

PART 01- **BACKGROUND**

01. Introduction

WHT is a major transport infrastructure project that will make it easier, faster, and safer to get around Sydney

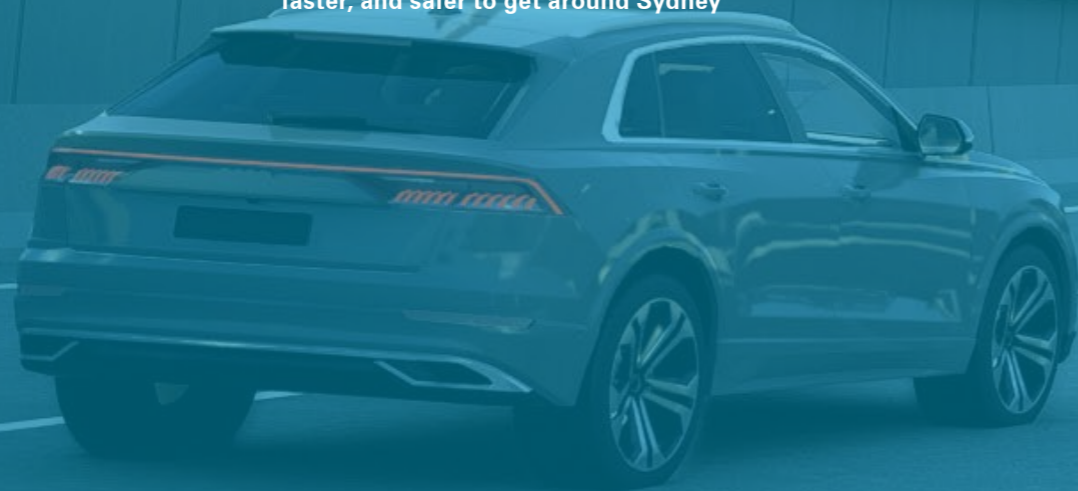




Figure 3: Artist's impression- view towards Cammeray ventilation facilities from Warringah Freeway (trees shown at 5 years maturity)

1.0 Introduction

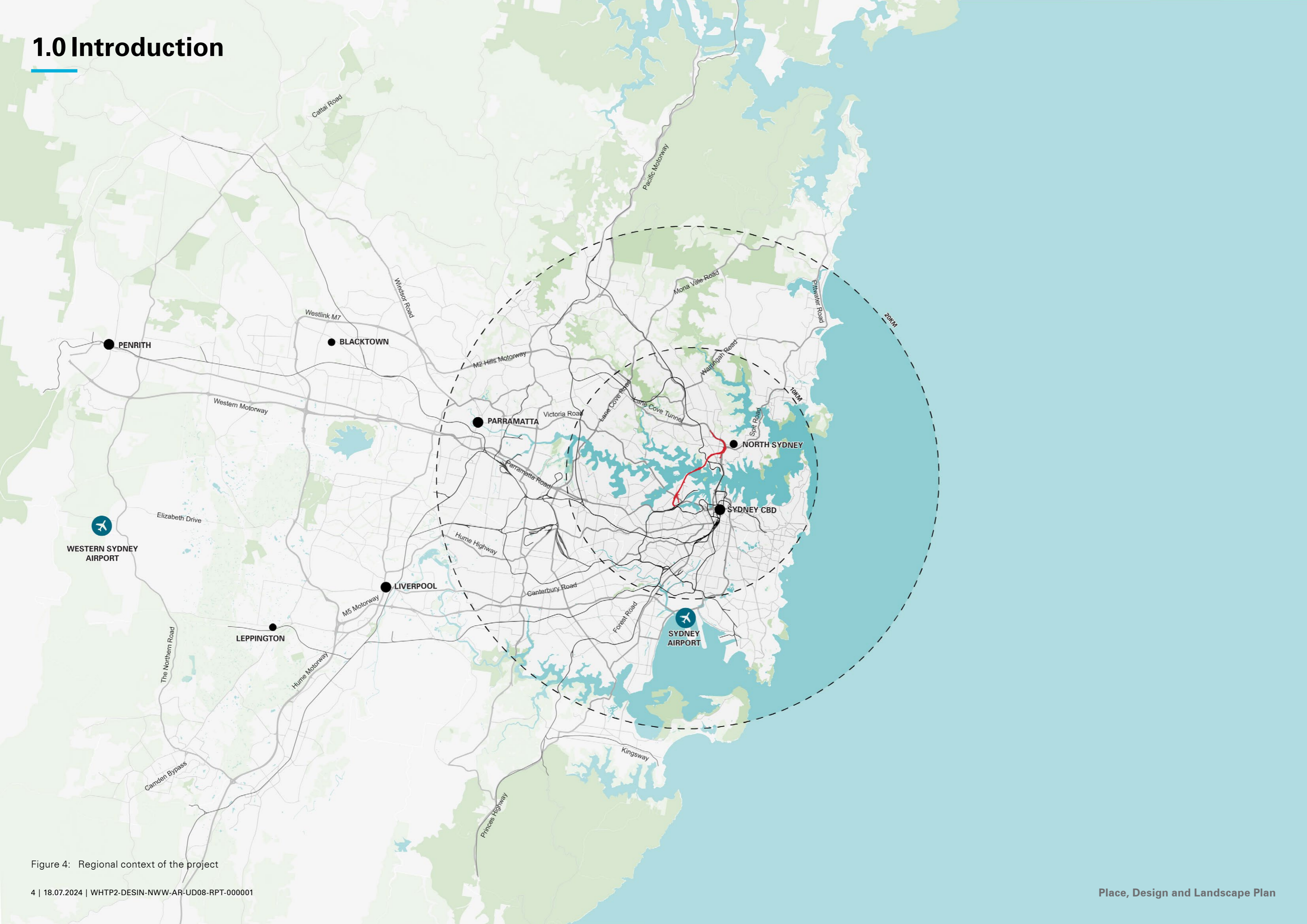


Figure 4: Regional context of the project

1.1 The Project

1.1.1 Purpose

The WHT is part of the NSW Government's biggest infrastructure programs in history, changing the way people move as our motorways expand to better serve our growing city. By creating a western bypass of the Sydney CBD, the WHT will take pressure off the Sydney Harbour Bridge, Sydney Harbour Tunnel, Anzac Bridge and Western Distributor corridors to improve transport capacity in and around Sydney Harbour. It connects to WestConnex at the Rozelle Interchange, crosses underneath Sydney Harbour between Birchgrove and Waverton, and connects with the Warringah Freeway near North Sydney. This project is an important part of creating an integrated road and public transport network, which balances the needs of motorists and local communities and provide new levels of access to jobs, recreation, and services such as schools and hospitals.

1.1.2 Location

The Project spans the Inner West and North Sydney Local Government Areas (LGAs), connecting Rozelle in the south to Cammeray in the north. Beginning at the Rozelle Interchange, the mainline tunnels will pass beneath Balmain and Birchgrove, crossing Sydney Harbour between Birchgrove and Balls Head. The tunnels continue beneath Waverton and North Sydney, linking to Warringah Freeway north of the existing Ernest Street Bridge.

The tunnel ventilation outlet and buildings are located at Cammeray, north of the eastern end of the widened Ernest Street Bridge. Adjacent public domain improvements in this area include landscaping of the Ernest Street Bridge and a small park at the eastern end of the bridge.

Operational facilities, notably the Motorway Control Centre (MCC), were initially slated for placement within the Artarmon industrial area, as outlined in the Environmental Impact Statement (EIS). However, this plan has been revised, and the MCC will now be located within an existing Transport for NSW facility remote from the WHT alignment. The MCC building will be an internal fit-out only and therefore is not covered under this PDLP.









1.1.3 Project scope

Key features of WHT include:

- Twin mainline tunnels about 6.5 kilometres long—each serving traffic in one direction and each accommodating three lanes of traffic. At the southern end, these tunnels connect to the M4-M8 Link at Rozelle. To the north, these tunnels connect to the Warringah Freeway at Cammeray.
- Surface connections at North Sydney and Cammeray, including direct connections to and from the Warringah Freeway (including integration with the WFU), an off ramp to Falcon Street and an on ramp from Berry Street at North Sydney.
- A ventilation outlet and motorway facilities at the Warringah Freeway in Cammeray.
- A new public park at Cammeray ventilation facilities site, as a result of reducing the amount of land needed for the motorway facilities through changes to the design.
- Landscaping work along the upgraded Ernest Street active transport bridge. The bridge structure is being delivered as part of the Warringah Freeway Upgrade project.
- 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.
- The crossing of Sydney Harbour between Birchgrove and Waverton was initially planned as a dual, three lane, Immersed Tube Tunnel. The construction methodology was changed to Tunnel Boring Machines through the design development process to limit environmental impact and deliver improved community outcomes, according to [Western Harbour Tunnel and Warringah Freeway Upgrade Modification 2 - TBM construction methodology \(July 2023\)](#).

The main elements of the scope are featured in [Figure 5](#).

* Please refer to the Rozelle Interchange Urban Design and Landscape Plan for information about the Rozelle interchange.

-  WHT
-  Warringah Freeway
-  Rozelle Interchange
-  Tunnel portal
-  Ventilation outlet
-  Motorway facilities
-  Landscape
-  Tunnel event- artistic panels

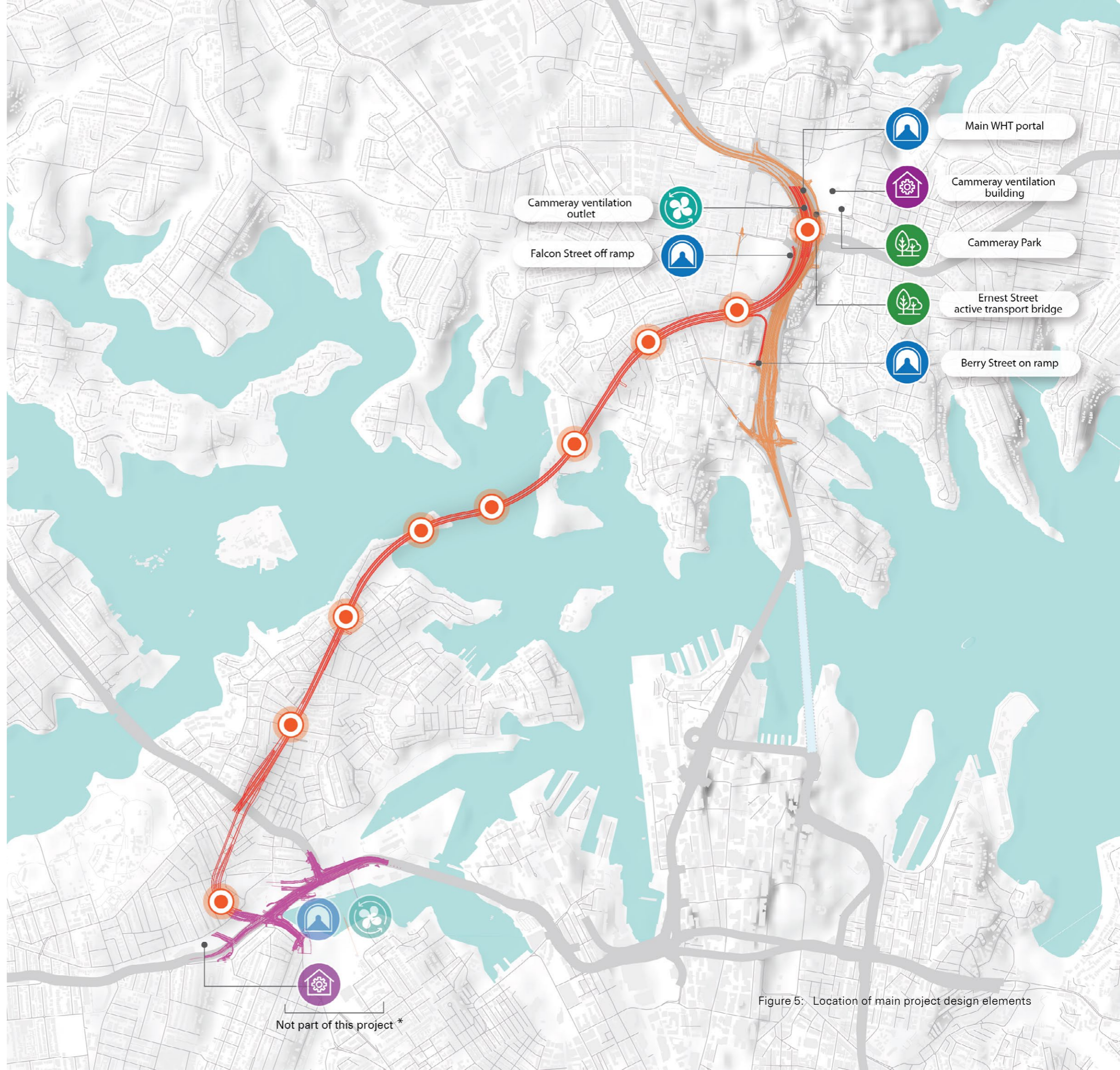


Figure 5: Location of main project design elements

1.2 Adjoining infrastructure projects

The Project interconnects with several existing, in-progress and future infrastructure developments. The design has considered the relationship with neighbouring projects to create an integrated experience.

1.2.1 Warringah Freeway Upgrade

The Warringah Freeway Upgrade (WFO) is a major transport infrastructure project that aims to simplify the Warringah Freeway, making it safer and easier to use, and more efficient and reliable for the benefit of all road users, including public transport users. The project includes:

- » upgrading four kilometres of the Warringah Freeway between north Sydney and Naremburn
- » improving interchanges with Falcon Street, including a new northbound on ramp at High Street
- » creation of connections to the WHT, optimising the operation of the three road harbour crossings in the future
- » improved public transport links, with a continuous southbound bus lane from Miller Street to the Sydney Harbour Bridge
- » around 2.5 kilometres of new and upgraded cycleways and pedestrian paths, integrated with public transport networks.

1.2.2 Western Harbour Tunnel Stage 1

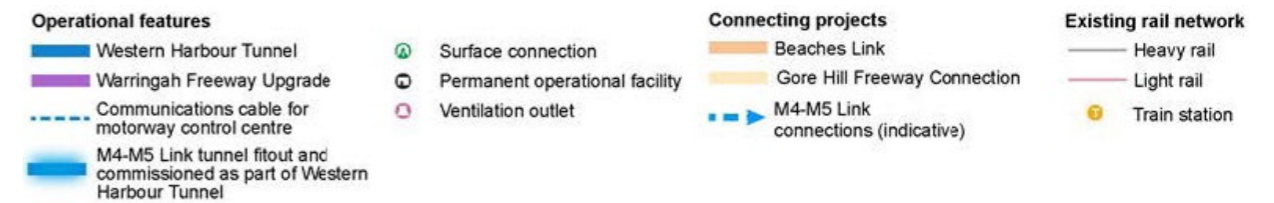
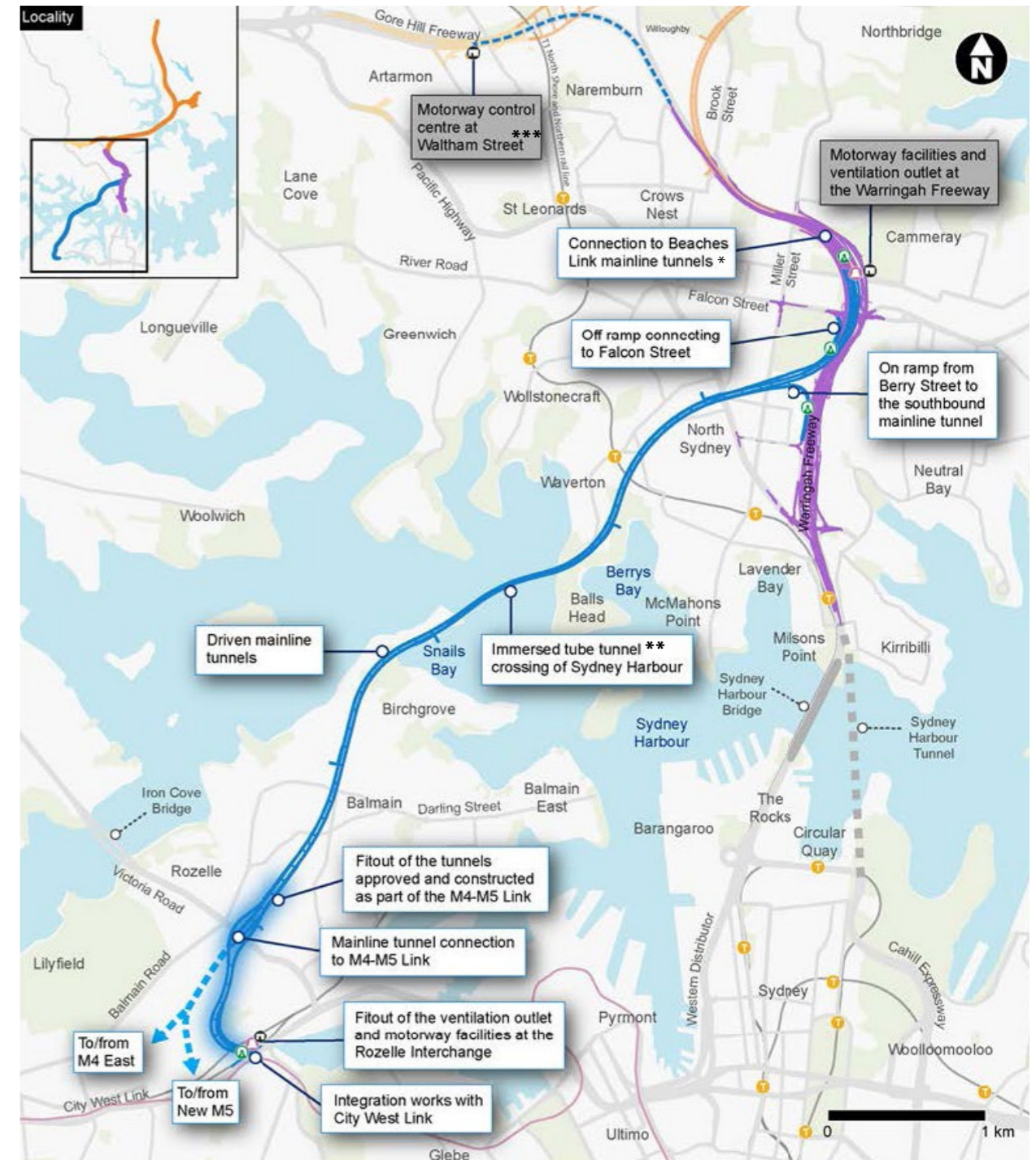
WHT is being delivered in two stages. The southern section of the tunnel, Stage 1, is being delivered by John Holland CPB Contractors (JHCPB) and includes the excavation of 1.7km of the tunnel between Emily Street in Rozelle to Cove Street in Birchgrove. This stage is excavation only and does not include tunnel fit-out activities.

1.2.3 Rozelle Interchange, WestConnex

The Rozelle Interchange is a new underground motorway interchange, which provides connectivity to the M4-M8 (formerly M4-M5) Link Tunnels and City West Link, and an underground bypass of Victoria Road between Iron Cove Bridge and Anzac Bridge. Rozelle Interchange also provides a connection to the WHT.

The interchange is part of WestConnex and the key components include:

- An underground interchange at Leichhardt and Annandale that would link the mainline tunnels (Stage 1) with the Rozelle interchange and the Iron Cove Link (Stage 2)
- A new interchange at Lilyfield and Rozelle (the Rozelle interchange) that connects the M4-M8 mainline tunnels with:
 - » City West Link
 - » Anzac Bridge.
- Construction of connections to the proposed future Western Harbour Tunnel including:
 - » Tunnels that would allow for underground mainline connections
 - » A dive structure and tunnel portals
 - » Entry and exit ramps
 - » A ventilation outlet and ancillary facilities
- Twin tunnels that would connect Victoria Road near the eastern abutment of Iron Cove Bridge and Anzac Bridge (the Iron Cove Link)
- Creation of a vibrant, new public park within the former Rozelle Rail Yards site.



* now cancelled
 **Changed to TBM following MOD 2
 *** Removed from scope

Figure 6: Project overview as at the time of the EIS (January 2020)
 Source: Western Harbour Tunnel and Warringah Freeway Upgrade EIS Appendix V

1.3 Purpose of the PDLP

ACCIONA is responsible for the design and construction of Stage 2 of the WHT. To meet the Minister's Conditions of Approval (MCoA), DesignInc has prepared this Place Design and Landscape Plan (PDLP) on behalf of ACCIONA. Section 1.7 of the PDLP addresses the specific conditions of approval as outlined. While the MCoA covers both WHT and WFU (by others), this PDLP focuses solely on WHT Stage 2 scope.

The PDLP serves as a comprehensive guide, outlining the Urban Design and Landscape strategies for the Project. It ensures compliance with the requirements and scope outlined in the Scope of Works and Technical Criteria (SWTC).

The purpose of this PDLP is to demonstrate compliance with the other approval documents, including:

- MCoA
- Revised Environmental Management Measures (REMM)
- Environmental Impact Statement (EIS) and modifications

The development of the Project elements has been through an integrated urban design approach, involving close collaboration with a broad, multidisciplinary project team. Additionally, the design has been informed through engagement with the client, subject matter experts, and key external stakeholders, including North Sydney Council. This approach has led to continuous evolution and improvement of elements during the detailed design phase.

The design team has presented the development of the design to the State Design Review Panel (SDRP) at regular intervals. Ongoing development integrated the feedback from the SDRP as it occurred. Inputs from the SDRP process are documented in [Section 1.7.5](#).

As the project progressed, the elements were further refined based on detailed engineering assessments and construction optimisations. Further design modifications may also be necessary as an outcome of the community and stakeholder consultation process.

1.3.1 What the PDLP covers

In accordance with MCoA 177, "the PDLP must be prepared to inform the final design of CSSI", which is to say the visible permanent built works and landscaping.

The elements of the permanent built works subject to the WHT PDLP and covered in this document are, therefore:

- In-tunnel
 - » Architectural panel lining
- Tunnel portals
 - » Berry Street entry architectural panels, noise wall finishes, and anti-throw screens
 - » Falcon Street cut and cover and dive: architectural panels, anti-throw screens
- General
 - » Main tunnel entry from Warringah Freeway: crown patternation and colouring
- Cammeray ventilation facility
 - » Façade (patternation and finish)
 - » Landscaping
- Cammeray Park and Ernest Street active transport bridge
 - » Landscaping (hardscape and softscape)
 - » Furniture and fixtures
 - » Art integration into urban design components.

The permanent built elements NOT subject to the WHT PDLP (that is, out of scope for urban and landscape design) are:

- In-tunnel
 - » Shotcrete, excavated face or Tunnel Boring Machine segments
 - » Mechanical and engineering equipment
- Tunnel portals and non-visible structures
 - » Signs and ITS
 - » Structural elements
 - » Flood wall structure
- Cammeray ventilation facility
 - » Building structure including location, form, and size
 - » Civil layout
- Rozelle operational facilities.

1.3.2 Urban and landscape design development

The development of the urban and landscape design for the Project has been a collaborative and iterative process, incorporating the following key activities:

- A comprehensive examination of briefing materials and related working papers, such as the EIS and Reference Design
- Inspections of the route and its environs
- Multiple design workshops and meetings involving the Project's dedicated design team, fostering collaboration and creativity in the design process
- An evaluation of existing design standards and construction practices employed by Transport for NSW, as well as industry best practices, to ensure compliance and alignment with established guidelines.

1.3.3 Project team

The WHT is set to become a significant and landmark addition to Sydney’s transportation infrastructure. A key goal is for the Project to establish a new standard for mega-infrastructure in terms of design excellence and placemaking. A crucial aspect of the project’s success lies in its seamless integration with the existing environment, surrounding movement networks and historical significance of the area.

To meet this challenge and foster design innovation, the project team is composed of a diverse interdisciplinary group of design and construction specialists. Their collective expertise is dedicated to delivering successful project outcomes, ensuring the new infrastructure integrates with the urban environment while enhancing the overall travel experience.



DesignInc

WHT Landscape architecture, urban design and architecture



 **acciona**

WHT Stage 2 Contractor



cultural
capital

Cultural Facilitator

1.4 Strategic documents

1.4.1 Project documents

Western Harbour Tunnel and Warringah Freeway Upgrade EIS Appendix V: Urban design, landscape character and visual impact, Prepared by WSP | Arup for Roads and Maritime Services

The Landscape Character and Visual Impact Assessment LCVIA appended to the EIS (Appendix 5) was prepared to address the environmental assessment requirements of the Secretary of the Department of Planning, Industry and Environment (now Department of Planning, Housing and Infrastructure (DPHI)). It included:

- A strategic urban design framework for the project
- An LCVIA that considered the potential impacts likely to occur as a result of the project
- Mitigation measures and design recommendations to avoid, minimise or improve potential landscape character and visual impacts.

The document also outlines an urban design vision for the project as follows:

The Western Harbour Tunnel and Warringah Freeway Upgrade provides a distinctive motorway experience that, through a series of undulating subterranean journeys, provides a connection across Parramatta River to the urban centre of North Sydney and on towards the northern suburbs.

It is a transition between tunnel and surface environments, a connection across the Harbour and a link from city to suburb. It would provide enhanced green connections, improved pedestrian and cyclist amenity and facilitate local places to return to local communities.

The primary design strategy highlighted is the correlation between the alignment of the road, the presence of Sydney Harbour’s water, adjacent local green spaces, and the sandstone geology of North Sydney. Urban design objectives were developed as the basis for ongoing strategic urban design development. The objectives were to achieve the following:

- Shape the project narrative established in the vision as a concept of transition from city to suburb, underneath the waters of Sydney Harbour
- Ensure the project is well integrated into the geography of the region, the motorway system and its surrounding landscape and urban context
- Deliver infrastructure elements that define and give meaning to the user experience in a way that is evocative of the unique local context.
- On 8 September 2023, the NSW Government confirmed the decision to cancel the Beaches Lnk project, in line with the advice supplied from Infrastructure NSW in 2022.

Aboriginal core narrative and cultural design principles report, Balarinji (2020)

This report presents Balarinji’s guidelines for incorporating Aboriginal cultural values into the design of the Western Harbour Tunnel project. It aims to provide assistance and direction for interpreting and integrating these cultural values into the project.

Balarinji’s work aligns with the Centre for Urban Design’s Beyond the Pavement framework and has been greatly influenced by it. The stated objective of Balarinji was to create site-specific outcomes to effectively convey the rich local narrative, by engaging in collaborative efforts with the community through a series of Aboriginal Exploratory Workshops.

The Aboriginal core narrative and cultural design principles report includes:

- the core narrative based on key themes, sites and reported stories of significance for the Western Harbour Tunnel, Warringah Freeway and Beaches Link* sections
- Balarinji’s Cultural Design Principles relating to the corridor
- recommendations for next steps
- appendices featuring a verbatim compilation of the consultation responses.

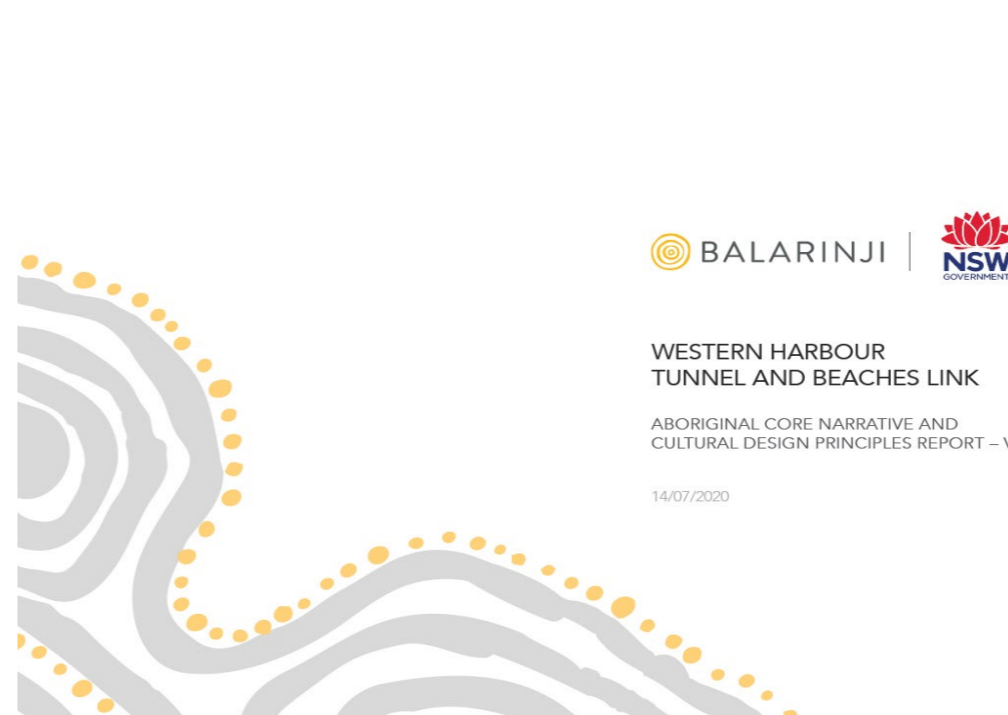
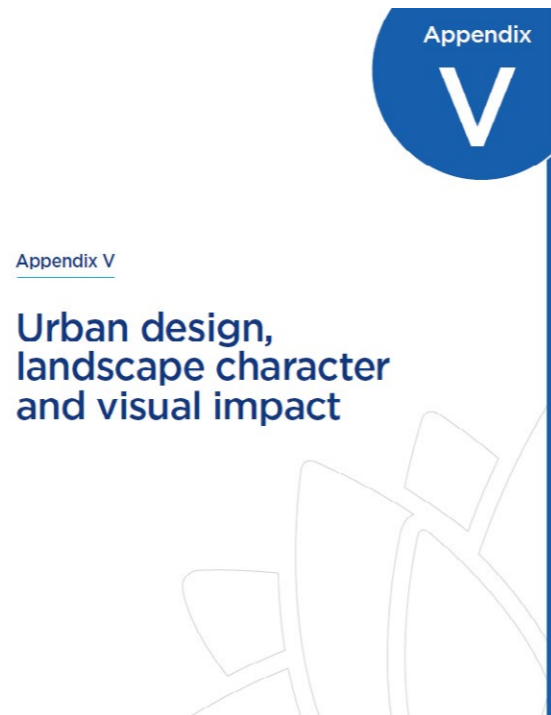
Draft North Sydney Tree Replacement Strategy, Transport for NSW (2022)

As part of the Western Harbour Tunnel and Warringah Freeway Upgrade project, there will be impacts to some trees along the alignment. Transport’s approach in delivering the project is to avoid or minimise the need to remove trees through project design and careful environmental management. Trees that do need to be removed will be replaced in accordance with planning approval, including the two to one replacement ratio requirement.

This document has been prepared in partnership with North Sydney Council and provides guiding information and policy considerations for the tree replacement program as part of the Project. It emphasises the importance of trees in the urban environment and the commitment of Transport for NSW to replace trees at a two-to-one ratio. Transport has identified three overarching principles to guide the delivery of tree replacement:

- Community centred – delivering benefits to the impacted local community
- Returning green space – reinstating quality open and green space in the local area
- Achievable – providing certainty to meet project approval requirements.

*cancelled



1.4.2 Standards and guidelines

Beyond the Pavement, Transport for NSW (2023)

Transport for NSW's urban design approach for road and maritime projects is set down in Beyond the Pavement. This document serves as a guide, offering direction on urban design methodologies and presenting the design principles, values, and overarching objectives for projects. It emphasises the adoption of an urban design approach for all road and maritime infrastructure-related work that impacts the overall quality of the built environment, natural surroundings, and community. This approach aligns with the guidelines and standards outlined within the document.

Nine urban design principles govern the planning and design of road infrastructure:

- contributing to urban structure, urban quality and the economy
- fitting with built fabric
- connecting modes and communities and promoting active transport
- fitting with the landform
- contributing to green infrastructure and responding to natural systems
- connecting to Country and incorporating heritage and cultural contexts
- designing an experience in movement
- designing self-explaining roads that respond to their role and context
- achieving integrated and minimal maintenance design.

Practitioner's guide to Movement and Place, Transport for NSW (2023)

This document is designed to assist practitioners in making informed decisions and implementing best practices that prioritise the needs of people while ensuring efficient and sustainable transportation systems. The guide includes case studies, design principles, technical guidelines, and other resources to support practitioners in their work

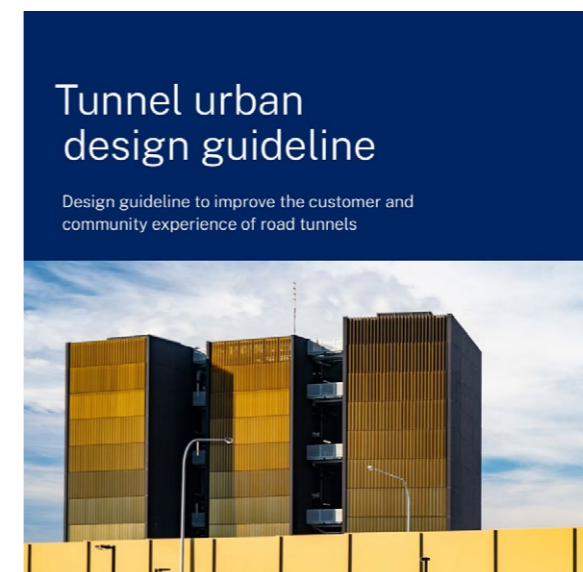
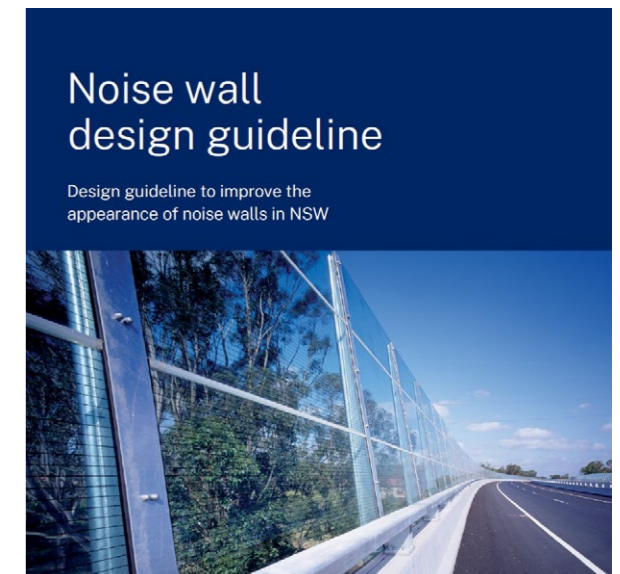
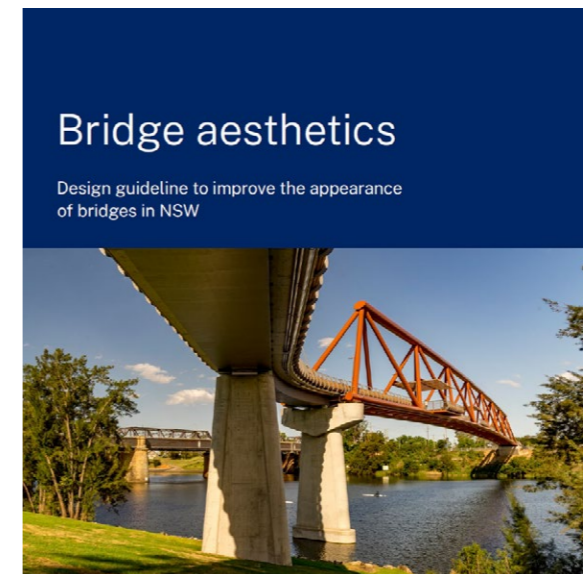
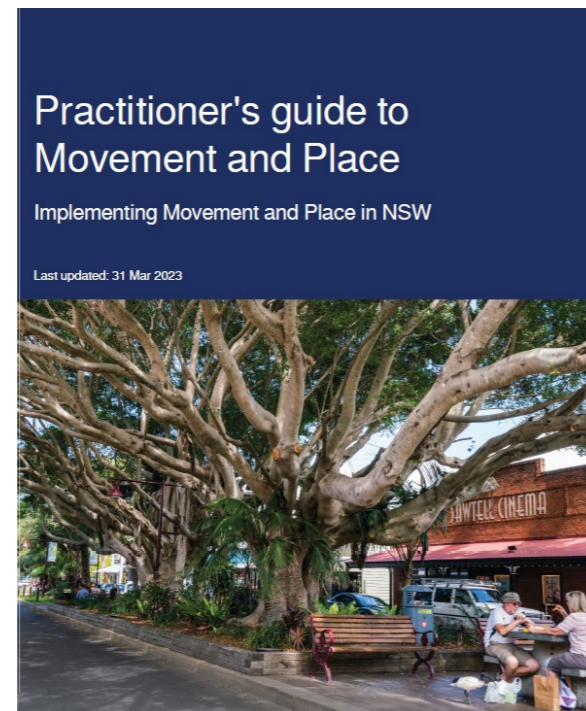
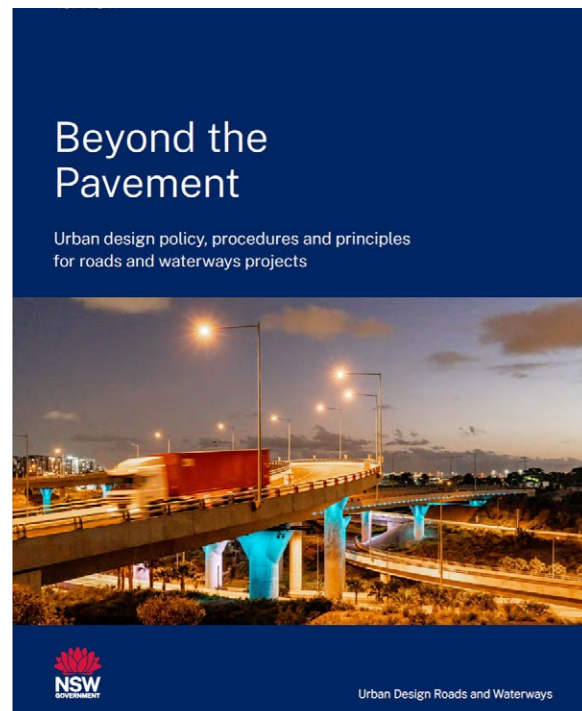
The guide outlines:

- a collaborative method for practitioners, stakeholders, and the community to work together
- a shared responsibility and a shared language to support collaboration across disciplines, agencies, and levels of government
- a process for implementing this approach across a range of decisions and project types, at various scales, and throughout the life cycle of a plan, project, or asset
- criteria for measuring and evaluating the alignment of movement and place in existing contexts and when comparing future options.

Transport for NSW Urban Design Guidelines

The urban and landscape design proposals for the Project have responded to the suite of Transport for NSW guidelines (including those originally produced by RMS) and include:

- Biodiversity guidelines: Protecting and managing biodiversity, September 2011
- Bridge aesthetics: Design guideline to improve the appearance of bridges in NSW, 2023
- Guideline for batter surface stabilisation using vegetation, 2015
- Landscape design: guideline Design guideline to improve the quality, safety and cost effectiveness of green infrastructure in road corridors, RMS, 2018
- Transport for NSW, Noise Wall Design Guidelines Design – Guidelines to improve the appearance of noise walls in NSW, 2023
- Shotcrete design guidelines, 2016
- Tunnel urban design guideline, 2023
- Water sensitive urban design guideline, 2023
- Landbridge draft discussion paper – Restitching the built environment, 2017.



Transport for NSW QA specification R178 - Vegetation and R179 - Landscape planting

These specifications outline the requirements for vegetation in various areas of the site, such as cut and fill batters, open drains, and other designated spaces. The vegetation requirements encompass a range of activities, including initial surface preparation, topsoil application, fertilisation, seeding, watering, as well as landscape works such as site preparation, supply and planting of containerised plants (including mulching, fertilisation, and staking), turfing, watering, and post-planting maintenance.

Relevant Standards

- AS/NZS 1158 Lighting for roads and public spaces – Set
- AS 1428.1 Design for access and mobility – General requirements for access – New building work
- AS 1428.2 Design for access and mobility – Enhanced and additional requirements - Buildings and facilities
- AS 1428.4.1 Design for access and mobility- Means to assist the orientation of people with vision impairment – Tactile ground surface indicators
- AS 1743 Road signs Specifications (with RMS Supplement)
- AS 1657 Fixed platforms, walkways, stairways and ladders – Design, construction and installation
- AS 3845 Road safety barrier systems
- AS 4422:2016. Playground surfacing – Specifications, requirements and test method
- AS 4282:1997 Control of the obtrusive effects of outdoor lighting
- AS 4685 Playground Equipment and Surfacing – Set
- National Construction Code 2019 Volume One - Building Code of Australia – Class 2 to Class 9 Buildings (Includes Amendment 1)
- National Construction Code 2019 Volume Two – Building Code of Australia – Class 1 and Class 10 Buildings

Connecting with Country Framework - Government Architect New South Wales, 2023

The Connecting with Country Framework is a guide for good practice to help respond to Country to plan, design and deliver built environment projects. The framework offers guidance and suggestions rather than a comprehensive checklist for how to connect with Country. It encourages practitioners to research, undertake cultural awareness training, and work with Aboriginal communities to develop projects.

The document describes practical ways for responding to changes and new directions in planning policy relating to Aboriginal culture and heritage, including place-led design approaches. It also aims to help better support a strong and vibrant Aboriginal culture in our built environment.

The Connecting with Country Draft Framework is intended to complement and support existing protocols and policies developed by Aboriginal colleagues and community leaders. These existing initiatives encompass engagement protocols, policies promoting Aboriginal employment opportunities, design protocols, and the protection of Aboriginal cultural heritage.

This document has served as the guiding framework for the Project’s Connecting with Country approach

Better Placed, Government Architect NSW, 2017

This document provides a framework and guidelines for creating sustainable, liveable, and well-designed built environments in NSW. The document outlines seven specific objectives to define the primary considerations in the design of the built environment which have been considered in the urban design approach for this project

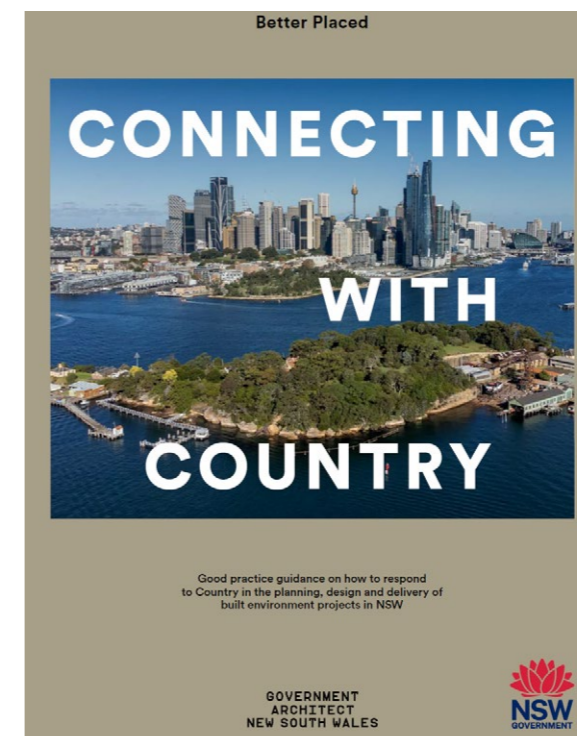
- better fit – contextual, local and of its place
- better performance – sustainable, adaptable and durable
- better for community – inclusive, connected and diverse
- better for people – safe, comfortable and liveable
- better working – functional, efficient and fit for purpose
- better value – creating and adding value
- better look and feel – engaging, inviting and attractive.

Greener Places, Government Architect NSW, 2017

“Greener Places” is a policy on Green Infrastructure that provides guidance for the planning, design, and implementation of Green Infrastructure within urban areas. The document includes recommendations on various aspects, including urban greening, tree canopy cover, green infrastructure, and sustainable water management. It encourages the integration of vegetation and green spaces into urban areas, emphasising the benefits they provide, such as improved air quality, temperature regulation, and enhanced aesthetics. It outlines the following four key principles that will help deliver green infrastructure in NSW:

- Integration – combine green infrastructure with urban development and grey infrastructure
- Connectivity – create an interconnected network of open space
- Multifunctionality – deliver multiple ecosystem services simultaneously
- Participation – involve stakeholders in development and implementation

The project has made efforts to optimise the potential for green infrastructure wherever feasible through incorporating new public open spaces that include interconnected swales, water quality treatments, abundant tree canopy coverage, and green walls integrated into structures.



Urban Tree Canopy Guide, Government Architect NSW, 2017

There is now a renewed emphasis on recognising the significance of the urban tree canopy and its potential to improve the urban climate, ecosystems, and the well-being of communities. The Urban Tree Canopy Guide has identified that a significant majority of Sydney suburbs have less than 10% canopy cover. In that context, this document outlines objectives, recommendations, and targets aimed at preserving and enhancing the urban tree canopy.

The goal is to attain a 40% urban tree canopy cover throughout the Greater Sydney Region by 2036. The Project is dedicated to actively contributing to this vision of creating a greener Sydney.

Sydney Green Grid, NSW Department of Planning and Environment, 2017

The aim of Sydney Green Grid is to establish a comprehensive and interconnected network of green spaces and corridors throughout the Greater Sydney Region. It identifies key strategic areas for the development of green infrastructure, including the revitalisation of existing parks, the creation of new green spaces, and the connection of corridors to facilitate the movement of people, wildlife, and ecological processes. It also emphasises the importance of active transportation, such as walking and cycling, within this green network.

The Green Grid opportunities identified in the document adjacent to the surface interface of the Project are:

- M2 Active Transport Corridor
- North Sydney CBD Open Spaces and Green Streets
- Sydney Harbour Foreshore and Parramatta River Walk
- Lilyfield Road Active Transport Corridor
- White Bay and Blackwattle Bay Foreshore and Open Space.

North District Plan, Greater Sydney Commission, 2018

The district plans are 20-year plans to manage growth in the context of economic, social, and environmental matters to achieve the 40-year vision for Greater Sydney. It is a guide for implementing the Greater Sydney Region Plan, A Metropolis of Three Cities, at a district level and is a bridge between regional and local planning. WHT tunnel plans across the areas covered by North District Plan and Eastern City District Plan, however the former document is analysed in detail as it encompasses the areas of all surface work related to the project.

Road investments including WHT have been identified as critical project in the district plan as means to provide faster access to the Harbour CBD and bolster business and jobs growth. The WHT project will ease congestion across northern Sydney and the Harbour CBD, and take through traffic out of the Harbour CBD and off the Harbour Bridge. It also improves connection to The District's strategic centres of Macquarie Park, Chatswood and St Leonards, which is part of the State's greatest economic asset – the Eastern Economic Corridor.

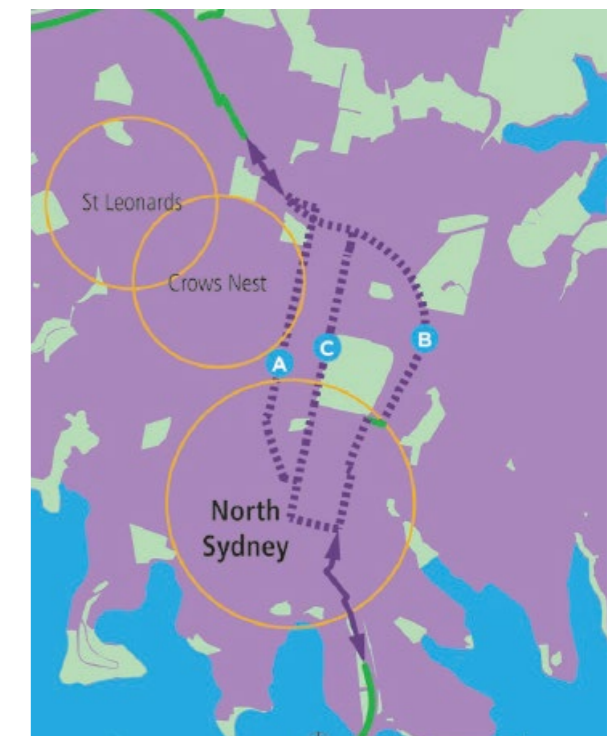
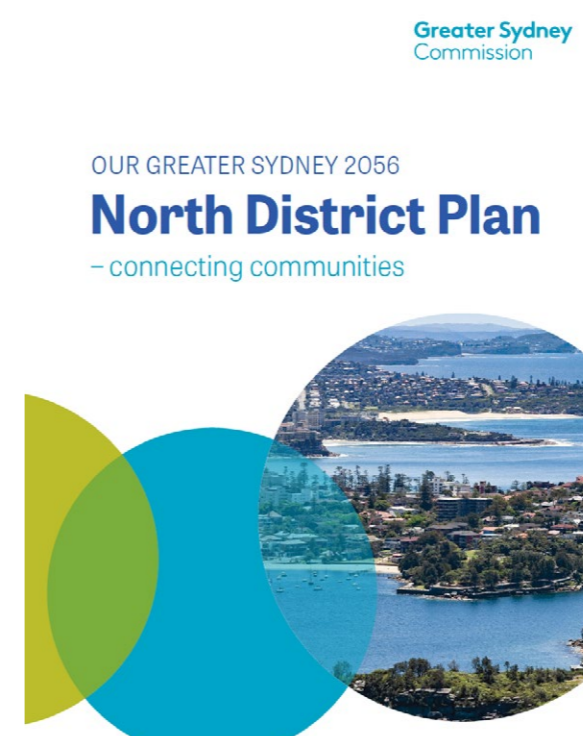
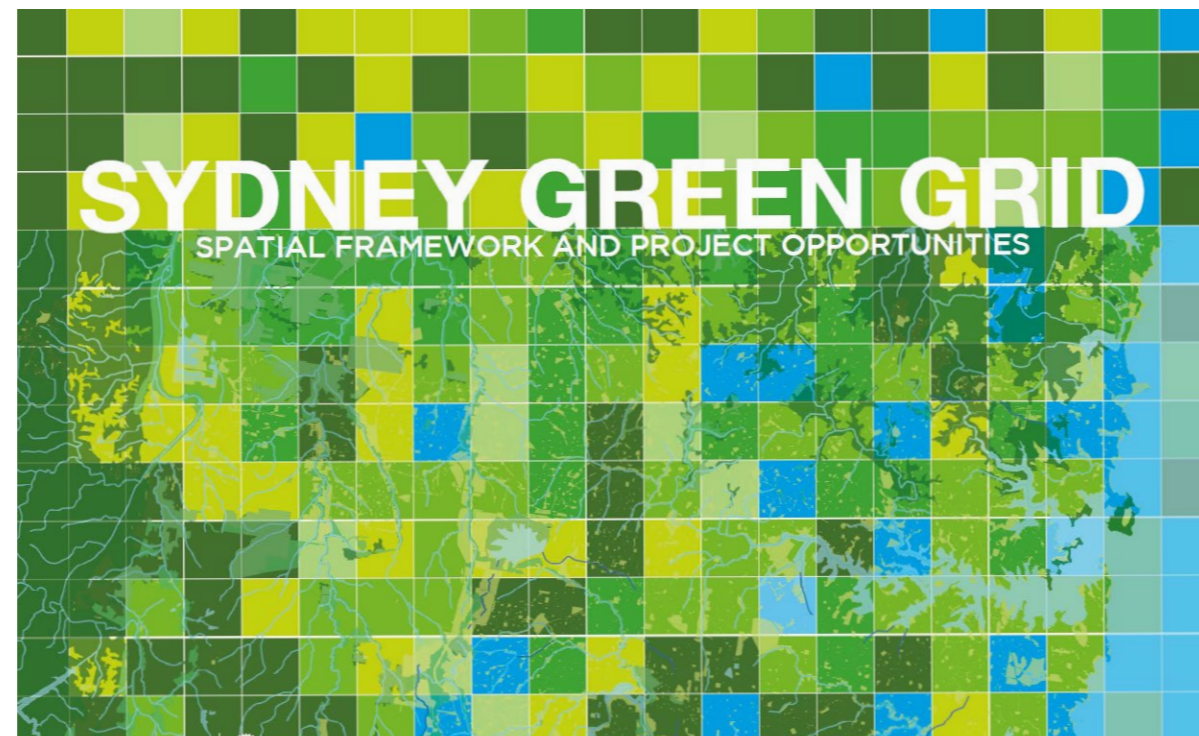
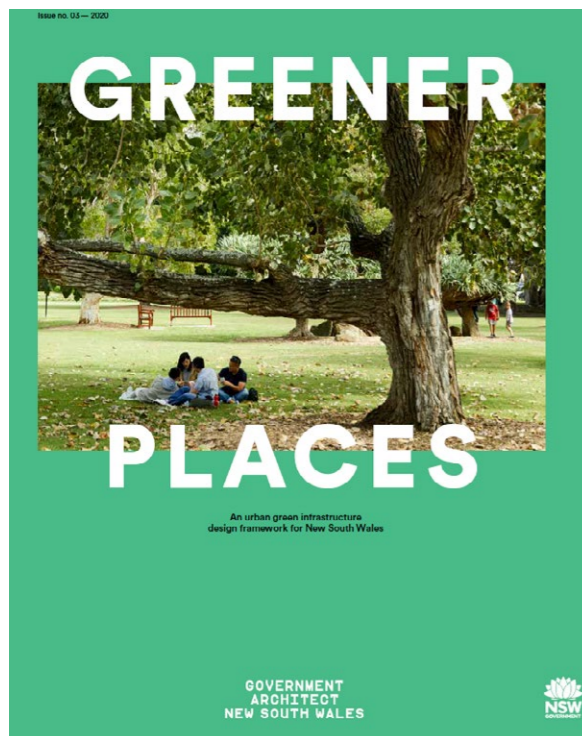
WHT is a major step in Delivering integrated land use and transport planning and a 30-minute city (Planning priority N12). Other key planning priorities identifies in the plan that are relevant to the place design approach of the Project includes:

- Planning Priority E1: Planning for a city supported by infrastructure
- Planning Priority N3: Providing services and social infrastructure to meet people's changing needs
- Planning Priority N4: Fostering healthy, creative, culturally rich and socially connected communities
- Planning Priority N6: Creating and renewing great places and local centres, and respecting the District's heritage
- Planning Priority N16: Protecting and enhancing bushland and biodiversity
- Planning Priority N19: Increasing urban tree canopy cover and delivering Green Grid connections
- Planning Priority N20: Delivering high quality open space
- Planning Priority N21: Reducing carbon emissions and managing energy, water and waste efficiently
- Planning Priority N22: Adapting to the impacts of urban and natural hazards and climate change.

Sydney's Cycling Future – Cycling for Everyday Transport, 2013

This document promotes cycling as a safe, convenient, and sustainable mode of transportation in Sydney. The plan focuses on developing a comprehensive cycling network, improving safety measures, integrating cycling with public transport, and engaging the community. It aims to increase cycling trips, enhance cycling infrastructure, and foster a cycling culture within the city. By implementing this plan, Sydney aims to create a more livable and environmentally friendly city by encouraging more people to choose cycling for their daily commuting needs.

This document is important for this project as it highlights a missing link between the Naremburn Cycleway and the Sydney Harbour Bridge. It also addresses the need for developing safe and separated cycle connections to Willoughby, Chatswood, and Mosman in the long term.



1.4.3 Local Policy

The urban design of the project has taken into account the relevant urban design policies and guidelines provided by the local council. The following documents will continue to guide the design decisions of the project:

- North Sydney Council Public Domain Style Manual and Design Codes 2019
- North Sydney Open Space Provision Strategy 2009
- North Sydney Street Tree Strategy 2006
- North Sydney CBD Public Domain Strategy 2020
- North Sydney Public Amenities Strategy & Action Plan 2016.

North Sydney Council Public Domain Style Manual and Design Codes 2019

The Public Domain Style Manual and Design Codes is a comprehensive guide developed by the Council which provides a set of design principles and guidelines for the development and enhancement of public spaces within the North Sydney area. The manual focuses on creating attractive, functional, and sustainable public spaces that meet the needs of the community. It covers various aspects of urban design, including street furniture, lighting, paving, landscaping, signage, and public art. The goal is to ensure consistency and quality in the design and implementation of public domain projects throughout the region. The new materials palettes have been introduced to define the character of each precinct. Comprehensive plans and sections showcase the application of these materials, ensuring a consistent and high-quality public domain.

The design of the public domain elements within the Project has taken into careful consideration the specifications and guidelines detailed in this document to ensure alignment with the surrounding environment.

North Sydney Open Space Provision Strategy, 2009

The North Sydney Open Space Provision Strategy is a strategic document developed by the North Sydney Council in Australia. It outlines a comprehensive plan for the provision and management of open spaces within the North Sydney area.

The document provides guidelines for the identification, acquisition, development, and maintenance of open spaces. It addresses various types of open spaces, including parks, reserves, playgrounds, sports fields, and waterfront areas. The strategy also considers factors such as accessibility, sustainability, and biodiversity in the planning and design of open spaces.

The North Sydney Open Space Provision Strategy promotes the integration of open spaces with the surrounding built environment, encouraging connectivity, walkability, and the creation of vibrant community hubs. It also recognises the importance of community engagement and collaboration in the development and management of open spaces.

Street Tree Strategy, North Sydney Council, 2006

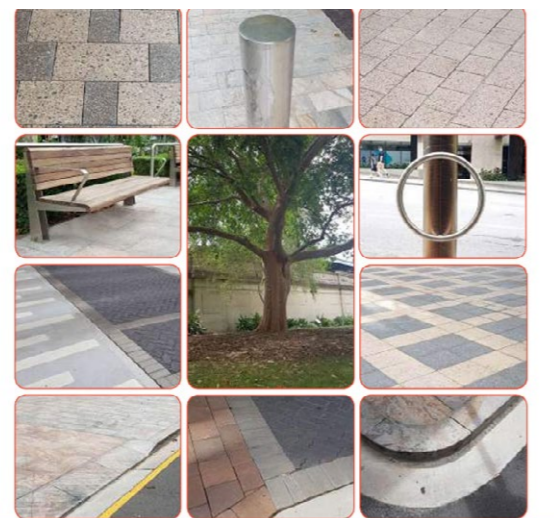
The North Sydney Street Tree Strategy provides guidelines and objectives for the selection, planting, and maintenance of street trees. It emphasises the importance of selecting appropriate tree species that are suitable for the local climate, soil conditions, and urban context. The strategy also considers factors such as tree placement, spacing, and maintenance practices. The ultimate objective is to create an optimal streetscape environment that embodies the desired standards.

This document offers a guidelines to identify areas for potential enhancements in public amenities, aesthetics, and safety within the project scope.

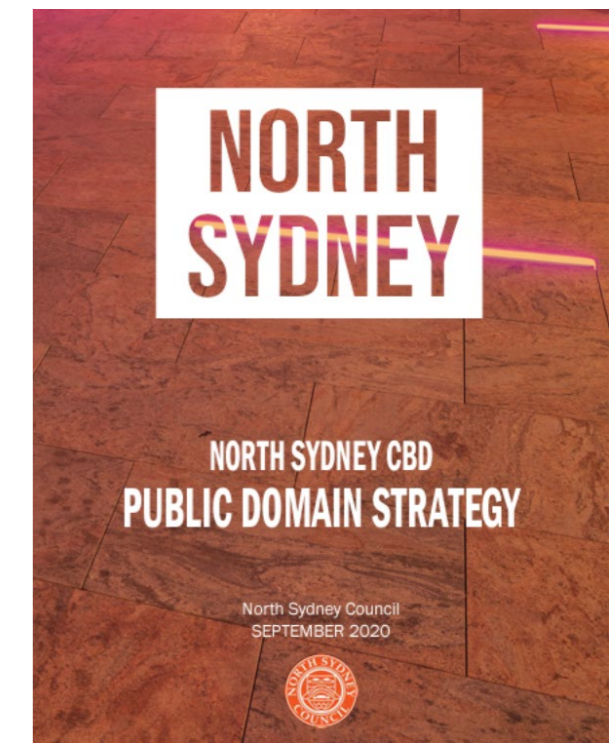
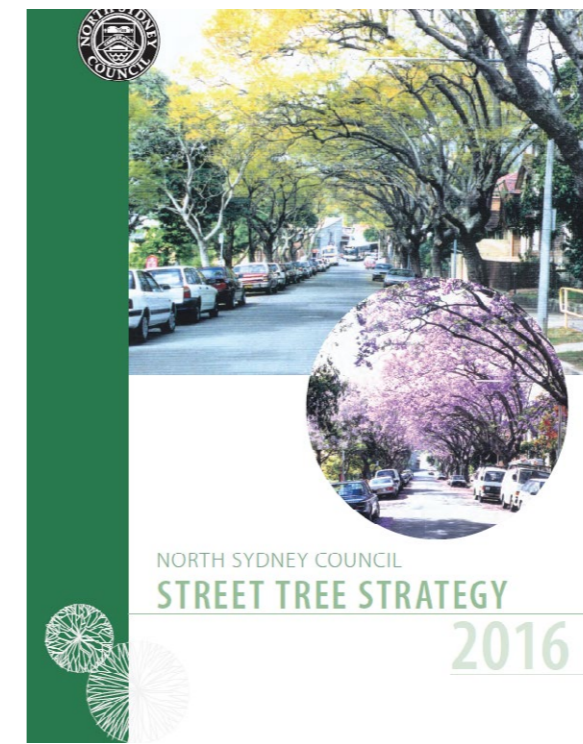
North Sydney CBD Public Domain Strategy, 2020

This document focuses on revitalising and improving the public spaces within the North Sydney CBD. The strategy aims to create an attractive, vibrant, and sustainable CBD by enhancing the quality and functionality of its public spaces. It provides a framework for the design, development, and management of streets, squares, parks, and other public areas within the CBD.

The North Sydney CBD Public Domain Strategy identifies key areas for improvement and outlines a range of objectives and actions to achieve the desired outcomes. It emphasises the importance of creating pedestrian-friendly environments, enhancing active transportation, improving accessibility, and promoting green spaces.



North Sydney
Public Domain Style Manual & Design Codes
 July 2022
 Originally prepared by
OCULUS
 landscape architecture



1.4.4 Adjoining project documents

The project is a component of a broader infrastructure development program encompassing several major developments. To maintain consistency and coherence within the corridor, the following documents from neighbouring projects are referenced. These documents provide detailed insights into the Urban Design and Landscape strategies implemented in their respective projects, helping to ensure a comprehensive and harmonious approach to the design of the wider motorway network.

- Place, Design and Landscape Plan, Warringah Freeway Upgrade, prepared by Hassell for CPB Contractors Downer Joint Venture, 2023
- Urban Design and Landscape Plan, WestConnex Rozelle Interchange, prepared by Hassell for John Holland CPB Contractors Joint Venture, 2023



1.5 Minister's Conditions of Approval

Table 1 provides a list of the Minister's Conditions of Approval (MCoA) relevant to the design works of WHT covered under this PDL. Note that the conditions are not sequential as the MCoA covers not only WHT, but WFU scope. Conditions related only to WFU have been omitted.

Each condition is accompanied by the project response and reference indicating the section in this PDL where the context is addressed.

CoA	Condition Requirements	Response	Document Reference
General Design Outcomes			
E156	The place making, design and landscape outcomes of the CSSI must be informed by and be consistent with Appendix V of the EIS, including but not limited to the objectives and design principles, requirements and opportunities	The vision, design principles and outcomes are developed based on the Appendix V of the EIS.	– Section 3.0
E157	The CSSI must result in a net increase in usable open space. Replacement space must be in the general vicinity of the loss, unless agreed to by the Planning Secretary.	<p>The project provides a net increase in usable open space for the public through the creation of numerous public domain spaces along the alignment. These include:</p> <ul style="list-style-type: none"> – reinstatement of impacted St. Leonards Park atop the cut and cover structure at Falcon Street – creation of a landscaped public domain zone on Ernest Street Bridge, including a cycle track, active transport corridor, and footpath, integrating a tree canopy to enhance the green spine connection between ANZAC Park and Cammeray Park – creation of a public park at the corner of Ernest Street and the new CVB access drive; the design of this park is ongoing, pending community input as documented in Section 5.3 <p>More broadly, the scope of works associated with the WHT delivery includes the redevelopment of Berrys Bay from ex-industrial land to a waterfront park. This sits outside of the scope of this PDL, but forms part of the overall project.</p>	<ul style="list-style-type: none"> – Section 8.4.1 – Section 5.2 – Section 5.3
Specific Design Outcomes			
E160	Following the completion of the use of the St Leonards Park for ancillary facility WHT9 (temporary tunnelling site), the site must be returned to public open space in consultation with North Sydney Council, to maximise usable open space	– The site will be returned to public use after construction	– Section 8.4
North Sydney CBD			
E162	The CSSI must not preclude the delivery of the objectives proposed by the North Sydney Integrated Transport Program in consultation with the Government Architect NSW and North Sydney Council.	– The project is consistent with the objective of the Program to incorporate major transport projects in the area to enable North Sydney Council to implement its public domain strategy. It integrates active transport and public domain works with the WHT.	<ul style="list-style-type: none"> – Section 1.4.2 – Section 1.4.3
Lighting and Security			
E163	The Proponent must construct and operate the CSSI with the objective of minimising light spillage to surrounding properties. All lighting associated with the construction and operation of the CSSI must be consistent with the requirements of AS/NZS 4282:2019 Control of the obtrusive effects of outdoor lighting and relevant Australian Standards in the series AS/NZ 1158 – Lighting for Roads and Public Spaces. Additionally, the Proponent must provide mitigation measures to manage any residual night lighting impacts	<ul style="list-style-type: none"> – All the lighting associated with the operation and construction is consistent with the requirements of AS/NZS 4282:2019 Control of the obtrusive effects of outdoor lighting and relevant Australian Standards in the series AS/NZ 1158 – Lighting for Roads and Public Spaces – The landscape buffer is used around the ventilation facilities to mitigate residual light impacts – Indirect lighting is incorporated wherever feasible to limit light spillage 	– Section 6.3.3

Table 1: Minister for Planning Conditions of Approval specific to this plan

CoA	Condition Requirements	Response	Document Reference
Design Review Panel			
E164	<p>The Proponent must establish an independent Design Review Panel which must operate during detailed design and during construction. The process for the operation of the Panel, including the Panel's Terms of Reference and frequency of meetings, must be agreed to with the NSW Government Architect prior to the establishment of the Design Review Panel.</p> <p>The Terms of Reference must be consistent with the State Design Review Panel.</p>	<ul style="list-style-type: none"> - In independent Design Review Panel was established for the detailed design phase of the project, prior to the commencement of construction. 	<ul style="list-style-type: none"> - Section 1.7
E165	<p>The Design Review Panel must provide advice and recommendations on the detailed design. The responsibilities of the Design Review Panel include:</p> <p>a) provide advice and recommendations for consideration in the development of the Place, Design and Landscape Plan (PDLP) required by Condition E177;</p> <p>b) provide advice on the application of the objectives to key design elements in relation to place making, architecture, heritage, urban and landscape design and artistic aspects of the CSSI; and</p> <p>c) provide advice on structures including bridges and flyovers (including the Alfred Street flyover and walking and cycling bridges across the Warringah Freeway).</p> <p>The Panel's advice must be consistent with the CSSI as approved.</p>	<ul style="list-style-type: none"> - Regular presentations were made to the Panel, which then provided feedback that the design team responded to. The design team then reported back to subsequent Panels including commentary on how the Panel advice was integrated with the design development. 	<ul style="list-style-type: none"> - Section 1.7
E166	<p>The Design Review Panel must be chaired by the NSW Government Architect (or its nominee), and must be comprised of, where relevant, a suitably qualified, experienced and independent professional in each of the fields of:</p> <p>a) urban design and place making (including active transport);</p> <p>b) landscape architecture;</p> <p>c) architecture; and</p> <p>d) Aboriginal cultural heritage, non-Aboriginal cultural heritage.</p> <p>The Panel may seek advice from suitably qualified, experienced independent professionals in other fields as required.</p>	<ul style="list-style-type: none"> - The Design Review Panel consists of experts from the fields of architecture, urban design, landscape design and heritage. 	<ul style="list-style-type: none"> - Section 1.7
E167	<p>Panel members must be sourced from the State Design Review Panel Pool, approved by the Government Architect NSW (or its nominee). These panel members must be involved in the development and review of the PDLP required by Condition E177.</p>	<ul style="list-style-type: none"> - Panel members were sourced and approved as per the condition, and have been involved in multiple review sessions 	<ul style="list-style-type: none"> - Section 1.7.5
E168	<p>Advice letters by the Design Review Panel Members and logs which demonstrate how each piece of advice is considered and addressed, must be included when submitting the PDLP to the Planning Secretary for approval.</p>	<ul style="list-style-type: none"> - For issue to the DRP and TfNSW, DRP advice is summarised in the PDLP 	<ul style="list-style-type: none"> - Section 1.7.5
E170	<p>Other representatives of the Proponent and its contractor(s) may be invited to attend the Panel meetings as observers or to provide technical advice.</p>	<ul style="list-style-type: none"> - Representatives of ACCCIONA, DesignInc & Cultural Capital were invited and attended meetings 	<ul style="list-style-type: none"> - Section 1.7.5
E171	<p>The relevant council may be invited to the meetings of the Panel as observers or to provide feedback on key design elements of the CSSI.</p>	<ul style="list-style-type: none"> - Representatives of North Sydney Council, together with attendees as above, attended the DRP meetings 	<ul style="list-style-type: none"> - Section 1.7.5

CoA	Condition Requirements	Response	Document Reference
E173	The Proponent must provide independent secretarial resources to the Panel.	– Not requested or provided. Project team prepared agendas for meetings and Panel commentary in the form of minutes was provided to the Project by the Panel	– N/A
Place, Design and Landscape Plan			
E177	A PDLP must be prepared to inform the final design of the CSSI and to give effect to the outcomes informed by Condition E156 and design review. The Plan does not apply to work, which for technical, engineering, or ecological requirements, or other requirements as agreed by the Planning Secretary, do not allow for alternative design outcomes.	– This document has been prepared to comply with this condition. Part 2 of this document outlines the final design of the Project and how it aligns with the objectives and commitments made within the EIS	– WHTP2-DESIN-NWW-AR-UD08-RPT-000001
E178	The PDLP must be prepared by a suitably qualified and experienced person in consultation with relevant councils, the community and affected landowners and businesses. The PDLP must include:	– PDLP team members can be found in Section 1.3.3 and consultation is discussed in Section 1.7	– Section 1.3.3 – Section 1.7 .
	a) outcomes from the Design Review Panel as required by Condition E165	– The ongoing design development was subject to review at regular SDRP sessions, with feedback being documented and tracked to demonstrate its integration into the design	– Section 1.7.5
	b) an analysis of the built, natural and community context and the urban design objectives, principles and standards for the CSSI;	– Context analysis along with the supporting maps and photos are provided in Section 2.0 – Section 3.0 outlines the design parameters including vision, objectives and principles	– Section 2.0 – Section 3.0
	c) the design of the CSSI elements including their form, materials and detail, with a focus on high quality bridge design, public space, and integrated art;	– The design elements are described in respective sections	– Section 5.2 - ESB – Section 5.3 - Cammeray Park – Section 6.0 - Cammeray facilities – Section 7.0 - Tunnel interiors – Section 8.0- Tunnel portals
	d) the design of the project landform and earthworks;	– Shown on landscape plans and sections	– Section 5.2 – Section 5.3 – Section 6.5 – Section 6.4 – Section 8.4 – Section 8.4.3
	e) the design of usable open space;	The new useable open spaces as part of the scope include: – reinstated St. Leonard's Park – Cammeray Park – landscaped public domain zone on Ernest Street active transport bridge The design for each space is illustrated in respective sections	– Section 8.4- Falcon Street off ramp – Section 5.3 - Cammeray Park – Section 5.2 - ESB
	f) the location of existing vegetation, areas of vegetation to be retained and proposed planting and seeding details, including the use of local indigenous species for revegetation activities;	– The planting details are provided in the landscape design section	– Section 5.0 – Section 8.4.1 – Section 8.4.4
	g) the location of existing heritage items;	– The location of heritage items is detailed within the contextual analysis section of the report	– Section 8.4.3 Section 2.1

CoA	Condition Requirements	Response	Document Reference
	h) details of how Aboriginal and non-Aboriginal heritage (including maritime) interpretation and public art are incorporated within the design of built features, having regard to the results of any archaeological investigations;	– The Designing with Country strategies and themes are outlined in Section 8.4.3 Section 3.7 . The integration of cultural interpretation and artwork into built features such as building façades and tunnel panels is explained in the respective chapters	– Section 3.7 – Section 6.3 – Section 7.2
	i) visual screening requirements;	– Landscape design screens the Berry and Falcon Street portals from neighbouring residents	– Section 8.4 – Section 8.4.3
	j) design of the Falcon Street bus on ramp as required by Condition E159;	– N/A to this project	– Warringah Freeway Upgrade-Place, Design and Landscape Plan (WHTBLWFU-CPBD-NWW-DU-RPT-210001)
	k) developed visuals, cross sections and plans showing the proposed design outcome;	– Visuals, cross sections and plans showing the proposed design are provided across various sections related to landscape design, ventilation facilities, tunnel interior and tunnel portals. In addition concept plans for the whole alignment is also shown in Section 4.0	– Section 4.0 – Section 5.0 – Section 6.0 – Section 7.0 – Section 8.0
	l) details of strategies to rehabilitate, regenerate or revegetate disturbed areas; and	– The strategies to rehabilitate, regenerate or revegetate disturbed areas are explained in landscape sections	– Section 5.0
	m) management and routine maintenance standards and regimes for design elements and landscaping work (including weed management) to ensure the success of the design and landscape outcomes.	– Operations and Maintenance Manual is being produced for the project as a separate document, part of the Master document to be prepared by ACA (ongoing)	
E179	The PDLP, and any sub-plans, must be reviewed by the Design Review Panel. The Proponent must respond to the outcomes of the Design Review Panel's review and submit the PDLP (including evidence of response to the Design Review Panel's advice) to the Planning Secretary for approval no later than one month before the construction of permanent work that is the subject of the PDLP (s) (in the area to which the PDLP applies).	– This PDLP is a living document that will be developed along with the design to document key design decisions and the design outcomes of the CSSI. Drafts of this PDLP have been prepared for each SDRP session to demonstrate progression of the design resolution.	– N/A
E180	Unless otherwise agreed with the Planning Secretary, construction of permanent built work or landscaping that are the subject of the PDLP must not be commenced (in the area to which the PDLP applies) until the PDLP has been approved by the Planning Secretary, after considering advice received from the Design Review Panel.	– Noted	– N/A
E181	The PDLP, as approved by the Planning Secretary, must be implemented during construction and operation.	– Noted	– N/A
Operational Noise Barriers Design			
E182	Operational noise barriers must be designed to minimise visual and amenity impacts and be designed in accordance with the Noise Wall Design Guideline – design guideline to improve the appearance of noise walls in NSW (RMS, March 2016).	– The noise wall at Berry Street has been designed to minimise impacts, and in accordance with the Guideline	
Tree Removal, Replacement Plantings and Rehabilitation			
E184	The CSSI must be designed to retain as many existing trees as possible. Replacement trees and plantings must be provided at a ratio of 2:1 and deliver an increase in tree canopy and aim to enhance the relevant council's position in respect of the Sydney Green Grid, unless otherwise agreed by the Planning Secretary.	– Where possible, existing vegetation will be protected and planting opportunities adjacent to the corridor and within service compounds will be maximised	– Section 3.2

CoA	Condition Requirements	Response	Document Reference
E185	Replacement trees must:		
	(a) be located on public land and prioritised within 500 metres of the Construction Boundary, that delivers increased shading to footpaths, pedestrian and cycle paths;	– Replacement trees will be located on public land and preferably within 500m of the Project boundary	– Section 3.3.4
	(b) be of a species suitable to the location, having regard for local ecology and existing street trees;	– List of suitable species for each location where landscaping will be undertaken have considered the local ecology and existing street trees. Tree species will be chosen from the approved council list	– Section 5.2.7 – Section 5.3.4 – Section 6.4.1 – Section 6.5.1 – Section 8.4.2
	(c) meet the requirements for quality tree stock specified in the AS2303:2018: Tree Stock for Landscape Use;	– Quality of tree stocks specified in the AS2303:2018 will be met as a key urban design requirement	– Section 3.3.4
	(d) be provided no later than six months following the commencement of operation; and	– Noted	
	(e) have a minimum pot size consistent with the relevant council's plans / programs / strategies for vegetation management, street planting, or open space landscaping, or as agreed by the relevant council(s).	– Pot size of replacement trees will meet the requirement of the relevant Council's plan, programs or strategy, or as otherwise agreed with Council	– Section 3.3.4
E186	Replacement and enhancement of vegetative screening along the project corridor must be undertaken in a progressive manner during construction to allow for the early establishment of vegetative screening.	– Not applicable - this requirement relates the construction phase of the Project and does not apply to the PDLP.	
E187	A Landscape Strategy Report must be prepared which details the type, size, number and location of replacement trees. The report must demonstrate how any replacement plantings are consistent with the requirements of Condition E184 and Condition E185. The report must be submitted to the Planning Secretary for information no later than nine months following the commencement of operation.	– Noted. Landscape Strategy Report to be prepared following completion of landscaping	

1.6 Revised Environmental Management Measures

The Revised Environmental Management Measures from the Submissions Report, which are specific to urban design, are listed below along with the response and reference to where each measure is addressed within this plan.

Impact	Ref	Environmental management measure	Response
Non-Aboriginal heritage	NAH2	Appropriate heritage interpretation will be incorporated into the urban design for the project in accordance with the NSW Heritage Manual (NSW Heritage Office and Department of Urban Affairs and Planning, 1996), Interpreting Heritage Places and Items: Guidelines (Roads and Maritime, 2005), and the Heritage Interpretation Policy (NSW Heritage Council, 2005).	– Section 2.02
Biodiversity - removal of native vegetation and threatened species habitat	B4	Vegetation will be re-established within the project footprint where feasible, in accordance with Guide 3: Re-establishment of native vegetation of the Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects (RTA, 2011). Where replacement trees cannot be accommodated within the project footprint, locations outside the project footprint will be identified for compensatory plantings. Trees removed by the project will be replaced at a ratio equal to or greater than 1:1. The replacement trees will consist of local native provenance species from the vegetation community that once occurred in the locality (rather than plant exotic or non-local native trees) where available and subject to the urban design and landscape plan.	– As per landscape design

Impact	Ref	Environmental management measure	Response
Built form	V1	Construction support sites will be developed to minimise visual impacts for adjacent receivers where feasible and reasonable	– Not applicable - this requirement relates the construction phase of the Project and does not apply to the PDLP
	V2	Storage areas and associated works will be located in cleared and otherwise disturbed areas away from residential areas where feasible and reasonable.	– Not applicable - this requirement relates the construction phase of the Project and does not apply to the PDLP
	V3	Site hoardings will be in neutral colours and designs, in proximity to open space, to help blend them into the surrounding environment	– Not applicable - this requirement relates the construction phase of the Project and does not apply to the PDLP
	V4	Site hoarding and perimeter site areas will be maintained regularly to include the prompt removal of graffiti.	– Not applicable - this requirement relates the construction phase of the Project and does not apply to the PDLP
	V5	Site lighting will be designed to minimise glare issues and light spillage into adjoining properties and be generally consistent with the requirements of Australian Standards and Guidelines 4282 – 2019 Control of the obtrusive effects of outdoor lighting.	<ul style="list-style-type: none"> – All the lighting associated with the operation and construction is consistent with the requirements of AS/NZS 4282:2019 Control of the obtrusive effects of outdoor lighting and relevant Australian Standards in the series AS/NZ 1158 – Lighting for Roads and Public Spaces – The landscape buffer is used around the ventilation facilities to mitigate residual light impacts – Indirect lighting is incorporated wherever feasible to limit light spillage
	V6	Hoardings and temporary noise walls will be erected as early as possible within the site establishment phase to provide visual screening.	– Not applicable - this requirement relates the construction phase of the Project and does not apply to the PDLP
	V7	High quality fencing suitable for parks and public spaces will be used where construction support sites are located in close proximity to sensitive residential receivers such as residents and users of recreational space.	– Not applicable - this requirement relates the construction phase of the Project and does not apply to the PDLP
Vegetation/ landscaping	V8	Existing trees adjacent to the works will be retained and protected where possible to screen construction support sites, minimising clearing where possible.	– Detailed design will avoid or minimise the need for the removal of trees for the construction of the project, where feasible
	V9	Where possible, trees will be trimmed rather than removed. Works will be carried out by a qualified arborist.	– All tree removal undergoes inspection by an arborist to ensure that clearing is minimised to the greatest extent feasible. Additionally, all trimming is supervised by a qualified arborist
	V10	<p>All areas disturbed by construction and not required for operation of the project will be restored to existing condition or in accordance with the urban design and landscape plan where applicable (environmental management measure V12).</p> <p>The future use and rehabilitation of the WHT13 site (construction support site at Emu Plains) at the completion of the Project would be agreed upon with the landowner</p>	– Any areas temporarily disturbed for construction purposes will be restored to their pre-construction condition or as specified in the approved PDLP
	V11	Early planting works will be considered to provide a screening buffer that has time to mature before the project is fully operational	– Landscaping works will start in phases, contingent upon PDLP approval and the completion of construction in each respective area
	V12	<p>An urban design and landscape plan will be prepared during further design development and implemented in line with the strategic urban design framework for the project. The urban design and landscape plan will detail built and landscape features to be implemented during construction and rehabilitation of disturbed areas during construction of the project. The urban design and landscape plan will be made available to the public for feedback.</p> <p>The urban design and landscape plan would not include the WHT13 site. The future use and rehabilitation of the WHT13 site at the completion of the Project would be agreed upon with the landowner.</p>	– The preparation of this PDLP aligns with the strategic urban design framework for the Project, and it will undergo consultation with the community before finalisation and submission for DPE approval. The PDLP does not include the WHT13 site.

Table 2: Revised Environmental Management Measures

1.7 Stakeholder engagement

The PDLP builds on the extensive engagement undertaken for the project's Environment Impact Statement and subsequent Modification for the Tunnel Boring Machine solution. Together Transport for NSW and ACCIONA are committed to working with the community throughout all stages of the project. The PDLP has been prepared for our community and provides an important plan for us to engage and gather feedback from North Sydney and Inner West Councils and the community, including landowners and businesses directly impacted or close to the Project. The feedback received during this consultation period will be reviewed and incorporated into the plan where possible.

Transport for NSW and ACCIONA will engage with community and stakeholders and encourage feedback on the PDLP by:

- Distributing community update
- Website update
- Community information sessions
- Email to registered subscribers
- Advertising on social and traditional media.

It is important to note that certain technical specifications, such as the size of the ventilation outlet, the height of noise barriers, lighting standards, and the reflectivity index of the tunnel panels, remain immutable. These parameters represent minimum standards critical to the operational integrity of the Project and are thus not open to modification.

1.7.1 Consultation with Transport for NSW

The design team and representatives from Transport for NSW have collaborated throughout the design development in formal consultation. Stakeholder consultations with Transport for NSW took place on the following dates:

- 01/05/2023
- 01/06/2023
- 12/09/2023

1.7.2 Consultation with North Sydney Council

Surface works for WHT are occurring only within the boundary of North Sydney Council. North Sydney Council representatives were present and provided feedback at each SDRP session. The feedback, along with the inputs by Council during the WFU design process, have been considered and integrated into the design.

1.7.3 Consultation with local Knowledge Holders

Under the advice of Cultural Capital, cultural facilitator Kyra Kum-Sing was engaged and endorsed by the Metropolitan Local Aboriginal Land Council, who is a key stakeholder for this project. Kyra then identified a group of three Indigenous representatives. These Knowledge Holders consulted closely with the appointed artist who produced artwork for the tunnel. The artist and Knowledge Holders were part of a consultative co-design process with project architects.

[Section 3.5](#) and [Section 3.4](#) outline the consultation process and outcomes.

1.7.4 Consultation with the community

The PDLP will undergo community consultation following the SDRP process. An extensive engagement program will be undertaken to promote the exhibition and ensure a better understanding of the PDLP. This includes:

- Publishing of the PDLP on the Project's website
- Virtual presentations for key stakeholder groups
- One-on-one virtual Q&A sessions for the community, allowing them to interact with subject matter experts

Responses to PDLP Consultation

The received consultation submissions and feedback will be carefully considered and feedback will be incorporated into the plan, where feasible before being submitted to DPHI for approval. All the consultation records, including responses to submissions, will be documented in the PDLP Consultation Report, appended to the final PDLP.



Figure 7: Photos from the Connecting with Country workshops

1.7.5 State Design Review Panel

An SDRP was established to offer guidance and advice during the detailed design phase and the preparation of the PDL, as required by MCoA clauses E164 to E176. The Panel membership was carried through from the Warringah Freeway Upgrade project, as both projects fall under the same approval. The SDRP's responsibilities encompass providing advice and recommendations for the development of the PDL, as required by Condition E177. Additionally, the Panel has provided advice on how the objectives apply to key design elements such as placemaking, architecture, heritage, urban and landscape design, and artistic aspects of this Critical State Significant Infrastructure (CSSI) project.

Consultations with the SDRP took place on the following dates before the PDL was released for public display:

- SDRP 1 - 18/05/2023
- SDRP 2 - 20/07/2023
- SDRP 3 - 21/09/2023
- SDRP 4 - 28/03/2024.

Attendees included representatives of Acciona, DesignInc and Cultural Capital, and North Sydney Council.

Design review items

The Panel was provided with comprehensive presentations on different aspects of the project during key stages of design development. Each design review session focused on the following main items related to the project.

- SDRP 1
 - Project scope and context
 - Tender design resolution
 - NSW GA and Project Design Objectives
 - Guiding Principles
 - SWTC and Co-Design Process
 - Key Opportunities
 - Alignment Analysis
 - Key Packages
 - Design Development
 - Tunnel Alignment
 - Tunnel Portals
 - Cammeray Facilities
 - Cammeray Park + Ernest Street Bridge
 - Interior Fit-outs
- SDRP 2
 - Connecting with country
 - Tunnel portals
 - Cammeray ventilation building and ventilation outlet
 - Cammeray Park
 - Ernest Street Bridge
 - Removal of Beaches Link components
- SDRP 3
 - Cammeray ventilation building and ventilation outlet design refinement
 - Cammeray Park
 - Integration of artworks
 - Ernest Street Bridge
 - Lighting of tunnels and ventilation facilities
- SDRP 4
 - New public park on Beaches Link land
 - Creative and design work led by the Aboriginal Artist
 - Refinements of ventilation outlet and compound
 - Tunnel interiors
 - Cammeray ventilation building and ventilation outlet design refinement

Outcomes of design review process

A comprehensive record of all consultations, including responses to submissions, is documented in the Consultation Report. The following are the key commentary from the SDRP:

- Where possible reduce the scale and size of both the ventilation outlet and compound. Minimise the material language and number of treatments
- Develop a coherent relationship between the landscape and the buildings
- Working closely with the First Nations consultant is critical to ensuring the development of a coherent and unique project
- Celebrate moving into the tunnel, under the harbour, and up again
- Consider perforations on the bridge and ensure the ventilation outlet works in with the bridge designs
- Develop the concept of three boulders for the ventilation building, so they have a better balance of colour, size and rhythm
- The lighting of the ventilation, facility and tunnels are essential to ensuring a strong outcome for the project. Ensure there is sufficient budget to install appropriate lighting and that there is a good lighting designer on the project to bring the design ideas into life
- Consider the desire lines of the park in relation to the golf course for Cammeray Park design. Ensure pedestrians are protected from any short cuts that cyclists may take across the park
- Ensure the experience of moving through the tunnel is singular and coherent and not ruptured by inconsistent material, type, patterns, lighting or signage.

The advice and commentary from the Panel primarily guided the refinement of design details particularly of Cammeray facilities, ESB and Cammeray Park including:

- Reduction of mass for CVB and CVS and refinement of façade to reduce perceived bulk
- Emphasis on Terrestrial Country concept on design process
- Revised lighting strategy
- All tunnel events to have Aboriginal artworks for a unified experience defined by Indigenous story telling.