Chapter 1

Introduction

January 2020

1 Introduction

This chapter provides an overview of the Western Harbour Tunnel and Warringah Freeway Upgrade (the project), including its key features and location.

1.1 Overview

The Greater Sydney Commission's *Greater Sydney Region Plan – A Metropolis of Three Cities* (Greater Sydney Commission, 2018a) proposes a vision of three cities where most residents have convenient and easy access to jobs, education and health facilities and services. In addition to this plan, and to accommodate for Sydney's future growth, the NSW Government is implementing the *Future Transport Strategy 2056* (NSW Government, 2018), a plan that sets the 40 year vision, directions and outcomes framework for customer mobility in NSW. The Western Harbour Tunnel and Beaches Link program of works is proposed to provide additional road network capacity across Sydney Harbour and to improve transport connectivity with Sydney's Northern Beaches. The Western Harbour Tunnel and Beaches Link program of works include:

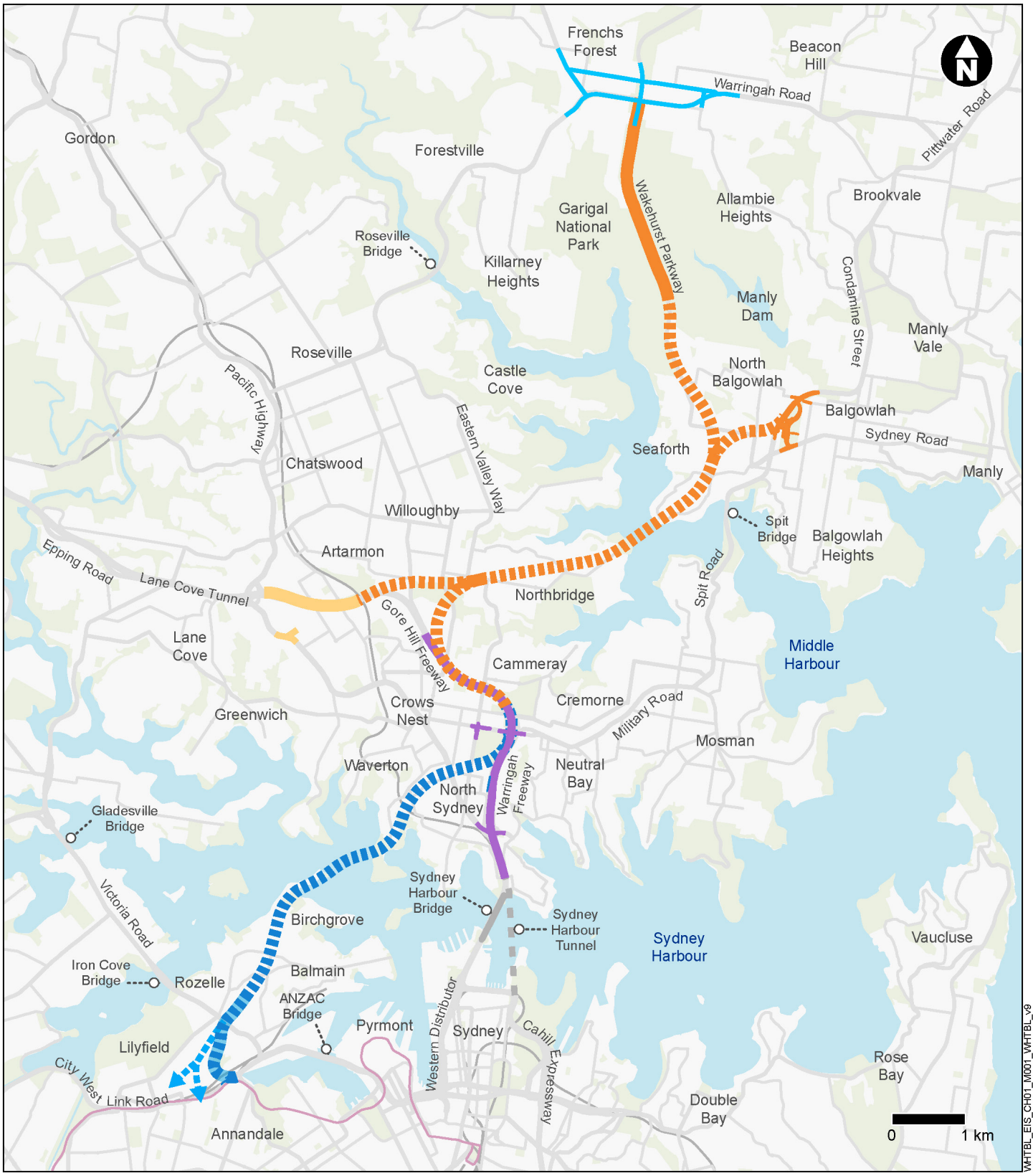
- The Western Harbour Tunnel and Warringah Freeway Upgrade project which comprises a new tolled motorway tunnel connection across Sydney Harbour, and an upgrade of the Warringah Freeway to integrate the new motorway infrastructure with the existing road network and to connect to the Beaches Link and Gore Hill Freeway Connection project
- The Beaches Link and Gore Hill Freeway Connection project which comprises a new tolled motorway tunnel connection across Middle Harbour from the Warringah Freeway and Gore Hill Freeway to Balgowlah and Killarney Heights including the surface upgrade of Wakehurst Parkway from Seaforth to Frenchs Forest and upgrade and integration works to connect to the Gore Hill Freeway at Artarmon.

The components of the Western Harbour Tunnel and Beaches Link program of works are shown in Figure 1-1.

A combined delivery of the Western Harbour Tunnel and Beaches Link program of works would unlock a range of benefits for freight, public transport and private vehicle users. It would support faster travel times for journeys between the Northern Beaches and south, west and north-west of Sydney Harbour. For example, with the combined program of works, journeys from Dee Why to Sydney Kingsford Smith Airport are expected to be 56 minutes faster. Delivering the program of works would also improve the resilience of the motorway network, given that each project provides an alternative to heavily congested harbour crossings. These key benefits are discussed further in Chapter 3 (Strategic context and project need).

The project would also provide an opportunity to introduce new express bus services to key employment and education centres, directly linking North Sydney to the Inner West region of Sydney. This opportunity would better integrate employment, residential and education centres and provide improved road transport access to a wider range of services and facilities.
The Western Harbour Tunnel and Warringah Freeway Upgrade project and the Beaches Link and Gore Hill Freeway Connection project are subject to separate and coordinated environmental assessment and approval processes.

This environmental impact statement relates to the Western Harbour Tunnel and Warringah Freeway Upgrade project.



Legend

Operational features

- Beaches Link
- Gore Hill Freeway Connection
- Western Harbour Tunnel
- Warringah Freeway Upgrade
- M4-M5 Link tunnel fitout and commissioned as part of Western Harbour Tunnel

Connecting projects

- M4-M5 Link connections (indicative)
- Northern Beaches Hospital road upgrade

Existing rail network

- Heavy rail
- Light rail

Figure 1-1 The Western Harbour Tunnel and Beaches Link program of works

1.2 The project

Transport for NSW (formerly Roads and Maritime Services) is seeking approval under Division 5.2, Part 5 of the *Environmental Planning and Assessment Act 1979* to construct and operate the Western Harbour Tunnel and Warringah Freeway Upgrade, which would comprise two main components:

- A new crossing of Sydney Harbour involving twin tolled motorway tunnels connecting the M4-M5 Link at Rozelle and the existing Warringah Freeway at North Sydney (the Western Harbour Tunnel)
- Upgrade and integration works along the existing Warringah Freeway, including infrastructure required for connections to the Beaches Link and Gore Hill Freeway Connection project (the Warringah Freeway Upgrade).

The project is an integrated transport solution that will address urban congestion on Sydney's road network. It would provide a new western bypass of the Sydney Central Business District (CBD), providing an alternative to the heavily congested Sydney Harbour Bridge, Western Distributor and ANZAC Bridge. It would reduce pressure and provide faster and more reliable journeys on roads around the Sydney CBD and increase the resilience of the road network to incidents and delays. The project would also provide major benefits to public transport with a free-flowing continuous bus lane southbound on Warringah Freeway – removing weaving between buses and other traffic and improving bus transit times for all buses using Warringah Freeway. The project would also provide direct bus access to North Sydney.

A detailed discussion on the project benefits is presented in Chapter 3 (Strategic context and project need).

Key features of the Western Harbour Tunnel component of the project are shown in Figure 1-2 and would include:

- Twin mainline tunnels about 6.5 kilometres long and each accommodating three lanes of traffic in each direction, connecting the stub tunnels from the M4-M5 Link at Rozelle to the Warringah Freeway and to the Beaches Link mainline tunnels at Cammeray. The crossing of Sydney Harbour between Birchgrove and Balls Head would involve a dual, three lane, immersed tube tunnel
- Connections to the stub tunnels at the M4-M5 Link project in Rozelle and to the mainline tunnels at Cammeray (for a future connection to the Beaches Link and Gore Hill Freeway Connection project)
- Surface connections at Rozelle, North Sydney and Cammeray, including direct connections to and from the Warringah Freeway (including integration with the Warringah Freeway Upgrade), an off ramp to Falcon Street and an on ramp from Berry Street at North Sydney
- A ventilation outlet and motorway facilities (fitout and commissioning only) at the Rozelle Interchange
- A ventilation outlet and motorway facilities at the Warringah Freeway in Cammeray
- Operational facilities including a motorway control centre at Waltham Street within the Artarmon industrial area and tunnel support facilities at the Warringah Freeway in Cammeray
- Other operational infrastructure including groundwater and tunnel drainage management and treatment systems, signage, tolling infrastructure, fire and life safety systems, lighting, emergency evacuation and emergency smoke extraction infrastructure, CCTV and other traffic management systems.

Key features of the Warringah Freeway Upgrade component of the project are shown in Figure 1-3 and would include:

- Upgrade and reconfiguration of the Warringah Freeway from immediately north of the Sydney Harbour Bridge through to Willoughby Road at Naremburn
- Upgrades to interchanges at Falcon Street in Cammeray and High Street in North Sydney
- New and upgraded pedestrian and cyclist infrastructure
- New, modified and relocated road and shared user bridges across the Warringah Freeway
- Connection of the Warringah Freeway to the portals for the Western Harbour Tunnel mainline tunnels and the Beaches Link tunnels via on and off ramps, which would consist of a combination of trough and cut and cover structures
- Upgrades to existing roads around the Warringah Freeway to integrate the project with the surrounding road network
- Upgrades and modifications to bus infrastructure, including relocation of the existing bus layover along the Warringah Freeway
- Other operational infrastructure, including surface drainage and utility infrastructure, signage, tolling, lighting, CCTV and other traffic management systems.

A detailed description of the project is provided in Chapter 5 (Project description). Construction of the project is described in Chapter 6 (Construction work). The project alignment at the Rozelle Interchange shown in Figure 1-2 reflects the arrangement presented in the environmental impact statement for the M4-M5 Link, and as amended by the proposed modifications. The project would be constructed in accordance with the now finalised M4-M5 Link detailed design. Refer to Section 2.1.1 of Chapter 2 (Assessment process) for further details.

The project does not include ongoing motorway maintenance activities during operation or future use of residual land occupied or affected by project construction activities, but not required for operational infrastructure. These would be subject to separate planning and approval processes at the relevant times.

Subject to the project obtaining planning approval, construction is anticipated to commence in 2020 and is expected to take around six years to complete.

1.3 Project location

The project would be located within the Inner West, North Sydney and Willoughby local government areas, connecting Rozelle in the south with Naremburn in the north. The regional context of the project is shown in Figure 1-1. The local context of the project is shown in Figure 1-2 and Figure 1-3.

Commencing at the Rozelle Interchange, the mainline tunnels would pass under Balmain and Birchgrove, then cross Sydney Harbour between Birchgrove and Balls Head. The tunnels would then continue under Waverton and North Sydney, linking directly to the Warringah Freeway to the north of the existing Ernest Street bridge.

The motorway control centre would be located at Waltham Street, Artarmon while the communication connection cable linking the Western Harbour Tunnel with the motorway control centre would be located along the Gore Hill Freeway and Warringah Freeway road reserves.

The Warringah Freeway Upgrade would be carried out on the Warringah Freeway from around Fitzroy Street at Milsons Point to around Willoughby Road at Naremburn. Upgrade works would

include improvements to bridges across the Warringah Freeway, and upgrades to surrounding roads.

1.4 Purpose of this environmental impact statement

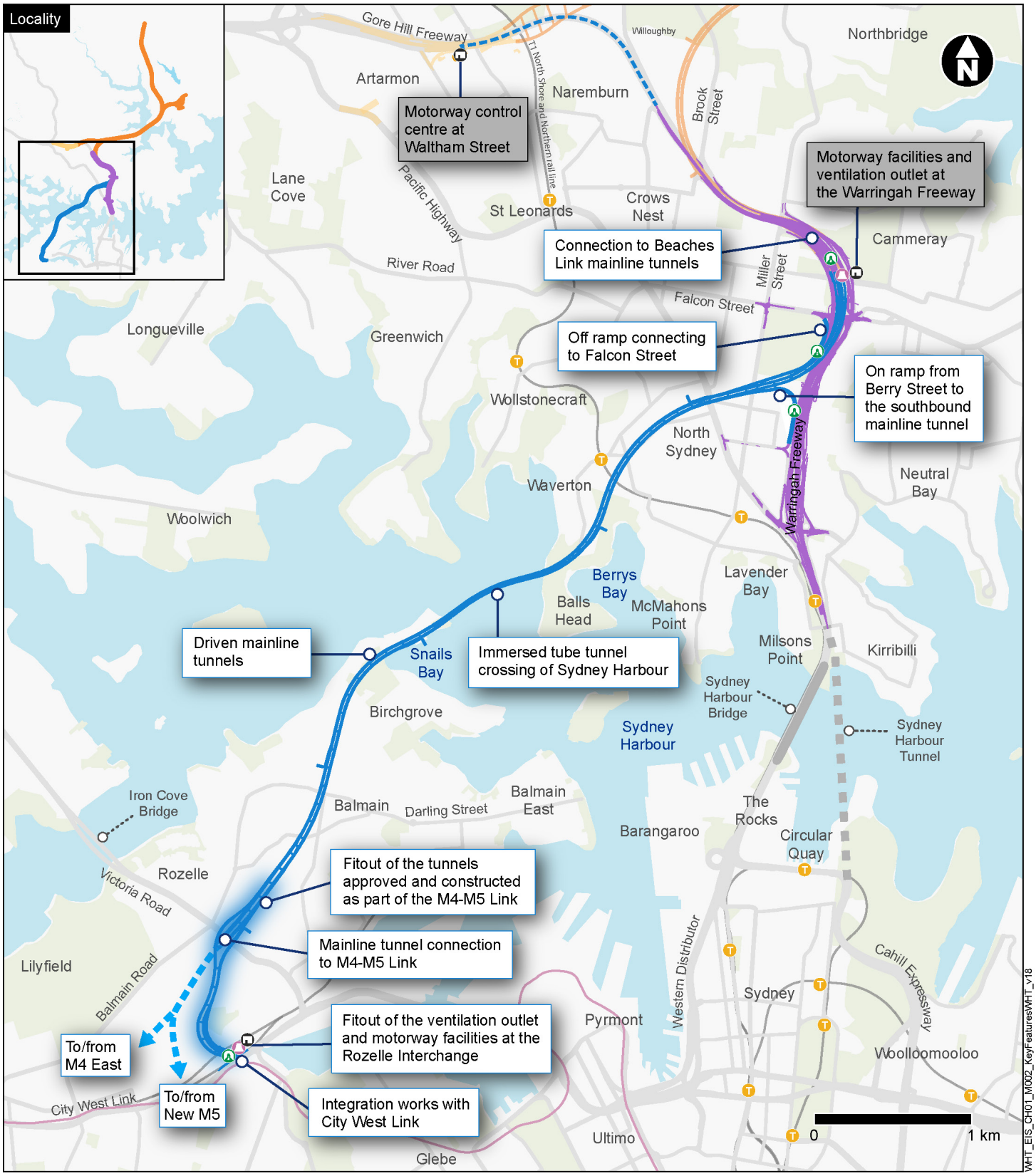
This environmental impact statement has been prepared in accordance with the relevant provisions of the *Environmental Planning and Assessment Act 1979*. It has been prepared to address the requirements issued by the Secretary of the NSW Department of Planning, Industry and Environment (formerly Department of Planning and Environment) on 15 December 2017 and the relevant provisions of Schedule 2 of the Environmental Planning and Assessment Regulation 2000.

In accordance with Division 5.2 of the *Environmental Planning and Assessment Act 1979*, this environmental impact statement presents an assessment of potential environmental issues identified during the planning and assessment of the project. The assessment considers the area directly or indirectly affected by construction and operation of the project, as relevant to each technical assessment.

As of 1 December 2019, legislation came into effect (*Transport Administration Amendment (RMS Dissolution Bill) 2019*) such that all functions of Roads and Maritime Services are now performed by the integrated Transport for NSW organisation. However, due to the timing of the preparation of this environmental impact statement, there are still references to Roads and Maritime in some of the appendices to the environmental impact statement. All references to Roads and Maritime are legally taken to mean Transport for NSW.

This environmental impact statement will be placed on public exhibition and will provide an opportunity for the community, government agencies and other interested parties to comment on the project. Transport for NSW will consider this feedback and respond to issues raised in a submissions report. The assessment process for the project is discussed further in Chapter 2 (Assessment process).

The Secretary's environmental assessment requirements are detailed in Appendix A, along with a reference to where these have been addressed in this environmental impact statement.



Legend

Operational features

- Western Harbour Tunnel
- Warringah Freeway Upgrade
- Communications cable for motorway control centre
- M4-M5 Link tunnel fitout and commissioned as part of Western Harbour Tunnel
- Surface connection
- Permanent operational facility
- Ventilation outlet

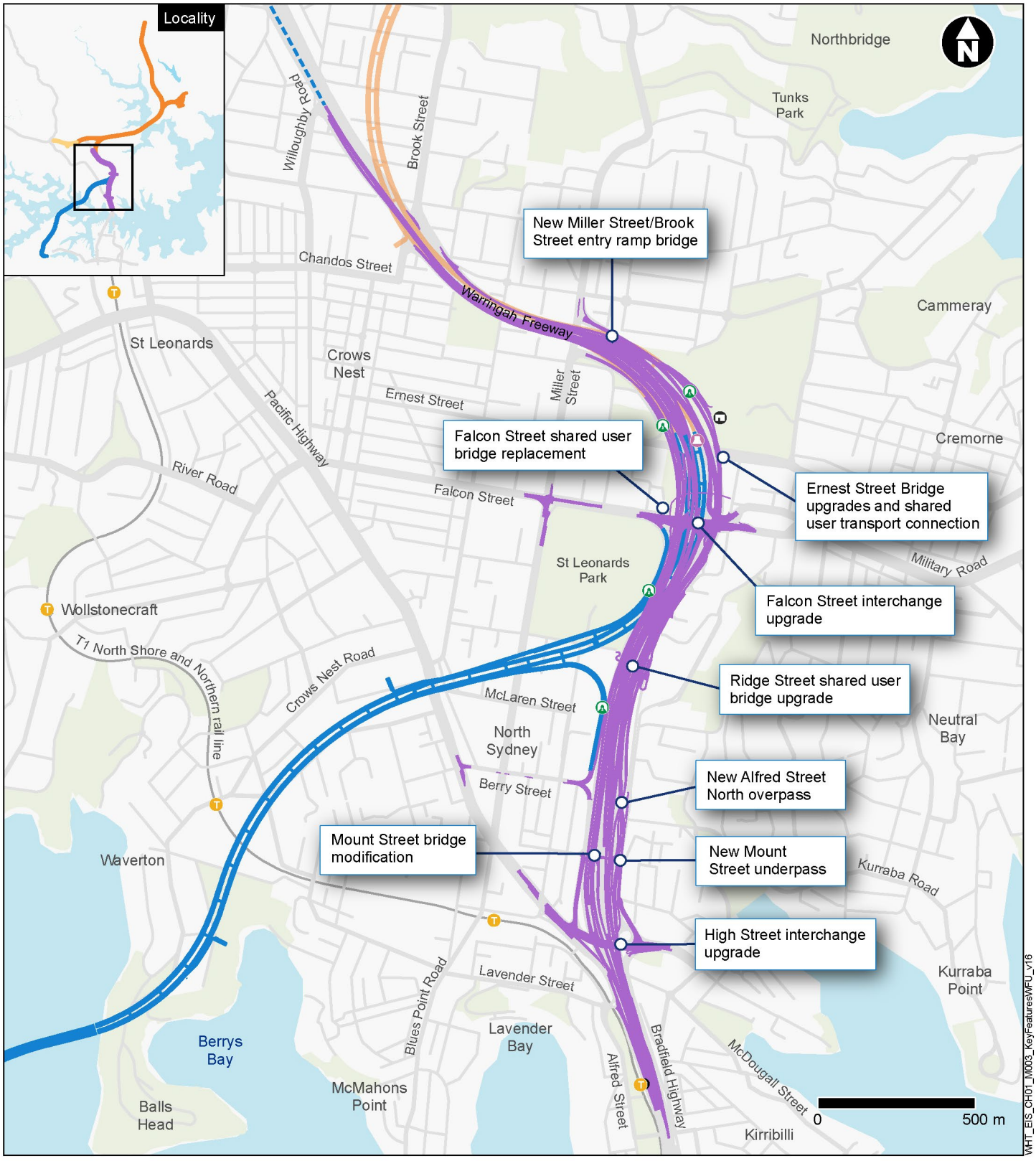
Connecting projects

- Beaches Link
- Gore Hill Freeway Connection
- M4-M5 Link connections (indicative)

Existing rail network

- Heavy rail
- Light rail
- Train station

Figure 1-2 Key features of the Western Harbour Tunnel component of the project



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Operational features
- Warringah Freeway Upgrade
- Western Harbour Tunnel
- Communications cable for motorway control centre
- Surface connection
- Permanent operational facility
- Ventilation outlet

Connecting projects
- Beaches Link

Existing rail network
- Heavy rail
- Train station

Figure 1-3 Key features of the Warringah Freeway Upgrade component of the project

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