Part A

Introduction and context

Part A

Introduction

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PART A INTRODUCTION AND CONTEXT

1.0 Introduction

This chapter provides an overview of this proposal, for the tunnel fit-out, construction of stations, ancillary facilities and station precincts, and operation and maintenance of Sydney Metro West, including the strategic planning context and key features. The purpose and structure of this Environmental Impact Statement is also provided.

1.1 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.

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 new 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.

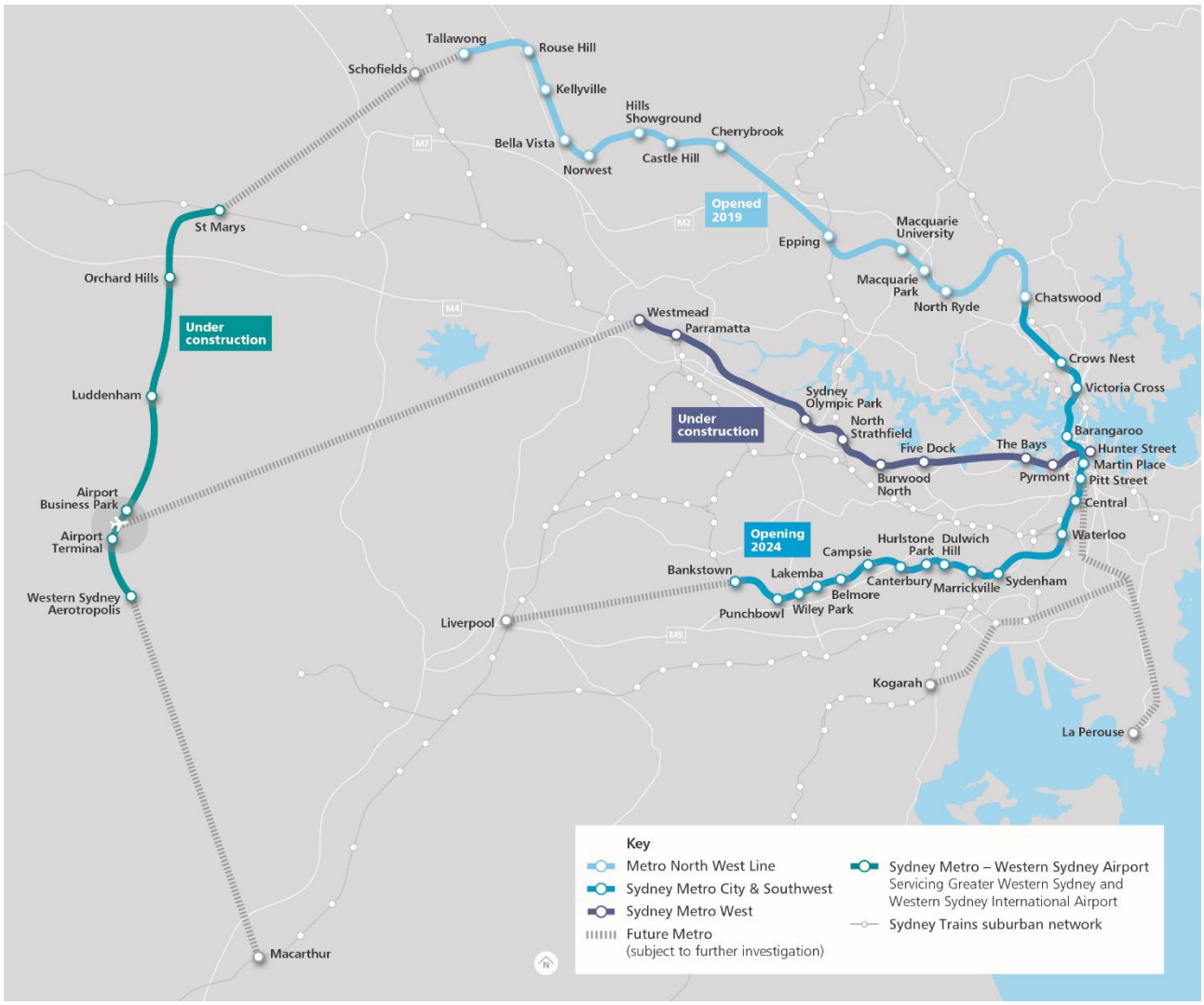

Figure 1-1 Sydney Metro network

The delivery of Sydney Metro West is critical to keeping Sydney moving and is identified in a number of 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, as well as 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.

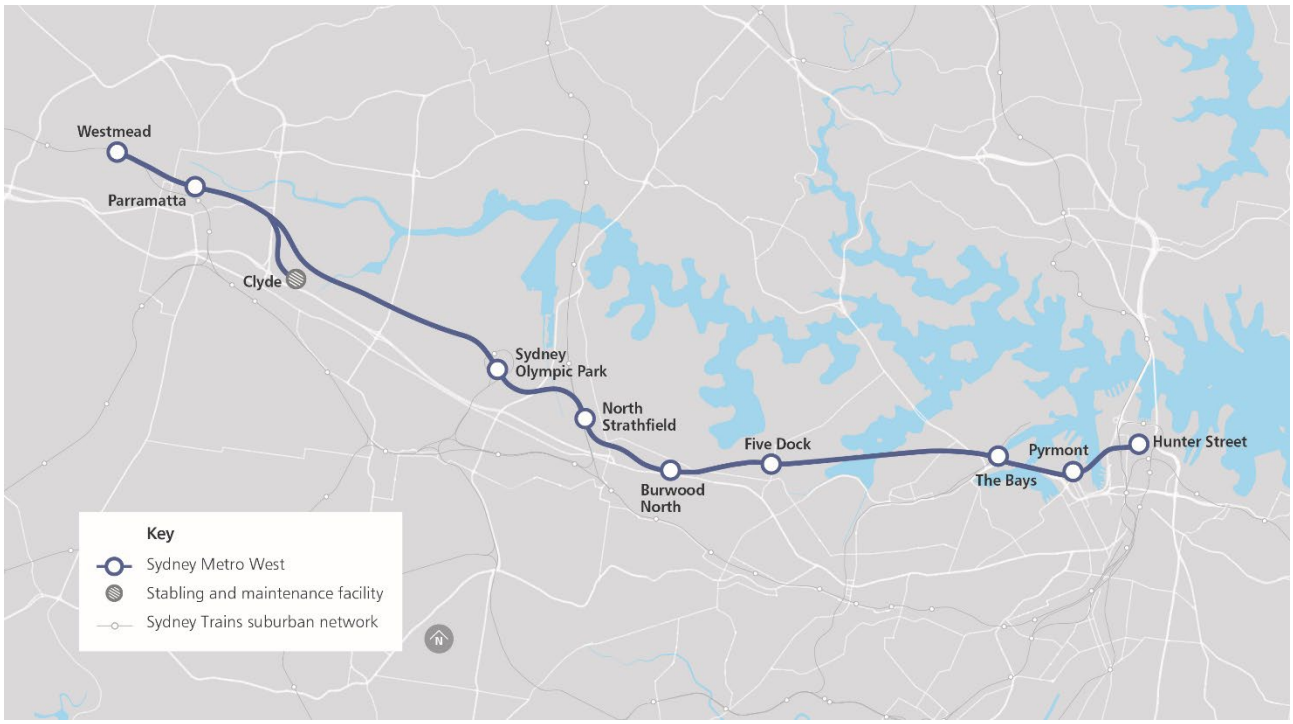

Figure 1-2 Sydney Metro West

1.1.1 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. Appendix A (Assessment requirements) outlines how the requirements of this approval, where relevant, have been considered for this proposal.

The Concept includes:

- construction and operation of new passenger rail infrastructure between Westmead and the central business district 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.

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).

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 Environmental Impact Statement, includes tunnel fit-out, construction of stations, ancillary facilities and station precincts, and operation and maintenance of the Sydney Metro West line (this proposal).

These works would commence in 2024 and would continue through to the beginning of 2030.

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

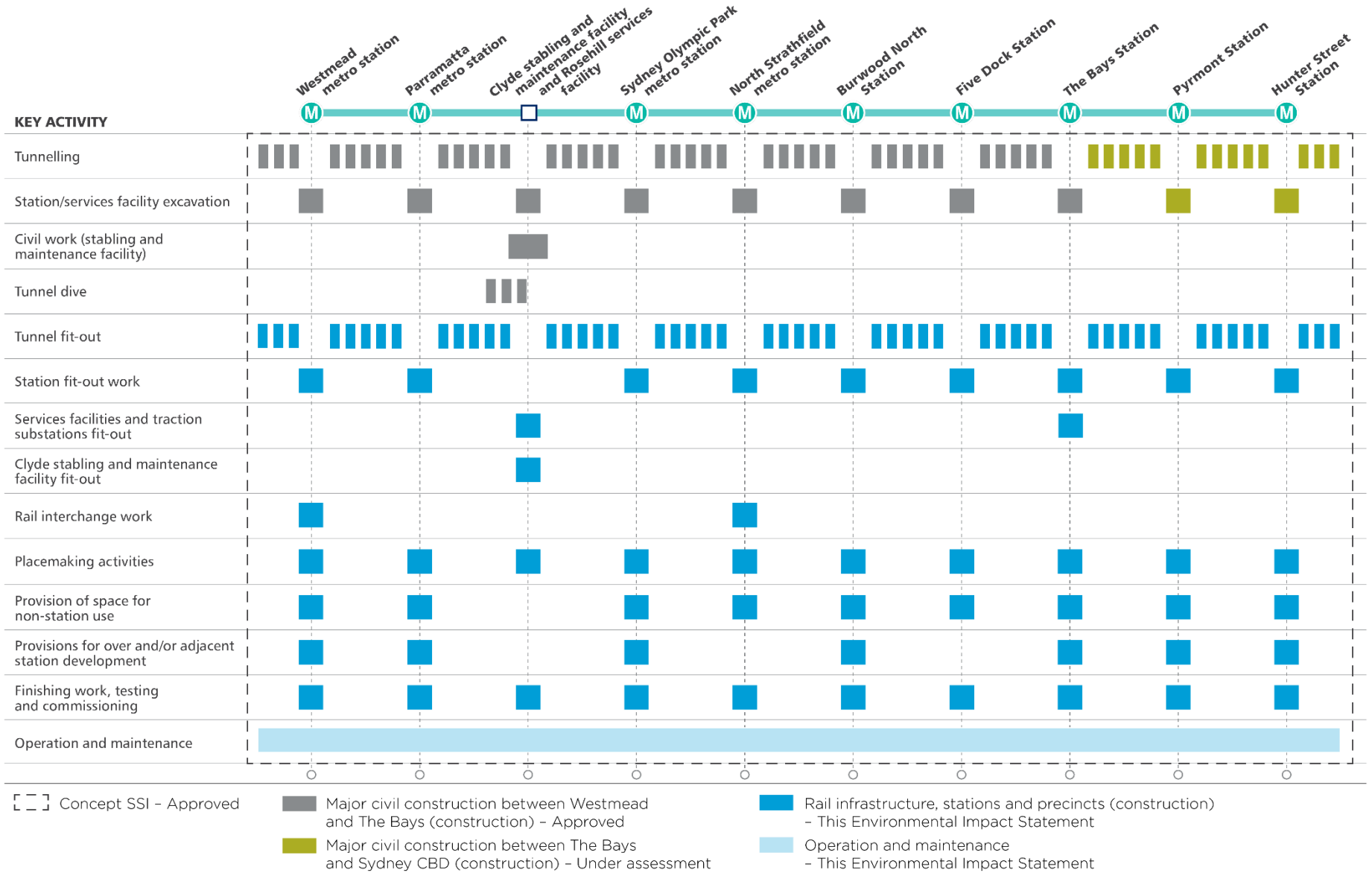

Figure 1-3 Sydney Metro West planning approval stages

1.2 Background to Sydney Metro West

1.2.1 History

Sydney Metro and Transport for NSW are implementing a three-tiered rail network for Sydney, comprising:

- tier 1: Sydney Metro – 'turn-up-and-go' services and single-deck metro trains
- tier 2: suburban – timetabled services with double-deck trains
- tier 3: intercity – timetabled services with on-board amenities for long-distance trips.

This network delineation was first proposed in *Sydney's Rail Future* (Transport for NSW, 2012) and has been the basis for the development of the Sydney Metro network.

Congestion on the T1 Western Line is one of the most pressing challenges for the Sydney Trains suburban rail network. Demand for the T1 Western Line already exceeds capacity at peak times.

The need to upgrade capacity between Parramatta and the Sydney CBD was reinforced in February 2016 when Infrastructure Australia identified connectivity between the two centres as a national infrastructure priority.

In November 2016, the NSW Government announced Sydney Metro West, with a direct connection between Greater Parramatta and the Sydney CBD, and stations at Sydney Olympic Park and The Bays.

In March 2018, the NSW Government expanded the scope of Sydney Metro West to include a station at Westmead and a station at North Strathfield to provide for customers to transfer to and from the T9 Northern Line.

As described in Section 1.1.1, approval for Sydney Metro West at a Concept level was obtained in March 2021.

1.2.2 Strategic planning context and key benefits

Sydney is a global city and will experience significant population and employment growth in the coming decades. Investment in public transport will play an important role supporting this growth, ensuring Sydney's future liveability and global competitiveness.

Sydney Metro West (the approved Concept) included consideration of a number of key strategic planning and transport infrastructure strategies and policies including:

- supporting the development of a three-city metropolis for Greater Sydney as per the *Building Momentum: State Infrastructure Strategy 2018-2038* (Infrastructure NSW, 2018) by connecting two of the three cities
- enhancing the intercity linkage between the Central River City of Greater Parramatta and the Eastern Harbour City of the Sydney CBD, and supporting the key directions outlined in the *Greater Sydney Region Plan: A Metropolis of Three Cities* (Greater Sydney Commission, 2018a)
- supporting the city by aligning infrastructure and land use planning; growing a stronger internationally competitive Sydney CBD; delivering integrated land use and transport planning; and a 30-minute city, as per the *Eastern City District Plan* (Greater Sydney Commission, 2018b)
- providing support for 30-minute cities and improved connections to key destinations, including major health and education precincts, diverse employment centres and residential precincts; as well as embracing new transport technology that would deliver fast, safe and reliable journeys for customers with high performance standards and good customer amenities, consistent with the *Smart Cities Plan* (Australian Government, 2016)
- providing the high-capacity transport link along the city-shaping corridor between Greater Parramatta and the Sydney CBD, connected via Sydney Olympic Park and The Bays, which is identified and listed as a committed initiative in *Future Transport 2056* (Transport for NSW, 2020a).

This proposal is seeking planning approval to enable the approved Concept to be realised by undertaking the tunnel fit-out, construction of stations, ancillary facilities, 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 key benefits of Sydney Metro West would include:

- city-shaping – including supporting planned growth, expanding the 30-minute cities, increasing all-day accessibility, reducing public infrastructure provision and household energy consumption, improving housing affordability and supply, and benefiting social equity, sustainability, health and amenity
- transport benefits – namely increasing transport network capacity, reducing train and station crowding, increasing accessibility to key centres, increasing public transport network reach and use, improving travel times, and improving resilience to incidents on the network, opportunities to optimise the bus network, and road user and community benefits
- productivity benefits – particularly enhancing international competitiveness and creating productive jobs in knowledge-based industries and connectivity benefits by reducing travel times between businesses in the corridor.

1.2.3 Objectives of Sydney Metro West

Sydney Metro West's objectives are separated into network and corridor objectives and are set out in Section 2.7 of *Sydney Metro West Environmental Impact Statement – Westmead to The Bays and Sydney CBD* (Sydney Metro, 2020a), and these objectives apply to this proposal.

The network objectives represent the outcomes to be achieved by Sydney Metro West in its full configuration, including potential western and eastern extensions. The corridor objectives include the specific plans and needs of the geographic area between Greater Parramatta and the Sydney CBD. These objectives are unchanged and would continue to apply to this proposal.

1.2.4 Project development and alternatives

The Sydney Metro West development process was driven by the identified strategic need to improve connectivity between Greater Parramatta and the Sydney CBD, and included:

- strategic alternatives based on the future transport infrastructure network documented in the *Future Transport Strategy 2056* (Transport for NSW, 2020a), including:
  - do nothing
  - better-use reforms (including continued implementation of rail network improvements, more efficient use of roads, more frequent bus and ferry services and bus priority initiatives)
  - improvements to other parts of the transport network, including road, bus, light rail and ferry
  - improvements to other parts of the Sydney Trains network
- optimisation of travel times between Parramatta and the Sydney CBD
- alignment alternatives
- station location options
- alternative locations for the stabling and maintenance facility
- technical design and construction alternatives.

An analysis of these potential alternatives and options is detailed in Chapter 3 of *Sydney Metro West Environmental Impact Statement – Westmead to The Bays and Sydney CBD* (Sydney Metro, 2020a). The option selection process took into account issues raised during consultation with key stakeholders, including government agencies and the community. Options were assessed against a range of criteria, including customer outcomes, constructability, operation, environmental impacts, accessibility, heritage and placemaking considerations, risk and cost effectiveness.

Since approval of the Concept, an Environmental Impact Statement for major civil construction between The Bays and Sydney CBD (Sydney Metro, 2021a) has been prepared and publicly exhibited. This report provides an overview of project development and alternatives for the Pyrmont and Hunter Street (Sydney CBD) station locations.

Where further design development has occurred for this proposal, this is discussed in the design development sections in Part B (Environmental assessment) of this Environmental Impact Statement. These sections include an overview of key features and changes to the design to avoid and minimise impacts and responds to stakeholder feedback.

1.3 Overview of this proposal

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 that take into account the outcomes of community and stakeholder engagement and environmental investigations.

Further details of this proposal are provided in Chapter 5 (Proposal description – operation) and Chapter 6 (Proposal description – construction) of this Environmental Impact Statement.

1.4 Overview of environmental assessment approach

This Environmental Impact Statement has adopted a precinct-based approach to the environmental assessment of construction and operational impacts. These precincts are described further in individual chapters in Part B (Environmental Assessment) of this Environmental Impact Statement and include:

- Westmead metro station
- Parramatta metro station
- Sydney Olympic Park metro station
- North Strathfield metro station
- Burwood North Station
- Five Dock Station
- The Bays Station
- Pyrmont Station
- Hunter Street Station (Sydney CBD)
- Ancillary infrastructure including:
  - Clyde stabling and maintenance facility
  - Rosehill services facility.

The assessment of the fit-out and operation of the tunnels is also described in a separate section.

This approach has allowed for potential impacts to be assessed for individual precincts and location specific mitigation measures to be considered.

Where relevant, the baseline environment for each precinct has considered the impacts from the previous Sydney Metro West planning applications. For example, the baseline environment for this proposal assumes that the construction sites as established for the previous Sydney Metro West planning applications would be cleared and established prior to the commencement of this proposal. Operational and construction impacts that would generally be applicable for the whole proposal have been considered on a proposal-wide basis.

These include property; air quality; sustainability, climate change and greenhouse gas; waste management and resource use; and hazard and risk. Some of the proposal wide elements of transport, social impacts as well as hydrology and water quality have also been addressed in the proposal wide chapter.

1.5 Purpose and structure of this Environmental Impact Statement

The purpose of this Environmental Impact Statement is to support Sydney Metro's application to the Minister for Planning for approval of this proposal (Stage 3 of the planning approvals process for Sydney Metro West) as State significant infrastructure under section 5.15 of the EP&A Act. It addresses the environmental assessment requirements of the Secretary of the NSW Department of Planning and Environment (the Secretary's environmental assessment requirements), dated 16 August 2021 (refer to Appendix A (Assessment requirements)).

The structure and content of this Environmental Impact Statement are outlined in Table 1-1.

Table 1-1 Structure and content of this Environmental Impact Statement

Chapter	Description
Part A: Introduction and context	
Chapter 1 Introduction (this chapter)	Outlines the key elements of Sydney Metro West and this proposal, including its strategic context, as well as the purpose of this Environmental Impact Statement.
Chapter 2 Planning and assessment process	Provides an outline of the statutory approvals framework, including applicable legislation and planning policies.
Chapter 3 Stakeholder and community engagement	Outlines stakeholder and community engagement carried out to date, including during the preparation of this Environmental Impact Statement.
Part B: Environmental assessment	
Chapter 4 Methodology	Provides an overview of the methodology for the assessment of potential impacts associated with construction and operation of this proposal.
Chapter 5 Proposal description – operation	Provides a description of the operation of Sydney Metro West and an overview of the physical infrastructure and built form of stations, precincts and ancillary infrastructure.
Chapter 6 Proposal description – construction	Provides a description of construction of this proposal, likely construction activities and techniques and an overview of the location and function of the construction sites.
Chapter 7 to Chapter 17 Precinct descriptions and environmental assessment	Provides a description of each precinct during operation and construction (including the proposed construction activities), and an assessment of the potential direct and indirect impacts that may result during operation and construction of this proposal.
Chapter 18 Proposal-wide environmental assessment	Provides an assessment of the potential direct and indirect impacts that may result during operation and construction of this proposal, where these are not precinct-specific and/or are applicable to this proposal as a whole.
Chapter 19 Cumulative impacts	Provides an assessment of the potential cumulative impacts associated with this proposal, during operation and construction.
Part C: Synthesis, risk analysis and conclusion	
Chapter 20 Synthesis	Provides a technical summary of this Environmental Impact Statement, including how uncertainties that still exist around the design would be managed, the environmental management approach, and the performance outcomes and mitigation measures for this proposal.
Chapter 21 Environmental risk analysis	Provides an environmental risk analysis for this proposal taking into account the potential impacts and mitigation measures identified in this Environmental Impact Statement.

Chapter	Description
Chapter 22 Justification and conclusion	Provides a conclusion including justification for this proposal and an assessment of whether this proposal has achieved the objectives of Sydney Metro West and met the objects of the EP&A Act.
Chapter 23 References and terminology	Provides a list of references and defines abbreviations and key terms used throughout this Environmental Impact Statement.
Appendices	
Appendix A	Assessment requirements
Appendix B	Legislative and policy context
Appendix C	Overarching Community Communications Strategy
Appendix D	Detailed assessment methodologies
Appendix E	Design Guidelines
Appendix F	Construction Environmental Management Framework
Appendix G	Construction Traffic Management Framework
Appendix H	Construction Noise and Vibration Standard
Appendix I	Healthy Built Environment Checklist
Appendix J	Environmental risk analysis results
Appendix K	Draft Heritage Interpretation Strategy
Technical papers	
Technical Paper 1	Operational transport
Technical Paper 2	Construction transport
Technical Paper 3	Operational noise and vibration
Technical Paper 4	Construction noise and vibration
Technical Paper 5	Non-Aboriginal heritage
Technical Paper 6	Landscape and visual amenity
Technical Paper 7	Contamination
Technical Paper 8	Hydrology, flooding and water quality
Technical Paper 9	Social impacts