required.

EPA made recommendations for conditions for Stages 1 and 2 related to surface water quality discharge and considers the conditions applied in the Stage 1 Instrument of Approval for water quality (D117 to D120) appropriate for Stage 3.

#### Response

EPA's comments, that wastewater discharges are unlikely to pose a risk to receiving waterways and no further assessment of potential water pollution impacts is required, are noted.

Sydney Metro notes EPA's suggestion regarding conditions of approval for surface water quality discharge. Conditions of approval are a matter for the Department of Planning and Environment during its assessment of this proposal.

## 9.8.2 Contamination

### Issues raised – adequacy of contamination assessment

EPA raised the following issues in relation to the adequacy of the Preliminary Site Investigation (PSI) in the Environmental Impact Statement:

- concern that the PSI is a desktop assessment only and therefore does not meet the requirements of Managing Land Contamination Planning Guidelines (EPA, 1998)
- site investigations should have been carried out to inform the PSI
- it is unclear whether other contamination reports prepared in 2021 referenced as part of the PSI have investigated the additional areas of the project footprint for Stage 3, or how they informed the PSI
- the limited contamination assessment undertaken for the PSI has flow-on effects in informing the need for detailed site investigations (DSIs)
- DSIs should be provided as part of the planning assessment process given that there are known contamination issues along the project footprint. DSIs are required to determine the nature and extent of contamination and, importantly, to inform the appropriate measures to manage contamination within the project footprint. As DSIs have not been provided as part of the Environmental Impact Statement as it is uncertain whether the potential risks due to contamination can be managed
- concern that community interest may be heightened by inadequate technical assessments and insufficient measures proposed to manage contamination, especially during the construction phase
- EPA recommends that DSIs are provided as part of the response to submissions.

### Response – adequacy of contamination assessment

The contamination assessment undertaken in the Environmental Impact Statement met the requirements of the Secretary's environmental assessment requirements and is considered adequate to identify potential contamination risk at the current stage of design development. As noted in Technical Paper 7 (Contamination) of the Environmental Impact Statement, site inspections could not be completed at the time of preparing the report due to public health orders and restrictions issued by the NSW State government related to the Covid-19 pandemic.

Site inspections were carried out of all sites as part of the contamination assessment for the previous Sydney Metro planning applications. As the assessments and site inspections as part of the previous Sydney Metro West planning applications were completed within the past two years, changes in land use that could have resulted in new contamination sources is unlikely and not considered to have a material impact on the outcome of the contamination assessment of this proposal.

The contamination assessment undertaken in the Environmental Impact Statement includes the additional footprint areas associated with this proposal. The additional footprint areas for this proposal include:

- the rail corridor at Westmead which has well known contamination risks and has been identified as having a moderate contamination risk
- the small area at Sydney Olympic Park on the corner of Olympic Boulevard and Figtree Drive which is immediately adjacent to the area that was subject to assessment and inspection as part of the previous Sydney Metro West planning application. Consistent with that assessment, this area has not been identified as an area of environmental interest
- the rail corridor at North Strathfield which has well known contamination risks and has been identified as having a moderate contamination risk
- areas at The Bays which have well known contamination risks and have been subject to additional investigation by Sydney Metro (the Senversa (2021) Factual Contamination Investigation Report) which were documented in Technical Paper 7 (Contamination) of the Environmental Impact Statement. These areas have been identified as having a high contamination risk.

Detailed site investigations were not carried out during the preparation of the Environmental Impact Statement due to property access and acquisition constraints, as well as the staging of construction. These constraints have been previously discussed with the EPA and Department of Planning and Environment as part of the previous Sydney Metro West planning application. The same constraints apply for this assessment. Detailed site investigation would be carried out as required by the mitigation measures outlined below.

Prior to work for this proposal commencing, bulk excavation work within the station box footprint at the construction sites will have been completed under the previous Sydney Metro West planning approvals. Most solid waste remediation in the permanent work area at the station sites will have been carried out and validated prior to any work under a planning approval for this proposal commencing.

The approach to managing contamination is outlined in Appendix B of the CEMF (Appendix I). Contamination management for this proposal would be a continuation of the management that will commence under the previous Sydney Metro West planning applications and will be in accordance with the relevant conditions of approval for those projects and this proposal. Mitigation measures in the CEMF (Appendix I) include:

- CEMF-C1, which requires low risk contamination sites to be managed in accordance with the Soil and Water Management Plan
- CEMF-C2, which requires detailed site investigations for sites where contamination risk is not sufficiently understood
- CEMF-C3, which requires development of a Remedial Action Plan for sites of medium or high contamination risk
- CEMF-C4, which requires review of the Remedial Action Plan by an accredited Site Auditor
- CEMF-C5, which requires establishment of an unexpected finds protocol to facilitate the quarantining, isolation and remediation of unexpected contamination. Any unexpected asbestos identified on site would be managed in accordance with applicable regulatory requirements.

This staged and risk based assessment approach (with preliminary site investigations completed for the Environmental Impact Statement) is appropriate for this phase of the proposal where design information is indicative. This approach has been consistently adopted on major transport infrastructure projects in NSW.

#### **Issues raised – NSW EPA-accredited Site Auditor**

EPA raised the following issues regarding the use of a NSW EPA-accredited Site Auditor:

- a NSW EPA-accredited Site Auditor must be engaged across the Sydney Metro West project to ensure work in relation to contamination is appropriately managed and so that there is confidence that the land within the project footprint is suitable for the proposed use
- concern that the PSI indicates that a Site Auditor would only be engaged to review the Remediation Action Plans. This does not meet the requirements Managing Land Contamination Planning Guidelines (EPA, 1998)
- EPA requests that the proponent be required to commit to the engagement of an EPA-accredited Site Auditor to provide the required oversight of all contamination-related reports including DSIs.

#### **Response – NSW EPA-accredited Site Auditor**

The CEMF (Appendix I) sets out the process for management of contamination through construction. In accordance with mitigation measure CEMF-C4 (refer to Appendix I (CEMF)) an accredited Site Auditor would review and approve the Remediation Action Plan and would develop a Site Audit Statement and Site Audit Report upon completion of remediation. This is consistent with the risk-based approach adopted as part of the assessment in the Environmental Impact Statement, and further reflects the contamination risk profile that is expected as part of the works for this proposal (i.e. following the major civil construction work being undertaken under the previous Sydney Metro West planning applications).

Additionally, a NSW EPA-accredited Site Auditor will issue Site Audit Statements where required under the previous Sydney Metro West planning applications, prior to work for this proposal commencing. The Site Audit Statements will focus on the assessment, management and remediation of contamination completed in the earlier stages of the Sydney Metro West project. This documentation will inform the contamination management for the work to be conducted under this proposal.

Based on stakeholder consultation as part of the previous Sydney Metro West planning applications, Sydney Metro would consider Site Auditor involvement at the Sampling Analysis and Quality Plan stage for moderate to high risk sites.

### 9.8.3 Operational and construction noise monitoring

#### Issues raised

EPA raised the following issues regarding operational and construction noise monitoring:

- the discrepancy between the monitoring locations in the operational noise assessment and the construction noise assessment does not appear to be justified. This should be clarified
- concern that the operational noise assessment approach to use one location to characterise a large area of receivers with multiple and diverse local and regional noise sources within it appears to be inconsistent with the *Noise Policy for Industry* (EPA, 2017) (NPfl) and has the potential to impact noise outcomes. The monitoring locations and their appropriateness to represent affected receiver groups should be reviewed
- concern the operational noise assessment used the monitoring data from monitoring locations in the previous Sydney Metro West planning applications and that these locations were appropriate for either concept or temporary construction activities and not for operational noise sources
- concern regarding the lack of resolution in the monitoring locations, particularly around stations with residential areas, as many of the predicted noise levels in the operational noise assessment are at or close to the project noise trigger levels
- the NPfl requires a statement justifying the choice of monitoring locations and stating a monitoring location was used in a previous assessment is not a sufficient justification, particularly if that assessment was for a different activity. A justification for each monitoring location specific to each receiver group potentially affected by operational activities should be included
- recommendation that additional data, that is representative of potentially affected receiver groups not currently covered by the monitoring data in the Environmental Impact Statement, is presented
- where changes are made to the number and location of monitoring locations for receiver groups, the project noise trigger levels for each receiver group should be reviewed and amended accordingly based on representative monitoring data
- suggestion that the operational noise assessment monitoring location for Sydney Olympic Park as 1 Herb Elliott Drive is not representative of residential receivers, is not used and that additional data or evidence that the monitoring is representative of potentially affected residential receivers is provided.

#### Response

The monitoring locations used for the operational noise assessment were selected from the monitoring locations used for the construction noise assessment based on locations closest to the operational noise sources at each station, and therefore would represent the controlling location for establishing the 'project airborne noise trigger levels'. The construction noise assessment uses more background noise locations due to the nature of the noise sources located across the sites, whereas operational noise from stations are typically point sources in one location of the station.

In many cases, it is the amenity noise objective which sets the controlling criteria for the operational noise assessments. The amenity noise objective is an absolute value and has no relation to background noise levels or monitoring data. As such, the amenity objectives apply to large areas regardless of multiple or diverse noise sources within the catchment.

Additionally, for the operational assessment it is appropriate to examine predicted noise levels to the most affected (usually the nearest) receivers as the reduction in noise as setback distance increases from the station is quite large (generally a 20 logarithmic noise-to-distance relationship). Increasing the granularity of assessment when it would not result in any improved environmental outcomes or any changes in mitigation or management practices is not justified, nor is it supported by the NPfl. The monitoring data collected for the previous Sydney Metro West planning applications is considered to accurately represent background noise levels and obtained all data necessary to carry out the operational noise assessment. As such, there was no need to undertake additional background noise monitoring.

In relation to the use of monitoring data at 1 Herb Elliott Avenue, residential receivers are sparsely distributed in NCA08, are generally distant from the construction site, and are predicted to have relatively minor impacts. Monitoring at each residential receiver location is not feasible for an Environmental Impact Statement assessment and the measured data at B.08 (1 Herb Elliott Avenue) is considered representative of existing noise levels in the catchment. Additional background noise monitoring would be undertaken, where necessary, when detailed construction planning information becomes available and detailed management plans and noise and vibration impact statements are completed.

The appropriateness of the background noise monitoring locations for the assessment of operational noise from the station would be considered during the preparation of the Operational Noise and Vibration Review as required by mitigation measure EIS-NV4 (refer to Appendix C (Revised mitigation measures)). NSW Environment Protection Authority would be consulted during the preparation of this review.

#### 9.8.4 Operational noise amenity level

##### Issues raised

EPA raised the following issues regarding the operational approach to noise amenity level:

- concern that the operational noise assessment has not considered cumulative industrial noise in determining the amenity criteria and has assumed no existing or future industrial noise, aside from metro facilities, at any of the station sites. The NPfI defines industrial noise as including noise from commercial premises and therefore this should be considered when deriving the amenity criteria
- the operational noise assessment does not provide sufficient evidence to demonstrate it is not appropriate to apply the correction to the amenity level for proposed industrial noise sources for stations where there is a mix of existing commercial and/or industrial uses next to residential receivers, such as at Parramatta, Olympic Park, Burwood North, Five Dock, and Pyrmont
- the potential for future industrial noise using the method in the NPfI should be considered where developments are proposed to be delivered separately as part of station precincts. If future developments are not considered, it may impose unnecessarily stringent requirements on them as the amenity noise allowance has already been taken up by the station and associated activities
- it is not clear why there is a proposed alternative approach to project noise trigger levels (PNTLs) in the operational noise assessment given the vast majority of predicted noise levels appear to be below the alternative amenity approach proposed
- an urban amenity category has been assumed for all residential receivers, however there are large groups of receivers potentially affected by North Strathfield metro station, Five Dock Station and Burwood North Station that have R2 and R3 zoning and should be categorised as suburban rather than urban.

##### Response

Section 3.4.2 of Technical Paper 3 (Operational noise and vibration) of the Environmental Impact Statement provides consideration of the amenity noise criteria and the method to set these criteria to make an allowance for future industrial noise sources (to allow for cumulative industrial noise sources). As discussed in this section, the NPfI contemplates exceptions to this method where there are no other significant industrial sources, or it is unlikely that any additional industrial noise sources would be introduced into the area. For some station locations such as at Pyrmont and Hunter Street, it is considered unlikely that future industrial noise sources would be introduced. Notwithstanding, the assessment has considered both an aspirational target level (the amenity noise level minus 5 dB) and a maximum acceptance level (the amenity target level minus 0 dB).

It is also important to recognise that the NPfI is a non-mandatory document and amenity noise levels should not be used directly as regulatory limits. Rather, the regulatory limits should include consideration of a number of feasible and reasonable factors in determining achievable noise requirements. As outlined in Technical Paper 3 (Operational noise and vibration) of the Environmental Impact Statement, in some cases attenuating the noise sources within the station to achieve the amenity target level would require additional floors of the services buildings. The reasonableness of noise reduction needs to consider the potential impacts of increasing the physical extents of the buildings which would include visual, overshadowing and reduced activation opportunities around stations, as well as substantially increasing cost, and potential breaching of height objectives.

Notwithstanding the above, the assessment shows that predicted noise levels achieve the amenity target levels in most cases. Where exceedances do occur, these are relatively minor and are likely to be resolved during detailed design, or they are in locations where future industrial noise sources are not considered likely to be introduced, such as in the Sydney CBD.

Technical Paper 3 (Operational noise and vibration) of the Environmental Impact Statement outlined that noise from over and/or adjacent station development has been considered in setting appropriate criteria for the proposal so that cumulative noise achieves the relevant objectives.

Sydney Metro West is being progressed to support planned growth in the corridor and in the vicinity of the stations. It is appropriate to undertake the operational noise assessment taking into consideration the desired future land use around the stations, which would be urban rather than suburban.

### 9.8.5 Operational noise assessment – use of industrial interface

#### Issues raised

EPA raised concern that the industrial interface has been applied to receivers in Clyde and Rosehill, however there is insufficient discussion or justification in the operational noise assessment that it is appropriate to apply it in this case. Unless an appropriate justification or evidence that this approach is appropriate for all receivers in Clyde and Rosehill, EPA will consider that the industrial interface is not applied.

#### Response

Clyde / Rosehill is an established industrial area, and the most affected receivers are located adjacent to the industrial area. The Clyde stabling and maintenance facility would replace some of the former industrial premises and other facilities including the Rosehill Heliport and the Sydney Speedway which generated high levels of noise. These facilities, along with transportation noise from the M4 Motorway and James Ruse Drive, dominated the noise catchment. The front facing adjacent residential dwellings have, and would continue to be located in an industrial interface zone. Notwithstanding, the predicted noise levels from the Clyde stabling and maintenance facility at the most affected receivers are close to the existing background noise levels.

### 9.8.6 Operational noise assessment – non-residential project noise trigger levels

#### Issues raised

EPA raised concern that Table 5-6 of the operational noise assessment indicates the commercial amenity level is  $L_{Aeq,15min}$  60 dBA, however if following the standard procedure in the NPfl, a project amenity level of  $L_{Aeq,15min}$  63 dBA would apply. Recommendation that the non-residential receiver's PNTLs are reviewed for consistency with the NPfl and are either amended or a justification provided.

#### Response

EPA's comments are noted. The assessment of commercial receivers around Parramatta metro station predicts compliance with an  $L_{Aeq,15min}$  criterion of 60 dB(A). As such, there would also be compliance if this criterion was amended to  $L_{Aeq,15min}$  63 dB(A).

### 9.8.7 Operational noise assessment – low frequency noise

#### Issues raised

EPA raised the following issues regarding low frequency noise:

- concern that justification in the operational noise assessment for the application of the NPfl Fact Sheet C low frequency noise correction offers no details, calculations or data to substantiate these conclusions
- the assertion in the operational noise assessment that if the application complies with the PNTL then no low frequency penalty is required, is not consistent with NPfl Fact Sheet C. The aim of Fact Sheet C is to remove and/or reduce low frequency characteristics wherever possible, not simply apply a penalty if they are present
- there is insufficient information presented in the operational noise assessment to understand the risk of low frequency noise occurring as a result of this proposal
- the assessment of low frequency noise in the operational noise assessment should be amended to provide justification and demonstrate evidence to substantiate its conclusions, including an assessment which is consistent with the NPfl and NPfl Fact Sheet C.

#### Response

The stations require the use of large fans to extract the necessary volumes of air which may result in low frequency noise impacts. It is not possible to provide detailed design and assessment of the fans at this stage of design development. It is expected that, when measured at receiver locations, the difference between C and A weighted noise levels would not be more than 15 dB. Fan and attenuator size and other feasible and reasonable measures would continue to be considered during development of the design, including to reduce overall noise impacts and the presence of any excessive noise characteristics to meet relevant noise criteria.

The potential for low frequency noise would be considered during the preparation of the Operational Noise and Vibration Review as required by mitigation measure EIS-NV4 (refer to Appendix C (Revised mitigation measures)). Appropriate corrections as per NPfl Fact Sheet C would be applied as appropriate. The NSW Environment Protection Authority would be consulted during the preparation of this review.

### 9.8.8 Operational noise assessment – annoying characteristics

#### Issues raised

EPA raised concern that the operational noise assessment does not appear to provide an assessment of other annoying characteristics required by Fact Sheet C (e.g. tonal or intermittent noise), aside from the low frequency noise matters. All annoying characteristics as required by NPfI Fact Sheet C should be considered (NSW EPA, 2017).

#### Response

The noise sources at the stations would typically be a continuous noise source and are not expected to have any other annoying characteristics.

### 9.8.9 Operational noise assessment – emergency plant noise

#### Issues raised

EPA raised the following issues regarding emergency plant noise:

- the proposed assessment criteria for emergency plant in the operational noise assessment is not consistent with the NPfI as there is no provision in the NPfI that excludes emergency plant and equipment from assessment in the NPfI
- recommendation that all plant and equipment associated with the premises should be assessed using the NPfI, including scheduled maintenance, testing and emergency operation
- recommendation that if the noise at receivers from this plant and equipment is above the PNTL, reasonable and feasible mitigation should be investigated and recommended.

#### Response

There is no current guidance in any NSW guideline (including the NPfI) for noise from emergency generators and equipment. Given the emergency equipment is not normally used, and only operates during an emergency situation or infrequent scheduled maintenance, it is not considered appropriate to apply the standard criteria from the NPfI. Sydney Metro has proposed a reasonable approach of relaxing the criteria by 5 dB. The emergency noise assessment has also conservatively considered all plant operating simultaneously which would not occur in practice during plant testing.

The timing for maintenance activities and testing of equipment would be considered during the development of operational management plans. Where feasible and reasonable, maintenance and testing would be carried out in less sensitive time periods for the particular precinct. This would need to consider the operational requirements of the rail line and activities that need to occur when train services are not running.

### 9.8.10 Operational airborne noise predictions and contours

#### Issues raised

EPA noted it is difficult to understand how different receivers are affected from each station site as no operational noise contours have been provided. Noise level predictions should be transparently presented and operational noise contours ( $L_{Aeq,15min}$  and  $L_{max}$ ) should be provided to allow assessing authorities and the community to review the predicted noise propagation through the community.

#### Response

For the operational assessment it is appropriate to examine predicted noise levels to the most affected (usually the nearest) receivers, as the reduction in noise as setback distances increases from the station is quite large (generally a 20 logarithmic noise-to-distance relationship). On this basis, production of airborne noise contours for each station is not considered to be warranted. Further information on the operational noise and vibration assessment is provided in Technical Paper 3 (Operational noise and vibration) of the Environmental Impact Statement.

### 9.8.11 Operational assessment of multiple buildings and facilities at a single station

#### Issues raised

EPA noted the operational noise assessment for stations where there is more than one station building or facility proposed, such as Pyrmont, Five Dock or Burwood North, each station building was assessed individually. Clarification is requested for how multiple buildings/facilities at each station site were assessed and the assessment should be amended accordingly to consider all buildings/facilities for each station cumulatively at receivers.

## Response

As discussed in Section 9.8.3 and Section 9.8.10, for the operational assessment it is appropriate to examine predicted noise levels to the most affected (usually the nearest) receivers. Where there are multiple station buildings, the noise sources are typically oriented away from each other and the reduction in noise as distance increases from the station is quite large, any individual receiver would be unlikely to experience cumulative impacts from multiple station buildings. Further information on the operational noise and vibration assessment is provided in Technical Paper 3 (Operational noise and vibration) of the Environmental Impact Statement.

### 9.8.12 Operational noise assessment – Westmead metro station

#### Issues raised

EPA raised concern that Section 5.3 of Technical Paper 3 (Operational noise and vibration) of the Environmental Impact Statement does not fully evaluate the potential for sleep disturbance impacts from the Draught Relief Shafts because it highlights that receivers are already exposed to railway operations when this noise event may actually be a compounding factor rather than a mitigating factor. The assessment of sleep disturbance should consider the number of events and frequency of occurrence throughout the night period.

#### Response

The operational noise assessment acknowledges that the potential impacts from the draught relief shafts is above the sleep disturbance noise criteria of  $L_{AFmax}$  52 dB(A). The assessment also notes that these same receivers are subject to existing rail noise which has a much higher noise criteria of  $L_{AFmax}$  85 dB(A).

Section 3.4.7 of Technical Paper 3 (Operational noise and vibration) of the Environmental Impact Statement notes that there is currently a gap in policy regarding noise emitted via the draught relief shafts with noise criteria from the *Rail Infrastructure Noise Guidelines* (NSW EPA, 2013) or the NPfI not directly applicable to this noise source. Additionally, the NPfI sleep disturbance criterion is based on the background noise during the night-time, which is typically during the early hours of the morning when trains and the draught relief shafts would not be operating. The application of the sleep disturbance noise criterion based on the NPfI would be unduly stringent and it would also be not necessarily appropriate to apply to the draught relief shaft event directly.

The EPA's Road Noise Policy (NSW EPA, 2011) provides a review of noise impacts from short term noise events, associated with sleep disturbance noise impacts and concludes that external noise levels  $L_{AFmax}$  60 – 65 dB(A) are considered unlikely to awaken people.

Based on the above, the assessment proposed a noise objective of  $L_{AFmax}$  65 dB(A) as being a feasible and reasonable level that would provide adequate protection from noise generated by draught relief shaft events.

Based on the above, it is not considered reasonable to adopt a sleep disturbance criterion of  $L_{AFmax}$  52 dB(A) for the draught relief shaft at any site, and particularly at Westmead where there is existing high  $L_{AFmax}$  events.

### 9.8.13 Operational noise assessment – Parramatta metro station

#### Issues raised

EPA noted the exceedances identified at Macquarie Street church and education facilities in Section 5.4 of Technical Paper 3 (Operational noise and vibration) of the Environmental Impact Statement requires further investigation and should be addressed in conditions of approval by the NSW Department of Planning and Environment.

#### Response

The operational noise assessment for Parramatta metro station in Section 5.4.2 of Technical Paper 3 (Operational noise and vibration) of the Environmental Impact Statement acknowledges that there are some minor exceedances of the amenity target level at the Leigh Memorial Church and education facilities on Macquarie Street. The educational facilities on Macquarie Street have sealed façade systems, so internal noise levels would be compliant with the amenity target noise levels in this instance.

The assessment has conservatively assumed that the Leigh Memorial Church may choose to leave its door open during services. However, as the exceedance is only marginal, it is likely that the internal noise amenity target level would be achieved during development of the design. Mitigation measure EIS-NV1 required that stations and ancillary facilities would be designed to meet the applicable noise criteria derived from the NPfI (refer to Appendix C (Revised mitigation measures)).

#### 9.8.14 Operational noise assessment – Sydney Olympic Park metro station

##### Issues raised

EPA raised concern the PNTLs for the nearest receivers been derived from monitoring conducted at 1 Herb Elliott Drive which is not representative of the background noise environment and recommended the assessment is amended to use additional data that is representative.

##### Response

Residential receivers are sparsely distributed in NCA08, are generally distant from the construction site, and are predicted to have relatively minor impacts. Monitoring at each residential receiver location is not feasible for an Environmental Impact Statement assessment and the measured data at B.08 (1 Herb Elliott Avenue) is considered representative of existing noise levels in the catchment. Additional background noise monitoring would be undertaken in the next stages of the project, where necessary, when detailed construction planning information becomes available and detailed management plans and noise and vibration impact statements are completed.

In addition, for the closest residential receiver the controlling criteria in the more stringent evening and night-time periods is the amenity noise objective. The amenity noise objective is an absolute value and has no relation to background noise levels or monitoring data.

#### 9.8.15 Operational noise assessment – Burwood North Station

##### Issues raised

EPA raised concern that operational noise impacts at St Luke's Church on Burton Street adjacent to the proposed metro station have not been considered. Recommendation that the assessment considers all sensitive receivers including St Luke's Church.

##### Response

The assessment of operational noise from Burwood North Station in Section 5.7.2 of Technical Paper 3 (Operational noise and vibration) of the Environmental Impact Statement predicts compliance with the daytime criteria at the closest residential receivers to the north (on Burton Street). The predicted noise level at these receivers is 52 dB(A) with the closest receiver being about 10 – 20 metres from the noise source.

The church on Burton Street is in the order of 60 metres from the closest noise source and, with an approximate reduction of 6 dB for every doubling of distance (in this case for every 20 metres), compliance with an external amenity criterion of 45 dB(A) would be expected at the church. This would be confirmed as part of detailed design.

#### 9.8.16 Operational noise assessment – The Bays Station

##### Issues raised

EPA raised concern that the operational noise assessment does not appear to consider potential impacts for receivers in the north west of Pyrmont and in Glebe (such as around Bank Street and Glebe Point Road). Recommendation that impacts at these residential receivers from operations at The Bays Station is clarified.

##### Response

As discussed in Section 9.8.3, Section 9.8.10 and Section 9.8.11, for the operational assessment it is appropriate to examine predicted noise levels to the most affected (usually the nearest) receivers. For The Bays Station the assessment has considered potential noise impact to receivers to the west and to the north (which are around 100 metres and 200 metres respectively from the station). The assessment shows compliance with all noise criteria. The closest receivers in Pyrmont and Glebe would be several hundred metres or more from the station and would not be impacted by operational noise from The Bays Station. Further information on the operational noise and vibration assessment is provided in Technical Paper 3 (Operational noise and vibration) of the Environmental Impact Statement.

#### 9.8.17 Operational noise assessment – Hunter Street Station

##### Issues raised

EPA raised concern that the operational noise assessment did not identify residential receivers near Hunter Street Station (Sydney CBD) and therefore does not include the residential noise criteria. EPA notes there is residential land use at the corner of O'Connell, Hunter and Pitt streets and several mixed-use buildings on Hunter Street and it is unclear what mixed use means in this context. EPA recommended that the sensitive receivers near the proposed stations are reviewed, receiver types are clarified and the maps and assessments in the operational noise assessment are amended accordingly.

## Response

The property at the corner of O'Connell, Hunter and Pitt streets is the Radisson Blu Plaza Hotel and the other mixed use buildings in the area are a mix of commercial, retail and hotels. Potential impacts to nearby hotels are considered in the operational noise assessment in Section 15.6.2 of the Environmental Impact Statement.

### 9.8.18 Operational noise assessment – Clyde stabling and maintenance facility

#### Issues raised

EPA raised the following issues regarding the Clyde stabling and maintenance facility:

- concern that the  $L_{max}$  noise level in Table 4-10 is up to 5dB lower than the highest  $L_{eq,15min}$  noise source in Table 4-9 which does not appear reasonable without further information. The sound power level is not the only consideration in a maximum noise level assessment as both the location relative to the receiver and the number and frequency of events across the night period affect the impact at the receiver
- recommendation that sound power levels for the assessment of maximum noise levels be reviewed and updated accordingly with a justification for the sources selected, their location, number and frequency of events across the night period
- concern that Table 5-26 of the operational noise assessment appears to only consider two residential properties, however the noise contour maps appear to show many other receivers with the potential to receive similar noise levels as those in Table 5-26 that are not addressed
- request for clarification for how the height of multi-storey receivers to the west of the Clyde stabling yard located on and around James Ruse Drive has been considered in the assessment.

#### Response

As identified in Technical Paper 3 (Operational noise and vibration) of the Environmental Impact Statement, the only noise source at the Clyde stabling and maintenance facility with potential to result in maximum noise events is the air brake release from the trains. Although it is not particularly noisy compared to other activities at the stabling and maintenance facility, the air brake release was perceived to be the most noticeable peak noise level event as it has a faster onset time than  $L_{max}$  events, i.e. it is more impulsive. Other noise generated on site is relatively steady and broadband in nature and does not contain significant emergent peak noise level events. In regard to the frequency of such events, this would likely occur once per train at night and, as shown in the operational noise assessment, would comply with the relevant criteria.

For the operational assessment it is appropriate to examine predicted noise levels to the most affected (usually the nearest) receivers as the reduction in noise as distance increases from the station is quite large. In relation to the Clyde stabling and maintenance facility, Table 5-26 of Technical Paper 3 (Operational noise and vibration) of the Environmental Impact Statement shows the two most affected receivers would comply with the applicable noise criteria. Other receivers shown on the contours in Appendix D of the Technical Paper, including the multi-storey receivers on James Ruse Drive would also be expected to comply with the applicable noise criteria.

### 9.8.19 Operational noise mitigation

#### Issues raised

EPA raised the following issues related to operational noise mitigation:

- concern that the operational noise assessment identifies some exceedances of the PNTLs but has not provided a sufficient evaluation of reasonable and feasible mitigation for these exceedances. An evaluation of reasonable and feasible mitigation and an achievable noise level for each case where the PNTLs are exceeded should be presented and deferring the evaluation of mitigation measures to post-approval is not appropriate or consistent with the NPfI nor the Secretary's environmental assessment requirements
- the above matters raised by the EPA may have a material impact on the outcome which may affect the ability for the development to meet its objectives
- statements in Section 3.4.2 and 6.3 of Technical Paper 3 (Operational noise and vibration) of the Environmental Impact Statement are contradictory on the one hand saying that PNTLs can and will be met, but also saying there are circumstances where they may not be able to be met
- where residual impacts are identified (such as noise exceedances from the Clyde and Rosehill facilities), safeguards or additional measures (such as at-property treatment for residual impacts when all other measures have been exhausted) available for affected receivers should be identified.

## Response

The operational noise mitigation measures provided in the Environmental Impact Statement are appropriately outcomes focussed and commit to achieving the applicable noise criteria as part of detailed design. It is not appropriate at this stage of the project to identify the precise nature of operational noise mitigation at each station.

Where minor exceedances of the applicable noise criteria have been predicted, the assessment identifies the types of mitigation which can be considered as part of the detailed design process. For example, at Burwood North the assessment in Section 5.7.2 of Technical Paper 3 (Operational noise and vibration) of the Environmental Impact Statement identifies measures such as repositioning of plant and equipment locations, vent orientation, additional attenuators, acoustic louvres and at-property treatments.

An Operational Noise and Vibration Review would be prepared during design development to confirm the mitigation measures required to manage potential airborne and ground-borne noise and vibration impacts from rail operations and stations, in accordance with mitigation measure EIS-NV4. The NSW Environment Protection Authority would be consulted during the preparation of this review. This has been included as an additional mitigation measure in Section 2.14 (Changes to or additional mitigation measures) of this Submissions Report.

### 9.8.20 Construction working hours

#### Issues raised

EPA raised the following issues related to construction working hours:

- there is no justification that extending standard working hours to 6pm on Saturdays would result in “considerable benefit to the community” by reducing the duration of construction related disruption. Recommendation that clarification of what is meant by “considerable benefit to the community” including any community feedback on preferred working hours is provided. Any benefit should be substantiated by evidence and justification
- it is unclear how or if the benefit would be realised or compensated for in the event that the duration of the project extends beyond the construction duration currently projected
- recommendation that in the absence of this justification, that the standard working hours outlined in the ICNG are applied to the project.

#### Response

Justification for out of hours work is provided in Section 6.5.1 of the Environmental Impact Statement and Section 4.4.1 of Technical Paper 4 (Construction noise and vibration) of the Environmental Impact Statement. Standard construction hours outlined within the *Interim Construction Noise Guideline* (NSW Department of Climate Change, 2009) are proposed to be extended from 1pm to 6pm on Saturdays to reduce the overall construction program of this proposal. Earlier completion would bring considerable benefits to the community (in terms of reducing the construction period) and would reduce the duration of construction related disruption. The extended construction hours on Saturdays (from 1pm to 6pm) for this proposal would also align with the conditions of approval for the previous Sydney Metro West planning application. In addition to appropriate acoustic mitigation measures being implemented during this work to minimise impacts, measures from the Sydney Metro management frameworks would be applied. These would include measures from the Overarching Community Communications Strategy (OCCS) (Appendix N), such as notifications delivered to nearby properties seven days prior to out of hours work commencing.

Mitigation measures EIS-S4 (refer to Appendix C (Revised mitigation measures)) includes the requirement to develop site-specific Community Communications Strategies. These would identify tailored mitigation measures for each precinct informed by stakeholder engagement. The measures would be reviewed and evaluated through construction to consider the appropriateness of mitigation measures and lessons learnt.

The construction program presented in the Environmental Impact Statement is indicative. Sydney Metro would carry out construction works as efficiently as possible and would continue to consider opportunities to achieve efficiencies in the construction program.

### 9.8.21 Assessment methodology for construction impacts

#### Issues raised

EPA raised the following issues related to the construction noise assessment methodology:

- the categorisation of impacts as part of the construction noise assessment is not appropriate, as noted for the previous Sydney Metro West planning applications, as this method is likely to misrepresent the extent of impact that may be experienced by the community and set unrealistic expectations for the community. There is no validity to the justification that an approach is appropriate because it has been used on previous applications without demonstrating it is appropriate to the particulars of the application
- the construction assessment approach does not follow the approach outlined in the Sydney Metro Construction Noise and Vibration Strategy (CNVS)
- it is not appropriate to continue to use the categorisations low, moderate and high due to their inappropriateness and potential to be misleading in the application for approval and these should be removed from the Environmental Impact Statement
- recommendation that the Environmental Impact Statement and construction noise assessment are amended to remove the classification presented
- alternative approaches to be used are welcomed, provided they can be robustly justified and are consistent with the EPA's guidelines, policies and those listed in the Secretary's environmental assessment requirements.

#### Response

The categorisation of impacts through the use of impact gradings represent a likely subjective response to noise and are aligned with bands of noise management level exceedance. Technical Paper 4 (Construction noise and vibration) of the Environmental Impact Statement acknowledges that the subjective response would vary and depends on the period in which the impacts occur. The assignment of impact grades would be further refined for reporting of construction impacts and identification of feasible and reasonable mitigation in Detailed Noise and Vibration Impact Statements consistent with the requirements of the Construction Noise and Vibration Standard (CNVS (Appendix K)) (and accounting for the varying factors to be considered such as location, type/sensitivity of receiver, amenity objectives for area, extent of exceedance, duration and time periods).

The methodology has maintained a consistent approach with the previous Sydney Metro West planning applications. This enables the community and stakeholders to interpret potential impacts associated with each stage of work in a consistent manner, and to understand how impacts associated with this application vary compared to previous planning applications.

Decibel ranges of exceedances of noise management levels are defined in construction noise and vibration sections in Part B (Environmental assessment) and in Table 20 of Technical Paper 2 (Construction noise and Vibration) of the Environmental Impact Statement.

Exceedance noise management levels, rather than the impact gradings used in the Environmental Impact Statement, would be the basis for implementing reasonable and feasible mitigation measures during construction.

The CNVS's primary function is to manage the approach to noise and vibration assessments during delivery (post planning approval) and to ensure feasible and reasonable noise and vibration management measures are implemented. The assessment in the Environmental Impact Statement has appropriately been undertaken in accordance with the Secretary's environmental assessment requirements.

### 9.8.22 Predicted level of construction impacts

#### Issues raised

EPA raised concern regarding the high noise level predictions at proposed stations including Pymont, The Bays, Burwood North, Hunter Street and Parramatta and recommended that mitigation and management for these high noise levels are provided.

#### Response

The CNVS (Appendix K) and the CEMF (Appendix I) contain detailed feasible and reasonable mitigation measures which would be applied, where appropriate, to manage the potential construction impacts. The CNVS has been successfully implemented on previous Sydney Metro projects.

Specific mitigation measures to be applied would be detailed in site-specific Construction Noise and Vibration Impact Statements to be prepared for:

- all work outside standard construction hours likely to exceed the relevant noise management levels
- activities likely to result in highly noise affected receivers
- activities likely to generate vibration levels at receivers in excess of the relevant criteria.

### 9.8.23 Westmead metro station construction site

#### Issues raised

EPA requests clarification on the number of possessions required at Westmead.

#### Response

In relation to rail possessions at Westmead, Section 7.6.3 of the Environmental Impact Statement states that it is currently anticipated that about 16 individual weekend rail possessions would be required. Work would also likely occur during five-day shutdowns between December 26 and 30 in 2024, 2025 and 2026.

Confirmation of the number of rail possessions required would be determined as part of detailed construction planning. Sydney Metro would implement feasible and reasonable mitigation measures during rail possession work in accordance with the CNVS (Appendix K).

### 9.8.24 Construction in commercial areas

#### Issues raised

EPA made a recommendation that clarification of the mitigation measures be considered at Parramatta metro station and Hunter Street Station (Sydney CBD) given the potential difference in sensitive times for usage, such as working alternative hours to minimise impacts on the different receiver types.

#### Response

Specific measures to be implemented at Parramatta metro station and Hunter Street Station (Sydney CBD) would be determined in site-specific Construction Noise and Vibration Impact Statements to be developed in accordance with the CNVS (Appendix K). This would consider the nature of sensitive receivers around each site. This approach has been successfully implemented in similar CBD environments on previous Sydney Metro projects.

### 9.8.25 Rail system access shafts

#### Issues raised

EPA raised the following issues related to rail system access shafts:

- recommendation that the potential equivalent noise reduction measures where an acoustic shed is not feasible and reasonable is confirmed
- recommendation that Department of Planning and Environment carefully considers the activities permitted outside of standard hours for rail access and station fit out works as this will significantly impact the EPA's ability to regulate noise impacts at the licensing stage.

#### Response

There are a range of options available which could be implemented where an acoustic shed is not feasible and reasonable, including measures like acoustic panels over shafts or station boxes. The specific mitigation measures would be determined in site-specific Construction Noise and Vibration Impact Statements.

Technical Paper 4 (Construction noise and vibration) of the Environmental Impact Statement provides an assessment of the potential impacts of rail systems access shafts at various locations along the alignment as well as a case study from the use of Waterloo Station on the Sydney Metro City & Southwest project for rail systems fit-out. This shows that these activities can be appropriately managed in residential environments.

### 9.8.26 Construction mitigation

#### Issues raised

EPA raised the following issues related to construction mitigation:

- limited commentary on the mitigation that may or may not be applied is provided and relies on reference to the CNVS without adequately explaining which measures from the strategy could be applied, what their potential effectiveness is and the factors at each construction site and receiver group that could impact their adoption. This approach is inconsistent with the ICNG which requires that mitigation is applied where reasonable and feasible to minimise noise
- deferring mitigation to post-approval is not appropriate and Sydney Metro could reasonably be expected to present specific measures that may not be listed in the CNVS
- information should be provided for the potential mitigation measures that can be applied at each site and receiver group, how and by how much these would reduce impacts and the factors that would affect the adoption of measures for each receiver group and/or station site.

#### Response

The CNVS (Appendix K) and the CEMF (Appendix I) contains detailed feasible and reasonable mitigation measures which would be applied, where appropriate, to manage the potential construction impacts. The CEMF provides measures which are implemented, where feasible and reasonable, as standard practice on all Sydney Metro projects and would be implemented on all Sydney Metro West construction sites. The CNVS details the additional mitigation measures which are to be applied based on certain noise management level exceedances. The measures contained in the CEMF, and the approach outlined in the CNVS has been successfully implemented on previous Sydney Metro projects.

Specific mitigation measures to be applied would be detailed in site-specific Construction Noise and Vibration Impact Statements to be prepared for:

- all work outside standard construction hours likely to exceed the relevant noise management levels
- activities likely to result in highly noise affected receivers
- activities likely to generate vibration levels at receivers in excess of the relevant criteria.

### 9.8.27 Community feedback

#### Issues raised

EPA raised the following issues related to community feedback:

- recommendation that clarification on the respite measures (beyond reducing the construction program by three months) proposed in response to the community feedback provided in Table 83 of the construction noise assessment
- recommendation that clear information is provided to the community on eligibility for at-property treatment at noise-affected receivers.

#### Response

Table 83 of Technical Paper 4 (Construction noise and vibration) of the Environmental Impact Statement outlines how proposed construction noise management and mitigation measures (including respite measures) responds to community feedback received as part previous Sydney Metro West planning applications. Further details on respite measures are provided in the CNVS (Appendix K) and the CEMF (Appendix I).

The Sydney Metro CNVS (Appendix K) and the CEMF (Appendix I) provide a comprehensive list of standard (to be implemented on all construction sites) and additional mitigation measures to avoid and minimise potential construction noise impacts, as far as feasible and reasonable. The additional mitigation measures would be applied based on certain noise management level exceedances and include additional pro-active engagement with affected receivers, project specific respite offers, additional noise and vibration monitoring and offers of alternative accommodation.

## 9.9 Place Management NSW

### 9.9.1 Placemaking – The Bays Station

#### Issues raised

At The Bays Station, all proposed works should be in alignment with the Department of Planning and Environment's *Bays West Place Strategy*.

#### Response

The *Bays West Stage 1 draft Master Plan and Urban Design Framework* (NSW Department of Planning and Environment, 2022) was exhibited from 4 May to 31 May 2022. The master plan builds on the vision of the *Bays West Place Strategy* (NSW Department of Planning, Industry and Environment, 2021a), and would inform development and planning controls for the area around the former White Bay Power Station.

The indicative layout of key design elements of The Bays Station (as exhibited in the Environmental Impact Statement) is broadly consistent with the *Bays West Stage 1 draft Master Plan and Urban Design Framework*, particularly with respect to the following:

- the location, layout and indicative heights of the aboveground station buildings, and provision of space for non-station use in these buildings
- provision of active transport connections, including a bicycle route along the northern edge of the station precinct and along the new precinct street
- preservation of significant view corridors where possible, including to the silhouette and chimney stacks of the former White Bay Power Station.

Sydney Metro has and would continue to work with the Department of Planning and Environment and other relevant stakeholders regarding integration of The Bays Station with the *Bays West Place Strategy* and associated draft *Bays West Urban Design Framework* (NSW Department of Planning, Industry and Environment, 2021b), sub-precinct master plans and future rezoning process for the relevant sub-precinct, as outlined in Chapter 13 (The Bays Station) of the Environmental Impact Statement and Section 2.8 (The Bays Station – alignment with master planning work) of this Submissions Report.

This includes development of The Bays Station design and precinct plan in consultation with Department of Planning and Environment.

### 9.9.2 Impacts to White Bay Power Station

#### Issues raised

Place Management NSW raised the following issues regarding impacts to White Bay Power Station:

- The Environmental Impact Statement only focuses on the building complex and does not identify or consider the State Heritage curtilage of the White Bay Power Station
- Place Management NSW, as the landowners of the White Bay Power Station and its State Heritage Significant Curtilage, requests that it is involved in further design and development of the traction substation to ensure it does not obstruct the views of the Turbine Hall, Boiler House & Chimneys when viewed from the South and the Anzac Bridge.

#### Response

Section 13.7.2 of the Environmental Impact Statement considers potential impacts on both the White Bay Power Station building complex and the heritage listed curtilage.

As noted above, the indicative layout of key design elements of The Bays Station is broadly consistent with the *Bays West Stage 1 draft Master Plan and Urban Design Framework*, including with respect to the preservation of significant view corridors where possible, including to the silhouette and chimney stacks of the former White Bay Power Station.

Potential impacts to the White Bay Power Station curtilage and buildings would be managed in accordance with the following mitigation measures (refer to Appendix C (Revised mitigation measures)):

- mitigation measure EIS-NAH2, which requires detailed design for aboveground station elements, ancillary facilities and public domain and landscaping work located in or near to heritage significant items to respond to relevant heritage guidelines and existing Conservation Management Plans during design development in order to minimise indirect (visual) impacts

- mitigation measure EIS-NAH10, which requires opportunities to minimise the scale or alter the siting of the proposed traction substation to be considered so that the prominence of White Bay Power Station is not obstructed on significant view lines from the south and south-east would be explored during detailed design
- mitigation measure EIS-LV9, which requires design of the traction substation building to have an industrial character with a high-quality architectural finish and not detract from the visual prominence of the existing power station façade and silhouette of the twin stacks.

In addition, the Design Guidelines (Appendix M) notes that the design would ensure that primary view corridors are maintained and impacts to secondary view corridors are minimised, as identified in the White Bay Power Station Conservation Management Plan and the *Bays West Place Strategy* and associated draft Urban Design Framework.

Alternative locations and the design and scale of the traction substation would continue to be considered as part of ongoing design to minimise these impacts. Consideration of alternative locations would consider potential locations outside of the White Bay Power Station heritage curtilage.

Sydney Metro is committed to consultation with Place Management NSW regarding design development of the traction substation at The Bays to minimise impacts on key views of the White Bay Power Station from the south and Anzac Bridge.

### 9.9.3 Impact to the heritage-listed inlet/outlet canal

#### Issues raised

The box culvert excavation for new drainage (two to four meters deep) in the northern part of The Bays construction site and piling work for the traction substation may have an impact on the canal/water inlet-outlet and its function. Future design/development must take into account the impact and necessary involvement of the NSW Heritage Council, and plans should be shared with Place Management NSW for review and endorsement.

#### Response

In accordance with revised mitigation measure EIS-NAH8 (refer to Appendix C (Revised mitigation measures)), an addendum to the existing Archaeological Research Design/s or a new Archaeological Research Design/s would be prepared to identify the excavation methodology for predicted non-Aboriginal archaeological remains for the additional footprint area at The Bays Station construction site. This would include provision for the early investigation of areas where the 'White Bay Power Station (Inlet) Canal' may potentially be impacted within the additional footprint area.

Potential direct impacts to the inlet canal during construction of this proposal would also be managed in accordance with mitigation measure EIS-NAH10 (refer to Appendix C (Revised mitigation measures)), which requires the following:

- in order to mitigate direct (physical) and permanent indirect (visual) impacts to the White Bay Power Station (Inlet) Canal, the proposed culvert to the north of the White Bay Power Station would not intersect the White Bay Power Station (Inlet) Canal
- piling and other foundation work to install the traction substation would be sited and designed so that they do not directly impact the White Bay Power Station (Inlet) Canal.

Sydney Metro would continue to work with Place Management NSW regarding construction works which could potentially impact the White Bay Power Station (inlet) Canal, and regarding the addendum to the existing Archaeological Research Design/s or a new Archaeological Research Design/s

### 9.9.4 Access to Place Management NSW land

#### Issues raised

Place Management NSW raised the following issues regarding impacts to access to Place Management land:

- licence agreement/s should be sought from Place Management NSW and will be subject to statutory approval from the Heritage Council of NSW for any other authority for the use of White Bay Power Station State Heritage Listed land
- additional land for the precinct is limited to works and not development with the possible exception of the traction substation.

## Response

Place Management NSW's comment regarding the need for a licence agreement to allow use of the White Bay Power Station heritage listed land is noted. Sydney Metro would work with Place Management NSW to include this additional area into the existing construction licence. As outlined in Section 13.4 and shown in Figure 13-7 of the Environmental Impact Statement, construction of this proposal requires some additional areas of land beyond the existing The Bays Station construction site established under the previous Sydney Metro West planning application. The traction substation is the only building proposed within the additional footprint area. The additional footprint includes:

- an area to the north of the former White Bay Power Station adjacent to Robert Street to allow for the construction of flood mitigation and active transport upgrade works
- an area to the south of the former White Bay Power Station adjacent to Victoria Road to allow for the construction of a traction substation and road work.

### 9.9.5 Transport

#### Issues raised

Place Management NSW raised the following issues regarding transport impacts:

- the proposal in the Environmental Impact Statement has no provision for vehicle access to the White Bay Power Station site (Roberts Road or otherwise)
- the road network needs to address the adaptive reuse, and therefore commercial viability of the White Bay Power Station, access to and from Rozelle Goods Yard and Robert Street, and vehicular and pedestrian connectivity with Bays West Precinct.

#### Response

The proposed indicative station design and precinct plan for The Bays Station (shown in Figure 13-1 of the Environmental Impact Statement) does not preclude vehicular access being provided to the White Bay Power Station site in the future from the new internal precinct street network.

The indicative station design and precinct plan and the place and design principles figures (refer to Figure 13-4, Figure 13-5 and Figure 13-6 of the Environmental Impact Statement) shows proposed active transport connections from and through the station precinct to White Bay Power Station, Robert Street, Rozelle Rail Yards and the waterfront open space and promenade proposed in the *Bays West Place Strategy*.

Road network requirements and access to the White Bay Power Station would be considered further as part of integration with the internal street network as per the *Bays West Place Strategy*, the *Bays West Stage 1 draft Master Plan and Urban Design Framework* and future rezoning process for the sub-precinct, in collaboration with relevant stakeholders.

## 9.10 Port Authority of NSW

### 9.10.1 General

#### Issues raised

Port Authority of NSW (Port Authority) supports this proposal.

#### Response

Port Authority's support for this proposal is noted.

### 9.10.2 Bays West Place Strategy

#### Issues raised

Port Authority raised the following issues relating to the *Bays West Place Strategy*:

- Port Authority notes that Sydney Metro West will continue to work with the Department of Planning and Environment to integrate The Bays Station with the *Bays West Place Strategy* and the associated draft *Bays West Urban Design Framework* and relevant sub-precinct master plans
- one of the Directions of the Place Strategy is to '*retain, manage and allow the essential strategic port and maritime industry uses to grow and evolve, to ensure they continue to support the NSW economy*'. The Place Strategy also acknowledges the opportunities for ambitious innovation in the planning of the integration of ports and working harbour with urban renewal and blue economy knowledge-intensive industries, and includes several actions directly related to this

- Port Authority supports the intention to provide a waterfront promenade within the White Bay Power Station, metro station precinct, and Robert Street sub-precincts, subject to the current *Bays West Stage 1 draft Master Plan*
- all other parts of White Bay and Glebe Island (Bays Ports) are not within the scope of the Environmental Impact Statement or the *Bays West Stage 1 draft Master Plan* and will be subject to further work and investigations, including the location of any active transport links as noted in the actions of the Place Strategy, to be led by Port Authority of NSW in collaboration with Department of Planning and Environment and other Government stakeholders.

### Response

Port Authority's support for the directions of the *Bays West Place Strategy* (NSW Department of Planning, Industry and Environment, 2021a), associated draft *Bays West Urban Design Framework* (NSW Department of Planning, Industry and Environment, 2021b) and sub-precinct planning are noted.

Sydney Metro has and would continue to work with the Department of Planning and Environment and other relevant stakeholders (including Port Authority) regarding integration of The Bays Station with the *Bays West Place Strategy* and associated draft *Bays West Urban Design Framework*, the *Bays West Stage 1 draft Master Plan and Urban Design Framework* (NSW Department of Planning and Environment, 2022), and future rezoning process for the wider sub-precinct as outlined in Chapter 13 (The Bays Station) of the Environmental Impact Statement and Section 2.8 (The Bays Station – alignment with master planning work) of the Submissions Report.

### 9.10.3 Transport and traffic

#### Issues raised

Port Authority raised the following issues relating to the *Bays West Place Strategy*:

- Port Authority looks forward to continuing the collaboration with Sydney Metro West, Department of Planning and Environment and their specialist consultants on traffic and transport matters related to the Environmental Impact Statement, the Place Strategy, the Stage 1 Master Plan and current and future transport requirements for port and working harbour activities in Bays West (including the White Bay Cruise Terminal)
- all White Bay Cruise Terminal traffic (except servicing, providing and staff related traffic) is required to travel through this area via James Craig Road, Solomons Way and Port Access Road. Additionally, other port and working harbour related traffic may travel through this area or access Port Authority land at White Bay via Robert Street
- given these transport requirements Port Authority expects and requests to continue to be formally involved in further investigations into, and any proposed changes to, the overall street network; interchange facilities; access to the site via Robert Street; options to improve the performance and capacity of the Robert Street / Mullens Street intersection; the interface with port traffic at Glebe Island; and pedestrian crossing facilities
- Port Authority requests that mitigation measures EIS-TT8 and EIS-TT9 specifically include consultation with Port Authority in addition to Inner West Council and Department of Planning and Environment (refer to Appendix C (Revised mitigation measures)).

#### Response

Port Authority's comments regarding continued collaboration with Sydney Metro and Department of Planning and Environment on traffic and transport matters are noted and supported.

Port Authority's comments regarding use of the surrounding road network by White Bay Terminal traffic and other port traffic are noted. The proposed road layout as detailed in Chapter 13 (The Bays Station) of the Environmental Impact Statement would provide for ongoing access to the White Bay Cruise Terminal and for other port traffic via the new precinct street. As detailed in the OCCS (Appendix N), Sydney Metro would continue to engage with key stakeholders, including the Port Authority, during ongoing design development and construction of this proposal.

Mitigation measure EIS-TT8 which discusses the investigation of pedestrian crossing facilities at the Robert Street / new precinct street and new precinct street / Port Access Road intersections, has been revised to include the requirement for consultation with Transport for NSW, Inner West Council, NSW Department of Planning and Environment and Port Authority (refer to Appendix C (Revised mitigation measures)).

Mitigation measures EIS-TT9 is related to potential improvements to the Mullens Street / Robert Street intersection (refer to Appendix C (Revised mitigation measures)), which is outside of The Bays precinct. Any upgrades to this intersection are a high level road network matter which are appropriately dealt with through consultation with Inner West Council and the Department of Planning and Environment.

#### 9.10.4 Construction noise and vibration

##### Issues raised

Given the predicted construction noise impacts on nearby sensitive receivers and Port Authority's long standing and on-going relationship with the local communities adjacent to Bays Port, Port Authority requests that the Construction Noise and Vibration Management Plan (CNVMP) for The Bays Station site is prepared in consultation with Port Authority.

##### Response

Sydney Metro would consult with Port Authority in relation to the preparation of the Construction Noise and Vibration Plan(s) related to The Bays Station construction site.

#### 9.10.5 Non-Aboriginal heritage

##### Issues raised

Port Authority of NSW raised the following issues relating to non-Aboriginal heritage:

- the Environmental Impact Statement indicates that box culvert excavation for new drainage infrastructure to the north of the White Bay Power Station may result in partial removal of significant fabric of the 'White Bay Power Station (Inlet Canal)' (Port Authority of NSW Section 170 heritage item – SHI #4560062). Piling work for the traction substation may also potentially impact the canal.
- Port Authority requests further consultation regarding the outcome of the early physical investigation of areas likely to contain State significant archaeology or subterranean heritage items as required by the ARD and Excavation Methodology for the work carried out under the previous Sydney Metro West planning application.

##### Response

Section 13.7.2 of the Environmental Impact Statement identifies that box culvert excavation for new drainage (about two to four metres in depth) in the northern part of the construction site may result in partial removal of significant fabric of the inlet canal. Piling work for the traction substation may also potentially impact the canal.

In accordance with revised mitigation measure EIS-NAH8 (refer to Appendix C (Revised mitigation measures)), an addendum to the existing Archaeological Research Design/s or a new Archaeological Research Design/s would be prepared to identify the excavation methodology for predicted non-Aboriginal archaeological remains for the additional footprint area at The Bays Station construction site. This would include provision for the early investigation of areas where the 'White Bay Power Station (Inlet Canal)' may potentially be impacted within the additional footprint area. The results of this investigation would be provided to Port Authority of NSW.

Potential direct impacts to the inlet canal during construction of this proposal would also be managed in accordance with mitigation measure EIS-NAH10 (refer to Appendix C (Revised mitigation measures)), which requires the following:

- in order to mitigate direct (physical) and permanent indirect (visual) impacts to the White Bay Power Station (Inlet) Canal, the proposed culvert to the north of the White Bay Power Station would not intersect the White Bay Power Station (Inlet) Canal
- piling and other foundation work to install the traction substation would be sited and designed so that they do not directly impact the White Bay Power Station (Inlet) Canal.

#### 9.10.6 Contamination and groundwater

##### Issues raised

Port Authority of NSW raised the following issues relating to contamination and groundwater:

- Port Authority notes (per previous Sydney Metro planning applications) that groundwater inflows to excavations and groundwater level drawdown associated with construction and operational activities may cause impacts such as activation of acid sulfate soils, which can impact the integrity of underground structures (such as adjoining wharf structures at White Bay owned by Port Authority) and potentially lead to migration of contamination

- Port Authority therefore requests:
  - that the groundwater monitoring program (established under previous Sydney Metro West planning applications) be reviewed on an on-going basis to allow any groundwater drawdown impacts at The Bays Station construction site to be proactively identified
  - to be informed of groundwater drawdown impacts due to construction and operation at The Bays Station site based on the monitoring program results
  - to review the Groundwater Management sub-plan to the CEMP for The Bays Station site prior to its finalisation.

## Response

Section 6.2 of the CEMP (refer to Appendix I) requires preparation of a Groundwater Management Plan in consultation with relevant government agencies. Sydney Metro would consult with Port Authority in relation to preparation of the Groundwater Management Plan(s) related to The Bays Station.

In accordance with mitigation measure CEMF-GW1, monitoring of groundwater levels and quality at the site area would occur before, during and after substantial construction (refer to Appendix C (Revised mitigation measures)). This would also include monitoring of potential contaminants of concern. Groundwater level data would be regularly reviewed during and after construction by a qualified hydrogeologist.

Mitigation measure CEMF-GW2 also requires preparation of a detailed geotechnical model which would be progressively updated during design and construction (refer to Appendix C (Revised mitigation measures)). Where a significant exceedance of target changes to groundwater levels are predicted at surrounding land uses and nearby water supply works, an appropriate groundwater monitoring program would be developed and implemented. The program would aim to confirm no adverse impacts on groundwater levels or to appropriately manage any potential impacts.

Where off-site sources of groundwater contamination have been identified, mitigation measure CEMF-C5 requires development and implementation of controls to manage the potential impacts of contamination due to drawdown and resulting migration of contaminated groundwater into the construction footprint to be implemented (refer to Appendix C (Revised mitigation measures)). A review of available groundwater data would be completed to inform the plan. Where insufficient data is available to understand groundwater conditions and the potential for contamination to migrate as a result of the proposal, further investigation would be carried out if considered necessary and if not already undertaken under mitigation measure CEMF-C2 (refer to Appendix I (CEMF)).

## 9.11 Sydney Olympic Park Authority

### 9.11.1 General

#### Issues raised

Sydney Olympic Park Authority supports the establishment of Sydney Olympic Park metro station and welcomes the significant precinct improvement in terms of accessibility that the station will bring to residents, workers and visitors to Sydney Olympic Park. Sydney Olympic Park Authority also strongly supports the aspirations in the report that “The broader Sydney Olympic Park metro station precinct is proposed to be a thriving urban centre with a vibrant mix of homes and jobs, as well as a premier destination for cultural, entertainment, recreational and sporting events”.

#### Response

Sydney Olympic Park Authority’s support for this proposal is noted.

### 9.11.2 Alignment with the Sydney Olympic Park Authority Master Plan 2030 (Interim Metro Review)

#### Issues raised

Sydney Olympic Park Authority raised the following comments in relation to the alignment of master planning:

- Sydney Olympic Park Authority and Sydney Metro have worked in collaboration for a number of years to develop the most effective station design set amongst a vibrant green urban centre. The culmination of this work was the *Draft Sydney Olympic Park Master Plan 2030 (Interim Metro Review)* (Sydney Olympic Park Authority, 2021) (the Master Plan 2030 (Interim Metro Review)) which Sydney Olympic Park Authority submitted to the Department of Planning and Environment in August 2021. Currently the Master Plan 2030 (Interim Metro Review) is well advanced in the assessment process

- Sydney Olympic Park Authority consider that the Environmental Impact Statement is well aligned with the Master Plan 2030 (Interim Metro Review) reflecting the agreed position between Sydney Olympic Park Authority and Sydney Metro for many of the key items.

### Response

Sydney Olympic Park Authority's comment that the Environmental Impact Statement is well aligned with the Master Plan 2030 and the Master Plan 2030 (Interim Metro Review) is noted. Sydney Metro notes that the *Sydney Olympic Park Master Plan 2030 (Interim Metro Review)* (Sydney Olympic Park Authority, 2022) has been finalised since the exhibition of the Environmental Impact Statement.

### 9.11.3 Sydney Olympic Park Vision and Strategy 2050 and Master Plan 2050

#### Issues raised

The Sydney Olympic Park Authority is also currently developing the Sydney Olympic Park Vision & Strategy 2050, and the Master Plan 2050. Sydney Olympic Park Authority will further involve Sydney Metro in the formulation of these strategic documents to ensure that the delivery of the new metro station has a profound positive impact across the entirety of Sydney Olympic Park.

#### Response

Sydney Olympic Park Authority's commitment to further involve Sydney Metro in the formulation of the Sydney Olympic Park Vision & Strategy 2050, and the Master Plan 2050 is noted.

### 9.11.4 Sydney Metro Design Review Process

#### Issues raised

As reflected in the Master Plan 2030 (Interim Metro Review), the over station development would not be required to follow the Sydney Olympic Park Authority Design Excellence Policy and associated processes and would instead be required to undergo ongoing review with the NSW Government Architect and State Design Review Panel. However, given that these buildings would be located in the heart of the Sydney Olympic Park town centre, Sydney Olympic Park Authority requests full active representation on the State Design Review Panel to ensure the unique requirements of the precinct is considered, including events and the emerging residential areas.

#### Response

Sydney Metro propose to implement their Sydney Metro West Design Excellence Strategy for over station development, consistent with consultation held with Sydney Olympic Park Authority.

Sydney Olympic Park Authority's existing Design Excellence Policy would apply to other sites within Sydney Metro land that are not integrated with the station infrastructure.

A Design Review Panel would be established for Sydney Metro West. The objective of the Design Review Panel would be to support achievement of the Sydney Metro design objectives and to ensure quality design process and outcomes. Relevant councils and key stakeholders, including Sydney Olympic Park Authority, would be invited to participate in relevant Design Review Panel meetings to advise on local issues and design outcomes as they relate to the local context at the station precinct.

### 9.11.5 Sustainability

#### Issues raised

The Sydney Metro West commitment to sustainability is welcomed as noted in Appendix M (Design Guidelines): "Stations and associated precinct developments are to achieve a high level of sustainability performance using the Green Building Council of Australia Buildings Green Star Tool and other sustainability tools (such as NABERS, the Infrastructure Sustainability Council's (ISC) rating scheme and BASIX) for relevant sites".

Sydney Olympic Park is a 6 Star Green Star Community certified by the Green Building Council of Australia in 2019. The required environmental ratings as per Section 4.2 of *Sydney Olympic Park Master Plan 2030 (2018 Review)* (Sydney Olympic Park Authority, 2018) apply to the Sydney Metro West sites with the addition of the following for mixed use buildings for design competition sites (as outlined in the Master Plan 2030 (Interim Metro Review)):

- minimum 5 Star Green Star rating from the Green Building Council of Australia
- and/or demonstration of world's best practice sustainable building design and as-built using an alternative rating tool such as WELL Building Standard, Living Building Challenge, or other recognised rating scheme can be negotiated with Sydney Olympic Park Authority.

Recommendation that evidence of registration and certification of any of the above rating tools will be required to be submitted to Sydney Olympic Park Authority and a condition to this effect is suggested as attached.

### **Response**

Sydney Metro notes that the commitment to sustainability as detailed in Section 18.4 of the Environmental Impact Statement and the Design Guidelines (refer to Appendix M) is welcomed by Sydney Olympic Park Authority.

Sydney Metro is committed to sustainability leadership to create a positive legacy for the customers and communities it serves, as outlined in its Environment and Sustainability Statement of Commitment (Sydney Metro, 2020c). Concept condition of approval C-B7 requires that Sydney Metro West must achieve minimum ISCA rating of 75 (or equivalent level of performance) or a 5-Star Green Star rating (or equivalent level of performance). Sydney Metro would also use zero emission electricity to operate Sydney Metro West.

Sydney Metro would continue to work with Sydney Olympic Park Authority regarding sustainability rating schemes and provision of information such as certification.

Conditions of approval are a matter for the Department of Planning and Environment during its assessment of this proposal.

#### **9.11.6 Site 46 deferral**

### **Issues raised**

Pursuant to discussions with Department of Planning and Environment during the Interim Metro Review development, Sydney Olympic Park Authority has deferred a small part of the Sydney Olympic Park metro station site, being that portion of Site 46 within the Sydney Metro landholding. The narrow site presented a number of challenges. Therefore, deferring the site for a full review in the Sydney Olympic Park Master Plan 2050 will allow the whole of site 46 to be developed in the future in a cohesive manner that will result in urban design and site efficiency outcomes. Sydney Metro is aware of this amendment, however given the timing of both reports, the Environmental Impact Statement does not reflect this late change.

Sydney Olympic Park Authority requests that the Department of Planning and Environment do not approve the Environmental Impact Statement concept for site 46 at this stage for the above reasons.

### **Response**

As described in Section 2.6 (Sydney Olympic Park metro station – refinement to adjacent station development) of this Submissions Report, Sydney Metro has established an agreement with Sydney Olympic Park Authority to enable Site 46 to be planned in accordance with the development of the Master Plan 2050 for the broader precinct.

Figure 2-20 of this Submissions Report includes a revised site layout for Sydney Olympic Park metro station which reflects this clarification.

Sydney Metro would continue to work with Sydney Olympic Park Authority in relation to site 46 throughout the finalisation of the Master Plan 2030.

#### **9.11.7 State Abattoir Heritage Precinct**

### **Issues raised**

Sydney Olympic Park Authority noted that the interface between, and possible enhancement of, the Abattoir Precinct will be the outcome of detailed design development and as would be expected, is not included in the Environmental Impact Statement at this stage. However, Sydney Olympic Park Authority considers that the interface and integration of the northern station building, Central Urban Park and connecting pedestrian paths warrants the introduction of a “sensitive design interface” overlay and requests that Department of Planning and Environment mandate the use of such an interface. Sydney Olympic Park Authority raised that this would ensure that at the future detailed design stage of Sydney Olympic Park metro station, the heritage context and architectural design interface will be thoroughly considered resulting in a design which enhances and respond to the adjacent heritage precinct.

The Environmental Impact Statement uses the “sensitive design interface” mapping overlay at other metro stations to require future detailed designs to provide a contextually sensitive interface with heritage precincts/building through architectural treatments and strategies.

## Response

Sydney Metro has adjusted the Design Guidelines (refer to Appendix M) to recognise a sensitive design interface along the site frontage to Herb Elliott Avenue opposite the State Abattoir Heritage Precinct which is located on the opposite (northern) side of Herb Elliott Avenue.

The potential impacts of this proposal on the State Abattoir Heritage Precinct are discussed in Table 9-15 of the Environmental Impact Statement and are considered to be neutral or negligible.

Mitigation measures EIS-NAH2 requires detailed design of aboveground station elements, ancillary facilities, public domain and landscaping located in or near significant non-Aboriginal heritage items to response to relevant heritage guidelines and Conservation Management Plans in order to minimise indirect (visual) impacts to heritage items, including with a particular focus on preserving significant views to the item (refer to Appendix C (Revised mitigation measures)).

### 9.11.8 Sydney Olympic Park metro station entries

#### Issues raised

Sydney Olympic Park Authority raised the following issues relating to metro station entries:

- Sydney Olympic Park Authority has worked in collaboration with Sydney Metro to develop the proposed station and precinct. Sydney Olympic Park Authority considers that extensive activation and pedestrian permeability are key objectives for the emerging town centre, focused around the metro station
- Sydney Olympic Park Authority does not support the dedication of two of the four station entries on the plaza as 'event only' as this would render this space inactive a large proportion of the time. The draft Master Plan 2030 has strived to make the Central Precinct more activated and fine-grained, providing shorter travel distances/sight for pedestrians and to improve legibility and wayfinding. All entries need to be open and active every day. To make the station permeable and to provide a strong visual connection to the station and the town centre from Olympic Boulevard west and the rest of the precinct to the east, all entries need to be available in everyday mode, with the entries from Transit Plaza becoming available to event-goers during event mode and the everyday promenade entrances available to residents and workers only in event mode.

#### Response

The public domain between the station buildings (accessible from Olympic Boulevard) would be accessible to the public during day to day operations as well as event mode.

Based on feedback received during public exhibition of the Environmental Impact Statement, Sydney Metro is reviewing station entries (including day to day operations and event mode) at Sydney Olympic Park with the intent of all entries being available for day to day operations and to optimise precinct outcomes and align with Sydney Olympic Park Authority master planning. These specific design elements would be incorporated through the station design and precinct plan, which would be prepared in consultation with Sydney Olympic Park Authority (refer to Section 5.2 (Ongoing design development) of this Submissions Report for further detail). A minor clarification has been included in Section 2.13 (Minor clarifications and corrections) of this Submissions Report to acknowledge that Sydney Metro is reviewing the function of station entries at Sydney Olympic Park metro station, in consultation with Sydney Olympic Park Authority.

### 9.11.9 Northern Station Building – Rooftop publicly accessible open space

#### Issues raised

Sydney Olympic Park Authority raised the following issues relating to the northern station building:

- Sydney Olympic Park Authority's draft Vision & Strategy 2050 is encapsulated in a precinct that: puts Country first and is nature positive, 'energises' the everyday and is a place where Sydney comes to play. The metro station at the heart of urban core will become the active and vibrant town centre
- the Master Plan 2030 (Interim Metro Review) includes the concept of a publicly accessible open space on the northern station building and builds on this with a conceptual design as part of the Place Design and Public Domain Framework (Appendix 3 to Master Plan 2030 (Interim Metro Review)). Sydney Olympic Park Authority considers this to be an important public domain element given the unique Sydney Olympic Park location and characteristics

- Sydney Olympic Park Authority and Sydney Metro were aligned during the development of the Interim Metro Review with the rooftop of the northern station building comprising a publicly accessible open space. The benefits of this design element include assisting the northern station building to recede into the landscape and adjoining Central Urban Park, provide another type of public open space for enjoyment by residents, visitors and workers, and to add to the pleasant outlook from surrounding tower buildings
- the Environmental Impact Statement does not make reference, or illustrate on the figures, the publicly accessible open space on the rooftop of the northern station building as agreed in principle between Sydney Olympic Park Authority and Sydney Metro.
- recommendation that Department of Planning and Environment require Sydney Metro to include the publicly accessible open space on the northern station building at the next step in the design development. A suggested condition of consent has been included which addresses this item.

### Response

Consistent with further consultation held with the Sydney Olympic Park Authority, Sydney Metro would continue to work with Sydney Olympic Park Authority through detailed design to achieve the objective of a green roof to the northern station building that is high quality and visually appropriate to be viewed from ground level and overlooking buildings. These specific design elements would be incorporated through the station design and precinct plan, which would be prepared in consultation with Sydney Olympic Park Authority (refer to Section 5.2 (Ongoing design development) of this Submissions Report for further detail).

Significant areas of new public domain are proposed within the Sydney Olympic Park metro station precinct including delivery of part of the Central Urban Park identified in the Master Plan 2030, and Sydney Metro would continue to work with Sydney Olympic Park Authority to achieve good precinct outcomes.

#### 9.11.10 Construction transport route

##### Issues raised

The proposed vehicle construction route in the Environmental Impact Statement is not aligned with the approved heavy vehicle route approved under the Traffic Management Plan for Stage 1 Construction (tunnelling and station box) which is already underway. It is critical that this is resolved to protect the amenity of residents at Sydney Olympic Park who will experience an extended period of construction and traffic noise.

The heavy vehicle route should reflect the approved construction route already being used. All impacts resulting from this route change need to be reassessed such as traffic impacts and noise and vibration.

##### Response

Sydney Metro would continue to consider any changes made to construction haul routes at Sydney Olympic Park under the previous Sydney Metro West planning application as part of detailed construction planning for this proposal, and note Sydney Olympic Park Authority's preference to use the construction haul route approved for the previous Sydney Metro West planning application's Traffic Management Plan. Changes would be made in accordance with the CTMF (Appendix J). Sydney Metro would continue to work with Sydney Olympic Park Authority on this process and any proposed changes to construction haul routes.

#### 9.11.11 Recommended conditions of consent

##### Issues raised

The Sydney Olympic Park Authority submission on the Environmental Impact Statement included recommended conditions of approval with regards to the following items:

- Construction Environmental Management Plan, including:
  - Construction Noise and Vibration Management Plan
  - Erosion and Sediment Control Plan
  - Heritage Management Plan
  - Flora and Fauna Management Plan
  - Soil and Water Management Plan

- Groundwater/Leachate Management Plan
- Landfill Gas Risk Management Plan
- Construction Traffic and Pedestrian Management Plan
- Operational Stormwater Management Plan
- sustainability
- Landscape Plan
- tree protection/preservation
- public domain interface
- draft Heritage Interpretation Strategy
- work permits
- repair of damage (roads and public domain).

### **Response**

The recommended conditions of approval for this proposal by Sydney Olympic Park Authority are noted. Conditions of approval are a matter for the Department of Planning and Environment during its assessment of this proposal. The intent of several of the conditions of approval suggested by Sydney Olympic Park Authority are included in the Construction Environmental Management Framework (Appendix I) and the Construction Traffic Management Framework (Appendix J).

Sydney Metro would consult with Sydney Olympic Park Authority in relation to the preparation of the Construction Environmental Management Plan and associated sub-plans related to Sydney Olympic Park metro station construction site.

Sydney Metro would also work with Sydney Olympic Park Authority during the development of the station design and precinct plan (refer to Section 5.2 (Ongoing design development) of this Submissions Report for further detail).

## **9.12 Sydney Water**

### **9.12.1 Stakeholder engagement**

#### **Issues raised**

Sydney Water recommends that close consultation between the proponent and Sydney Water occur during all stages of the proposed development. Engagement during the preliminary stage of the project will enable for both parties to identify additional risks and other factors that may affect the delivery of the proposed development.

#### **Response**

As detailed in the OCCS (refer to Appendix N), Sydney Metro would continue to coordinate and work with key stakeholders, including Sydney Water, during ongoing design development and construction of this proposal to ensure they are informed about this proposal and have opportunities to provide feedback. The OCCS also outlines our approach to coordinating communications between interfacing projects (Appendix N).

### **9.12.2 General water-related infrastructure requirements**

#### **Issues raised**

Sydney Water recommended that the proponent of the Environmental Impact Statement consider the service demands for water related infrastructure requirements within the proposed Sydney Metro West corridor. Following this, the proponent should demonstrate that satisfactory arrangements have been made to prevent any unwarranted damage to Sydney Water's drinking water, wastewater and recycling water networks.

## Response

Section 6.5.3 of the Environmental Impact Statement describes the utilities works proposed as part of this proposal and Section 18.6.3 of the Environmental Impact Statement identifies potential impact to utilities (including Sydney Water assets) and management approaches to minimise risk of damage. Utilities identification, relocation, protection and/or removal would be completed as part of the work carried out under the previous Sydney Metro West planning applications. Additional utilities work may be required where minor additional land is required of this proposal. At these locations and if required, it may be necessary to:

- provide physical protection for the utility, where the utility is not directly affected but may be indirectly affected by vibration or accidental impact
- modify construction methods to avoid impacting a nearby utility, such as by using smaller plant and equipment, hand excavation and compaction tools such as hand digging tools, a vibration plate or pedestrian rollers
- divert the utility around the construction footprint.

Further consultation with Sydney Water would occur via a utilities coordination manager and include consideration of impacts to Sydney Water assets.

### 9.12.3 Spoil, waste management and resource use

#### Issues raised

Sydney Water requires that any discharge of treated wastewater into the stormwater system be investigated during detailed construction planning phase. Disposal via Sydney Water Trade Waste agreements are to be investigated during detailed construction planning.

#### Response

Sydney Water would be consulted regarding water supply requirements and disposal via any Sydney Water Trade Waste agreements during construction planning.

### 9.12.4 Synthesis of the Environmental Impact Statement

#### Issues raised

Sydney Water supports any coordination with the proponent to manage the interface of other concurrent projects that are stipulated under the Environmental Impact Statement.

#### Response

Sydney Water's support for managing cumulative impacts with concurrent projects is noted. Sydney Metro would coordinate with stakeholders (including utility providers) as required by mitigation measure CEMF-C11 in the CEMF (Appendix I).

### 9.12.5 Growth planning and commercial

#### Issues raised

Sydney Water raised the following concerns regarding growth planning and commercial:

- Sydney Waters Growth Servicing Plan provides high level planning and timescale intel and highlights where servicing constraints may be currently. Suggestion for Sydney Metro to continue to work with Sydney Water to ascertain construction and servicing demand requirements to enable prudent and efficient delivery of services. Recommendation that Sydney Metro registers each individual development location via the Water Services Coordinator process to ensure Sydney Water has the most accurate and up to date development position, timescales, staging and opportunities
- suggestion that the staging and timing of growth offers opportunities or necessity for re-alignment and/or amplification of Sydney Water assets. Note that Sydney Water would like to work collaboratively with Sydney Metro so that they have the necessary data and contacts to ensure timely and efficient asset management
- recommendation for provision of annual and ultimate growth forecasts, staging plans and development timescales related to over and adjacent station development during the pre-lodgement planning and referral process. Recommendation that Sydney Metro work with Sydney Water to facilitate the sharing of this growth information.

## **Response**

As detailed in the OCCS (refer to Appendix N), Sydney Metro would continue to engage with key stakeholders, including Sydney Water, during further design development and construction of this proposal (and in relation to the previous Sydney Metro West planning applications). Sydney Metro's utilities coordination manager would also engage with Sydney Water regarding future water connection requirements for Sydney Metro West infrastructure.

### **9.12.6 Section 73 Compliance Certificate**

#### **Issues raised**

A Section 73 Compliance Certificate under the *Sydney Water Act 1994* must be obtained from Sydney Water. The proponent is advised to make an early application for the certificate, as there may be water and wastewater pipes to be built that can take some time. This can also impact on other services and buildings, driveways, or landscape designs.

#### **Response**

Sydney Water's comment regarding the need for a Section 73 Compliance Certificate under the *Sydney Water Act 1994* is noted.

## 10.0 Conclusion and next steps

This chapter provides an updated justification of this proposal, conclusion to the Submissions Report and outlines the next steps in the approvals process.

### 10.1 Updated proposal justification

Sydney Metro West would provide city-shaping benefits as the significant increase in transport connectivity, capacity and amenity in the Greater Parramatta to Sydney CBD corridor would boost the economic productivity of Sydney and unlock planned land use outcomes in the CBDs, planned precincts and urban renewal areas.

This proposal, Stage 3 of the planning approval process for Sydney Metro West, has been justified in relation to its strategic transport need and its anticipated benefits, taking into account the objectives of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and matters of ecologically sustainable development. This proposal best meets the network and corridor objectives when compared to all other alternatives considered. Further information regarding the justification for this proposal is provided in Chapter 22 (Justification and conclusion) of the Environmental Impact Statement.

The approved Sydney Metro West Concept included consideration of the justification of the project as a whole in the *Sydney Metro West Environmental Impact Statement – Westmead to The Bays and Sydney CBD* (Sydney Metro, 2020a). This proposal is seeking planning approval to enable the Sydney Metro West Concept to be realised by undertaking tunnel fit-out, station construction tunnel fit-out, construction of stations, ancillary facilities and station precincts, and operation and maintenance of Sydney Metro West. As this proposal is a subsequent stage within the approved Concept, it would continue to be consistent with the key strategic planning and transport infrastructure strategies and policies and contribute to providing the identified benefits of the approved Concept.

The clarifications outlined in Chapter 2 (Environmental Impact Statement clarifications) of this Submissions Report, issues raised in submissions and advice from NSW government agencies, and responses to the issues raised do not change the justification of this proposal as outlined in the Environmental Impact Statement.

Provided the measures and commitments specified in the Environmental Impact Statement and this Submissions Report are effectively implemented during the design, construction and operational phases, the identified environmental impacts would be acceptable and manageable. The consequences of not proceeding with this proposal (do nothing) would result in unacceptable impacts on the transport network, particularly in terms of the inability to support growth and urban renewal. This would ultimately constrain Sydney's future liveability and global competitiveness. On balancing the strategic need and benefits with the residual impacts and the outcomes documented in this Submissions Report, Sydney Metro West is considered to be in the public interest.

### 10.2 Conclusion and next steps

The *Sydney Metro West Environmental Impact Statement – Rail infrastructure, stations, precincts and operation* (Sydney Metro, 2022a) was placed on exhibition from 23 March to 4 May 2022. During the Environmental Impact Statement exhibition period, submissions were invited from the community and other stakeholders. The receipt of submissions was coordinated and managed by the Department of Planning and Environment.

A total of 71 community, organisation and public authority submissions were received by the Department of Planning and Environment during the exhibition period. Of the 71 submissions, 57 submissions were received from community members, interest groups and organisations, seven were received from key stakeholders and seven submissions were received from public authorities. In addition to these submissions, the Department of Planning and Environment also received government agency advice regarding this proposal from 11 government agencies.

Issues raised in community, public authority and key stakeholder submissions and government agency advice have been addressed in the following chapters of this Submissions Report:

- Chapter 6 (Community submissions)
- Chapter 7 (Public authority submissions)
- Chapter 8 (Key stakeholder submissions)
- Chapter 9 (Government agency advice).

Proposed design refinements for this proposal have been assessed in Chapter 2 (Environmental Impact Statement clarifications) of this Submissions Report, and key environmental issues have been, and would continue to be, examined throughout the design development process. Revised mitigation measures have been provided to address the proposed design refinements and to address issues raised in submissions. (refer to Appendix C (Revised mitigation measures)).

The Department of Planning and Environment will review the Environmental Impact Statement, the submissions received and this Submissions Report. Once the Department of Planning and Environment has completed its assessment, a draft Environmental Assessment Report will be prepared for the Secretary of the Department of Planning and Environment, which may include recommended conditions of approval. The Environmental Assessment Report will then be provided to the Minister for Planning.

The Minister for Planning will then decide whether or not to approve the project and identify any conditions of approval that would apply. The Minister's determination, including any conditions of approval and the Environmental Assessment Report, will be published on the Department of Planning and Environment Major Projects website. Sydney Metro would continue to consult with community members, government agencies and other stakeholders during design development, construction and operation of this proposal to minimise potential impacts on the local and regional environment and the community.

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## 11.2 Glossary of terms and abbreviations

### 11.2.1 Terms

Term	Definition
AM peak hour	Unless otherwise stated, this refers to trips travelling on the network during the average one-hour peak period between 6am–9am on a weekday.
Construction footprint	The total extent of land required for the construction of this proposal, including ancillary facilities and services and land temporarily required for construction (incorporating construction elements such as compounds, access roads and worksites).
Drained structure	Drained structures are those in which groundwater can enter the structure to lower the groundwater levels adjacent to the structure.
Drawdown	Reduction in the level of the water table caused by changes in the local environment.
Floodplain	Area of land which is inundated by floods up to and including the probable maximum flood event (i.e. flood prone land).
Greenhouse gas	Greenhouse gases are those gaseous constituents of the atmosphere that absorb and emit infra-red radiation at specific wavelengths within the spectrum of terrestrial radiation emitted by the Earth's surface, the atmosphere itself, and by clouds. This radiation generates heat which warms the atmosphere, and therefore greenhouse gases are a key contributor to the changing climate.
Groundwater dependent ecosystem	Refers to communities of plants, animals and other organisms whose extent and life process are dependent on groundwater, such as wetlands and vegetation on coastal sand dunes.
Mid-block	The section of road between two intersections.
Operational footprint	The land permanently required for operation of the proposal.
Placemaking	Describes an approach to the planning, design and management of public spaces.
PM peak hour	Unless otherwise stated, this refers to trips travelling on the network during the average one hour peak period between 3pm–6pm on a weekday.
Proponent	For this proposal, the proponent is Sydney Metro.
Rail possession	A planned closure of one or more rail lines to allow work to be carried out safely.
Runoff	The amount of rainfall that ends up as streamflow, also known as rainfall excess.
Sensitive receiver	Includes residences, educational institutions (including preschools, schools, universities, TAFE colleges), health care facilities (including nursing homes, hospitals), religious facilities (including churches), child care centres, passive recreation areas (including outdoor grounds used for teaching), active recreation areas (including parks and sports grounds), commercial premises (including film and television studios, research facilities, entertainment spaces, temporary accommodation such as caravan parks and camping grounds, restaurants, office premises, retail spaces and industrial premises).
Settlement	Refers to how ground can move due to the construction of new infrastructure.
Stabling and maintenance facility	Consists of the structures and facility used for the stabling and maintenance of trains and the operations control centre.

Term	Definition
Tanked	Structure constructed with an impermeable casing/membrane that minimises groundwater inflows to negligible rates.
This proposal	Includes tunnel fit-out, construction of stations, ancillary facilities and station precincts, and operation and maintenance of the Sydney Metro West line.
Tunnel alignment	The horizontal and vertical position beneath the ground along which the tunnel progresses.
Untanked	Excavation that allows groundwater to flow into the structure.

### 11.2.2 Abbreviations

Abbreviation	Meaning
AEI	Areas of environmental interest
AEP	Annual Exceedance Probability
AHD	Australian Height Datum
ANZECC	Australian and New Zealand Environment Conservation Council
ANZG	Australian and New Zealand Guidelines
ARD	Archaeological Research Design
CBD	Central Business District
CEMF	Construction Environmental Management Framework
CMP	Conservation Management Plan
CNVMP	Construction Noise and Vibration Management Plan
CNVS	Construction Noise and Vibration Standard
CPTED	Crime Prevention through Environmental Design
CTMF	Construction Traffic Management Framework
dB	Decibel
dBA	A-weighted decibels. A-weighting is applied to instrument-measured sound levels in an effort to account for the relative loudness perceived by the human ear, as the ear is less sensitive to low audio frequencies.
DCP	Development Control Plan
DSI	Detailed Site Investigation
EB	East Bound
EIS	Environmental Impact Statement
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EPA	NSW Environment Protection Authority
ISC	Infrastructure Sustainability Council
ISCA	Infrastructure Sustainability Council of Australia
L <sub>Aeq</sub>	Average noise level

Abbreviation	Meaning
L <sub>Aeq,15min</sub>	The 'energy average noise level' evaluated over a 15 minute period for construction noise or the relevant daytime, evening or night-time period for ambient noise monitoring.
L <sub>Afmax</sub>	The 'maximum noise level' for an event, used in the assessment of potential sleep disturbance during night-time periods.
LEP	Local Environmental Plan
NB	North Bound
NCA	Noise Catchment Area
NML	noise management level
NPfi	<i>Noise Policy for Industry</i> (NSW EPA, 2017)
NSW	New South Wales
NSW SES	NSW State Emergency Services
OCCS	Overarching Community Communications Strategy
PCB	Polychlorinated biphenyl
PMF	Probable Maximum Flood
PNTL	Project Noise Trigger Level
PSI	Preliminary Site Investigation
PTPM	Public Transport Projects Model
RCP	Representative Concentration Pathway
SB	South Bound
SHI	State Heritage Inventory
SHR	State Heritage Register
SSD	State significant development
SSI	State significant infrastructure
TMAP	Transport Modelling Analytics Platform
UPSS	Underground Petroleum Storage System
WB	West Bound
WBPS	White Bay Power Station

