



Circular Quay Renewal

July 2023

Transport for NSW



Acknowledgement of Country

Transport for NSW acknowledges the Gadigal as the traditional custodians of the land on which the Circular Quay Renewal is proposed.

We pay our respects to Gadigal Elders past and present and celebrate the diversity of Aboriginal people and their ongoing cultures and connections to the lands and waters of NSW.

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

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



Connecting with Country Statement

Circular Quay Renewal acknowledges that Warrane, now known as Circular Quay, sits within the lands and waterways of the Gadigal.

Through this acknowledgement, Circular Quay Renewal identifies that there is a way of identifying with, understanding and connecting to this place that draws on experiences and ways of being that date back millennia.

The challenge set out in the Warrane/ Circular Quay Renewal cultural principles, to ensure Aboriginal connection, visibility and agency, offers new and exciting opportunities to match the world class aspirations for this place. This moves away from traditional approaches that embed a limited Aboriginal cultural element, to fully exploring new ways of understanding and connecting to place and country across the broad range of elements within the renewal.


“A core strength and value of Aboriginal culture is centred on a unique worldview that draws on the experiences and cultural continuity of a connection to country. In embracing and valuing this worldview, greater focus needs to be placed on the uniqueness of the “Aboriginal voice”, not only on its validity, but also on the importance it brings to an understanding of place”. - Cultural Framework for the renewal.

Transport for NSW is committed to honouring Aboriginal peoples’ cultural and spiritual connections to the land and waters of Warrane.



Document control

Approval and authorisation

Title	Circular Quay Renewal - Scoping Report
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Glossary of terms and abbreviations

Term	Meaning
AEP	Annual Exceedance Probability
AHD	Australian Height Datum
AHIMS	Aboriginal Heritage Information Management System
ANZECC	Australian and New Zealand Environment and Conservation Council
ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
CBD	Central Business District
CPTED	Crime Prevention Through Environmental Design
DDA	<i>Disability Discrimination Act 1992 (Cth)</i>
DSAPT	<i>Disability Standards for Accessible Public Transport 2002 (Cth)</i>
DPE	Department of Planning and Environment (NSW)
DPIE	[Former] NSW Department of Planning, Industry and Environment
EIS	Environmental Impact Statement A detailed examination of a proposal and its local environmental context prepared in accordance with the requirements of Division 5.2 of the <i>Environmental Planning and Assessment Act 1979</i> .
EP&A Act	<i>Environmental Planning and Assessment Act 1979 (NSW)</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>
LEP	Local Environmental Plan
LGA	Local Government Area
NHL	National Heritage List
NSW	New South Wales
NARClIM	NSW and ACT Regional Climate Modelling
OPT	Overseas Passenger Terminal
Proponent	A person or body proposing to carry out an activity under Part 5 of the EP&A Act
The Project	The renewal of Warrane / Circular Quay including Circular Quay Station, ferry wharves, the promenade and First Fleet Park.
Reclaimed land	The process of creating new land from the sea, generally by filling the area with large amounts material until the desired height is reached.
SCRA	Sydney Cove Redevelopment Authority
SEARs	Secretary's Environmental Assessment Requirements
Sensitive receivers	Land uses which are sensitive to potential noise, air and visual impacts such as residential dwellings, schools and hospitals. Sensitive receivers are users or occupants of these land uses.
SEPP	State Environmental Planning Policy
SHR	State Heritage Register
SPS	Sewage Pumping Station
SSI	State Significant Infrastructure

Term	Meaning
Study area	Two kilometres radius of the Project area
Transport	Transport for New South Wales
Warrane	Gadigal name for Sydney Cove within which Circular Quay sits
WHL	World Heritage Listing

Summary

What is proposed and why is it needed?

Transport for NSW (Transport) is proposing to renew Warrane / Circular Quay's transport interchange and surrounding public spaces, also known as Circular Quay Renewal.

The Project includes the following key features:

- replacement of the existing wharves, including Wharf 1, with new accessible wharves
- replacement and widening of the southern promenade
- upgrades to Circular Quay Station, including new escalators and lifts
- replacement of operational facilities, including new staff amenities
- new built form to the east and west of the existing station
- renewal of First Fleet Park
- new and upgraded public amenities including provision for retail uses.

Warrane / Circular Quay is the symbolic gateway to Sydney's world-famous harbour and city, a significant transport interchange and a place with deep cultural and historical significance for all Australians.

The key objectives of the Project are to:

- create a vibrant and accessible place with a unified identity that is well integrated into the transport interchange
- improve the passenger and visitor experience
- meet the existing and future public transport demand and ensure that journeys to and from Warrane / Circular Quay are easy, accessible, comfortable and safe
- achieve innovative, sustainable and sophisticated design solutions that befit Warrane / Circular Quay's spectacular location
- realise opportunities that support and grow the local and tourist economy by further activating the Warrane / Circular Quay Project area
- provide value for money to the NSW Government.

The Project is located on Gadigal Country, within Warrane, the Gadigal name for Sydney Cove. The Project provides an opportunity for the NSW Government to demonstrate their commitment to Connecting and Designing with Country in one of Australia's most historically significant sites.

What is the approval process?

Transport, as the Proponent, is seeking to have the Project declared to be State Significant Infrastructure (SSI) as specified development on specified land under section 5.12(4) of the *Environmental Planning and Assessment Act 1979* (EP&A Act). This would require Schedule 4 of the *State Environmental Planning Policy (Planning Systems) 2021* to be amended to include Circular Quay Renewal as SSI. The Project would be subject to assessment and approval by the NSW Minister for Planning under Part 5, Division 5.2 of the EP&A Act.

What are the main community and stakeholder views?

The NSW Government has been consulting with stakeholders and the community on the future of Warrane / Circular Quay since 2013. This consultation has influenced decision making and the Project's strategic direction in key areas that are summarised in Table 0-1.

Table 0-1 Stakeholder and community consultation

Year	Purpose	Consultation outcomes	How it has influenced the Project
2013	Community consultation to ask people about their experiences of Warrane / Circular Quay and hopes for its future.	Warrane / Circular Quay holds a special place in many people's lives and is a place of wonderful memories and experiences. Shelter, food and facilities were important to people.	Contributed to the development of the Project Vision Statement.
2017 - 2019	Passenger and visitor research to understand what people like and what improvements they want at Warrane / Circular Quay	While people appreciate Warrane / Circular Quay, they are disappointed by the experience and public spaces. Critical challenges identified around wayfinding and access to services and information.	Contributed to the Visitor and Customer Experience Framework.
2020 - 2021	Early community consultation to raise awareness of the Project, provide an opportunity for early community input into the development of designs and ideas for the Project, as well as to identify early issues and concerns.	Warrane / Circular Quay is a much-loved place in Sydney. People would like to see improved public spaces, amenity and a better experience.	Contributed to the development of early designs.
2022	Briefings to key stakeholders on the pre-concept design to identify issues, prepare for community/broader consultation and to inform the statutory planning process.	Key stakeholders are supportive of the proposed renewal.	Feedback informs future design and consultation activities.
January 2023	Relaunch the pre-concept design to build awareness about the renewal and prepare the community for upcoming consultation.	The general community sentiment is very positive. People would like more information about the key project features and timing of the renewal.	Feedback informs future design and consultation activities.

What is the scope of the environmental impact statement?

The purpose of this scoping report is to assist the preparation of environmental assessment requirements by the Planning Secretary of the Department of Planning and Environment (SEARs) under section 5.16 of the EP&A Act. The outcomes of the preliminary environmental investigations indicate that the following matters will require further assessment:

- built environment and amenity
- Aboriginal heritage
- historic heritage
- access
- social
- terrestrial flora and fauna
- aquatic flora and fauna
- water quality
- hydrology and flooding
- hazards, risk and land
- noise and vibration
- air
- coastal hazards
- waste
- climate resilience
- sustainability
- public land and private property
- cumulative impacts.

After receiving the SEARs, Transport will prepare an EIS for public exhibition, in accordance with the requirements of Division 5.2 of the EP&A Act and the Department of Planning and Environment's State Significant Infrastructure and State Significant Project Guidelines (SSI Guidelines). The EIS will include but not be limited to:

- a detailed description of the Project including its components, construction activities and potential staging
- a comprehensive assessment of the potential impacts of the Project including a description of the existing environment and assessment of potential direct, indirect and cumulative impacts
- a description of measures and strategies to be implemented to avoid, minimise, manage, mitigate, offset and/or monitor the potential impacts
- identification and response to issues raised by stakeholders and the community
- a justification and evaluation of the Project as a whole, having regard to its economic, environmental and social impacts, and the principles of ecologically sustainable development.

1. Introduction and background

1.1 Proponent

Transport for NSW
231 Elizabeth Street, Sydney NSW 2000
ABN: 18 804 239 602

1.2 Overview of the Project

Transport for NSW (Transport) is proposing to renew Warrane / Circular Quay's transport interchange and surrounding public spaces, also known as Circular Quay Renewal (the Project). The Project is located on Gadigal Country within the City of Sydney Local Government Area.

The Project includes the following key features:

- replacement of the existing wharves, including Wharf 1, with new accessible wharves
- replacement and widening of the southern promenade
- upgrades to Circular Quay Station, including new escalators and lifts
- replacement of operational facilities, including new staff amenities
- new built form to the east and west of the existing station
- renewal of First Fleet Park
- new and upgraded public amenities including provision for retail uses.

The Project area is shown Figure 1-1. The design is described in more detail in Chapter 5, and will continue to evolve through the design development, consultation and environmental assessment process. Renewal within the Project area must be integrated with the surrounding areas to create a cohesive public domain. An 'area of integration' has been identified where some Project work may be integrated into existing public domain (such as footpaths and paving).

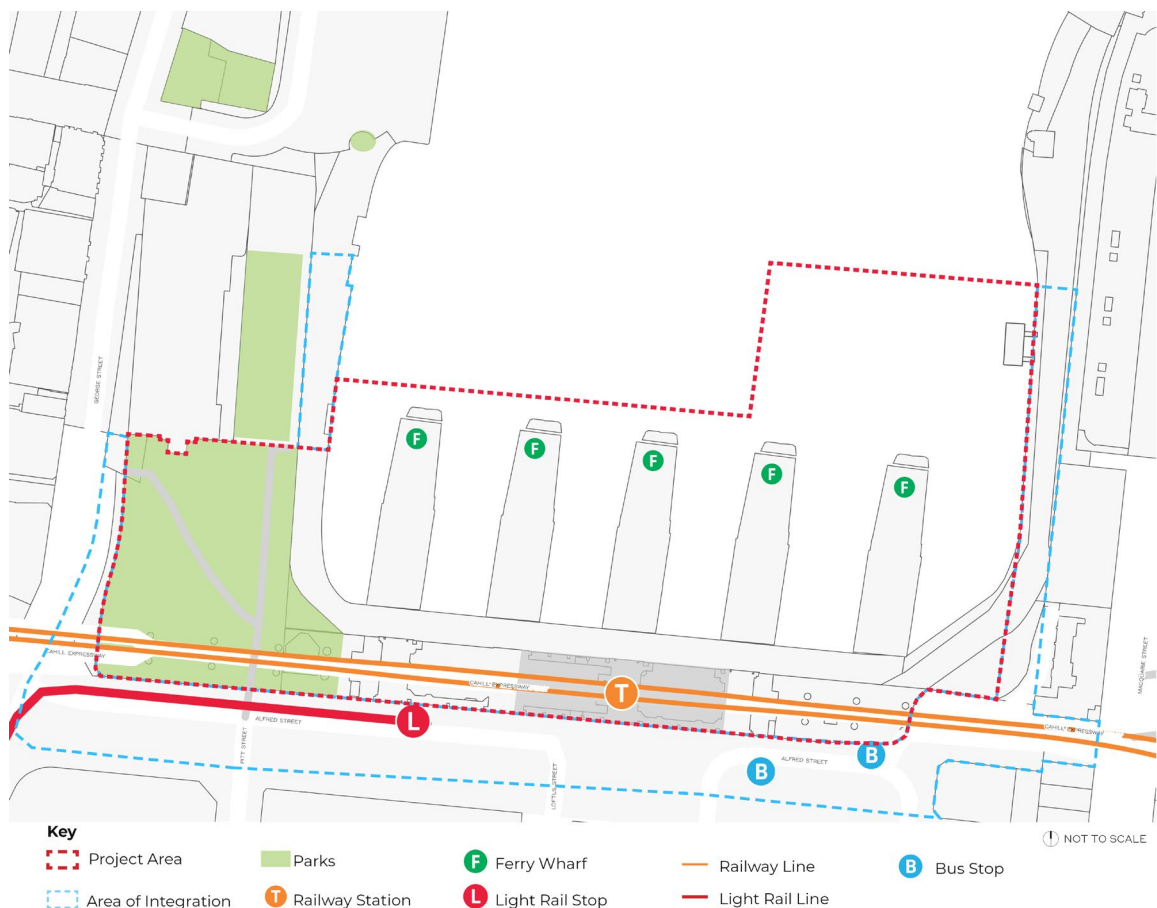


Figure 1-1 Project area
Source: Ethos Urban

This Project is being developed in accordance with Transport's Sustainability Plan and Environment and Sustainability Policy. Avoiding and minimising impact is a key objective of the Project.

1.3 Project objectives

The key objectives of the Project are to:

- create a vibrant and accessible place with a unified identity that is well integrated into the transport interchange
- improve the passenger and visitor experience
- meet the existing and future public transport demand and ensure that journeys to and from Warrane / Circular Quay are easy, accessible, comfortable and safe
- achieve innovative, sustainable and sophisticated design solutions that befit Warrane / Circular Quay's spectacular location
- realise opportunities that support and grow the local and tourist economy by further activating the Warrane / Circular Quay Project area
- provide value for money to the NSW Government.

These objectives will continue to be refined as the Project develops further.

1.4 Project background

Transport is leading the renewal of Warrane / Circular Quay in consultation with the Department of Planning and Environment (DPE), the City of Sydney and other government agencies.

Despite Warrane / Circular Quay's role as the gateway to Sydney, its interchange and public spaces have seen limited investment or accessibility improvements for a long time. Visitors to Warrane / Circular Quay treat the space largely as a thoroughfare rather than a place to stay and enjoy.

In 2015, the NSW Government announced that \$200 million would be reserved to upgrade the Warrane / Circular Quay ferry wharves and promenade in recognition of the need to provide renewed transport assets.

In 2016, the renewal of the transport assets was integrated with public domain and commercial opportunities so the renewal of Warrane / Circular Quay could be undertaken as a precinct-wide approach. Transport and the NSW Government Architect worked together with stakeholders to identify challenges and opportunities in the precinct. Background studies and research were also undertaken to inform decision making and a proposed design and delivery model involving the private sector.

The NSW Government has engaged the expertise and capability of both government and the private sector to co-develop potential options to renew Warrane / Circular Quay since 2018.

The Project will deliver an improved transport interchange, public domain and upgraded amenities to reflect the need to provide renewed assets.

1.5 Related development

1.5.1 State-led rezoning

A rezoning process is being undertaken concurrently with the State significant infrastructure (SSI) process for the Project, which seeks new or updated planning controls outside the SSI planning pathway.

The State-led rezoning process allows DPE to guide development and ensure the proposed new elements of built form are consistent with the statutory planning controls.

DPE will issue rezoning planning study requirements that will guide Transport's investigations into proposed new or updated planning controls for Warrane / Circular Quay. Transport will prepare a detailed planning study that outlines the proposed planning controls and this is proposed to be placed on public exhibition for community and stakeholder feedback at a similar time to the EIS.

1.6 Purpose and structure of this scoping report

Transport has prepared this scoping report to support a SSI application under section 5.15 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and having regard to the DPE SSI Guidelines including preparing a scoping report - Appendix A to the SSI Guidelines.

The proposed planning pathway for the Project is specified development on specified land under section 5.12(4) of the EP&A Act. Refer to Chapter 2 for more information on the approval framework.

The purpose of this scoping report is to assist the preparation of environmental assessment requirements by the Planning Secretary of DPE under section 5.16 of the EP&A Act.

The structure of the scoping report is outlined in Table 1-1.

Table 1-1 Structure of this report

Chapter	Description
Chapter 1	Introduction and background (this chapter) Provides a broad overview of the Project, relevant background and history and summarises any related development.
Chapter 2	Approval framework Provides an overview of the statutory context and approval process.
Chapter 3	Strategic context and need Provides the strategic context and need for the project.

Chapter	Description
Chapter 4	Selection of the preferred project Describes the alternatives and options considered and identifies the preferred project.
Chapter 5	Project description Provides a description of the project including key design, construction, and operational features.
Chapter 6	Community and stakeholder engagement Provides an overview of the stakeholder engagement process that has been carried out for the Project to date, identifies key stakeholders and the consultation approach proposed during preparation of the EIS.
Chapter 7	Proposed assessment of impacts Identifies the matters requiring further assessment in the EIS and the proposed approach to assessing each of these matters.
Chapter 8	Conclusion Provides a conclusion and summarises the next steps for the Project.
Chapter 9	References
Appendix A	Scoping summary table

2. Approval framework

An overview of the key statutory requirements for the Project are provided in Table 2-1. An approvals process flowchart under Part 5, Division 5.2 of the EP&A Act and the Project status is shown in Figure 2-1.

Table 2-1 Statutory requirements for the Project

Matter	Discussion
Power to grant approval	<p>Division 5.2 of the EP&A Act establishes the planning pathway to approve State Significant Infrastructure.</p> <p>The Minister for Planning may approve the carrying out of SSI (section 5.19 of the EP&A Act).</p>
Permissibility	<p>Transport is seeking to have the Project declared to be SSI as specified development on specified land under section 5.12(4) of the EP&A Act. This would require Schedule 4 of the <i>State Environmental Planning Policy (Planning Systems) 2021</i> (Planning Systems SEPP) to be amended to include the Circular Quay Renewal as SSI. The Project would be subject to assessment and approval by the Minister for Planning under Part 5, Division 5.2 of the EP&A Act.</p> <p>Development for the purpose of wharf or boating facilities, including associated public transport facilities, may be carried out by or on behalf of a public authority without consent under Division 13 (clause 2.80(4)) of the <i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i>.</p> <p>Schedule 3, clause 2 of the Planning Systems SEPP declares development for the purpose of port and wharf facilities or boating facilities (not including marinas) by or on behalf of a public authority that has a capital investment value of more than \$30 million to be SSI.</p> <p>The operation of clause 2.13(2) of the Planning Systems SEPP means the remainder of the development (except so much of the remainder as is State Significant Development or as the Secretary determines is not sufficiently related to the State Significant Infrastructure) may be carried out without development consent and is also declared to be State Significant Infrastructure.</p>
Other approvals – Approvals that should be substantially consistent with the approved Project	<p>Section 5.24(1) of the EP&A Act provides a number of approvals that are to be applied consistently to approved SSI Projects. The following approvals listed under section 5.24(1) may be relevant to the Project, subject to further design refinement:</p> <ul style="list-style-type: none"> • An environment protection licence under Chapter 3 of the <i>Protection of the Environment Operations Act 1997</i>. • A consent under section 138 of the <i>Roads Act 1993</i>. • An aquifer interference approval under the <i>Water Management Act 2000</i>.
Other approvals – Approvals that are not required for the approved Project	<p>Section 5.23(1) of EP&A Act provides a number of approvals that are not required for approved SSI projects. Approvals that may be required to carry out the SSI, if not for Section 5.23 of the EP&A Act, include:</p> <ul style="list-style-type: none"> • A permit under section 201, 205 or 219 of the <i>Fisheries Management Act 1994</i>. • An approval under Part 4, or an excavation permit under section 139, of the <i>Heritage Act 1977</i>. • An Aboriginal heritage impact permit under section 90 of the <i>National Parks and Wildlife Act 1974</i>. • A water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the <i>Water Management Act 2000</i>. <p>In addition, under section 5.23(2) of the EP&A Act, Division 8 of Part 6 of the <i>Heritage Act 1977</i> does not apply to prevent or interfere with the carrying out of approved SSI projects.</p>
Other approvals – <i>Environment Protection and Biodiversity Conservation Act 1999</i>	<p>The Project is not anticipated to have a significant impact on any Matters of National Environmental Significance under the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act). However, as the Project is within the World Heritage buffer zone of the Sydney Opera House (a Matter of National Environmental Significance), a Referral will be made to the Commonwealth Minister for the Environment via the Department of Climate Change, Energy, the Environment and Water to confirm whether an approval will be required under the EPBC Act.</p>

Matter	Discussion
Other approvals – Other NSW and/or Commonwealth legislation	<p>The <i>Aboriginal and Torres Strait Islander Heritage Protection Act 1984</i> (Cth), <i>Native Title Act 1993</i> (Cth), and <i>Aboriginal Land Rights Act 1983</i> (NSW) may apply to contemporary Aboriginal cultural property, ancient sites, and other Indigenous rights and interests.</p> <p>The <i>Native Title Act 1993</i> recognises and protects native title. Searches of the registers maintained by the National Native Title Tribunal indicate there are no native title claims or any indigenous land use agreements that apply to the Project area.</p>
Other approvals – Other NSW and/or Commonwealth legislation	<p>The <i>Disability Discrimination Act (DDA) 1992</i> (Cth) aims to eliminate as far as possible, discrimination against persons on the grounds of disability in areas including access to premises and the provision of facilities, services and land.</p> <p>The Project seeks to upgrade the ferry wharves, Circular Quay Station and public domain to ensure it is DDA compliant. Assessment against the relevant accessibility requirements will be undertaken as part of the EIS.</p>
Pre-conditions to exercising the power to grant approval	<p>Section 5.19(1) of the EP&A Act provides that:</p> <p>(1) If -</p> <p>(a) the proponent makes an application for the approval of the Minister under this Division to carry out State significant infrastructure, and</p> <p>(b) the Planning Secretary has given his or her report on the State significant infrastructure to the Minister, the Minister may approve or disapprove of the carrying out of the State significant infrastructure.”</p>
Mandatory matters for consideration	<p>Section 5.26(2) of the EP&A Act provides that “[t]he only requirement of this Division that is mandatory in connection with the validity of an approval of State significant infrastructure is a requirement that an environmental impact statement with respect to the infrastructure is made publicly available under this Division.”</p> <p>Section 7.9 of the <i>Biodiversity Conservation Act 2016</i> (BC Act) provides that any application under Division 5.2 of the EP&A Act for SSI must be accompanied by a biodiversity development assessment report (BDAR) unless the Planning Agency Head and the Environment Agency Head from DPE determine that the proposed development is not likely to have any significant impact on biodiversity values. A BDAR Waiver Request, under section 7.9(2) of the BC Act and the associated guidelines, has been prepared to accompany this scoping report.</p>

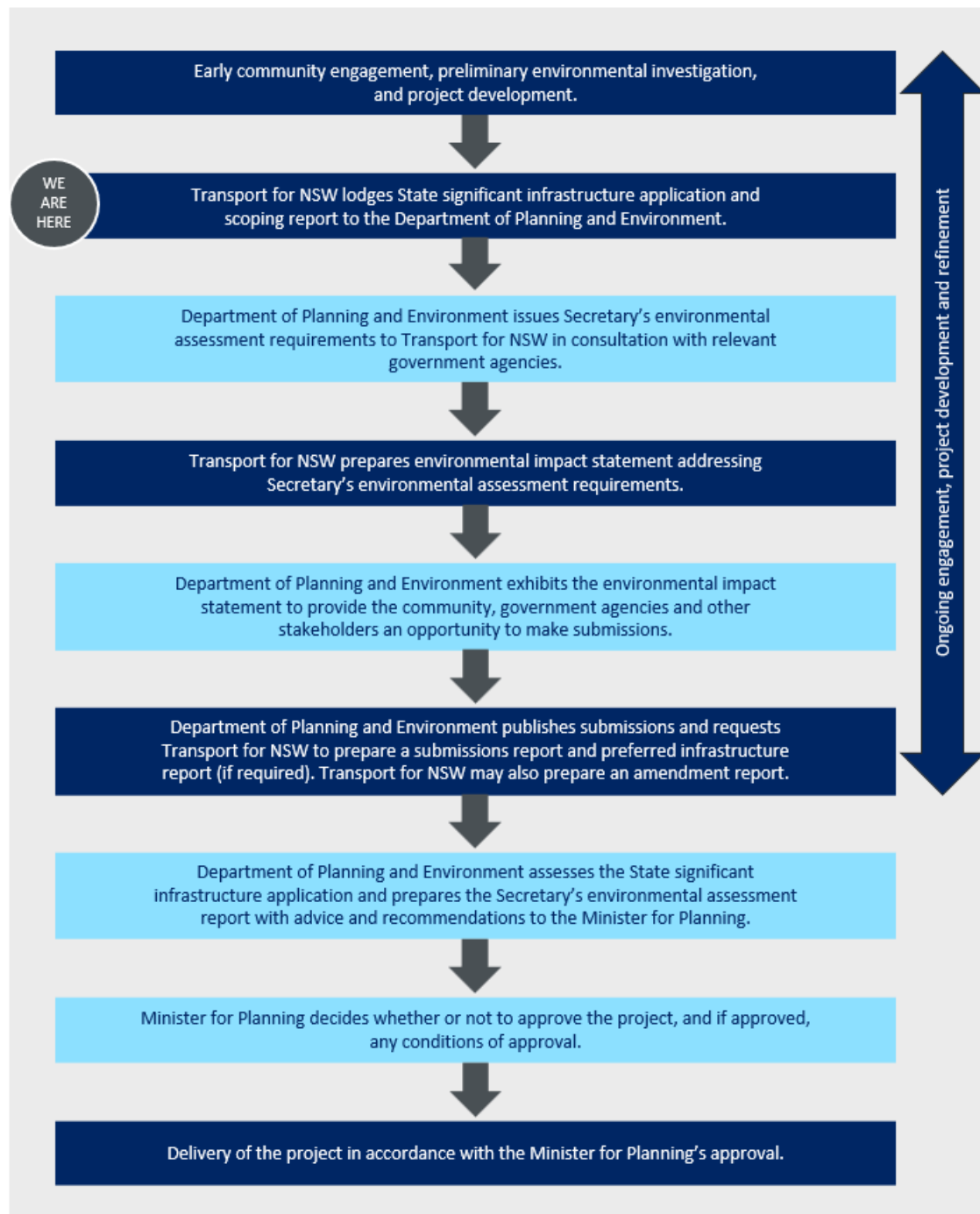


Figure 2-1 Approvals process flowchart under Part 5, Division 5.2 of the EP&A Act
Source: *State Significant Infrastructure Guidelines* (DPE, 2021)

3. Strategic context and need

3.1 Strategic planning and policy framework

Table 3-1 provides a discussion on the relevant strategic planning and policy framework that supports the Project.

Table 3-1 Relevant strategic planning and policy framework for the Project

Policy	Project consistency
A Metropolis of Three Cities: Greater Sydney Region Plan	<p>The Greater Sydney Region Plan (Greater Sydney Commission, 2018a) (the Region Plan) sets a 40-year vision and establishes a 20-year plan to manage growth and change for Greater Sydney in the context of social, economic and environmental considerations. It informs district and local plans, the assessment of planning proposals, and assists infrastructure agencies to plan and deliver for growth and change. The Regional Plan is underpinned by ten directions for delivering integrated planning. The Project objectives align with the following directions outlined in the Region Plan:</p> <ul style="list-style-type: none"> • a city supported by infrastructure • a collaborative city • a city for people • a city of great places • a well-connected city • jobs and skills for the city • a city in its landscape • an efficient city • a resilient city. <p>The Project will make a more accessible, resilient and efficient precinct by improving the transport interchange. The renewal will also improve the passenger and visitor experience.</p>
Eastern City District Plan	<p>The <i>Eastern City District Plan</i> (Greater Sydney Commission, 2018b) identifies renewal of Warrane / Circular Quay under Planning Priority E7: <i>Growing a stronger and more competitive Harbour CBD</i>, acknowledging that the renewal will stimulate the day and night-time economies through a mix of land uses based on place-based planning principles. Planning Priority E10: <i>Delivering integrated land use and transport planning and a 30-minute city</i> acknowledges that the Project will revitalise the ferry wharves and the transport interchange.</p>
Future Transport Strategy	<p>The <i>Future Transport Strategy</i> (Transport for NSW, 2022) (the Strategy) sets the strategic directions for Transport to achieve world-leading mobility for customers, communities, businesses and people, outlining Transport's direction for investment, services and policy. The Strategy is based on delivering three core outcomes:</p> <ul style="list-style-type: none"> • connecting our customer's whole lives • successful places for communities • enabling economic activity. <p>The Project aligns with these principles by seeking to create a more successful passenger and visitor experience in Warrane / Circular Quay, stimulating the day and night-time economy. The renewal will also provide greater accessibility and capacity in the precinct, while creating a more cohesive and enjoyable place.</p>
Tourism Transport Plan 2018	<p>The <i>Tourism Transport Plan</i> (Transport for NSW, 2018) recognises the potential for transport to support and enhance existing tourism and provides a framework of customer outcomes to guide the work of the NSW Transport cluster over the next ten years. These outcomes include</p> <ul style="list-style-type: none"> • enhancing the visitor experience • greater access to more of NSW • making transport the attraction • a seamless experience. <p>The Project intends to provide these outcomes through improving access to transport information and services, as well as the quality of the overall transport experience. The Project extends beyond the transport infrastructure to upgrade surrounding areas and provide for future retail, dining, and entertainment</p>

Policy	Project consistency
	attractions. It will incorporate heritage values and tourism needs for a more seamless experience.
State Infrastructure Strategy 2022-2042	<p>The <i>Staying Ahead: State Infrastructure Strategy 2022 – 2042</i> (Infrastructure NSW, 2022) (the State Infrastructure Strategy) sets out the NSW Government’s priorities for the next 20 years and brings together infrastructure investment and land-use planning for the cities and regions of NSW. The State Infrastructure Strategy is framed around nine objectives, each outlining key challenges and opportunities faced by NSW, and providing a set of strategic directions to inform priorities. The Project supports and aligns with the goals of the State Infrastructure Strategy, specifically with the following objectives:</p> <ul style="list-style-type: none"> • embed reliability and resilience through providing a renewed First Fleet Park, additional landscaping and by using resources wisely to improve efficiency • integrate infrastructure, land use and service planning through consideration of the needs of all users including workers, passengers, nearby residents, tourists, commuters and visitors.
Connecting with Country Draft Framework	<p>The <i>Connecting with Country Draft Framework</i> (Government Architect, 2020a) (the Draft Framework) is a framework for developing connections with Country that can inform the planning, design, and delivery of built environment projects. The Draft Framework outlines two strategies, pathways for connecting and considering Project life cycles with an Aboriginal perspective.</p> <p>The Project intends to uphold this framework by ensuring that Aboriginal agency is embedded throughout the whole project lifecycle including design development, construction and operation.</p>
Sustainable Sydney 2030-2050 City Plan 2036	<p>Both <i>Sustainable Sydney 2030-2050: Continuing the vision</i> (City of Sydney, 2022a) and <i>City Plan 2036: Local Strategic Planning Statement</i> (City of Sydney, 2020), provide a set of goals to achieve the City of Sydney’s vision of a green, global and connected city. The vision acknowledges that sustainable development includes the physical environment, as well as the economy, society and culture. The Planning Statement sets out the 20-year vision for land use planning in the city, and the planning context, priorities, actions, governance and monitoring needed to achieve this vision.</p> <p>Green</p> <p>The Project aims to have net zero carbon emissions during construction and operation, with a sustainability strategy that is aligned with the United Nations Sustainable Design Goals. Urban ecology will be improved by introducing primarily native tree species and soft landscaping throughout the public domain. Climate change resilience is a key priority of the Project.</p> <p>Global</p> <p>The Project aims to improve the passenger and visitor experience in Australia’s most visited tourist precinct, by providing better access to cultural offerings and creating improved public spaces.</p> <p>Connected</p> <p>The Project will improve connectivity between transport modes, wayfinding, and pedestrian amenity in Warrane / Circular Quay. The renewal will be designed to support forecast growth in public transport use and tourism.</p>

Policy	Project consistency
Central Sydney Planning Strategy 2016-2036	<p>The <i>Central Sydney Planning Strategy 2016-2036</i> (City of Sydney, 2022b) (the Planning Strategy) provides a 20-year growth strategy that revises previous planning controls and delivers on the City of Sydney's <i>Sustainable Sydney 2030</i> (City of Sydney, 2022a) program for a green, global and connected city. The Planning Strategy aims to facilitate the projected growth in Central Sydney with 10 key moves, five of which have direct relevance to the Project:</p> <ul style="list-style-type: none"> • ensure development responds to context • ensure infrastructure keeps pace with growth • protect, enhance and expand Central Sydney's heritage and public places • move people more easily • reaffirm commitment to design excellence. <p>The Project will deliver strengthened infrastructure to support the city's needs, enhance public places in the area, as well as prioritising accessibility and movement of people throughout the area.</p>

3.1.1 Relevant environmental planning instruments

The following are key statutory planning instruments that apply to the Project and Project area.

Sydney Local Environmental Plan 2012

The *Sydney Local Environmental Plan 2012* guides the planning decisions for the City of Sydney Local Government Area via zoning and development controls. The majority of the foreshore and promenade is zoned as Public Recreation (RE1), with a small area at Warrane / Circular Quay east zoned as Metropolitan Centre (B8). Wharves 2 to 6 and the railway station are zoned as Infrastructure (SP2).

As the Project will be SSI and will be assessed under Part 5 of the EP&A Act, the provisions of the *Sydney Local Environmental Plan 2012* do not apply (see section 5.22(2) EP&A Act), but will be considered as part of the EIS.

Sydney Cove Redevelopment Authority Scheme

The Sydney Cove Redevelopment Authority (SCRA) Scheme was prepared under the former *Sydney Cove Redevelopment Authority Act 1968* and is a deemed State Environmental Planning Policy (SEPP) by virtue of Schedule 1, clause 29 of the *Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017* (NSW). The SCRA is the relevant planning framework for development in the western area of the Project area including First Fleet Park. Land identified under the scheme is not the subject of a local environmental plan.

As the Project will be SSI and will be assessed under Part 5 of the EP&A Act, the provisions of the SCRA Scheme do not apply but will be considered as part of the EIS.

State Environmental Planning Policy (Biodiversity and Conservation) 2021

The *State Environmental Planning Policy (Biodiversity and Conservation) 2021* aims to protect the biodiversity values of trees and other vegetation in non-rural areas, water catchments and koalas. Part 6.4 Heritage conservation in Sydney Harbour applies to the Project area and seeks to protect the foreshores, waterways and islands of Sydney Harbour and identifies the ferry wharves as an item of State heritage significance. Introduced in late 2021, it replaced the previous and now repealed, *State Regional Environmental Plan (Sydney Harbour Catchment) 2005*.

The Project is not anticipated to have a significant impact on biodiversity, ecology and the environment as it is located in an area of modified environments, largely dominated by built structures.

State Environmental Planning Policy (Precincts – Eastern Harbour City) 2021

The *State Environmental Planning Policy (Precincts – Eastern Harbour City) 2021* contains planning provisions for precincts within the Eastern Harbour City. Of relevance, it carries over the provisions of the now repealed *State Environmental Planning Policy (State Significant Precincts) 2005* which related to the Sydney Opera House.

The Project area is located within the buffer zone of the World Heritage listed Sydney Opera House which is a Matter of National Environmental Significance (MNES) as discussed in Chapter above.

3.2 Project need

Warrane / Circular Quay is one of Australia's most recognized places, attracting 17 million visitors each year. It is also a critical transport interchange with over 58 million trips to and from the area per year. The number of visitors is anticipated to grow significantly in coming decades. Despite Warrane / Circular Quay's role as the gateway to Sydney, its interchange and public spaces have seen limited investment for a long time. Warrane / Circular Quay faces three key challenges:

1. **Ageing and non-compliant infrastructure creating safety and accessibility issues:** Significant parts of Warrane / Circular Quay, such as the wharves and promenade, are not compliant with the accessibility requirements of the *Disability Discrimination Act 1992*. Some assets are nearing the end of their design life, with significant maintenance costs that are expected to increase as assets continue to age and deteriorate. Some assets are also at or reaching capacity, no longer meet the relevant standards and are limiting growth in the area.
2. **The quality of the space and offerings do not match the significance of the area:** Research has shown that the amenity of Warrane / Circular Quay contributes to a poor visitor experience through confusing wayfinding, limited visual connections between landmark locations and underutilised spaces. There is a disjointed approach to design, wayfinding and the public domain.
3. **Limited, contested and disconnected spaces:** Warrane / Circular Quay is one of the busiest interchanges in Sydney, with over 250,000 trips on a busy summer Sunday. Limited space, conflicting pedestrian movements and a cluttered public domain creates crowding, increases wait times, and reduces pedestrian comfort. Limited capacity within the station leads to congestion and safety risks for passengers, with the station often needing to be closed during special events.

A renewal of Warrane / Circular Quay is needed to address these challenges. The Project will improve the passenger and visitor experience by providing an accessible, safe and efficient transport interchange and precinct.

A renewal of Warrane / Circular Quay also provides an opportunity to:

- strengthen connections to iconic cultural landmarks
- celebrate Country, and renew Warrane / Circular Quay under a shared, inclusive vision
- integrate sustainable whole of life initiatives into the form, function and operation of Warrane / Circular Quay.

The Project also aligns with a number of NSW Government policies and strategic plans which is discussed further in section 3.1.

3.3 Key features of the site and surrounds

3.3.1 Local and regional community

Warrane / Circular Quay sits on Gadigal Country. It is a place that was and is still called Warrane, the Gadigal name for Sydney Cove within which Circular Quay sits. Warrane / Circular Quay is located at the northern extent of the Eastern Harbour CBD and within the Sydney Local Government Area. The Project area includes the train station and ferry wharves as well as the public domain areas to the east and to the west of the southern promenade, including First Fleet Park. The Project area extends into Sydney Harbour and is influenced by the operational requirements of the wharves as well as the Overseas Passenger Terminal (OPT) to the north. The wider transport interchange includes buses/coaches, taxi stands, and Sydney Light Rail to the south.

Land use context

Warrane / Circular Quay is surrounded by medium to high rise residential development, with lower-level restaurants, entertainment and retail premises, to the east, the Botanic Gardens further beyond and the Sydney Opera House to the northeast. To the south is Alfred Street and residential and commercial uses including restaurants, hotels and offices. To the west and northwest is The Rocks, OPT and associated residential and commercial premises and further to the northwest are restaurants and hotels around Campbell's Cove with Sydney Harbour Bridge beyond.

Land ownership

Circular Quay Station is owned by the Transport Asset Holding Entity (TAHE) whilst the wharves and seabed of Sydney Harbour are owned and managed by Transport.

The surrounding areas are largely owned and managed by Place Management NSW, with a small area to the west of the station being Crown land managed by Place Management NSW. Land in and surrounding the OPT is owned by Newcastle Port Corporation.

Land towards the north-east surrounding the Sydney Opera House is owned by the Sydney Opera House Trust. Areas to the east and south of the Project area are owned by City of Sydney, or privately owned.

There are also a number of easements for utilities such as gas, electricity and water through the Project area.

3.3.2 Important features of the natural and built environment

Warrane / Circular Quay is a harbour, major transport interchange, public and tourism space, international passenger shipping port and World heritage precinct located in the Sydney CBD.

Warrane / Circular Quay forms part of Sydney Harbour which is a working harbour that supports the city's economic development. Sydney Harbour is Australia's busiest waterway and hosts thousands of recreational, commercial, passenger and working vessels each year.

Warrane / Circular Quay is also a major transport interchange incorporating ferry, rail, light rail and bus connections. The Cahill Expressway is a prominent feature of Warrane / Circular Quay, running from the east, over the elevated railway station to join the Sydney Harbour Bridge in the west. The OPT is located to northwest of the Project area and serves cruise ships and ocean liners.

Warrane / Circular Quay is a focal point for tourism due to its harbour setting and location between the Sydney Opera House and Sydney Harbour Bridge. It is one of Australia's most visited destinations and is one of the main congregation points for celebrations such as New Year's Eve.

The urban context within the Project area and surrounds predominantly comprises dense built environments with some landscaped open spaces.

3.3.3 Key risks or hazards

Climate change and flooding

Catchment flooding occurs at Alfred Street and the lower portion of Pitt Street during two-year Annual Exceedance Probability (AEP) rainfall events. This is likely due to a historic drainage system with worn features and some long-term build-up of sediment and other blockages. Other factors include raised promenade ground levels along the northern interface of Alfred Street which creates a barrier to surface water from Pitt Street leading to ponding.

Future sea level rise in Sydney is also likely to be experienced as a result of climate change and may have a direct impact on Warrane / Circular Quay. Periodic coastal flooding of the promenade ground level (approx. 2.2m Australian Height Datum [AHD]) is expected by 2075.

Further discussion on the key risks and hazards for the Project is provided in Chapter 7.

3.3.4 Cumulative impacts

Other future developments that may have a potential cumulative impact with the Project have been identified in accordance with DPE's [Cumulative Impact Assessment Guidelines for State Significant Projects](#). Details of these developments are included in Table 3-2. Chapter 7 and Appendix A provide details on the need for cumulative impact assessment for the EIS.

Table 3-2 Other developments

Other development	Status	Details
35-75 Harrington Street, The Rocks SSD-32766230	Prepare EIS	Part demolition and conversion of existing mixed-use building to facilitate change of use to hotel accommodation with ancillary retail and an accessible roof area. The proposal includes alterations to the basement carpark and through-site links.
Sirius Building SSD-10384	Approved 18/06/2021	Alterations and additions to the Sirius building including restoration and refurbishment with 76 residential apartments, commercial and retail premises, a pedestrian through-site link, landscaping and public domain work.

3.4 Aboriginal culture and heritage

Warrane / Circular Quay and surrounds are located within the traditional lands of the Gadigal people, who named the Sydney Cove area Warrane (War-ran, Wee-rong, Warrang). Fishing and canoeing were the main activities in the area. Shellfish was a valuable resource not only for food supply but for tool making as well. Fish hooks, spears in various forms and cutting edges were fashioned from the shells. Today, the historical occupation of the Aboriginal people around Sydney Harbour is evident from various middens, rock shelter art and engravings along the coastline (Tonkin Zulaikha Greer & Artefact, 2020).

Warrane / Circular Quay holds intangible and intrinsic Aboriginal heritage value, including customs, stories, and memories. Defined by the valley of a freshwater stream (later known as the Tank Stream), the landscape was made up of sandy beaches, rocky outcrops and mudflats.

Transport's *Principles and Framework for Aboriginal Engagement* (2021a) has been developed to assist the facilitation of appropriate Aboriginal engagement that informs the continuous improvement of policies, projects and programs. Aboriginal engagement has been undertaken during the development of the Project with people representative of Aboriginal custodial and cultural authority, cultural and creative enterprise, and cultural and creative expression outputs. The main thematic element that permeated through almost all stakeholder responses was the unique value of Aboriginal connection to Country, community and to culture. Stakeholders have highlighted a need for visible recognition of Aboriginal culture at Warrane / Circular Quay. The Project offers the opportunity for 'Australia's

waterfront to the world’ to further acknowledge and create a space for understanding Aboriginal society and culture as the foundation narrative of Australia. Aboriginal engagement is discussed further in section 6.1.3.

3.4.1 Designing with Country

A cultural framework was developed for Warrane / Circular Quay – *War-ran-jain-ora* (City People, Peter White, 2020). The framework includes an Aboriginal voice that represents the views, opinions and cultural knowledge of the Aboriginal contributors. This guides further engagement and design for the Project to ensure a consistent and cohesive approach reflecting Aboriginal cultural values across the precinct. One of the key principles of the framework is to ensure Aboriginal connection, visibility and agency so Aboriginal people can share their unique culture and give visitors an enhanced connection with Warrane / Circular Quay.

The current design for the Project responds to the *Designing with Country Framework* (Government Architect NSW, 2020b) and *Draft Connecting with Country Framework* (Government Architect NSW, 2020a) as well as *War-ran-jain-ora*, creating spaces with and for Aboriginal people. It connects land to water, recognises Country and is a catalyst for collaborative cultural activities. The EIS will consider and demonstrate consistency with these frameworks.

3.4.2 Aboriginal co-design

In addition to Designing with Country, the ongoing involvement of Aboriginal people is key to the success of the Project. Integrated Aboriginal leadership, and participation by Aboriginal people in Project governance supports the objective of ensuring Aboriginal connection, visibility and agency through the life of the Project. Country-centred design will embed stories in the design of the place, to provide opportunities for the cultural narratives of Country.

Consultation will continue with Aboriginal stakeholders as concept and detailed designs are developed, as discussed in Chapter 6. An Aboriginal Cultural Heritage Assessment will also be prepared in consultation with Aboriginal stakeholders, including the Metropolitan Local Aboriginal Land Council. The assessment will identify the significance of any potential Aboriginal sites or cultural values within the area. Any work which may be likely to impact significant sites will be undertaken with the Aboriginal cultural knowledge holders and stakeholders.

3.5 Placemaking and urban design principles and objectives

In response to the specific challenges and qualities of Warrane / Circular Quay, Transport with the Government Architect of NSW developed a set of urban design and development principles to guide the renewal towards the high-quality design and development outcomes expected for this nationally significant place. These principles form part of the *Circular Quay Renewal Strategic Framework* (Transport for NSW et al., 2021) that articulates the vision, values and principles for the renewal of Warrane / Circular Quay and acts as a brief for master planning and design. The Strategic Framework is supported by other frameworks in areas such as heritage, visitor and passenger experience, construction and sustainability to guide the desired outcomes of the Project.

At a high level, the process included the following key steps:

- an extended period of analysis, research into passenger and visitation patterns and community and stakeholder consultation from 2013 to 2014, which resulted in a vision statement to guide a renewal of Warrane / Circular Quay
- an ‘Enquiry by Design workshop’, held in 2016, which resulted in major stakeholders agreeing on the values that will guide decision making at all stages and at all scales of the Project
- site analysis, technical analysis and passenger research conducted during 2016-17, which resulted in the development of the principles.

The vision for the Project is to be achieved through the following urban design and development principles:

- optimising the interchange
- unifying and decluttering the public domain
- making physical and visual connections
- clarifying and expanding key focal points within
- expanding and connecting to public spaces beyond
- strengthening Warrane / Circular Quay as a key destination
- ensuring identity and management coordination
- delivering development excellence and public benefit
- preserving and enhancing heritage experience and interpretation.

3.6 Sustainability objectives

The sustainability principles of the Project have been developed to respond to the material risks and opportunities for the Project and include:

- whole of-life approach – ensuring sustainability is effectively considered from design through to project delivery, operation and planning for the end of life of the Project
- resource efficiency – opportunities for energy efficiency, reducing waste to address depletion of non-renewable resources and renewable energy options
- resilience – opportunities which respond to potential shocks and stresses that can strengthen the asset resilience in the face of an evolving and changing future
- social sustainability – social inclusion and improved liveability, including user friendly public spaces that provide opportunities for children and adults and flexible hubs that support a diverse range of active and passive activities
- cultural heritage – protecting and celebrating the heritage of the area including Aboriginal culture
- biodiversity – enhancing the function and value of existing ecology both within the Project boundaries and beyond, to create new opportunities for biodiversity development
- sustainable procurement – consideration of supplier corporate environmental and social responsibility in procurement decision making.

Sustainability initiatives are being incorporated into the planning, detailed design, construction and operation of the Project in order to meet the sustainability principles and the Project's aim to have net zero carbon emissions during construction and operation.

Refer to Section 7.17 for further consideration of sustainability.

4. Selection of the preferred Project

4.1 Options development

Transport recognises that Warrane / Circular Quay is a unique place as a major transport interchange in one of the most visited places and as one of the most important historic public spaces in Australia. The need to upgrade the wharves to meet DDA compliance requirements, and replace aging infrastructure, has been the catalyst for the NSW Government to explore opportunities for a larger renewal of the Warrane / Circular Quay precinct.

Transport developed a range of options, from meeting DDA requirements, to replacing wharves and refreshing or renewing the public domain (outlined in Figure 4-1). A multi-criteria analysis was undertaken to determine which of the options most closely aligned to the strategic objectives for the Project.

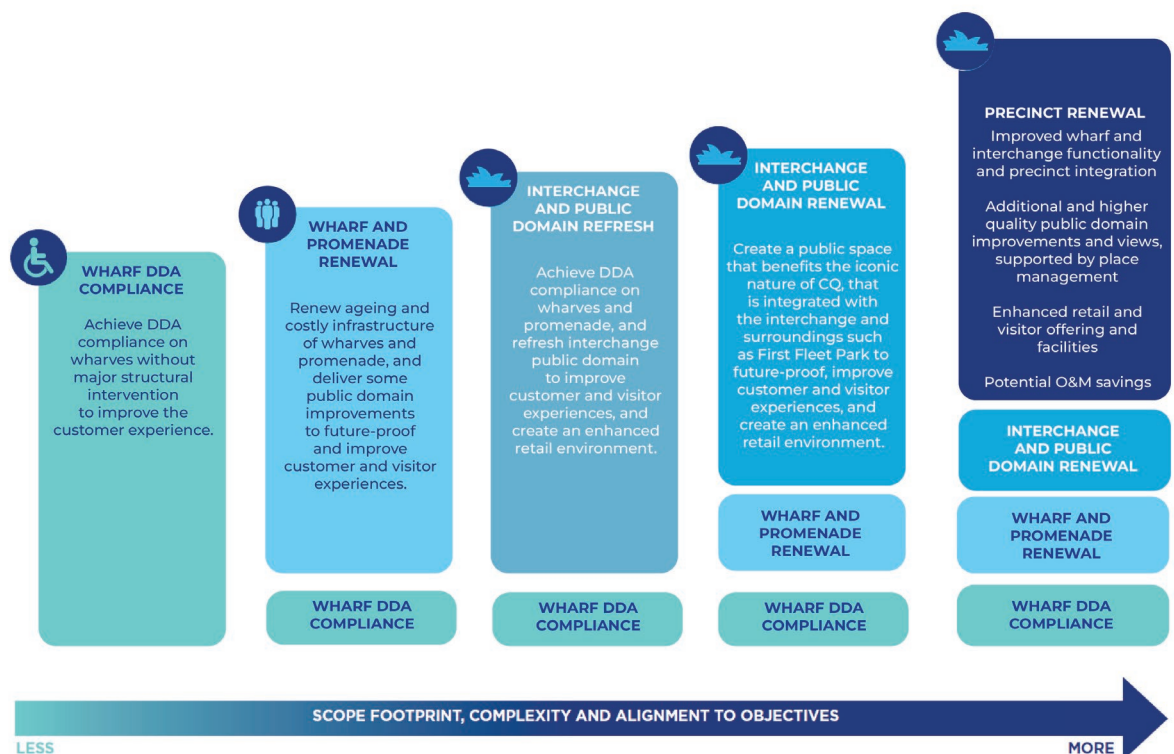


Figure 4-1 Warrane / Circular Quay multicriteria options analysis

Source: Transport for NSW

The options outlined in Figure 4-1 were developed by a multidisciplinary team, along with a range of specialist technical advisers, guided by the Strategic Framework.

4.2 Evaluation of options

The Strategic Framework and supporting frameworks (outlined in section 3.5) guided the option selection process. Strategic, technical and financial criteria were established to assess the options including:

- alignment with NSW Government strategic plans, project objectives and Strategic Framework
- DDA compliance
- engineering and maintenance
- constructability and safety
- transport network and operations including navigation and maritime
- heritage, environment and sustainability
- visitor and passenger experience enhanced retail experience
- whole of life costing

4.3 Preferred option

A renewal of the precinct including wharf, promenade, interchange and public domain renewal was determined to best align with the objectives of the Project outlined in section 1.3. The preferred design and development outcomes are considered to directly respond and recognise Warrane / Circular Quay's status as one of Sydney's major public spaces to appropriately upgrade key elements to improve safety and usability, including accessibility and amenity. Specifically, the Project will optimise the transport interchange and address existing non-compliances, declutter the public domain, improve physical and visual connections, expand and connect public spaces and deliver improved public benefit.

5. Project description

5.1 Project area

The Project area includes the six wharves (including five ferry wharves and the eastern pontoon also known as Wharf 1), the southern promenade to the northern edge of Alfred Street, Circular Quay Station, First Fleet Park and the section of the western promenade between First Fleet Park and the seawall. The boundary also extends into Sydney Harbour and is influenced by the operational requirements of the wharves as well as the OPT further to the north.

The Project area is shown in Figure 1-1. Renewal within the Project boundary must be integrated with the surrounding areas to create a cohesive public domain. An 'area of integration' has been identified where some Project work may be integrated into existing public domain (such as footpaths and paving).

5.2 Key features of the Project

The key features of the Project are summarised below:

- **The wharves:** Replacement of the existing wharves, including Wharf 1, with new accessible wharves. The configuration of existing wharves will be retained.
- **The promenade:** Replacement and widening of the southern promenade.
- **Circular Quay Station:** Upgrade of the station including additional lifts and escalators, increased capacity for passenger movement and improved wayfinding signage.
- **New built form:** Construction of new built form structures to the east and west of the existing station building.
- **First Fleet Park:** Renewal of the park with landscaping, seating and accessible pathways.
- **Precinct and public domain:** Upgrades to provide a decluttered, cohesive and high-quality public domain.
- **Amenities and facilities:** Provision of new amenities such as public toilets, spaces for future retail uses, back of house and operational areas, staff amenities, an information centre, and ticketing facilities.

No public transport services are proposed to change as part of the Project.

5.3 Key construction and operational activities

5.3.1 Construction

Construction of the Project is proposed to begin in 2025 subject to planning approval.

The use of Warrane / Circular Quay as a functioning transport interchange will be maintained during the construction of the Project. To achieve this, the construction program will be staged to allow the continued use of the area. The pontoons will be fabricated offsite to minimise disruption to Warrane / Circular Quay and floated in ready for connection onto the newly constructed promenade. The station construction work will be coordinated with the staged wharf replacement activities.

There is potential for construction activities to occur outside of standard construction hours to minimise disruption to transport services and access to businesses and to allow for continuous operations of the precinct.

5.3.2 Operation

Operation of the Project will not result in change to the existing use of the precinct as a transport interchange, including a change in the number or type of public transport services. Minor changes to access as a result of the Project may impact traffic including public transport services. This is subject to further design development and consultation with stakeholders. The Project is expected to make improvements related to accessibility, wayfinding and safety. Access within the Project area is expected to improve by providing more direct paths of travel and increased capacity to move through the station and southern promenade, along with improved wayfinding. This will also benefit access to surrounding areas.

5.4 Staging and timing

The proposed timing of the approvals process for the Project is shown in Figure 5-1 and is subject to change. The delivery strategy and timing for construction and operation of the Project is currently being developed. It is likely that infrastructure such as the new wharves would progressively come into operation to limit disruption.



Figure 5-1 Project Program
Source: Ethos Urban

6. Community and stakeholder engagement

6.1 Engagement processes and activities carried out

6.1.1 Early engagement objectives

To help plan for Warrane / Circular Quay's future, the Project team have been talking with and listening to the community and other stakeholders about their experiences and aspirations for Warrane / Circular Quay. Between 2013 and 2020, a broad mix of community consultation, stakeholder engagement and passenger research were undertaken to understand what people love about Warrane / Circular Quay and what could be improved.

This early work contributed to the *Circular Quay Renewal Strategic Framework* (Transport for NSW et al., 2021) and the supporting discipline-specific frameworks that are guiding the development of plans and designs for Warrane / Circular Quay's renewal.

6.1.2 Community consultation

Consultation on the renewal of Warrane / Circular Quay was first conducted in 2013 by the Sydney Harbour Foreshore Authority (now Place Management NSW). More than 1,000 people were asked about their experience of Warrane / Circular Quay and their hopes for its future. We heard that Warrane / Circular Quay holds a special place in many people's lives and is a place of wonderful memories and experiences. Shelter, food and facilities were important to people.

The Vision Statement that resulted from this process of public consultation was adopted as the guiding aspiration for the plans for Warrane / Circular Quay:

"Australia's Waterfront to the World, Warrane / Circular Quay is a major driver of Sydney's economy; a stage for its premier cultural events; an enhanced transport hub; and an outstanding environment worthy of Australia's greatest waterfront".

Subsequently, Transport conducted targeted stakeholder engagement and passenger research between 2016 – 2017 and further research on passenger and visitor behaviour during 2018 – 2019.

In 2020 Transport ran a "Share Your Ideas" campaign, asking the community to share their ideas for the renewal of Warrane / Circular Quay to inform the development of the early concept design. Throughout August 2020, over 2,500 people visited the Transport Your Say engagement portal, and 348 contributions were made on proposals for the renewal of Warrane / Circular Quay.

A community kiosk was established on the promenade throughout January 2023 to create awareness of the Project and gather feedback.

The outcomes of this engagement are summarised in section 6.2.

6.1.3 Aboriginal community consultation

The *Warrane / Circular Quay Cultural Framework* (City People, 2020) (outlined in section 3.4) was developed in early 2020 to guide design and consultation, with contributions by consultants and experts from City People, First Peoples Cultural & Creative Development, and NM Architecture and Heritage. The Cultural Framework continues to influence the Project's priorities throughout planning and design.

To support the program of early engagement, Transport undertook a focused program of Aboriginal engagement in early 2021. Transport consulted with a range of stakeholders including key Aboriginal stakeholders with cultural knowledge (Gadigal families and others who conduct cultural activities in the Warrane area), Aboriginal organisations with statutory responsibility for representing Aboriginal people in the area and other Aboriginal organisations who have a connection with the area as regular users or expert cultural institutions. The outcomes of this engagement are summarised in section 6.2.

In 2022, Transport re-engaged the Aboriginal community in a co-design process to develop and implement an Aboriginal Engagement Action Plan, to ensure an authentic Aboriginal voice is embedded and integrated into the planning and design development phase of the Project.

6.1.4 Key stakeholder consultation and briefings

From 2016 to 2023, targeted stakeholder engagement and passenger research was undertaken to expand Transport's understanding of the opportunities and challenges at Warrane / Circular Quay.

Given the preliminary stage of the Project, stakeholder engagement was largely targeted at government agencies, the City of Sydney Council, neighbouring cultural institutions, transport operators and peak bodies. This also included engagement with the Australian Transport Accessibility Committee (ATAC), to better understand the issues and opportunities at Warrane / Circular Quay from the perspective of people living with a disability and those with mobility issues. The primary aim of this engagement was to understand the property ownership and precinct management arrangements; transport operating environment, passenger needs and multi-faceted stakeholder relationships at Warrane / Circular Quay.

This work contributed to the development of the strategic objectives for the renewal of Warrane / Circular Quay and further technical work and analysis that helped to inform the NSW Government's decision to move ahead with its plans to renew the precinct.

Following this, Transport continued to undertake government agency consultation in 2022 and early 2023 to ensure that relevant government authorities are involved in the strategic planning process and are consulted on planning approval requirements and the environmental assessment process.

Consultation has occurred with:

- Department of Planning and Environment
- Place Management NSW
- Heritage NSW
- Heritage Council
- Greater Cities Commission
- Transport Asset Holding Entity
- Port Authority of NSW
- Transdev Sydney Ferries
- Destination NSW
- Create NSW
- Aboriginal Affairs
- The Commonwealth Department of Climate Change, Energy, the Environment and Water
- City of Sydney.

Consultation will continue through regular communication and meetings.

6.1.5 Other stakeholders

Transport has engaged extensively with other stakeholders and stakeholder groups, including but not limited to:

- Aboriginal cultural representatives
- Australian Institute of Architects
- Tourism peak bodies
- NSW Small Business Commissioner
- Significant neighbours
 - Museum of Contemporary Art
 - Sydney Opera House
 - Royal Botanic Gardens
 - Sydney Living Museums
 - Pullman Grand Hotel
- Transport passengers, visitors, local residents, tourists
- Business peak bodies
- Harbour Trust
- NSW National Parks and Wildlife
- Local and Federal MPs

- Accessible Transport Advisory Committee
- Interest groups
- Utility providers.

6.1.6 Human-centred design research

Transport spent time engaging with visitors and passengers to understand their experience and how it could be improved at Warrane / Circular Quay. Research has been undertaken through site walks, observational studies, interviews and intercepts with passengers and visitors. Research was also conducted with operational staff to understand requirements in relation to staff facilities and amenities. Insights from this research indicated that while passengers and visitors appreciate Warrane / Circular Quay, they are disappointed by the experience and public space for such an important destination, and there is enthusiasm for the area to be renewed.

Key outcomes of this research are summarised in section 6.2.

6.2 Summary of key findings from engagement to date

A summary of the key findings from early engagement is provided in Table 6-1.

These key engagement outcomes will be used to guide design development and ongoing consultation and engagement in relation to the Project.

Table 6-1 Summary of main findings from community engagement

Early Engagement Activity	Category	Finding or issue raised	Where addressed in scoping report
Aboriginal community engagement	Significance of Warrane	<ul style="list-style-type: none"> • Warrane is a significant place for past and present Aboriginal people • Warrane is part of the broader cultural context of Sydney Harbour and surrounds • Some families from La Perouse still have ongoing cultural connections to Warrane as survivors of the camp at the Government Boatsheds at Bennelong Point from 1879 to 1881 from when Aboriginal people were forcibly removed to La Perouse • Multi-layered history of place: traditional stories and uses (fishing, meeting place, whale stories), colonial settlement (construction of the railway including by local Aboriginal people) and today (ongoing contemporary connections) • Acknowledgement of cultural heritage and Country at Warrane could be greatly improved and is currently lacking • Opportunities to explore concepts of Country at Warrane include acknowledging surrounding waterways and ocean as Sea Country and the interconnection with land and sky. 	Section 3.4 Section 7.3
	Future opportunities for Warrane renewal	<ul style="list-style-type: none"> • Creating and celebrating a sense of cultural safety and awareness through artwork, audio recordings, posters and sculptures • Inclusion of significant people and items such as the Nawi – canoe used to travel Sea Country • Truth telling and recognition of the multi-layered history of first contact including through talks, walks and other cultural tourism/education • Opportunities for Aboriginal employment and business development are seen as critical. 	Section 3.4 Section 7.3

Early Engagement Activity	Category	Finding or issue raised	Where addressed in scoping report
Transport's Your Say campaign	Warrane / Circular Quay experience expectations	<ul style="list-style-type: none"> Protect and enhance the things they love, such as the inclusive and open nature of the area and the iconic views Respect the culture and create ways for it to be understood Improve the area's coherence and consistency Make Warrane / Circular Quay more functional and modern in terms of infrastructure and amenities. 	Section 5.2 Section 7.2
	Accessibility	<ul style="list-style-type: none"> Observational studies of visitor and passenger behaviour and site visits with people with disabilities and mobility needs. 	Section 4.2 Section 7.5
	Transport and public spaces	<ul style="list-style-type: none"> Widen the southern promenade to create a public square Make public facilities accessible, comfortable, clean and safe. 	Section 5.2 Section 7.2
	Amenity	<ul style="list-style-type: none"> Greening the area Quality and affordable places to eat in an open air setting Activity into the night with live music, performances and night markets Clearing the ground level of retail and other structures such as the pylons to open up the views to the harbour as well as extending the promenade and wharves. 	Section 3.5 Section 5.2 Section 7.2 Section 7.6
	History and Aboriginal connection	<ul style="list-style-type: none"> Tell the Aboriginal story of Warrane / Circular Quay Acknowledgement of the existing heritage attributes of the area, including the Warrane / Circular Quay Train Station and the Writer's Walk bronze plaques. 	Section 3.4 Section 5.2 Section 7.3 Section 7.4
	Beyond the scope of the Project	<ul style="list-style-type: none"> Build an underground arena like Madison Square Gardens A new floating boardwalk on the western promenade to increase the number of services and provide a better experience for passengers Recreational boating facilities Remove Cahill Expressway to open up views and connections to the harbour and surrounding areas Cahill Expressway should be retained and repurposed for public and green space and active transport connections. 	
Human centred design research	Functionality – Meet all our basic needs	<ul style="list-style-type: none"> Make surfaces level and suitable for all visitors Provide clean, accessible toilets Provide public places to stop, wait and rest Provide sufficient lighting Ensure functionality can flex to meet the needs during major events. 	Section 3.5 Section 4.2 Section 5.2
	Flow – Open the way and show us the way	<ul style="list-style-type: none"> Make navigating and understanding Warrane / Circular Quay and surrounding areas easy and intuitive Help find the fastest route, within the Project area and to surrounding areas Give information in formats and locations that allows to maintain momentum and prevent congestion Remove unnecessary obstacles. 	Section 3.5 Section 4.2 Section 7.2
	Vitality - Make us all welcome and give us reasons to engage and be social	<ul style="list-style-type: none"> Provide public spaces and facilities Provide quality food/dining/retail options that suit a wide range of tastes/budgets Provide information to plan our Warrane / Circular Quay experience Provide ways for all ages and backgrounds to engage with and enjoy Warrane / Circular Quay. 	Section 3.5 Section 5.2

Early Engagement Activity	Category	Finding or issue raised	Where addressed in scoping report
	Origin - Give us the full story / history and ways to make it our own	<ul style="list-style-type: none"> • Respect, remember and reflect upon Warrane / Circular Quay's origins and history • Respect and give us ways to understand Warrane / Circular Quay's Aboriginal history, importance and role. 	Section 5.2 Section 7.3 Section 7.4
	Authenticity - Celebrate Sydney and Circular Quay's working identity	<ul style="list-style-type: none"> • Respect and protect Warrane / Circular Quay's working origins • Give ways to connect with and experience the energy of the working harbour (while on land). 	Section 5.2 Section 7.4
	Nature - Make nature a centrepiece and let us all enjoy the benefits	<ul style="list-style-type: none"> • Use landscaping to showcase Warrane / Circular Quay's natural environment • Use nature to create vibrant, colourful environments. 	Section 3.4 Section 5.2 Section 7.2

6.3 Future engagement

Transport is committed to an inclusive and transparent stakeholder and community engagement process to support the Project. This process will help inform design development and the statutory planning process.

The next steps for stakeholder and community engagement for the Project are:

- Ongoing engagement with residents and businesses, passengers and visitors, as well as key stakeholders including local and State government agencies
- An Aboriginal engagement process is being held in collaboration with Aboriginal stakeholders and includes a detailed consultation strategy with the Aboriginal community
- Planning for communications and community engagement to support the preparation for site investigation and early work, public exhibition of the EIS and other statutory planning applications. Engagement methods being explored include notification letters, social media and interactive information on site.

7. Proposed assessment of impacts

7.1 Overview

The identification of the matters requiring further assessment in the EIS and the proposed approach to assessing each of these matters has been carried out with regard to DPE's *Preparing a scoping report - Appendix A to the SSI Guidelines*. Specifically, this includes:

- built environment and amenity
- Aboriginal heritage
- historic heritage
- access
- social
- terrestrial flora and fauna
- aquatic flora and fauna
- water quality
- hydrology and flooding
- hazards, risk and land
- noise and vibration
- air
- coastal hazards
- waste
- climate resilience
- sustainability
- public land and private property
- cumulative impacts

Matters requiring no further assessment as part of the EIS are included in Table 7-2.

A scoping summary table for the Project is provided in Appendix A.

It should be noted that the scoping assessment is based on preliminary environmental investigations only and impacts may be refined as the Project is further developed, design mitigation measures are applied, and further environmental assessments are carried out.

7.2 Built environment and amenity

7.2.1 Existing environment and background

Warrane / Circular Quay is an important and unique visual landscape which is dominated by views to iconic landmarks such as the Sydney Opera House and Sydney Harbour Bridge. However, the area contains many other important structures and buildings, including numerous heritage buildings, as well as the harbour and landforms of cove, water and sky, which also contributes to the visual significance of the area.

Public views within Warrane / Circular Quay are mostly open and unobstructed at the promenade as well as from the Cahill Expressway and from the Circular Quay Station platforms. At the southern parts of Warrane / Circular Quay, particularly along the southern promenade, views are more obstructed and limited by the built form of the ferry wharves. The views from First Fleet Park, Alfred Street and south of the station are most restricted, with only filtered views available through to Warrane / Circular Quay at ground level.

Whilst elevated views to the north are expansive from the station platform and Cahill Expressway, views out from Warrane / Circular Quay are largely obscured to the east (apartments), west (The Overseas Passenger Terminal, Museum of Contemporary Art and other buildings), and south (station and viaduct).

Views to the Opera House are afforded protection by a buffer zone which includes Sydney Harbour, Circular Quay Station and First Fleet Park. The visual connection between the key items is also of importance to create an integrated precinct experience.

The key visual receivers are:

- members of the public (including visitors, tourists)

- private residents within residential apartments
- passengers using the transport interchange.

7.2.2 Potential impacts

Potential construction impacts

- removal of some existing trees within the Project area and presence of hoarding and construction activity that has the potential to change the character and setting of the landscape
- temporary loss of viewing points and viewing opportunities to key landmarks around the harbour as a result of hoarding and construction activity has potential to change the views.

Potential operational impacts

The Project enhances connections between the harbour front and views across the harbour and to the CBD. The Project will also improve overall visual amenity in the precinct, by creating a more cohesive place with consistent and complementary design responses. Notwithstanding this, the potential operational impacts include:

- increased bulk and scale of the built form which will change the existing visual character of Warrane / Circular Quay
- reduced or altered viewing opportunities to surrounding landforms of cove, water and sky to the north of the Project area as a result of changes to the built form
- potential for changes to ambient lighting levels or light spill impacts
- potential for materials and finishes to cause unacceptable glare or reflectivity impact.

7.2.3 Assessment approach

A visual impact assessment will be undertaken as part of the EIS which will assess the impact of the Project on views and vistas; streetscapes, key sites and buildings, heritage items and the local community.

The landscape and visual impact assessment will include:

- identification of features such as landform, elevation, land cover and distribution of residential properties and visual receptor locations
- identification of opportunities to celebrate the landscape character and views of the Project and incorporate First Nations cultural and artistic expression
- assessment of temporary and permanent light spill impacts on the local area and any associated ecological impacts.
- assessment of the compatibility of Project with the landscape character
- assessment of visual impacts of the Project during construction and operation
- identification of ambient light levels
- identification of mitigation measures to be integrated into design development process to address the residual and visual impact.

7.3 Aboriginal heritage

7.3.1 Existing environment and background

For Aboriginal people local to Sydney, Warrane / Circular Quay is a component of a wider developed cultural landscape. This landscape holds a multitude of values, from ancient traditional connections, through to evidence for colonisation, land dispossession, resistance and resilience, on to pride reflecting the beauty of the modern harbour, and recognition of Aboriginal heritage and their reconnection to Country. Recent new sculptures, such as Judy Watson's Bara, look over the harbour at Warrane / Circular Quay and 'celebrate the First Peoples of Sydney, the traditional custodians of Gadigal Country' (City of Sydney, 2018). The places and values Aboriginal people associate with Warrane (City of Sydney, 2013) transcend a multitude of places in and around the harbour—Warrane / Circular Quay is a small component of this cultural landscape.

The deep time cultural landscape of Warrane can be described on several levels. Aboriginal people have inhabited the region we now call Greater Sydney for around 38,000 years (based on the dates of archaeological sites in Parramatta and at Pitt Town). During the first 30,000 years of occupation (a period called the Pleistocene), the area now called Sydney Harbour was not a harbour. Sea levels were significantly lower, and the coastline was up to 35km further east. The Parramatta River flowed through a green valley, which was overlooked by a series of low hills (now the islands in the harbour). Warrane / Circular Quay would have been part of a shallow slope, bound by higher ridges east and west.

Around 10,000 years ago, when the Holocene commenced, sea levels rose and Sydney Harbour was inundated. Local Aboriginal creation or Dreamtime stories tell of both the Whale Dreaming and Eel Dreaming, which describe how places and locations within Sydney Harbour formed. For most of the last 10,000 years, sea levels were two metres higher than today, and much of the area which became Warrane / Circular Quay would have been permanently underwater or flooded at high tide. A small creek (the Tank Stream) flowed from an elevated wetland area (now Hyde Park), north through the shallow valley and into the harbour.

Around 2,000 years ago, sea levels fell by about two metres, and the tidal mud flats of Warrane / Circular Quay formed. Lowering sea levels created some of the flatter landforms around the harbour—these have been subject to extension through post 1788 land reclamation activities.

Through this period Aboriginal connections with Sydney Harbour and the landforms either side of the Tank Stream continued to form and strengthened. The relatively sparse evidence for Aboriginal habitation activities in and around the CBD (contrasted to other parts of the Sydney Harbour) still talks to long term Aboriginal presence. There is remnant midden material present at the end of Yurong (Mrs Macquarie's Chair) and at the Bonds Wharf, whilst low densities of stone artefact (lithics) have been recovered from archaeological excavations across the CBD (the greatest density coming from the KENS site on the western side of the CBD). Local Aboriginal people describe the late Holocene landscape of the CBD as connected with ceremony, corroboree, and other important traditions. Early historically recorded corroboree's above Bennelong's Hut (near the Opera House), and two male initiation ceremonies held in Wuganmagulya (Farm Cove) prior to 1800. The southern area of Hyde Park became (or always was) an Aboriginal ceremonial contest ground and continued this function for decades post 1788.

Within this late Holocene cultural landscape, Warrane / Circular Quay covered intertidal mud flats, and on its eastern and western peripheries, the shallow slopes which rose to the higher ridges. Aboriginal people could have accessed food resources from the tidal flat and used the landforms as convenient places from which to launch nowies (canoes). The Tank Stream would have provided fresh water, supplementing a number of springs which emanated from the rocks and cracks to its east and west. The Warrane / Circular Quay study area could retain limited evidence of Aboriginal activities during the late Holocene; however, its primary scientific value would likely be connected to reconstruction of the paleoenvironment, possibly understanding how this evolved and changed over the period of human occupation.

What is clear is that Warrane is 'highly significant to both Aboriginal and non-Aboriginal people as a site of first contact between the Eora and the Berewalgal (meaning people from a distant place: the Europeans)' (City of Sydney, 2013). These intangible values have become associated with Warrane / Circular Quay because of its proximity to First Government House and the early colony. The landmark qualities of this place, as an internationally identifiable destination, mean there is future opportunity for Aboriginal people to further reconnect to Country and provide a meaningful narrative about their heritage and future to all Australians and our visitors.

7.3.2 Potential impacts

Potential construction impacts

- disturbance of sub-surface sites and archaeology (if present) from activities related to the Project
- indirect disturbance through ground settlement or vibration impacts.

Potential operational impacts

- increased visitation/foot traffic could indirectly impact items of Aboriginal heritage and impact the cultural sense of place
- opportunity to celebrate the cultural values of Warrane and acknowledge the shared history of the Project area.

7.3.3 Assessment approach

An Aboriginal cultural heritage assessment report will be prepared in line with the relevant Heritage NSW guidelines, and will include:

- Aboriginal community consultation, in line with current Heritage NSW guidelines
- development of an Aboriginal cultural and scientific assessment and understanding of this specific place
- development of a research framework to address specific questions which could be answered through the scope of Project work
- archaeological sampling work, as per the research framework, with an assessment of soils to infer prior environmental regimes. Correlation of how these relate to Aboriginal cultural heritage will be made
- assessment of potential impacts to the Aboriginal heritage values
- identification of requirements for in-situ conservation of potential Aboriginal archaeological areas, and the need for further archaeological testing, and/or detailed archaeological excavations
- development of avoidance, mitigation, management and monitoring measures in accordance with relevant guidelines

- input into future Aboriginal heritage interpretation, should the place be identified with location specific Aboriginal cultural values.

7.4 Historic heritage

7.4.1 Existing environment and background

Heritage

As the site of first European settlement in Australia, Warrane / Circular Quay has tangible and intangible, historic heritage significance, containing items from local and State significance, through to World significance. Table 7-1 provides a summary and overview of the statutory listed heritage items within the study area.

Table 7-1 Statutory listed heritage

Heritage Item and Listing	Address	Highest Assessed Level of Significance
Sydney Opera House and buffer zone World Heritage List (WHL) #166rev National Heritage List (NHL) #105738 State Heritage Register (SHR) #01685 Sydney LEP 2012 #I1712	Circular Quay East, NSW 2000	World
Circular Quay Railway Station Group SHR #01112 LEP # I1660 TAHE s170 #4801109	Circular Quay, NSW 2000	State
Tank Stream SHR #00635 LEP #I1656 Sydney Water s170 #4573709	Sydney, NSW 2000	State
Circular Quay Ferry Wharves Roads and Maritime s170 #49220019 Biodiversity and Conservation SEPP #73	Circular Quay, NSW 2000	State
Railings, Sydney Cove (Cast-iron railings, palisade fence and gate posts; Sandstone Seawall and Railings, Circular Quay, Cast Iron Railings) SHR #01572 LEP #I1710 LEP #I1709 Property NSW s170 #4500439, #4500440, #4920004	Railings, Sydney Cove (Cast-iron railings, palisade fence and gate posts; Sandstone Seawall and Railings, Circular Quay, Cast Iron Railings)	State and Local
Sydney Cove West Archaeological Precinct SHR #01860 Property NSW + Sydney Ports Corporations s170 #4500831	112-156 George Street, The Rocks NSW 2000	State

Heritage Item and Listing	Address	Highest Assessed Level of Significance
First Fleet Park Property NSW s170 #4500074	Circular Quay, NSW 2000	Local
Harbour Masters Steps Property NSW s170 #4500090, #4500481	Circular Quay, NSW 2000	Local
The Rocks Conservation Area Property NSW s170 #4500458	The Rocks, NSW 2000	Local
Museum of Contemporary Art Property NSW s170 #5400056	136-140 George Street, The Rocks NSW 2000	Local
Commissariat Store Foundation Stone Property NSW s170 #5400322	Circular Quay, NSW 2000	Local

Historical archaeology

The Project area has the potential for significant historical archaeological remains associated with the development of Warrane / Circular Quay as a major maritime port from the arrival of the British in 1788, throughout the nineteenth and into the early twentieth century. The potential historical archaeological remains include the Tank Stream (both the historical stream and heritage listed stormwater drain), former sandstone and timber seawalls and wharves, buildings erected around the foreshore, and evidence of the extensive reclamation work, including maritime objects buried within the reclamation fills, that has given form to Warrane / Circular Quay as it is today. First Fleet Park is located in part of the Sydney Cove West Archaeological Precinct which is listed as an archaeological site on the SHR for its historical, associative, social, research potential and rarity heritage significance values. This precinct is a site of exceptional archaeological significance as 'evidence of some of the earliest colonial and maritime infrastructure of the convict settlement of Australia'.

Maritime archaeology

There are no known archaeological features within the marine zone or below the water table. Vessels in Sydney Harbour have powerful propellers which generate wash alongside the wharves and promenade. This action can scrub the seabed many times a day and quickly destroy or relocate any lightweight cultural material that may fall from the vessels themselves or from the adjacent wharves and promenade. Dislodged objects will either be driven out into the deeper waters or redeposited beneath the promenade where they would be subject to constant abrasion. The Project area accordingly possesses an overall low maritime archaeology potential.

7.4.2 Potential impacts

Potential construction impacts

- substantial intervention to the fabric of the SHR listed Circular Quay Railway Station, including the additions to, façade modifications and internal reconfiguration of the station
- removal of the existing heritage-listed wharves and replacement with new wharves
- temporary or permanent removal of quay-side railings, and potential reinstatement and/or interpretation
- potential impacts to marine archaeological objects due to seawall construction and land reclamation associated with the Project
- potential impacts to previous port infrastructure within the marine environment as a result of the wharf replacement
- visual impacts to the setting and views to and from some heritage items and The Rocks Conservation Area within the Project area, and in the vicinity (eg Sydney Harbour Bridge and Sydney Opera House)
- changes to the materiality, configuration and landmark qualities of First Fleet Park

- potential impacts to local and State significant archaeology, including within First Fleet Park and around the Tank Stream, which could result from sub-surface impacts (both as a result of site investigations and during construction)
- impacts to significant archaeological resources (as part of the Sydney Cove West Archaeological Precinct), particularly in First Fleet Park, will be avoided or minimised where possible through considered design development and during construction
- potential structural impacts to heritage items due to the vibration generated from piling and other work activities
- visual impacts resulting from temporary hoarding/scaffolding during site investigations and construction activities.

Potential operational impacts

- management practices throughout operation to ensure the heritage values of the items and areas are conserved appropriately, managed effectively and celebrated.

7.4.3 Assessment approach

A historical archaeological assessment, maritime heritage assessment and heritage impact assessment will be prepared in accordance with the relevant Heritage NSW guidelines, Commonwealth heritage legislation and guidelines, and Australia ICOMOS Burra Charter 2013.

The non-Aboriginal assessment will include:

- identification of items and areas of heritage significance that could be impacted during construction and operation
- condition assessments of heritage items within the Project area, along with any necessary repair and conservation work
- identification of areas of historical archaeological potential that may be present within the Project area
- assessment of significance of the potential historical archaeological remains
- identification of potential areas for in-situ conservation of historical archaeological remains
- assessment of the potential impacts of the Project on heritage items within and in the vicinity the Project area
- assessment of the potential impacts of the Project on historical archaeological remains
- consideration and assessment against the *Significant Impact Guidelines 1.1 – Matters of National Environmental Significance* (Department of the Environment, 2013) in relation to National Heritage Place (Sydney Harbour Bridge) and World Heritage Property (Sydney Opera House))
- development of proposed avoidance, mitigation, monitoring and management measures for heritage items and historical archaeological remains to mitigate or minimise impacts
- recommendation of interpretive themes, stories, methods to assist in the understanding and appreciation of the history and heritage values of the Project area.

7.5 Access

7.5.1 Existing environment and background

Pedestrian

Walking is one of the main modes of connectivity to Warrane / Circular Quay. Pedestrian infrastructure provides access between the Project area and key attractions in the surrounding area such as the Rocks, Royal Botanic Gardens, the Sydney Opera House and Barangaroo. As a significant public transport interchange, Warrane / Circular Quay must support high volumes of foot traffic generated by passengers accessing and egressing the multi-modal transport infrastructure and/or interchanging between different transport modes. Access points for pedestrians exist to the north, east, south, and west of the precinct.

Despite the permeability of the precinct, pedestrians face a poor experience from the following constraints:

- surrounding buildings and Warrane / Circular Quay itself form a visual barrier to surrounding attractions which limit sightlines and inhibit intuitive navigation around the area
- many of the access points to and from the area require the use of stairs
- footpaths are congested around the Warrane / Circular Quay, with faster paced commuter movements conflicting with travellers who pause to gather their surroundings or read signage.

Cycle network

Warrane / Circular Quay's location means it plays a role in connecting to regional cycling connections to the Sydney CBD as well as connections to the north, east and west. This includes connections to North Sydney, St Leonards, Chatswood and beyond via the wider Sydney cycle network. There is currently no permanent, dedicated cycleway linking Warrane / Circular Quay to the city. However, a pop-up cycleway was introduced during 2020 in response to the COVID-19 pandemic, linking Warrane / Circular Quay to the CBD at King Street along Pitt Street.

The existing cycle network within Warrane / Circular Quay comprises of mixed traffic bicycle routes such as off-road shared path, separated off-road cycleway and low traffic street or bike lane. The current cycling provisions in the area fall short of providing a coherent, legible and convenient network.

Cycling along the pedestrian promenade within Warrane / Circular Quay between the Overseas Passenger Terminal and the Sydney Opera House is not specifically prohibited, however, the busy pedestrian thoroughfare is not an appropriate cycling route. While commuters can take bikes on ferries, it is more common for people to cycle to a ferry stop and park before continuing on a ferry to Warrane / Circular Quay.

Train

Circular Quay Station comprises a ground level concourse and two elevated platforms, located between Alfred Street and the ferry wharves. The station is the tenth busiest of the Sydney rail network and is serviced by the T2 Inner West and Leppington Line, T3 Bankstown Line and T8 Airport and South Line. Analysis of interchange data within Warrane / Circular Quay showed that most commuters interchange between the station and the ferry wharves for all peak periods.

Light rail

The Warrane / Circular Quay precinct is the northern terminus of the CBD and South East Light Rail Line which services Randwick (L2) and Kingsford (L3). The light rail stop is located on Alfred Street west of Loftus Street, which forms a direct walking connection for pedestrians to trains and ferries in Warrane / Circular Quay.

Marine transport

The Warrane / Circular Quay precinct is the major hub for the Sydney Harbour ferry network and comprises both public and private operators. The Quay has six wharves which consists of five finger wharves and a pontoon. The most common destination for ferry journeys to and from Warrane / Circular Quay is Manly. Public transport interchange data within the Warrane / Circular Quay precinct showed that most commuters who interchange do so between the Circular Quay ferry wharves and Circular Quay Station.

In addition to the public and private ferries, Warrane / Circular Quay ferry wharves are used by private operators including water taxis, Captain Cook Cruises, NRMA Cruises, The Australian Cruise Group, and large cruise ships that dock at the OTP. The Harbour Master Steps along the western promenade are also used by water taxis.

Bus

Bus stops at Warrane / Circular Quay are located along Young Street, Albert Street and Phillip Street. Public transport data within Warrane / Circular Quay showed that most commuters interchanged between buses and ferries for all peak periods. A private bus stop for the Hop On Hop Off bus operators is located at the corner of George Street and Albert Street.

Road network

The road network surrounding Warrane / Circular Quay includes George Street, Alfred Street and Macquarie Street, all of which have high pedestrian activity. Private vehicle movement in Warrane / Circular Quay is dominated by the Cahill Expressway overpass, at its southern extent, above the railway line. The Cahill Expressway links the Sydney Harbour Bridge and other roads in the city, such as the Eastern Distributor. It provides a CBD bypass and access to the north-eastern CBD via Bridge Street.

The Warrane / Circular Quay precinct facilitates Point to Point (i.e. taxi, ride share, hire car) services and connectivity through the surrounding local road network. There is a coach and taxi zone located to the south of the precinct on George Street.

Businesses within and surrounding the Project area currently rely on kerbside loading zones in the surrounding area for deliveries and servicing. Maintenance and servicing vehicles supporting public transport infrastructure also rely on kerbside loading zones whilst accessing the precinct. These zones are located outside the Project boundary.

7.5.2 Potential impacts

Potential construction impacts

- temporary road closures and traffic diversions that may be required
- reduction of traffic performance on the surrounding road network due to movement of construction vehicles, deliveries and waste removal
- temporary impact to pedestrian access
- potential to disrupt public and private ferry services

- potential to disrupt access to transport infrastructure and businesses
- potential to disrupt major events that take place throughout the year in and around precinct
- potential for navigational congestion and safety concerns in Sydney Harbour resulting from cruise liners and other vessels.

Potential operational impacts

- potential for double berth on larger wharves, enabling the provision of additional ferry services and reducing wait times
- improved pedestrian movements in the precinct, including increased capacity on the southern promenade and in the station
- potential for conflicts between different users during peak periods or special events.

7.5.3 Assessment approach

A transport, traffic and access impact assessment will be undertaken as part of the EIS that will include:

- investigation of the existing land-based and maritime transport environment, including traffic, public transport, walking and cycling
- consideration of site-specific requirements during construction work, including the method of managing pedestrian, cyclist and construction traffic movements
- assessment of direct and indirect construction impacts on the local transport network including consideration of vehicular traffic, public transport users, pedestrians and cyclists
- assessment of direct and indirect operational impacts on the local transport network including consideration of vehicular traffic, public transport users, pedestrians and cyclists
- consideration of the traffic and transport impacts during major events such as Vivid and New Year's Eve celebrations
- consideration of cumulative traffic and transport impacts using surveyed data of the existing conditions
- identification of mitigation, management and monitoring measures to ensure that impacts are maintained within acceptable limits
- ongoing communication and coordination with authorities and operators
- assessment of the direct and indirect navigational impacts on the OPT and discussion of mitigation measures.

7.6 Social

7.6.1 Existing environment and background

An analysis area was defined to identify the area of social influence for the Project which includes the boundary of the Sydney - Haymarket - The Rocks statistical area. This covers a significant part of the City of Sydney, including the Sydney CBD, the harbour and Chinatown, spanning south to Central Station and incorporating Barangaroo to the west and the Royal Botanic Gardens to the east.

Population and demographics

The analysis area is home to 8,199 as of 2021 (ABS Census, 2021) and is predicted to grow to 15,140 by 2041, at an annual rate of approximately 3.1 per cent. There are limited residential properties directly adjacent to the Project area, with approximately 316 people living within the Statistical Area 1 (SA1) which encompasses the Project area (SA1 11703164413, ABS Census 2021). Residents within the SA1 are older and more affluent than the Greater Sydney average, with a median age of 58.1 (37.3 in Greater Sydney) and a median annual household income of \$132,960 (\$108,750 in Greater Sydney). Car ownership is slightly lower, with 14.1 per cent of dwellings owning zero cars, compared to 11.2 per cent in Greater Sydney.

Employment and economy

For those living in the broader area of social influence (Sydney (North) – Millers Point SA2), the most common industry of employment (for employed persons aged 15 and above) was professional, scientific and technical services (20.7 per cent), followed by financial and insurance services (17.6 per cent). Further, 97 per cent of employed persons are white-collar workers, which is a higher proportion than seen across Greater Sydney, where only 76.8 per cent of employed persons are white-collar workers. Businesses operating within the Project area are predominantly hospitality, retail or tourism enterprises located within Warrane / Circular Quay Railway Station and Ferry Wharves. These businesses employ staff and associated contractors (such as cleaners) who travel to the project area from other parts of Sydney.

Social infrastructure

Warrane / Circular Quay is a major tourism centre with over 50 million visitors each year (Transport, n.d). Warrane / Circular Quay is home to a number of key attractions, including the world-renowned Sydney Opera House and Sydney Harbour Bridge, the Rocks Discovery Museum, Museum of Contemporary Art Australia and Customs House. There are large amounts of open space (including First Fleet Park) which are well used by the residential and visitor community throughout the precinct which connects it to the Sydney Opera House and the Royal Botanic Gardens. The Project area is also used for major events such as Vivid and New Year's Eve celebrations.

Accessibility particularly to public transport, and homelessness are a key social issue in the precinct, and a catalyst for the Project. Homelessness is another social issue in the precinct. Warrane / Circular Quay.

Community values

Productivity is also identified as a key driver for the analysis area and commercial businesses within close proximity to the Project area, with an emphasis on delivering a well-connected city and creating the conditions for a stronger economy with jobs and skills. Sustainability is a highlighted value with the need to improve resilience, green spaces and landscape through the city plus use resources wisely to improve efficiency. Development within Warrane / Circular Quay Precinct must find a balance between catering for local needs and maintaining the status of the area as an iconic part of Sydney Harbour. One of these key focus areas is a priority of infrastructure and collaboration, focusing on creating a collaborative and connected environment supported by the right physical, social and digital infrastructure.

7.6.2 Potential impacts

Potential construction impacts

- temporary changes to the visual character of the area due to construction hoarding
- temporary amenity impacts for business owners, employees, tourists, visitors, walkers, cyclists and residents in proximity to the Project area, associated with noise, air quality and visual impacts resulting in nuisance and disturbance. This in turn requiring people to change their daily routines, or contributing to stress and anxiety and impacting on health and wellbeing
- potential temporary impact for tourism and visitors to the Warrane / Circular Quay area as a result of the construction impacts listed above and below
- temporary reduction in tourism and visitors to the Warrane / Circular Quay area
- temporary loss of foot traffic and access resulting in a reduction of turnover for businesses and retail establishments within proximity to Warrane / Circular Quay.
- temporary restriction on, or disruption to, water-based activities including commercial boat operators and tourism activities, and water-based transport
- temporary impacts to connectivity and accessibility for residents, passengers and visitors, as a result of transport and access impacts associated with the station development
- temporary impacts to local character, landscape and wayfinding and permeability through to Warrane / Circular Quay, impacting on visitation and key community values
- temporary impacts or disruption during special events such as New Year's Eve or Vivid
- temporary loss of key social infrastructure and open spaces such as First Fleet Park, and public realm surrounding the wharves, impacting on recreation activities for locals and visitors.

Potential operational impacts

- potential for increased noise, privacy, capacity and safety impacts to business owners, employees, tourists, visitors, walkers, cyclists and residents in proximity to the Project area, as a result of increased visitors, more night time activity in the area
- elimination of security and public safety risks as much as practicable, including implementation of the principles from Crime Prevention Through Environmental Design (CPTED)
- potential concerns within the local community regarding continued urban development and fears of over development within Sydney and Warrane / Circular Quay
- potential loss of valued visual amenity and views of the harbour and Sydney Opera House from particular locations from nearby roads and open spaces, such as First Fleet Park, due to new development.

The Project will also result in several positive social outcomes during operation including increased accessibility, improved open space, improved connections and movement through the precinct and a connection to Country.

7.6.3 Assessment approach

A detailed social impact assessment will be prepared in accordance with DPE guidelines to understand the full extent of likely social impacts as a result of the Project, as follows:

- identification of the area of social influence for the Project
- review of the existing social baseline including demographic characteristics, community and recreational facilities and community values
- identification of potential social and economic impacts associated with the construction and operation of the Proposal
- identification of potential mitigation, management and monitoring measures to reduce the social impacts and maximise potential benefits
- a business impact assessment, noting the large number of tourism and accommodation businesses near the Project, including a plan setting out how impacts to businesses will be managed and mitigated.

Stakeholder and community engagement and consultation will be important in understanding the extent of potential social impacts and enabling a collaborative approach to Project design to ensure community concerns and aspirations are captured. The community and stakeholder engagement undertaken to date has been described in Chapter 6.

7.7 Terrestrial flora and fauna

7.7.1 Existing environment and background

The landscape surrounding the Project area is predominately dense built environment with some landscaped open space. The closest parks outside the Project boundary include the Royal Botanic Gardens and Macquarie Place Park. Vegetation within the area is limited to First Fleet Park and planting along the promenades. Vegetation comprises landscape plantings and maintained lawns.

Around 150 trees are located within the Project area, primarily within First Fleet Park and along the foreshore areas of the Quay. Dominant species include Cabbage-tree Palm *Livostonia australis*, Dwarf Date Palm *Phoenix roebelenii*, Jacaranda *mimosifolia* and Ivory Curl *Buckinghamia celsissima*. Trees within the area are generally in good condition and many have been identified as suitable for retention or for transplantation. These include the indigenous Cabbage Tree Palms and Port Jackson Figs, as well as the non-native Washington Palm.

Several trees within the area are listed in the Sydney City Council's Significant Tree Register (City of Sydney, n.d) and are protected under the *Sydney Local Environmental Plan 2012* and the *Sydney Development Control Plan 2012*. These include a row of eight Peppercorn Trees *Schinus areira*, located within a raised planter adjacent to George Street in First Fleet Park. These trees date back to 1972 and have group significance for visual, aesthetic, historic and amenity value.

Fauna habitat within the study area is generally disturbed. Vegetation may support foraging opportunities for highly mobile, urban-adapted species, including Silver Gull *Chroicocephalus novaehollandiae*, White Ibis *Threskiornis moluccus* and Australian Magpie *Gymnorhina tibicen*. Some threatened microbat species, including Southern Myotis *Macropus*, may colonise buildings and existing man-made structures within the study area.

Available mapping (DECCW, 2010c) suggests a Grey-headed Flying Fox *Pteropus poliocephalus* (listed as vulnerable under both the EPBC Act and the BC Act) camp is situated around 400 metres south of the Project site within the Royal Botanic Gardens. This species is likely to have a transient presence within the study area during flowering and fruiting seasons. Fourteen other species may have a transient presence within the study area but generally there is a lack of available habitat.

7.7.2 Potential impacts

Potential construction impacts

- the current landscaped plantings in the area include significant trees that provide visual amenity and cultural values, with some native species plantings and will be impacted by the Project
- there may be potential impacts to foraging, roosting, nesting or perching habitats within the area, including artificial structures around the Project area
- potential disturbance to threatened and migratory species habitat due to noise, dust and vibration.
- potential for introduction of weeds, pest species and pathogens.

Potential operational impacts

- lighting impacts to terrestrial habitat and fauna
- change of tree species/vegetation planted.

7.7.3 Assessment approach

A BDAR Waiver under section 7.9(2) of the BC Act and the associated guidelines has been prepared to accompany this scoping report. The assessment undertaken for the BDAR Waiver confirms that the Project is not likely to have an impact on biodiversity values and a Biodiversity Development Assessment Report is not required. Notwithstanding, the EIS will include standard mitigation measures to manage any indirect impacts during the construction and operation phase of the Project.

7.8 Aquatic flora and fauna

7.8.1 Existing environment and background

Sydney Harbour forms a Key Fish Habitat. These are aquatic habitats that are “important to [preserve due to] the sustainability of the recreational and commercial fishing industries, the maintenance of fish populations generally and the survey and recovery of threatened aquatic species” (Department of Primary Industries (Fisheries), 2007).

Sydney Harbour supports a number of endangered aquatic species, communities and migratory species. The presence of threatened aquatic vegetation, invertebrates, sharks and rays and aquatic mammals in the Project area is unlikely. However, there is potential for two species of seahorse, which are listed under the EPBC Act and protected under the *Fisheries Management Act 1994*, to be present in the Project area and utilising artificial habitats such as the wharf pylons.

Intertidal habitats within the study area are predominantly comprised of manmade structures. The only natural intertidal habitats within the area are located near the north-eastern boundary, just north of Wharf 1, which is an intertidal sandstone reef. Intertidal biota has also been found on:

- seawalls made of natural sandstone: eastern shoreline
- concrete sea walls – western shoreline
- wooden and metal pylons, ladders and ropes: near ferry berths, ferry backstops and under wharves
- rock revetment beneath the southern promenade
- synthetic pontoon floats and supports, ferry gangways.

The intertidal biota observed in the Project area consisted of aquatic algae and invertebrates typical of sheltered and semi-sheltered habitats within Sydney Harbour. The habitat was distributed across the tidal zone, with the exception of the pontoon floats. Due to their floating nature, biota on pontoons had a comparatively restricted suite of species growing along the waterline.

The seabed habitat of Sydney Harbour has been sporadically disturbed due to dredging work and movement of ferries and cruise ships. Based on recent studies of benthic fauna in contaminated sediments in Sydney Harbour, benthic fauna such as worms, molluscs and crustaceans are likely present, and some groups may be abundant (Dafforn *et al.*, 2013; Birch *et al.*, 2017)

There are no specific studies available for Sydney Harbour on fish biodiversity in the open water habitat, although the list of species that may be present would be extensive. Such species may include those frequently observed in artificial habitats in estuaries such as yellowtail (*Trachurus novaezelandiae*), hula fish (*T. taeniatus*), porcupine fish (*Dicotylichthys punctulatus*), fan-belly leatherjacket (*Monacanthus chinensis*), silver beam (*Acanthopargus australis*) and gobies (*Gobiidae*) (Clynick *et al.* 2008).

7.8.2 Potential impacts

Potential construction impacts

- potential impact to areas of intertidal sandstone reef, located near the north-eastern boundary of the study area, just north of Wharf 1
- potential removal of areas of existing habitat on any constructed revetment walls and wharves
- habitat degradation and turbidity on sensitive environments during construction
- underwater noise impacts from piling and other activities.

Potential operational impacts

- lighting impacts to aquatic habitat and fauna
- potential loss of light under the proposed wharves affecting habitat
- potential for new aquatic habitat to be created.

7.8.3 Assessment approach

A detailed aquatic flora and fauna assessment will be prepared as part of the EIS, including:

- record search of State and Commonwealth databases to confirm any threatened aquatic species, populations, and ecological communities within the study area
- complete aquatic biodiversity field assessment to identify listed flora and fauna species, habitat, populations and ecological communities. There is potential for the presence of threatened fish. Carrying out habitat assessments and targeted surveys for:
 - black rock cod *Epinephelus daemeli*, a vulnerable species under the EPBC Act
 - macquarie perch *Macquaria australasica*, an endangered species under the EPBC Act
 - syngnathiformes (pipefish and seahorses)
 - white's seahorse *Hippocampus whitei*
 - eastern potbelly seahorse *Hippocampus abdominalis*.
- assessment of the direct and indirect impacts on aquatic flora and fauna, population, habitat, and ecological communities
- identification of mitigation, management, monitoring and offset measures.

7.9 Water quality

7.9.1 Existing environment and background

Stormwater catchment water quality

Water quality within the extent of the urban catchment is managed through the maintenance of existing gross pollutant traps, which are fitted within selected stormwater pit inlets and capture gross solids only. The removal of other undesirable water quality elements, such as suspended solids and excess nitrates and phosphates, is mitigated to a moderate degree by small and sporadic vegetated areas within the catchment, such as grassed parkland (First Fleet Park), and roadside tree pits.

As much of the catchment is urbanised, receiving waters and associated aquatic habitats within Sydney Harbour are subject to poor water quality (Hedge et al, 2014; Greater Sydney Local Land Services, 2015). Sources of key threats to Sydney Harbour water quality include stormwater run-off, sewage overflows and marine vessels.

Water quality parameters for available data within the wider Sydney Harbour have been assessed against the NSW Water Quality Objectives and the Australian and New Zealand Environment and Conservation Council (ANZECC) and Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) (2000) Guidelines for estuarine and marine environments. Whilst catchment water quality in Sydney Harbour is generally within the guideline limits, the quality is still considered to be poor for supporting aquatic ecology and habitats.

Groundwater depth

A natural groundwater level is present below the catchment surface which links hydraulically with the tidal maritime boundary within Sydney Harbour. There are two primary aquifers that act as a groundwater store in the area. The first is a shallow perched aquifer contained in the fill and alluvial deposits, where water is contained in the pore spaces of the sediment. The second is in potential fractures in the Hawkesbury Sandstone unit underlying the area. Groundwater is typically supplied by rainfall filtering through permeable soil and fractured rock layers, and by leaking 'wet' utilities such as potable water mains.

Generally, the groundwater level of the shallow perched aquifer would follow the top of bedrock and would fluctuate depending on the degree of connection to surface water and rainfall infiltration and leakage from water mains. The groundwater level in the fractured rock aquifer is expected to be located close to sea water level.

A single groundwater level obtained during geotechnical investigations (Coffey Services Australia, 2018) indicated that the groundwater level was approximately four metres below ground level, just below the boundary between the fill and sandstone.

The groundwater quality in the area is expected to vary with salt concentrations increasing towards the Sydney Harbour. Groundwater quality further from the harbour is generally characterised by increased concentrations of iron, manganese, nickel and zinc, which is governed by background conditions in the Hawkesbury Sandstone. pH generally ranges from slightly acidic to neutral. It is likely that groundwater has been contaminated due to historical industrial, commercial, residential, agricultural and construction related activities.

7.9.2 Potential impacts

Potential construction impacts

- the risk of erosion and sediment displacement during construction work including, but not limited to, excavation and earthworks and associated dispersion of construction site sediment into the stormwater system, watercourses and Sydney Harbour
- there is potential for mobilisation of contaminants from marine sediments into the water during sea bed profiling
- the risk of impacting the water quality of Sydney Harbour from spills and construction activities in the water
- storage of waste fuels, oils, batteries changed during construction has the potential to release hazardous substances to the environment or aquatic environment if not stored and disposed of correctly.

Potential operational impacts

- increased stormwater runoff into the stormwater system due to proposed increases to impermeable areas, ultimately impacting the water quality of Sydney Harbour.

7.9.3 Assessment approach

The EIS will include a detailed assessment of potential impacts to hydrology, flooding and water quality during construction and operation of the Project. This assessment will include:

- baseline information on existing groundwater conditions and site-specific background data
- a surface water quality assessment to determine all potential impacts and treatment options during construction and operation of the Project
- qualitative assessment of marine sediment samples to determine the potential impacts to water quality during construction and operation.

7.10 Hydrology and flooding

7.10.1 Existing environment and background

Drainage and flooding

The predominantly urban Sydney Harbour stormwater catchment drains northwards through a formal pit and pipe drainage system from the upstream catchment boundary at Bathurst Street. The catchment discharges into Sydney Harbour, primarily through an outfall located at the termination of the Tank Stream culvert at First Fleet Park.

Some sections of the existing stormwater drainage system within the lower portion of the Warrane / Circular Quay catchment have around a two-year annual exceedance probability (AEP) pipe capacity. Using a conservative modelling approach, existing flooding has been calculated to occur along Alfred Street and the lower portion of Pitt Street during frequent rainfall events such as the two-year average recurrence interval.

Some existing factors that contribute to catchment flooding is undersized, historic drainage system, long-term build-up of sediment, and raised promenade ground levels along the northern interface of Alfred Street which creates an overland flow barrier.

Coastal flooding

Predictions show that by 2075, at higher average recurrence intervals due to climate change impact, there is a risk that sea levels in Sydney Harbour could over-top the promenade during storm surges.

7.10.2 Potential impacts

Potential construction impacts

- Flooding, including potential changes to flood levels and flooding of construction compounds and excavations.

Potential operational impacts

- Catchment flooding within the renewed Warrane / Circular Quay precinct due to increased rainfall intensities and sea level rise attributed to the effects of ongoing climate change
- Coastal flooding along the Warrane / Circular Quay promenade due to increased sea levels attributed to the effects of ongoing climate change
- potential to increase flooding due to changed levels/increases impermeable areas.

7.10.3 Assessment approach

As noted in Section 7.9.3, a detailed assessment of potential impacts to hydrology, flooding and water quality during construction and operation of the Project. This assessment will include:

- development of a detailed description of the existing hydrological environment including identification of potential receiving waters and flow paths
- an assessment of the potential impact of the Project on flood behaviour, local hydrologic systems and water quality during construction and operation
- an assessment of climate change impacts for increasing rainfall intensities and sea level rise including drainage capacity, siting of critical infrastructure, with consideration for the existing site constraints.

7.11 Hazards, risks and land

7.11.1 Existing environment and background

The following assessment of soils, geology and contamination is based on investigations conducted by Coffey Services Australia (2018) for the Project. These investigations included a limited intrusive pre-demolition asbestos and hazardous materials survey of the commercial premises, the station and wharves at Warrane / Circular Quay, as well as additional investigations.

Geology

Warrane / Circular Quay has been extensively modified from its natural geology. The 1:100,000 Sydney Geological Sheet (Herbert, 1983) indicates the area is generally underlain by imported fill and sandstone. Marine sediments, located in the Sydney Harbour seabed and below, comprise of estuarine and alluvial sediments.

Notable geographical features include:

- the 1788 shoreline, which has since been built over and extended through land reclamation
- an old creek corridor running in line with the Tank Stream, widening as it approaches Sydney Harbour
- the eastern area of the study area is intersected by a major fault zone (Sydney CBD geology map, Ochs et al. (2004)). It is typically high weathered sandstone with infilled joints and some seepage.

Contamination

The limited investigation completed in this area has not identified evidence of a significant release of hydrocarbons, sewage or volatile organic compounds. Potential sources of contamination at Warrane / Circular Quay are considered to include the following:

- contaminated marine sediments as a result of historical uncontrolled contamination of the wider Sydney Harbour from industrial activity
- contaminated land sediments as a result of historical uncontrolled fill material, with potential asbestos and hazardous materials
- potential residual/unidentified contamination in soil and groundwater from previous industrial activities and businesses surrounding the foreshore
- fuel and chemical spills resulting from refuelling (and other unexpected) activities within Sydney Harbour
- general wharf operations causing contaminated material to end up on the seafloor.

7.11.2 Potential impacts

Potential construction impacts

- excavation, stockpiling, transport and/or disposal of potentially contaminated material may impact exposure of workers, general public and other human health and environmental receptors to contamination
- there is potential for migration of excavated contaminants into the surrounding environment and outside of the Project
- there is potential for mobilisation of contaminants from sediments into the water column and exposure of aquatic species to contamination
- the onsite storage, use, and transport of chemicals, fuels and materials
- the rupture of, or interference with, underground services
- potential health impacts from noise, air pollution and social and economic impacts during construction

- potential need for seabed reprofiling and management of acid sulfate soils should issues occur during construction potential risks to public safety during construction in proximity to construction sites. Construction hazards and risks will be adequately managed with standard management measures.

Potential operational impacts

The potential types of hazards and associated risks that may be encountered during operation include:

- any hazardous material that remains in-situ may cause exposure to end-users and general community
- the onsite storage, use, and transport of chemicals, fuels and materials
- potential for hazards to passenger and public safety and security – Transport will incorporate measures to eliminate security and public safety risks as much as practicable, including implementation of the principles from CPTED
- emergency situation – derailment, fire or deliberate sabotage
- general worker health and safety issues for drivers and maintenance staff.

7.11.3 Assessment approach

A hazardous materials, contamination, soils and groundwater assessment will be prepared as part of the EIS and will include:

- desktop review of the relevant regulatory framework and guidelines
- identification of contaminated soils and sediments within the Project area
- identification of the types of activities during construction and operation that may generate potential hazards
- undertake a detailed site investigation to provide more complete and definitive information to inform impact assessment and remedial action plans (if required)
- qualitative assessment of potential soil impacts, including acid sulfate soils, during construction and operation
- identification of the potential environmental impacts associated with the potential hazards
- appropriate recommendations for managing potential hazards, soils, geology and contamination.

7.12 Noise and vibration

7.12.1 Existing environment and background

The soundscape character describes the change in sounds across the environment. Several soundscapes were identified within Warrane / Circular Quay, influenced by the following dominant noise sources:

- natural sounds (harbour, birds, wind in trees)
- road traffic
- pedestrian noise/people sound
- ferry and cruise ship activity (including horns)
- rail line operations and associated station activities
- buskers
- patron sounds from the music played in individual food outlets.

Nearby noise and vibration receivers include:

- residential dwellings within mixed use developments along the Warrane / Circular Quay promenade to the east of the Project. Future residential developments are also proposed for and are being constructed to the south of the Project area across Alfred Street and Phillip Street
- commercial buildings- the area directly south of the Project boundary and adjacent to the Circular Quay Station is a commercial core within the Sydney CBD. There is also commercial activity occurring on the eastern side of the Warrane / Circular Quay promenade and to the west within The Rocks and Overseas Passenger Terminal
- educational facilities - there are six educational facilities within the study area
- hotels and holiday accommodation - there are nine hotels and holiday accommodation facilities within the study area
- recreational receivers - The King George V Recreation Centre is the nearest recreational centre (around 400 metres to the west). First Fleet Park, Bligh and Blarney Reserve and promenade areas are also identified as being recreational areas

- special use receivers - There are several major special use areas near the study area including The Museum of Contemporary Art, Sydney Opera House, Sydney Conservatorium of Music and St Patricks Catholic Church.

7.12.2 Potential impacts

Potential construction impacts

- construction activities such as demolition, earthworks, piling, construction and the use of onsite land and marine based machinery and equipment have the potential to generate noise emissions and vibration
- potential for construction noise and vibration impacts to extend beyond the Project area due to the geographic nature of the Project
- temporary surface vibration from land and water-based construction activities leading to amenity (human comfort) impacts or cosmetic or structural damage to (heritage-listed) buildings
- potential impacts from out of hours works during construction.

Potential operational Impacts

- impacts from the operational mechanical noise and vibration sources to surrounding receivers including underwater areas and associated marine life
- potential noise impacts to nearby residents from sources within the built form .

7.12.3 Assessment approach

A construction and operational noise and vibration impact assessment will be undertaken as part of the EIS to assess the noise and vibration impacts on surrounding sensitive receivers and land uses. The assessment will include:

- identification of the existing ambient noise environment in the vicinity of the sensitive receivers most likely to be affected by the Project by undertaking noise monitoring
- identification of nearby land uses and provide a map presenting land uses, receivers and monitoring locations
- review of the requirements of the relevant guidelines and establish appropriate environmental noise and vibration criteria for the operational and construction stages of the Project
- calculation of the likely construction and operational noise and vibration levels
- review of the potential impacts of construction and operational noise and vibration in relation to identified sensitive receivers and sites (particularly heritage structures and key utilities/infrastructure)
- recommendation of feasible and reasonable mitigation and management measures to address identified construction and operational noise impacts including building a strategy by working with the community to understand the preference e.g. more intensive but short construction period or a longer construction period with lower impact /less hours.

7.13 Air

7.13.1 Existing environment and background

Existing ambient air quality refers to the concentration of relevant pollutants that are present in the environment from various sources including industrial processes, commercial and domestic activities, traffic and atypical weather conditions.

The historic primary pollutants of concern are generated by various transport modes within Warrane / Circular Quay including road vehicles, ferries and cruise ships. Fuel advancement and improvements in engine technologies for landside transport modes (for example, cars and trucks) are likely to have had a positive effect on the existing air quality in Warrane / Circular Quay. Further adoption of electric transport modes, including small electric ferries, will continue to improve air quality.

In addition to the transport related activities, there is also an existing sewage pump station vent stack located along the northern extents of First Fleet Park within an established landscaped area. The potential odour emissions from this sewage pump station are well managed given the sensitivity of the surrounding land use and odour from this source does not have a material impact on local air quality.

7.13.2 Potential impacts

Potential construction impacts

- construction activities such as demolition, earthworks, construction and the use of onsite land and marine based machinery and equipment have the potential to generate emissions to air and cause amenity issues associated with dust and odour
- the potential for odour to be generated because of sediment disturbance during removal of existing wharf piles
- removal of potential hazardous materials.

Potential operational impacts

- there is potential for odour from proposed commercial/ retail outlets that include kitchens
- appropriate mechanical ventilation systems need to be included to prevent odour amenity issues for users of Warrane / Circular Quay.

7.13.3 Assessment approach

The EIS will include an air quality assessment which will assess the impacts of the Project on air quality. The assessment will:

- provide a qualitative assessment of construction impacts following the Institute of Air Quality Management Guidance for the Assessment of Dust from Demolition and Construction
- provide a qualitative assessment of operational impacts
- the Sewage Pumping Station located in First Fleet Park is unlikely to be impacted by the design. However, if this does need to be relocated, consideration of the potential for odour impacts will be considered.

7.14 Coastal hazards

7.14.1 Existing environment and background

Warrane / Circular Quay is exposed to winds from the north and south-east quadrants. Winds from the south are generally shielded by the massing of the city but are channelled along George and Pitt Streets crossing Alfred Street. The Cahill Expressway offers shielding to the north precinct for winds from the south. Winds from the west are ameliorated by the topography and building massing in The Rocks and Barangaroo. In terms of pedestrian comfort, the area will generally be classified as suitable for pedestrian sitting type activities for about 75 per cent of the time, standing for over 95 per cent of the time, and suitable for walking for 100 per cent of the time. There are some windy locations during strong wind events, particularly close to the taller buildings.

Warrane / Circular Quay is a protected harbour and is not exposed to ocean swells. Coastal hazards that have the potential to occur in the study area include erosion of the foreshore by vessel movements, propellor wash, sea level rise and changes to waves and currents. Sea level rise is discussed further in Section 7.16.

7.14.2 Potential impacts

Potential construction impacts

- strong wind events during construction are likely to result in dust impacts at Warrane / Circular Quay depending on activities taking place at that time.

Potential operational impacts

- no issues were identified for wind during the operation phase
- protection and maintenance of the wharves will be required
- analysing and addressing existing scour and erosion issues caused by propellor wash and vessel movement.

7.14.3 Assessment approach

A coastal hazards assessment will be undertaken as part of the EIS and will include:

- computational fluid dynamics modelling to determine the wind impacts and volume of rain penetrating partially covered areas
- a qualitative wind assessment report to determine likely wind conditions in and around the development considering the local wind climate, building massing of proposed development, surrounds and topography.

7.15 Waste and resource use

7.15.1 Existing environment and background

The *NSW Government Resource Efficiency Policy* (Office of the Environment and Heritage, 2019) aims to reduce the NSW Government's operating costs and lead by example in increasing the efficiency of its resource use. This policy also includes greenhouse gas emissions.

Waste streams at Warrane / Circular Quay include waste from retail and hospitality venues, sewage, and stormwater.

7.15.2 Potential impacts

Potential construction impacts

Waste and resource use both have the potential to impact resource efficiency for the Project and generate greenhouse gas emissions. This will include:

- liquid and solid waste generated during excavation, earthworks, demolition, packaging and maintenance of construction
- resource use – concrete, timber, steel, electricity, water and fuel greenhouse gas emissions from combustion of fuel in construction plant, equipment and vehicles, disposal of construction waste and use of construction materials with high embodied energy
- disposal of hazardous materials in buildings and structures including asbestos, synthetic mineral fibres, lead-based paints, polychlorinated biphenyls and ozone depleting substances that cannot be reused or recycled
- improper storage of waste fuels, oils, batteries etc. during construction.

Potential operational impacts

The operation of the Project has the potential to generate the following waste:

- general litter
- food waste and food and beverage containers
- general recycling and cardboard
- infrastructure maintenance and cleaning
- stormwater
- use of passenger facilities (sewage)
- decanting of waste and sewage from vessels.

Resource use during operation will primarily be electricity, for lighting and wayfinding, and water, for passenger facilities and cleaning. Resources required during operation are not expected to place a significant strain on water or electricity resources available in the wider Sydney region. However, opportunities to reduce resource use in operation and offset greenhouse gases will form part of the Sustainability Strategy for the Project. The Project will also encourage mode shift to public transport. This has the potential to reduce greenhouse gas emissions associated with private road transport to more efficient public transport modes.

7.15.3 Assessment approach

An assessment of impacts associated with waste generation undertaken in the EIS will include:

- review of the likely resources required and sources of emissions during construction and operation of the Project
- review of waste streams and approximate volumes generated during construction and operation of the Project
- development of management strategies for the identification, handling, transport and disposal of hazardous substances
- address waste, resource use and greenhouse gas emissions during construction and operation.
- consideration of options for reusing materials, where appropriate.

7.16 Climate change and resilience

7.16.1 Existing environment and background

Climate Change

Warrane / Circular Quay's waterfront location makes it susceptible to key climate change risks.

The Metropolitan Sydney Climate Change Snapshot was published by the former NSW Office of Heritage and Environment in 2014. This described the climate of the region and also used the NSW and ACT Regional Climate Modelling (NARClIM) climate model projections to identify potential future climate conditions.

Broadly expected changes in climate can be summarised as:

- an increase in average temperatures in the near (2030) and far (2070) future
- more frequent and consecutive hot days
- more intense fire weather and decreases in frost
- an increase in the intensity of frequency of severe storms
- drier winters and springs in the near future, becoming wetter in the far future. Wetter summers and autumns in the near and far future.

Sea level rise in Sydney is also likely to be experienced as a result of climate change and may have a direct impact on Warrane / Circular Quay.

The following (but not limited to) will also be considered with respect to climate change:

- climate change extreme weather
- natural hazards
- transport diversity
- infrastructure failure
- extreme heat shock/stress
- population growth.

Resilience

The public function of Warrane / Circular Quay, with diverse uses and high traffic, may make risks associated with resilience related shocks and stresses higher. The Project will manage and reduce the exposure to hazards and build resilience to shocks and stresses.

The following will be considered with respect to resilience:

- change in underlying use assumptions for the precinct
- disease pandemic in the city and Warrane / Circular Quay as an entry site
- terror attack
- evolving transport modes/ transport diversity
- cyber-attack/digital network failure
- social inequity
- disease outbreaks
- infrastructure failure.

7.16.2 Potential impacts

Several risks exist as a result of climate change variables, and other shocks and stresses are anticipated for the Project. These are both direct issues and indirect issues.

Direct issues are those which may create an impact on the infrastructure, system or organisation of the Warrane / Circular Quay Precinct that cause damage, extra costs, accelerated deterioration or disruption of services. This may include extreme weather events in the Warrane / Circular Quay Precinct. Indirect issues are those that may impact another system or organisation which disrupts the direct supply of goods or services that the Warrane / Circular Quay precinct critically relies on. This may include businesses in the Warrane / Circular Quay Precinct experiencing food shortages due to drought conditions being experienced by their suppliers.

Indirect risks can be interdependent and may include additional costs for maintenance, changes to use behaviour, impacts on supply and value chains, reputational and safety risks and long-term financial risks.

Potential construction impacts

- potential impacts due to storm surges, flooding and extreme weather events
- potential impacts to safety and wellbeing of staff involved in construction
- potential supply chain issues for construction materials and equipment resulting in delays to the construction program
- Supply chain for construction materials and equipment.

Potential operational impacts

- potential sea level rise, as a result of climate change, leading to an increased flood risk on land and overtopping risk on the promenade
- potential increased loss of service during an extreme weather event
- health and safety impacts on staff and passengers in extreme weather events and extreme temperature days
- increased maintenance due to extreme weather events (e.g. extreme temperature days, wind, rainfall, storm surges) degrading the infrastructure at a quicker rate than currently predicted
- potential structural damage due to stronger winds and heavy rain.

7.16.3 Assessment approach

A climate change risk assessment will be undertaken as part of the preparation of the EIS and will include analysis of climate change trends and projections to determine climate change scenarios and potential impacts relevant to the Project. A resilience assessment will be prepared including consultation and collaboration with adjacent and connected infrastructure stakeholders for improved resilience outcomes during design, construction and operation.

7.17 Sustainability

7.17.1 Existing background and environment

There is a key opportunity to embed economic, social and environmental sustainability throughout the Project lifecycle, including through planning, detailed design, construction and operation.

Sustainability is a key focus area of *Future Transport Strategy* (Transport for NSW, 2022), Transport's *Environment and Sustainability Policy* (Transport for NSW, 2020) and Transport's *Sustainability Plan 2021* (Transport for NSW, 2021b). Sustainability principles have been developed (refer to section 3.6) for the Project in response to these documents. The purpose of these principles is to guide and continually improve and innovate in addressing key challenges for the site and project.

7.17.2 Potential impacts

Potential construction impacts

Sustainability is expected to have a minimal impact over the construction period by driving resource efficiency, minimising waste. However, there is still the potential need to work in more extreme weather conditions, whether caused by climate change or natural variations.

Potential operation impacts

Sustainability has the potential to impact the operation of the Project including:

- health and safety impacts on staff and passengers in extreme weather events and extreme temperature days
- increased maintenance or damage to property due to extreme weather events such as extreme heat days, high winds, higher rainfall and storm surges
- potential for increased waste collection vehicles to visit the site as a result of additional separation of materials and waste
- potential disruption to business operation due to additional metering and monitoring requirements to measure energy and water efficiency.

7.17.3 Assessment approach

A sustainability assessment will be prepared for the EIS, which will:

- assess the Project against the current guidelines including targets and strategies that address sustainability themes identified in United Nations Sustainable Development Goals

- assess potential impacts of climate change on the Project, taking into account the climate change scenarios already considered within the design
- provide sustainability risks and opportunities for improved sustainability outcomes during design, construction and operation
- consider how the Project will demonstrate a best practice level of performance using sustainability ratings tools during design, construction and operation.

7.18 Public land and private property

7.18.1 Existing environment and background

There is a range of public, private, and tertiary land ownership within the study area, although land is predominantly publicly owned. There are also various access points to businesses and buildings within the Project area.

Land uses within and in the vicinity of the Project include:

- six wharves within Warrane / Circular Quay, the OPT to the north and further on the Campbells Cove Jetty located northwest of the project area
- transport infrastructure including Circular Quay Station, light rail and the Cahill Expressway as well as nearby bus interchange
- the Sydney Opera House to the northeast
- the Royal Botanic Garden to the east
- the Museum of Contemporary Art and First Fleet Park at the southwest corner of Warrane / Circular Quay
- the Torrens University Australia, the Rocks Campus located to the west of Warrane / Circular Quay
- multiple mixed-use developments throughout and surrounding Warrane / Circular Quay
- significant public open space throughout Warrane / Circular Quay.

Land use zoning and policy sets out the potential future land uses within the Warrane / Circular Quay and includes:

- zoning within the Sydney LEP 2012 as predominantly either metropolitan centre (B8), public recreation (RE1) or infrastructure (SP2). This is generally in line with existing land uses
- land to the west of Warrane / Circular Quay is subject to the Sydney Cove Redevelopment Authority Scheme - The Rocks (SCRAS)
- land zoned as W1 Maritime Waters under Chapter 6 of State Environmental Planning Policy (Biodiversity and Conservation) 2021.

7.18.2 Potential impacts

Potential construction impacts

- potential requirements for the temporary occupation of land, and/or easements and access arrangements for nearby landowners
- temporary loss of business, retail and commercial land uses due to construction of the Project, including potential demolition of premises within Warrane / Circular Quay
- temporary impacts to transport infrastructure due to work to improve the wharves and station facilities
- temporary impacts to utility infrastructure and services.

Potential operation impacts

- potential concerns within the local community regarding continued urban development Sydney and Warrane / Circular Quay
- potential changes to easements and access.

7.18.3 Assessment approach

The EIS will identify potential impacts on public land and private property including:

- identification of the direct impact area for the Project
- review of the existing property, land use and land use zoning environment
- identification of potential impacts associated with the construction and operation of the Project

- identification of potential mitigation, management and monitoring measures to reduce the land use and property impacts and maximise potential benefits.

7.19 Cumulative Impact

7.19.1 Existing environment and background

Cumulative impacts relate to any combined impact resulting from multiple individual sources. Cumulative impacts may arise during construction and operation because of other major infrastructure projects taking place at the same time as the Project.

There are several developments, either planned or underway near the Project area. Further information about these developments is provided in section 3.3.4.

7.19.2 Potential Impacts

Potential construction impacts

Potential cumulative impacts could arise in situations where construction occurs concurrently or consecutively with other known developments or nearby major Projects. Cumulative impacts could include:

- potential temporary construction traffic impacts – increased traffic congestion may occur where multiple construction projects use the same construction traffic routes at the same time, or where construction traffic impacts occur not long after construction traffic impacts have ceased
- potential temporary parking impacts associated with the loss of on-street parking and/or other kerbside uses (such as loading zones)
- potential temporary impacts associated with disruptions or changes to public transport which could result in longer commuter travel times due to disruptions to ferry, bus, light rail and/or rail services
- potential temporary noise, vibration and visual amenity impacts, such as construction fatigue, increased overall noise levels, additional out of hours work, and increased extent and/or duration of impacts, as a result of other nearby construction sites operating either simultaneously with or before or after the proposed construction work
- potential temporary soils, contamination, water quality and groundwater impacts as a result of nearby construction sites operating either simultaneously with or before or after the proposed construction work
- potential temporary social and business impacts as a result of the cumulative impacts identified in this document.

Potential operational impacts

It is anticipated that the Project and other projects occurring within the vicinity will provide cumulative benefits once operational. A summary of the potential types of cumulative benefits and impacts that could occur during operation include:

- potential placemaking benefits – additional opportunities for urban renewal due to the combined operation of multiple projects, incorporating additional amenity and placemaking benefits from enhanced pedestrian environments
- potential transport and traffic impacts due to changes in the distribution of traffic and access arrangements, increased activity within the surrounding area
- potential changes in amenity, including noise, pedestrian and cycling access due to the combined operation of multiple projects
- potential non-Aboriginal and Aboriginal heritage benefits and/or impacts to the setting or significance of heritage listed items and/or conservation areas due to changed views, access or functionality of an area as a result of multiple projects
- potential improvement to landscape character and visual amenity due to changes to the visual and landscape context of Warrane / Circular Quay
- potential social benefits through revitalising the public domain, providing additional public amenities and facilities, and ensuring all development is DDA compliant
- potential hydrology, flooding and water quality impacts due to changes to existing stormwater catchment flows as a result of the operation of multiple projects, including potential changes in flooding behaviour if the loss of floodplain storage from multiple projects occurs.

7.19.3 Assessment Approach

A cumulative impact assessment will be carried out as part of the EIS for this Project. The cumulative impact assessment will include:

- identification of projects with the potential to generate cumulative impacts through consultation with stakeholders and review of the DPE Major Projects planning portal, government agency databases and local council development application registers
- application of screening criteria – including location, timeframe, scale and status to determine which of these projects are likely to generate cumulative impacts
- identification of potential cumulative impacts
- identification of mitigation measures and management strategies to address the potential cumulative impacts.

7.20 Matters requiring no further assessment

Table 7-2 provides a list of the matters that require no further assessment as part of the EIS.

Table 7-2 Matters requiring no further assessment

Matter	Discussion
Bushfire	Not applicable to the Project as the Project is not located on bushfire prone land.
Biosecurity	The existing and proposed operations are not classified as hazardous or offensive development or a biosecurity risk.

8. Conclusion

The Project will renew public spaces and infrastructure in and around the Warrane / Circular Quay transport interchange. This renewal will improve accessibility for all users and support future demand for ferry services, while providing new and improved publicly accessible open space and ease congestion. The Project will respect and enhance the historic and cultural significance of the area and improve views towards the iconic Sydney Harbour.

The purpose of this document is to support a State significant Infrastructure application for the Project. Transport, as Proponent, is seeking to have the Project declared to be a State Significant Infrastructure Project on the basis that it is specified development on specified land under section 5.12 (4) of the EP&A Act. Should the Project be declared specified development on specified land it will be subject to Division 5.2 of the Act and will require the preparation of an EIS and the approval of the Minister for Planning.

The key environmental issues identified for the Project (as set out in the SSI Guideline) include:

- built environment and amenity
- Aboriginal heritage
- historic heritage
- access
- social
- terrestrial flora and fauna
- aquatic flora and fauna
- water quality
- hydrology and flooding
- hazards, risk and land
- noise and vibration
- air
- coastal hazards
- waste
- climate resilience
- sustainability
- public land and private property
- cumulative impacts.

Following receipt of the SEARs, Transport will prepare an EIS for the Project, in accordance with the SEARs and technical guidelines. Ongoing community and stakeholder consultation will be undertaken throughout the preparation of the EIS.

The EIS will include:

- A detailed description of the Project including its components, construction activities and potential staging
- A comprehensive assessment of the potential impacts of the Project including a description of the existing environment and assessment of potential direct, indirect and cumulative impacts
- Description of measures and strategies to be implemented to avoid, minimise, manage, mitigate, offset and/or monitor the potential impacts
- Identification and response to issues raised by stakeholders and the community
- A justification and evaluation of the Project as a whole, having regard to its economic, environmental and social impacts and the principles of ecologically sustainable development.

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Appendix A

Scoping summary table

Circular Quay Renewal – Scoping summary table

Level of assessment	Matter	Cumulative impact assessment	Engagement	Relevant government plans, policies and guidelines	Scoping report reference
Detailed	Built environment – design quality	Yes	Specific	<ul style="list-style-type: none"> • <i>Practitioners Guide to Movement and Place</i> (NSW Government Architect and Transport for NSW, 2020) • <i>Better Placed – An integrated design policy for the built environment in NSW</i> (Government Architect of NSW, 2017) • <i>Better Placed – Design Guide for Heritage – Implementing the Better Placed policy for heritage buildings, sites, and precincts</i> (Government Architect of NSW, 2019) • <i>Sydney Green Grid – Spatial Framework and Project Opportunities</i> (Tyrrell Studio and Office of the Government Architect, 2017) • <i>Guidance note EIA-N04 Guidelines for Landscape Character and Visual Impact Assessment</i> (Transport for NSW, 2020) • <i>The Guidance Note for Landscape and Visual Assessment</i> (Australian Institute of Landscape Architects, 2018) • <i>AS4282:2019 Control of the Obtrusive Effects of Outdoor Lighting</i> • <i>Draft Greener Places Design Guide</i> (NSW Government Architect, 2020) • <i>Local Character and Place Guideline</i> (Department of Planning and Environment, 2019) • <i>'Guidelines for Landscape and Visual Impact Assessment' version 3</i> • <i>Rose Bay Marina Pty Limited v Woollahra Municipal Council and anor [2013] NSWLEC 1046</i> • <i>Tenacity Consulting v Waringah [2004] NSWLEC 140.</i> 	Section 7.2

Level of assessment	Matter	Cumulative impact assessment	Engagement	Relevant government plans, policies and guidelines	Scoping report reference
Detailed	Heritage – Aboriginal	Yes	Specific	<ul style="list-style-type: none"> • <i>NSW National Parks and Wildlife Act 1974</i> • <i>Procedure for Aboriginal Cultural Heritage Consultation and Investigation</i> (Roads and Maritime Services, November 2011) • <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales</i> (Department of Environment, Climate Change and Water, 2010a) • <i>Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW</i> (Department of Environment, Climate Change and Water, 2010) • <i>Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW</i> (Department of Environment, Climate Change and Water NSW, 2011). 	Section 7.3
Detailed	Heritage – historic and maritime	Yes	Specific	<ul style="list-style-type: none"> • <i>NSW Heritage Act 1977</i> • <i>Sydney Cove Redevelopment Act 1968</i> • <i>State Environmental Planning Policy (Biodiversity and Conservation) 2021</i> • <i>Australia ICOMOS Charter for Places of Cultural Significance, The Burra Charter, 2013</i> (the Burra Charter) • <i>Assessing Significance for Historical Archaeological Sites and Relics</i> (NSW Heritage Branch, 2009) • <i>NSW Heritage Manual and the Archaeological Assessment Guidelines</i> (NSW Heritage Office, 1996) • <i>NSW Skeletal Remains: Guidelines for Management of Human Remains</i> (Heritage Office, 1998) • <i>Criteria for the Assessment of Excavation Directors</i> (NSW Heritage Council, 2011) • <i>Unexpected Heritage Finds Guideline</i> (Transport for NSW, 2019). 	Section 7.4

Level of assessment	Matter	Cumulative impact assessment	Engagement	Relevant government plans, policies and guidelines	Scoping report reference
Detailed	Access – traffic and parking	Yes	Specific	<ul style="list-style-type: none"> • <i>Guide to Traffic Management – Part 3 Traffic Studies and Analysis</i> (Austroads, 2017) • <i>Cycling Aspects of Austroads Guides</i> (Austroads, 2014) • <i>Guide to Traffic Generating Developments Version 2.2</i> (Roads and Traffic Authority, 2002) • <i>RMS Traffic Modelling Guidelines Version 1.0</i> (Roads and Maritime Services, 2013) • <i>Guide to Traffic Management – Part 3 Traffic Studies and Analysis</i> (Austroads, 2007) • <i>Guide to Traffic Generating Developments Version 2.2</i> (Roads and Traffic Authority, 2002) • <i>Guide to Traffic Generating Developments, Updated Traffic Surveys, TDT 2013/04a</i> (Roads and Maritime Services, 2013) • <i>Cycling Aspects of Austroads Guides</i> (Austroads, 2017) AP-G88-17 • <i>NSW Bicycle Guidelines v 1.2</i> (Roads and Traffic Authorities, 2005) • <i>Planning Guidelines for Walking and Cycling</i> (Department of Infrastructure, Planning and Natural Resources, 2004) • Other relevant transport plans that include station precinct areas. 	Section 7.5
Detailed	Access – rail facilities	Yes	Specific	<ul style="list-style-type: none"> • <i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i> • <i>Transport Administration Act 1998</i> • Rail Safety (Adoption of National Law) Regulation 2018 	Section 7.5
Detailed	Access – port facilities	Yes	Specific	<ul style="list-style-type: none"> • <i>Ports and Maritime Administration Act 1995</i> • <i>Transport Administration Act 1998</i> • <i>Green Port Guidelines</i> • Ports and Maritime Administration Regulation 2021 	Section 7.5
Detailed	Social	Yes	General	<ul style="list-style-type: none"> • <i>Social Impact Assessment Guideline for State Significant Infrastructure Projects</i> (Department of Planning, Industry and Environment, 2021) • <i>Socio-economic Assessment, Environmental Impact Assessment Practice Note EIA-N05</i> (Transport for NSW, 2020). 	Section 7.6

Level of assessment	Matter	Cumulative impact assessment	Engagement	Relevant government plans, policies and guidelines	Scoping report reference
Standard	Biodiversity – terrestrial flora and fauna	Yes	Specific	<ul style="list-style-type: none"> • <i>EPBC Act Significant Impact Guidelines</i> (Department of Sustainability, Environment, Water, Population and Communities, 2009) • <i>How to apply for a biodiversity development assessment report waiver for a major Project application</i> (Department of Planning, Industry and Environment, 2019) • <i>Biodiversity Assessment Methodology</i> (BAM) (NSW Office of Environment and Heritage, 2017) • <i>NSW Biodiversity Offsets Policy for Major Projects</i> (NSW Office of Environment and Heritage, 2014) • Relevant NSW and Commonwealth Species Survey Guidelines. • <i>Biodiversity Policy</i> (Transport for NSW, 2022) 	Section 7.7
Detailed	Biodiversity – aquatic flora and fauna	Yes	Specific	<ul style="list-style-type: none"> • <i>Matters of National Environmental Significance: Significant Impact Guidelines 1.1: Environment Protection Biodiversity Conservation Act 1999</i> (Commonwealth of Australia, 2013) • <i>Nationally Threatened Ecological Communities and Threatened Species Guidelines</i> (Commonwealth Department of the Environment and Energy) • <i>Biodiversity Assessment Method</i> (Office of Environment and Heritage, 2017) • <i>Draft Policy and Guidelines for Fish Habitat Conservation and Management, Update 2013</i> (Department of Primary Industries, 2013) • <i>Guidelines for Aquatic Habitat Management and Fish Conservation</i> (Department of Primary Industries, 1999) • <i>Aquatic Ecology in Environmental Impact Assessment</i> (Lincoln Smith, 2003) • <i>State Environmental Planning Policy (Biodiversity and Conservation) 2021</i>. 	Section 7.8
Detailed	Water – water quality	Yes	Specific	<ul style="list-style-type: none"> • <i>Approved Methods for the Sampling and Analysis of Water Pollutants in NSW</i> (DECC, 2008) • <i>Australian and New Zealand Guidelines for Fresh and Marine Water Quality</i> (ANZECC / ARMCANZ, 2000) 	Section 7.9

Level of assessment	Matter	Cumulative impact assessment	Engagement	Relevant government plans, policies and guidelines	Scoping report reference
				<ul style="list-style-type: none"> • <i>Using the ANZECC Guidelines and Water Quality Objectives in NSW</i> (DEC, 2006) • <i>National Water Quality Management Strategy</i> (ANZECC/ARMCANZ 2018) • <i>Guidelines for Managing Risks in Recreational Water</i> (NHMRC, 2008) • <i>Neutral or Beneficial Effect on Water Quality Assessment Guideline</i> (WaterNSW, 2021) • <i>Draft Managing Urban Stormwater – Council Handbook</i> (EPA, 1997) • <i>Water sensitive urban design guideline</i> (Roads and Maritime Services, 2017) • <i>Guidelines for controlled activities on waterfront land</i> (Department of Industry, 2018) • <i>NSW Aquifer Interference Policy</i> (Department of Primary Industries, 2012) • <i>Managing Urban Stormwater: Soils and Construction, Volume 1, 4th Edition</i> (Landcom, 2004) • <i>NSW Water Quality and River Flow Objectives</i> (NSW Department of Environment, Climate Change and Water, 2006). 	
Detailed	Water – hydrology	Yes	Specific	<ul style="list-style-type: none"> • <i>Review of Australian Rainfall and Runoff Design Inputs for NSW</i> (NSW Office of Environment and Heritage, 2019) • <i>Managing Urban Stormwater: Soils and Construction Volume 1</i> (Landcom 2004) 	Section 7.10
Detailed	Hazards and risks – flooding	Yes	Specific	<ul style="list-style-type: none"> • <i>Floodplain Development Manual, the management of flood liable land</i> (NSW Department of Infrastructure, Planning and Natural Resources, 2005) • <i>Floodplain Risk Management Guideline, Practical Considerations of Climate Change</i> (NSW Office of Environment and Heritage, 2006) • <i>Flood Hazard Guideline 7-3 of the Australian Disaster Resilience Handbook 7 Managing the Floodplain: A Guide to Best Practice in Flood Risk Management in Australia</i> (Australian Institute Disaster Resilience, 2017). 	Section 7.10
Detailed	Hazards and risks - contamination	Yes	General	<ul style="list-style-type: none"> • <i>National Environment Protection (Assessment of Site Contamination) Measure 1999</i> (as revised 2013) 	Section 7.11

Level of assessment	Matter	Cumulative impact assessment	Engagement	Relevant government plans, policies and guidelines	Scoping report reference
				<ul style="list-style-type: none"> • <i>Managing Land Contamination: Planning Guidelines State Environmental Planning Policy 55 – Remediation of Land</i> (Department of Urban Affairs and Planning & Environment Protection Authority, 1998) • <i>Guidelines for Consultants Reporting on Contaminated Sites</i> (NSW Office of Environment and Heritage, 2011) • <i>Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997</i> (Environment Protection Authority, 2015) • <i>Guidelines for the NSW Site Auditor Scheme</i> (Environment Protection Authority, 2017) 	
Detailed	Land – soil chemistry	Yes	General	<ul style="list-style-type: none"> • <i>Acid Sulfate Soils Assessment Guidelines</i> (Department of Planning, 2008) 	Section 7.11
Detailed	Geology	Yes	General	<ul style="list-style-type: none"> • <i>Risk assessment Guidelines for Groundwater Dependent Ecosystems</i> (Office of Water, 2012) • <i>NSW Aquifer Interference Policy</i> (Department of Primary Industries, 2012). • <i>PFAS National Environmental Management Plan 2.0</i> (Department of Agriculture, Water and the Environment, 2020) 	Section 7.11
Detailed	Amenity – noise and vibration	Yes	General	<ul style="list-style-type: none"> • <i>Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure and Ground Vibration</i> (ANZECC, 1990) • <i>Assessing Vibration: a technical guideline</i> (DEC, 2006) German Standard DIN 4150-3: Structural Vibration - effects of vibration on structures • <i>Interim Construction Noise Guideline</i> (DECC, 2009) • <i>Noise Policy for Industry</i> (EPA, 2017) • <i>NSW Road Noise Policy</i> (DECCW, 2011) • <i>Noise Criteria Guideline</i> (Roads and Maritime Services, 2015) • <i>Noise Mitigation Guideline</i> (Roads and Maritime Services, 2015) • <i>Construction Noise and Vibration Strategy Version 4</i> (Transport for NSW, 2019). 	Section 7.12

Level of assessment	Matter	Cumulative impact assessment	Engagement	Relevant government plans, policies and guidelines	Scoping report reference
Standard	Air	Yes	General	<ul style="list-style-type: none"> • <i>Guidance on the assessment of dust from demolition and construction</i> Version 1.1 (UK Institute of Air Quality Management, 2014). • <i>Approved Methods for Modelling and Assessment of Air Pollutants in NSW</i> (Approved Methods) (NSW Environment Protection Authority, 2016). 	Section 7.13
Standard	Hazards and risks – coastal hazards	Yes	General	<ul style="list-style-type: none"> • <i>A Statistical Model of Severe Winds</i> (Geoscience Australia 2007) • AS/NZS 1170.2:2011 - Structural design actions Part 2: Wind actions • <i>East Coast Lows: A Wind, Rainfall and Inundation Hazard Database Showing Locations Most at Risk</i>. NSW Coastal Conference, 2017. • <i>NSW Coastal Planning Guideline: Adapting to Sea Level Rise</i> (NSW Department of Planning, 2010) • <i>The Tsunami Threat to Sydney Harbour, Australia: Modelling potential and historic events</i>, Nature, Scientific Reports (2018) • <i>NSW Sea Level Trends – The Ups and Downs</i>, 17th Australian Hydrographers Association Conference Sydney, 2014 • <i>Fort Denison Sea Level Rise Vulnerability Study</i> (Department of Environment and Climate Change, 2008). 	Section 7.14
Standard	Hazards and risk – waste	No	General	<ul style="list-style-type: none"> • <i>Waste Avoidance and Recovery Act 2001</i> • <i>Plastic Reduction and Circular Economy Act 2021</i> • <i>Waste Classification Guidelines</i> (NSW Environment Protection Authority, 2014) • <i>National Greenhouse and Energy Reporting Act 2007</i> • <i>Australian Government National Greenhouse and Energy Reporting (Measurement) Determination 2008</i> • <i>National Greenhouse Gas Factors: Australian National Greenhouse Accounts</i> (Australian Department of the Environment and Energy, 2019) • <i>Carbon Estimate and Reporting Tool</i> (Transport for NSW, 2017) • <i>Government Resource Efficiency Policy (GREP)</i> (Office of Environment and Heritage, 2019). 	Section 7.15

Level of assessment	Matter	Cumulative impact assessment	Engagement	Relevant government plans, policies and guidelines	Scoping report reference
Standard	Climate resilience	No	General	<ul style="list-style-type: none"> • <i>Climate Risk Assessment Guidelines version 4.1</i> (Transport for NSW, 2021) • <i>Climate Change Impacts and Risk Management A Guide for Business and Government</i> (Australian Government Department of the Environment and Heritage Australian Greenhouse Office, 2006) • AS/NZS 31000:2018 Risk Management – Principles and Guidelines • AS5334 – Climate Change Adaptation for Assets and Infrastructure • AS 5334-2013 Climate change adaptation for settlements and infrastructure – a risk-based approach. 	Section 7.16
Standard	Sustainability	No	General	<ul style="list-style-type: none"> • <i>Government Resource Efficiency Policy</i> (GREP) (Office of Environment and Heritage, 2019) • <i>Future Transport Strategy</i> (Transport for NSW, 2022) • <i>Environment and Sustainability Policy</i> (Transport for NSW 2020) • <i>Transport Sustainability Plan 2021</i> (Transport for NSW 2021) • Clause 193 of the EP&A Regulations 2021 	Section 7.17
Standard	Built environment – private property	No	General	<ul style="list-style-type: none"> • Refer to scoping report 	Section 7.18

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