Transport for NSW

Parramatta Light Rail Stage 2

Staging Report

August 2026

transport.nsw.gov.au

NSW GOVERNMENT

Table of Contents

1 Introduction 10

1.1 Project description 10

Key features of the project 10

Light rail track and bridges 10

Active and public transport integration 10

Other works 11

1.2 Statutory context 13

1.2.1 Exempt and complying development 13

1.3 Proponent and delivery 14

1.4 Purpose of this Staging Report 14

2 Project staging 18

2.1 Low impact works 18

2.2 Construction staging 19

2.2.1 Enabling Works – Bridge between Melrose Park and Wentworth Point 20

2.2.2 Main Works A – Main alignment construction works 28

2.2.3 Main Works B – Main alignment construction works 30

2.3 Operate and Maintain Stage 31

2.3.1 Operational staging 31

2.4 Project timing 31

2.5 Managing cumulative impacts 32

2.5.1 Other major projects 32

2.5.2 Project cumulative impacts 33

2.5.3 Principles and mechanisms to minimise cumulative impacts 34

3 Addressing the Conditions of Approval and mitigation measures 39

3.1 Requirements of the Planning Approval 39

3.2 Compliance 39

DRAFT

4 Review 119

4.1 Changes to delivery strategy 119

4.2 Project determination and changes to the planning approval 119

5 References 120

DRAFT

Revision	Revision Date	Status	Description	Author/Company	Reviewer/Approver
A-C	Oct 23	Final	Staging Report developed prior to receiving Planning Approval. Submitted with Response to Submissions	TfNSW Senior Environmental & Sustainability Officer	TfNSW Senior Environment & Sustainability Manager
D	1 Oct 24	Draft	Revisions in line with Conditions of Approval	TfNSW Senior Environmental & Sustainability Officer	Environmental Representative
E	15 Nov 24	Draft	Aligning with CEMF	TfNSW Senior Environmental & Sustainability Officer	Environmental Representative and Acoustic Advisor
F	27 Nov 24	Draft	Addressing ER comments	TfNSW Senior Environmental & Sustainability Officer	Environmental Representative
G	19 Dec 24	Draft	Addressing ER comments	TfNSW Senior Environmental & Sustainability Officer	Environmental Representative
H	11 Feb 25	Final	Addressing DPHI comments	TfNSW Senior Environmental & Sustainability Officer	Planning Secretary's nominee
0	11 Aug 26	Draft	Revisions with updated Enabling Works scope and Main Works update	TfNSW Senior Environmental & Sustainability Officer	Environmental Representative
1	21 Aug 26	Final Draft	Response to DPHI review RFI	TfNSW Senior Manager Environment & Sustainability	Planning Secretary's nominee

Glossary and Definitions

Acronym / Term	Description
Aboriginal object	The same meaning as in the *National Parks and Wildlife Act 1974* (NSW)
Adjoining or adjacent	bordering; contiguous; not separated by anything of the same kind
AEP	Annual Exceedance Probability or the probability that a flood of a specified magnitude will occur within a year
AG DCCEEW	Australian Government Department of Climate Change, Energy, the Environment and Water
AHIMS	Aboriginal Heritage Information Management System
Amendment Report	The Amendment Report submitted to the Planning Secretary under clause 179(3) of the Environmental Planning and Assessment Regulation 2021 that describes amendments to the CSSI.
At-property acoustic treatment	Includes courtyard walls and building treatments. Building treatments may include but are not limited to ventilation, acoustic blinds / curtains, glazing, window and door seals, sealing of vents or underfloor areas, shutters and secondary glazing
CBD	Central Business District
CEMF	Construction Environmental Management Framework
CEMP	Construction Environmental Management Plan
CLM Act	*Contaminated Land Management Act* 1997
CMP	Construction Monitoring Programs
Completion of construction	The date upon which Construction is completed and all requirements of the Planning Secretary (if any) have been met. If construction is staged, completion of Construction is the date upon which Construction is completed and all requirements of the Planning Secretary (if any) have been met, in respect of all stages of Construction
Construction	Includes Work required to construct the CSSI as defined in the Project Description described in the documents listed in **Condition A1** including commissioning trials of equipment and temporary use of any part of the CSSI, but excluding **Low Impact Work** which is carried out or completed prior to approval of the CEMP and work approved under a **Site Establishment Management Plan**

Consultation	To provide information and actively engage with and obtain and consider feedback from stakeholders during development of post approval documents. How the feedback has been considered and whether any changes have been made in response to this feedback is then documented and communicated back to stakeholders. Consultation should not be limited to one-way notification about the project.
Contractor	An organisation which has entered into a contractual agreement with TfNSW to deliver contracted works on their behalf.
CSSI	The Critical State Significant Infrastructure, as described in Schedule 1, the carrying out of which is approved under the terms of this approval
Department	NSW Department of Planning, Housing and Infrastructure
DPHI	Department of Planning, Housing and Infrastructure (formerly Department of Planning, and Environment)
DPI Fisheries	NSW Department of Primary Industries, Fisheries
DRP	Design Review Panel
EIS	The Environmental Impact Statement referred to in **Condition A1**, submitted to the Planning Secretary seeking approval to carry out the development described in it, and including any additional information provided by the Proponent in support of the application for approval of the project
EP&A Act	*Environmental Planning and Assessment Act 1979* (NSW)
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth)
ER	The Environmental Representative(s) for the CSSI approved by the Planning Secretary
Emergency Services	NSW Police, NSW Ambulance, Fire and Rescue NSW, NSW Rural Fire Services and NSW State Emergency Service
Heavy Vehicle	Has the same meaning as in the Heavy Vehicle National Law (NSW)
ICNG	*Interim Construction Noise Guideline (DECC, 2009)*
Incident	An occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a noncompliance
Land	Has the same meaning as the definition of the term in section 1.4 of the EP&A Act
Landowner	Has the same meaning as "owner" in the *Local Government Act 1993* and in relation to a building means the owner of the building

Local road	Any road that is not defined as a classified road under the *Roads Act 1993*
Low Impact Work	Includes: (a) surveys; (b) investigations; (c) site establishment work approved under a **Site Establishment Management Plan**; (d) minor clearing and relocation of native vegetation, as identified on the documents listed in **Conditions A1**; (e) installation of mitigation measures; (f) property acquisition adjustments; (g) archaeological testing under the *Code of practice for archaeological investigation of Aboriginal objects in NSW (DECCW, 2010)* or archaeological monitoring undertaken in association with **(a) – (f)** above to ensure that there is no impact on heritage items; (h) Work or uses that the **ER** has determined will have minimal environmental or community impact; and (i) maintenance of existing buildings and structures required to facilitate the carrying out of CSSI; and Notwithstanding the following works are **not** Low Impact Work: (j) where heritage items (excluding those impacted by activities (g), (h) and (i) above) threatened species or threatened ecological communities (within the meaning of the *Biodiversity Conservation Act 2016 or Environment Protection and Biodiversity Conservation Act 1999*) are affected or potentially affected by any low impact work, that work is Construction, unless otherwise determined by the Planning Secretary, following consultation by the Proponent with Heritage NSW, BCS or DPI Fisheries (in the case of impact upon fish, aquatic invertebrates or marine vegetation); and (k) any Work undertaken outside the hours specified in **Condition E31** that exceeds noise management and vibration levels as identified in **Condition E33(b).** ***Notes***: 1. *Early stages of Work are not necessarily low impact work* 2. *Low Impact Works is not Construction as defined by this approval* 3. *Impacts due to Low Impact Work on heritage items on the State Heritage Register must not be greater than "little to no impact" as defined in Heritage NSW Material Threshold Policy*
Minister	NSW Minister for Planning and Public Spaces
NML	Noise Management Level as defined in the *Interim Construction Noise Guideline* (DECC, 2009)
OOHW	Out-of-hours work
Operation	The carrying out of the CSSI (whether in full or in part) upon the completion of Construction, unless otherwise agreed by the Planning Secretary.

	***Note**: There may be overlap between the carrying out of Construction and operation if the phases of the development are staged. Commissioning trials of equipment and temporary use of any part of the CSSI are within the definition of Construction*
Planning Approval	Collective term for the Parramatta Light Rail Stage 2 Environmental Impact Statement, Response to Submissions, Amendment Report and Infrastructure Approval
Planning Secretary	Planning Secretary of the Department (or nominee, whether nominated before or after the date on which this approval was granted)
POEO Act	*Protection of the Environment Operations Act 1997* (NSW)
Proponent	The person identified as such in Schedule 1 of this approval and any other person carrying out any part of the CSSI from time to time
RAPs	Registered Aboriginal Parties
Relevant council(s)	City of Parramatta, City of Ryde
Response to Submissions	The Proponent's response to issues raised in submissions received in relation to the application for approval for the CSSI under the EP&A Act
Sensitive land use(s)	Includes residences, educational institutions (including preschools, schools, universities, TAFE colleges), health care facilities (including nursing homes, hospitals), religious facilities (including churches), childcare centres and passive recreation areas (including outdoor grounds used for teaching). Receivers that may be considered to be sensitive include commercial premises (including film and television studios, research facilities, entertainment spaces, temporary accommodation such as caravan parks and camping grounds, restaurants, office premises, and retail spaces) and industrial premises as identified by the Planning Secretary ***Note**: For the purpose of determining appropriate mitigation, a multistorey residential flat building must not be counted as one sensitive receiver*
Site Auditor	A contaminated land auditor, accredited by the NSW EPA under the CLM Act
SOPA	Sydney Olympic Park Authority
Suitably qualified and Experienced contaminated land consultant(s)	A contaminated land consultant who meets the competencies outlined in the Guideline on the Competencies and Acceptance of Environmental Auditors and Related Professionals (Schedule B9) as provided in the ASC National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended in 2013).

Tree	Long lived woody perennial plant greater than (or usually greater than) 3 metres in height with one or relatively few main stems or trunks (AS4373-2007 Pruning of amenity trees)
The project	Parramatta Light Rail Stage 2
TfNSW	Transport for NSW (the proponent or Principal)
Work	Any physical activity for the purpose of the CSSI including Construction and Low Impact Work

DRAFT

1 Introduction

This Staging Report has been developed for the Parramatta Light Rail Stage 2 project (the project). It describes how construction of the project will be staged and has been prepared in accordance with the *Parramatta Light Rail Stage 2 Conditions of Approval (SSI 10035)* (Department of Planning, Housing and Infrastructure (DPHI), 2024).

Previously the Staging Report was developed as part of the Response to Submissions Report (October, 2023) and has been updated to comply with the *Parramatta Light Rail Stage 2 Conditions of Approval (SSI 10035)* (February, 2024). For more context refer to the Response to Submissions Report appendix F, and the project's Construction Environmental Management Framework (CEMF) which is aligned to the Staging Report (this document) with regard to staging and management of Construction.

1.1 Project description

Parramatta Light Rail will deliver an integrated light rail service that supports population and employment growth expected throughout the Greater Parramatta and the Olympic Peninsula (GPOP). It will integrate with existing and future modes of transport, including buses, trains, ferries and active transport, as well as Sydney Metro West services and the existing road network.

Parramatta Light Rail Stage 2 will be delivered in stages to ensure the infrastructure needed to support growth and development is in place. Stage 2 (the project) will connect the Parramatta CBD and Stage 1 to Camellia, Rydalmere, Ermington, Melrose Park, Wentworth Point, Sydney Olympic Park and the Carter Street precinct in Lidcombe, adjacent to Sydney Olympic Park.

Key features of the project

The project comprises two main elements:

- Construction of about 10 kilometres of light rail infrastructure between Camellia and the Carter Street precinct adjacent to Sydney Olympic Park
- Operation of about 13 kilometres of light rail alignment between the Parramatta CBD and the Carter Street precinct, including a section of infrastructure constructed by Parramatta Light Rail Stage 1 between Camellia and the Parramatta CBD.

Light rail track and bridges

- A new 10 kilometre long dual light rail track, with 14 stops, between the Parramatta Light Rail Stage 1 line in Camellia and the Carter Street precinct, adjacent to Sydney Olympic Park
- Two bridges over the Parramatta River between Camellia and Rydalmere, and between Melrose Park and Wentworth Point
- A bridge over Silverwater Road between Rydalmere and Ermington
- Other bridge works in Ken Newman Park and Sydney Olympic Park.

Active and public transport integration

- About 9.5 kilometres of new active transport links between Camellia and the Carter Street precinct, which will connect with the existing cycling and pedestrian network
- Interchanges with other forms of public transport, including trains, ferries, buses and Sydney Metro West, with the main interchanges located in the Parramatta CBD, Rydalmere and Sydney Olympic Park
- A shared light rail and pedestrian zone (no through vehicle access) within Sydney Olympic Park along Dawn Fraser Avenue between Australia Avenue and Olympic Boulevard

- Bus enabled access over the proposed bridge between Melrose Park and Wentworth Point.

Other works

Works proposed to support the project's operation:

- Turnback facilities, including along part of Macquarie Street in the Parramatta CBD
- Adjustments to the Parramatta Light Rail stabling and maintenance facility at Camellia
- Five new traction power substations to convert electricity to a form suitable for use by light rail vehicles
- New and improved open spaces and recreation facilities at Eric Primrose Reserve, Ken Newman Park and the Atkins Road stop.

The project is shown on Figure 1-1.

DRAFT

Figure 1-1: The Parramatta Light Rail Stage 2 project

1.2 Statutory context

The Parramatta Light Rail Stage 2 project is declared State Significant Infrastructure in accordance with the *Environmental Planning and Assessment Act 1979* (EP&A Act). It is classified as Critical State Significant Infrastructure (CSSI).

As State Significant Infrastructure, the project requires approval from the NSW Minister for Planning and Public Spaces. An Environmental Impact Statement (EIS) is required to support the approval application for State Significant Infrastructure under the EP&A Act. The *Parramatta Light Rail Stage 2 Environmental Impact Statement (EIS)* (Transport for NSW, 2022) assessed impacts for the project and was on public exhibition from 9 November to 16 December 2022. The project was approved by the Minister on the 22 February 2024 (SSI 10035).

The Planning Approval (including Infrastructure Approval SSI 10035, related environmental assessment documents and amendment report) is located at Department of Planning, Housing and Infrastructure's major projects website:

https://www.planningportal.nsw.gov.au/major-projects/projects/parramatta-light-rail-stage-2

The project has also been determined to be a controlled action under the *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth) (EPBC Act) and approval (2022/09300) from the Australian Government Minister for the Department of Climate Change, Energy, the Environment and Water (AG DCCEEW) was granted on the 19 April 2024.

This Staging Report identifies how Transport for NSW (TfNSW), and its contractors will stage the project's construction and operation of Stage 2 and comply with the updated mitigation measures within Appendix B of the Response to Submissions.

1.2.1 Exempt and complying development

Exempt development does not require assessment under Part 4 or Part 5 of the EP&A Act. Exempt development is defined in the State Environmental Planning Policy (Planning Systems) 2021, the State Environmental Planning Policy (Transport and Infrastructure) 2021, the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 and under relevant Local Environmental Plans. The State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 also defines complying development. In situations where work is carried out as exempt or complying development, it is not part of the project and is not covered by this Staging Report.

Examples of exempt activities include investigations (including geotechnical and other testing, surveying and the placement of survey marks, and sampling), demolition of buildings or structures and installation of fences.

State Environmental Planning Policy (Planning Systems) 2021, schedule 5, clause 35 also excludes the following activities from the project: surveys, test drilling, test excavations, geotechnical investigations, or other tests, sampling, or investigation for the purposes of the design or assessment of the project.

Each stage may utilise exempt provisions available under the State Environmental Planning Policies and planning instruments, subject to due diligence and environmental assessments of exempt development works being undertaken by TfNSW and its contractors prior to works commencing.

1.3 Proponent and delivery

The proponent for the Parramatta Light Rail Stage 2 is Transport for NSW (TfNSW). The detailed design, construction, maintenance and operation of the project is being delivered through separate contracts on behalf of TfNSW.

1.4 Purpose of this Staging Report

The purpose of this Staging Report is to provide an outline of the proposed staging of works for the CSSI. This document describes how and when the Conditions of Approval (CoA) will be addressed by each stage (or package) throughout construction of the CSSI.

This Staging Report has been prepared and structured to address the staging requirements in CoA A14, A15 and A17.

This Staging Report has been prepared to allow TfNSW to construct the project in stages. It:

- Describes the construction stages, including details of works and activities to be carried out in each stage and general timing
- Describes the operational stages, including details of activities to be carried out in each stage and the general timing
- Identifies how the mitigation measures will be complied with across and between each of the stages of the project
- Identifies how cumulative impacts arising from the proposed staging will be managed.

The Staging Report has been developed in accordance with the *Parramatta Light Rail Stage 2 Conditions of Approval (SSI 10035)*(refer to Table 1-1).

DRAFT

Table 1-1: Conditions of approval relevant to the Staging Report

ID	Condition	Document Reference	How addressed
A14	The CSSI may be constructed and operated in stages (including but not limited to temporal, location or activity-based staging). Where staged Construction and/or Operation is proposed, a Staging Report (for either or both Construction and Operation as the case may be) must be prepared. The Staging Report must be endorsed by the ER and then submitted to the Planning Secretary for information no later than one (1) month before the commencement of Construction of the first of the proposed stages of Construction (or if only staged Operation is proposed, one (1) month before the commencement of Operation of the first of the proposed stages of Operation),or as required by Condition A19. ***Note**: Unless otherwise specified in this approval, early works are a stage of construction to be Low Impact Work.*	Section 2	The purpose of this Staging Report is to provide an outline of the proposed staging of construction of the project. Construction of the project will be implemented in stages (described in section 2), including sub-stages. It will be submitted to the Department of Planning, Housing and Infrastructure a month prior to the comments of Construction. Should TfNSW decide to stage operation of the project at a later date, or otherwise amend the staging approach, this Staging Report will be revised, endorsed by the Environmental Representative (ER) and submitted to the Department of Planning, Housing and Infrastructure prior to the commencement of the operational stage.
A15	The Staging Report must: (a) if staged Construction is proposed, set out how the Construction of the whole of the CSSI will be staged, including details of work and activities to be carried out in each stage and the general timing of when construction of each stage will commence and finish;	Section 2	Details of the construction stages, including sub-stages are provided in section 2. Whilst commencing at different times, each stage will have periods during which the works will overlap. The proposed timing for each stage of the project is outlined in section 2.
	(b) if staged Operation is proposed, set out how the Operation of the whole of the CSSI will be staged, including details of Work or other activities to be carried out in each stage and the general timing of	N/A	Staged operation is not currently proposed for the project. Should TfNSW decide to stage operation of the project at a later date this Staging Report will be revised, endorsed by the Environmental Representative and submitted to the

ID	Condition	Document Reference	How addressed
	when operation of each stage will commence and finish (if relevant);		Department of Planning, Housing and Infrastructure prior to the commencement of the operational stage.
	(c) specify how compliance with conditions will be achieved across and between each of the stages of the CSSI; and	Section 3	Section 3 outlines how the Conditions of Approval (CoA) and Mitigation Measures will be addressed across each stage of the project. Table 3-1 identifies the mitigation measures applicable to the stages of the project.
	(d) set out mechanisms for managing any cumulative impacts arising from the proposed staging. ***Note**: A Staging Report may reflect the staged construction and operation of the project through geographical activities, temporal activities, or activity-based contracting and staging.*	Section 2.5	Mechanisms in place to manage cumulative impacts are described in section 2.5.
A16	Where staging is proposed, the CSSI must be staged in accordance with the Staging Report.	This table	This document will outline the timing of the construction and operation stages for the project, as updated at the time of receiving planning approval and per the Conditions of Approval (February, 2024). The project will be staged in accordance with the approved Staging Report per Condition A16.
A17	Where staging is proposed, the terms of this approval that apply or are relevant to the Work or activities to be carried out in a specific stage must be complied with at the relevant time for that stage.	Section 4.2	Table 3-1 identifies the Conditions of Approval and Mitigation Measures that are triggered or not triggered by the specific construction stages of the project.
A18	Where changes are proposed to the staging of Construction or Operation, a revised Staging Report must	Section 4	Should TfNSW decide to amend staging of the construction or operation of the project at a later date, this Staging Report will

ID	Condition	Document Reference	How addressed
	be prepared, endorsed by the ER and submitted to the Planning Secretary no later than one (1) month before the proposed change in the staging.		be revised, endorsed by the Environmental Representative and submitted to the Department of Planning, Housing and Infrastructure a month prior to the commencement of the stage.
A20	If a Construction Environmental Management Framework (CEMF) is submitted for approval under Condition C1, the Staging Report must be submitted before or with the CEMF, i.e. no later than one (1) month before the lodgement of any CEMP, CEMP sub plan or CMP to the Planning Secretary for approval.	This table	A Construction Environmental Management Framework has been developed for the project. It will be submitted for Secretary approval under Condition C1.

DRAFT

2 Project staging

This section outlines how construction of the project will be staged.

To construct the project in minimum, reasonable and practicable time, the core principles of the Staging Report, are:

1. Align the construction of broader project with market capacity.
2. Allow low impact work with negligible environmental impact to progress ahead of construction.
3. Prioritise low and medium risk construction works in advance of the main high-risk construction works to minimise disruption to receivers.
4. Where practicable, coordinate works to manage cumulative impacts of the project and, if reasonable, other local construction projects.

It is envisaged that the project will be constructed in stages, Enabling Works, with substages and Main Works parts A and B (see section 2.2). Commencing at different times, each stage will have periods during which the works will overlap. The substages have been staged during construction to meet the core principles of this Staging Report as noted above.

Following completion of the construction stages, the Operate and Maintain stage will commence with First Passenger Service or FPS.

2.1 Low impact works

Some works will be undertaken outside the stages (Enabling Works and Main Works) and substages identified or as 'exempt development' in accordance with section 76(2) of the EP&A Act. 'Exempt development' is discussed further in section 1.2.1.

Where works are undertaken outside of Enabling Works and Main Works identified in section 2.2 but are still part of the project, these 'low impact works' will not be defined as 'Construction' in accordance with the definition of 'Construction' provided in the *Parramatta Light Rail Stage 2 Conditions of Approval (SSI 10035)*.

The following actions will be undertaken prior to the commencement of the proposed low impact works:

- Consideration of relevant regulatory requirements
- Identification of relevant updated mitigation measures
- Preparation of a low impact works approval form by the relevant contractor and for review and approval by TfNSW to confirm that the works do not represent 'Construction' in accordance with the *Parramatta Light Rail Stage 2 Conditions of Approval (SSI 10035)*. This application must include (as a minimum):
  - A detailed description of the proposed works
  - An environmental risk assessment (including identification of actual and potential environmental impacts)
  - Identification of mitigation measures to be implemented to address any actual or potential environmental risks and/or impacts (including details on community consultation relevant to the works)
  - An environmental control map
  - Endorsement by the Environmental Representative (as required).

2.2 Construction staging

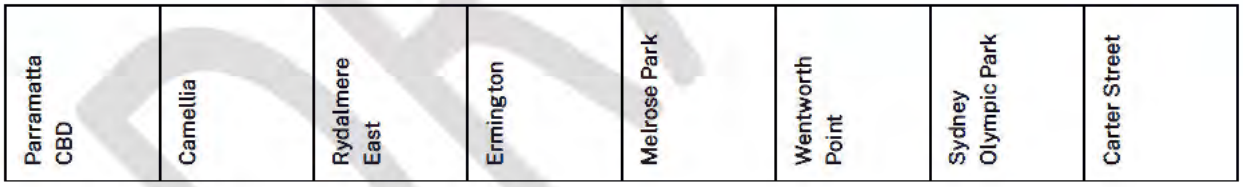
Construction of the project will be staged to align with the procurement and delivery strategy for the project, and achieve project completion in the minimum, practically reasonable time, while managing community and environmental impacts using suitably qualified and experienced contractors for specialised components. To achieve this, the project will be constructed in stages (refer to Figure 2-1):

- Enabling Works – Bridge between Melrose Park and Wentworth Point
- Main Works A – Main alignment construction works including Parramatta CBD turnback and from Camellia to Wentworth Point.
- Main Works B - Main alignment construction works from Wentworth Point to Carter Street
- Operate and maintain – Operation of the light rail system and maintenance of the alignment

Each contractor (including sub-contractors) and TfNSW are responsible for complying with relevant requirements of the EIS, Response to Submissions, Amendment Report and Infrastructure Approval for the project (collectively referred to as the planning approval). An allocation of responsibilities is defined in contracts between TfNSW and the contractors.

Coordination of work under each of the stages is further discussed in section 3, including the proponent's role in ensuring compliance (section 3.2), and the approach for managing cumulative impacts is outlined in section 2.5.

The staged commencement of works will mean that development and submission for approval (where applicable) of project plans (environmental management plans, sub plans and reports) will also be staged and reflect the complexity and degree of environmental risk associated with each stage of the project. Plans relating to activities commencing later in the project will be prepared and submitted prior to those stages commencing (and will exclude activities already undertaken, as applicable).



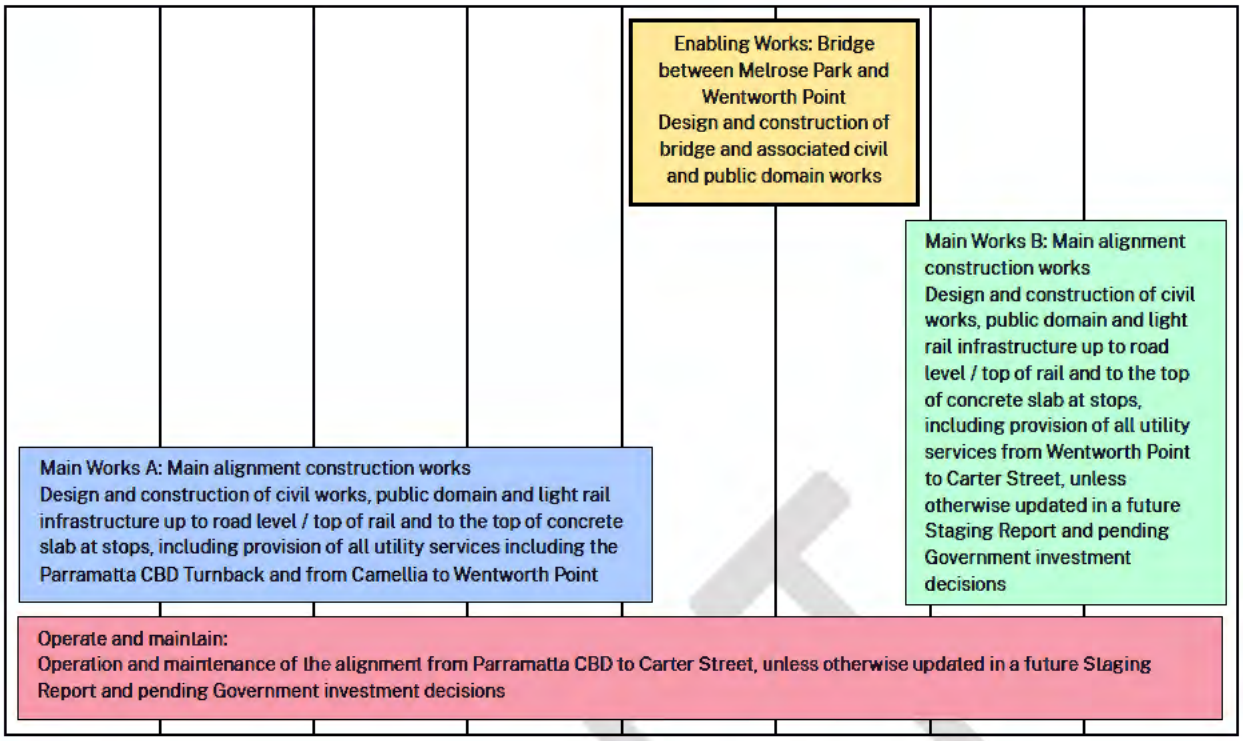


Figure 2-1: Summary of project stages by geographic location

2.2.1 Enabling Works – Bridge between Melrose Park and Wentworth Point

The Enabling Works project will include construction of the bridge between Melrose Park and Wentworth Point. The broad extent of the work area is shown in Figure 2-2. By building this bridge over the Parramatta River and its approaches first, TfNSW will align construction of the broader project with market capacity.

The Enabling Works has been broken into three substages of work (which may be carried out concurrently, or as a combined stage):

- Substage 1 – Pre-construction, including heritage investigations and low impact works;
- Substage 2 – Preliminary construction works, including utility works, temporary works (non-marine), ongoing site establishment and investigations;
- Substage 3 – Main construction works and testing and commissioning, including marine works, bridge construction and all other construction activities.

Figure 2-2: Extent of works for Enabling Works – Bridge between Melrose Park and Wentworth Point

Figure 2-3: Extent of works for Enabling Works – VIVA Stage 2 pipeline works, George Kendall Reserve Ermington

2.2.1.1 Substage 1 – Pre-construction works

Works undertaken in Substage 1 are required to provide additional design information; inform heritage, contamination and other environmental investigations; and enable the area for construction. The pre-construction, including heritage investigations and low impact works substage activities meet the "low impact work" definition within the *Parramatta Light Rail Stage 2 Conditions of Approval* and therefore are not classified as "Construction". This CEMF does not apply to "low impact works" and therefore a CEMP is not required to be prepared for this substage. However, TfNSW will use a low impact works approval process to manage these low impact works, consistent with the definition of Low Impact Works of the CSSI, such as seeking ER approval where relevant.

In accordance with the definition of Low Impact Work, the activities that are proposed to be undertaken before construction works commence will include:

a) surveys;
b) investigations;
c) site establishment work approved under a Site Establishment Management Plan;
d) minor clearing and relocation of native vegetation, as identified in the documents listed with Condition A1;
e) installation of mitigation measures;
f) property acquisition adjustment works;
g) archaeological testing under the *Code of practice for archaeological investigation of Aboriginal objects in NSW* (Department of Environment, Climate Change and Water (DECCW), 2010), or archaeological monitoring undertaken in association with [a]-[f] above to ensure that there is no impact on heritage items;
h) Work or uses that the ER has determined will have minimal environmental or community impact;
i) maintenance of existing buildings and structures required to facilitate the carrying out of the CSSI.

Where particular heritage items or threatened species, populations or ecological communities are affected or potentially affected by the work, approval by the Planning Secretary, following consultation with Heritage NSW, EH Group and DPI Fisheries will need to be sought. Additionally,

any non-standard hours of work that exceeds the standard Noise Management Levels (NMLs) as defined by the *Interim Construction Noise Guideline* will not be undertaken at this stage.

The pre-construction and site establishment activities stage will commence before other works in Stage A however they may continue concurrently with and be completed during the main construction works.

2.2.1.2 Substage 2 – Preliminary construction works

Utilities Works

Part of the utility relocation works may be undertaken during Substage 1 where the Environmental Representative deems the utility protection, relocation, and connection to have minimal impact to the environment (including noise levels compliant with Condition E33(b)) and the community, in accordance with the definition of low impact work. All other utility work will be completed in Substage 2 and is required to remove clashes between existing utilities and the project.

Prior to the corridor works, critical utilities such as the Viva Energy pipeline, Ausgrid 132 kV, and Endeavour Energy 11 kV overhead powerlines will be relocated. Excavation for underground utilities will be undertaken along the northern corridor (approximately 450 meters) and the southern corridor (approximately 100 meters) near the Parramatta River.

The existing Ausgrid high voltage transmission tower in Archer Park, Melrose Park is required to be removed to accommodate the amended bridge location between Melrose Park and Wentworth Point. The overhead wiring will be relocated to three new poles to be established within the project site at Archer Park, maintaining the necessary clearances. All proposed works will be undertaken in consultation with Ausgrid. The works would involve:

- piling (bored piles) to establish the footing of the replacement poles
- installation of the replacement poles and earthing grids
- strengthening modifications to adjacent high voltage transmission towers in order to maintain the lateral loading of the cables
- temporary modifications to the existing tower to facilitate the relocation of the cables
- cutovers to to transfer the cables from the existing tower, or to install new cables, to the replacement poles during electrical outage periods and already planned river closures
- installation of fibre conduits and pits
- removal of existing high voltage transmission tower

A portion of the existing Viva Energy Gore Bay Pipeline in Melrose Park is required to be relocated due to proximity to the future Parramatta Light Rail Corridor. The fuel pipeline currently runs south along Waratah Street, through the existing Archer carpark connecting into Wharf Road and continuing along Andrew Street. The Project will relocate approximately 600 m of pipe East along Mary Street, down Wharf Road into Andrew Street.

The like-for-like relocated asset will be designed, constructed and commissioned by a competent workforce according to the asset owner's specifications and procedures.

The works would involve:

- trench excavation up to 2000 mm in depth, and 1800 mm in width within the roadway of Waratah Street, Mary Street and Wharf Road
- potential tree removal along Wharf Road
- installation of new 300 mm diameter pipe sections and weld connections

- reinstate roadway pavement and subgrade, thickness to suit existing roadway
- de-fueling pipe prior any hot works
- cutover / weld connect new interface pipe section and valves at Waratah Street and Andrew Street
- installation of cathodic protection, as required
- quality Assurance checking including weld inspections
- test and commission pipeline including refueling
- removal of redundant section of pipe
- temporary works as required.

Temporary Works

The temporary works stage of the project includes the construction of temporary structures to enable the construction of the project. Under the Substage 2, temporary works undertaken on land will include:

- Removal of vegetation identified as low and medium risk, as per the risk assessment in section 4 and Appendix C of the CEMF;
- Installation of temporary working platforms to facilitate on land piling activities for the land bridge in Wentworth Point, and the bridge abutments on either side of Parramatta River;
- Installation of internal haul roads and access points.

Site establishment and investigations

Substages 2 will also involve preliminary construction works to undertake geotechnical and utility investigations within areas not accessible under the definition of low impact works. Site establishment will also be undertaken in Substage 2, which will include:

- Removal of vegetation identified as low and medium risk, as per the risk assessment in section 4 and Appendix C of the CEMF;
- Site Compound setup and use site establishment, including installation of internal roads;
- Installation of additional environmental controls.

Site compound setup will include the following:

- Environmental controls, including sediment fence, earthen bunding or similar, will be installed at the project boundary of the site compound locations;
- The ground levels on the southern side of the proposed Melrose Park compound will be increased through the import of material, which will be placed against an approximately 2m high concrete barrier block wall;
- Ground levels at the Wenworth Point compound locations is relatively level, and will only require import material to form the base of the compound;
- The imported material will be placed on top of a geofab marker layer to facilitate removal of this temporary work area at the completion of works;
- Site sheds will be delivered to site and placed within the proposed compound area with a crane;

- All service connections (water, sewer and electrical) will be completed through a qualified technician with required applications, isolations and approvals sought from the 3rd party asset owners prior to connection. Water and energy meters will be installed at these connection points as per project requirements.

Works in Substage 2 are "Construction" under the *Parramatta Light Rail Stage 2 Conditions of Approval (SSI 10035)* and will commence before other works in the Enabling Works, however they may continue concurrently with and be completed during Substages 3.

Substage 2 will not have an impact on ecological communities that have not been assessed as part of the project, and all impacts will be offset in accordance with Condition E4. The extent of vegetation removal during Substage 2 will be within areas of the Enabling Works footprint and will not include vegetation that is within the marine environment. The Flora and Fauna Management Plan (FFMP) will be in place to ensure clearing is undertaken in accordance with Conditions of Approval.

Substage 2 may potentially affect Aboriginal or non-Aboriginal heritage sites. If heritage impacts are identified, the Planning Approval will trigger archaeological and salvage requirements, which are considered a high impact for this aspect alone.

Noise and vibration impacts will generally be manageable within standard hours and noise thresholds, however, short periods of OOHW may be required.

Substage 2 works will include the following OOHW:

- At the intersection of Waratah Street and Mary Street:
    - Works during the night-time period of 10pm – 7am for the relocation of Sydney Water potable water utilities;
    - Works during the night-time period of 10pm – 7am for the relocation of Jemena gas utility;
    - Works during the night-time period of 10pm – 7am for the relocation of telecommunication utilities;
    - Works during the night-time period of 10pm-7am for the relocation of Endeavour Energy high voltage utilities.
- At Wharf Road, south of Waratah Street:
    - Works during the night-time period of 10pm – 7am for the relocation of Sydney Water potable water and wastewater utilities;
    - Works during the night-time period of 10pm – 7am for the relocation of Ausgrid electricity utilities.
- At the intersection of Hill Road and Footbridge Boulevard:
    - Relocation of Sydney Olympic Park Authority communications utility;
    - Works during the night-time period of 10pm-7am for the decommissioning of the existing redundant Ausgrid transition point including removal of redundant transmission cables at Hill Road;
    - Works during the night-time period of 10pm – 7am for the relocation of Sydney Water recycled water and wastewater utilities;
    - Works during the night-time period of 10pm – 7am for the relocation of Jemena gas utility;
    - Works during the night-time period of 10pm – 7am for the relocation of Ausgrid electricity utilities.

- Works during the night-time period of 10pm – 7am for the relocation of the VIVA petroleum pipeline between the intersection of Mary and Waratah streets and Wharf Road and Andrew Street.
- Works during the night-time period of 10pm – 7am for the relocation of the Ausgrid 132kV overhead electricity utility spanning the Parramatta River between Melrose Park and Wentworth Point, including installation of new transmission poles at Archer Park, removal of the existing pylon at Archer Park and tie-in to existing pylons. Anticipated impacts include noise at sensitive receivers, works adjacent to mangroves and other sensitive foreshore areas, and the temporary closure of the Ermington boat ramp.

2.2.1.3 Substage 3 – Main construction works

Substage 3 of the main construction works stage for the project includes the construction of temporary structures, including temporary working platforms, and infrastructure to enable construction of the bridge and other permanent works. This includes:

- Construction of temporary rock platforms including platform materials installation, piling and installation of protection measures;
- Transfer of construction equipment via barge;
- Construction of a new crew transfer/ safety evacuation pontoon;
- Installation of new navigation aid piles and marine site delineation, where required;
- Installation of temporary mooring piles (if required).

The piling activities within the Parramatta River will include removal of mangrove vegetation, piling, mobilisation of the required materials and temporary work platforms with an expected duration of 19 weeks. Marine piling for the bridge construction will utilise an alternative piling methodology (permanent caisson with bored piles) to avoid the use of noise intensive equipment. In addition, the vegetation clearing may be removed with heavy machinery making way for the temporary work platform required for the piling activity on the water.

Utility relocation, installation and removal works will take place along Hill Road, from the Hill Road entry gate in Wentworth Point south to approximately adjacent to Verona Drive within the northern roadside verge and shared user path (Hill Road Extension Works) to inform design and facilitate main construction.

This includes:

- Potable water relocation
- Sewer relocation
- Recycled water relocation
- Jemena secondary gas main cut and cap
- Ausgrid streetlighting and LV relocation
- Ausgrid 132kV fibre relocation
- SOPA communications relocation
- Temporary reinstatement

Substage 3 will also involve the installation and relocation of the Viva Energy 300mm high pressure Gore Bay fuel pipeline that runs along the PLR2 alignment in Ermington (West of the Enabling Works Project Site). A new section of this pipeline (Viva 2.0) will be constructed using a horizontal

directional drilling under bore method that will connect Viva Stage 1.0 utility relocation works with the new Viva Stage 2.0 pipeline installation from Waratah Street, Melrose Park to Broadoaks street, Ermington. This includes:

- Site Establishment of an entry launch pit compound in Melrose Park and a minor ancillary facility for the receival pit in George Kendall Reserve Parklands (GKRP)
- Excavating and installing entry/receival pits at underbore locations, including any new infrastructure for relocation works
- Launch underbore of 300mm fuel pipeline under Ermington Bay up to 30m deep under the Parramatta River into bedrock where it will be received in George Kendall Reserve Parklands.
- Excavate trenches for pipeline installation in GKRP following receival of underbore
- Installing appropriate bedding material and pipeline
- Backfilling and compacting trenches and pits
- Installing protection slabs where required
- Testing and commissioning
- Removing redundant utilities
- Reinstating disturbed areas

Substage 3 will include the construction of a new culvert in land owned by Sydney Olympic Park Land and National Parks and Wildlife Services will improve tidal flushing into protected and offset Wetlands. This includes:

- Establishment of construction area including fencing barriers and signage
- Laydown and minor ancillary facility construction
- Installation of environmental controls and erosion and sediment controls for works within Parramatta River
- Excavation of river walk to culvert depth
- Sheet piling installation works within Parramatta River
- Spoil haulage/storage and civil works
- Drainage culvert and automated gate installation
- Pack up compound and laydown area
- Reinstate disturbed areas

Substage 3 will also include the remainder of the works required to complete the design, construction, testing and commissioning of the bridge between Melrose Park and Wentworth Point and track slab extension works within the approved Stage A1 Boundary to approximately adjacent to Verona Drive in Wentworth Point, excluding system operations works (these will be completed as part of Stage B).

In summary the works in Substage 3 include:

- Removal of remaining trees and vegetation and offset planting
- Remaining earthworks and retaining structures

- Road works including connections to the existing road network:
  - Removing existing kerb, gutters, median strips and redundant infrastructure
  - Milling and excavation to the level required for the installation of the track slab
  - Placing and compacting road base and road pavement works
  - Integration with existing road pavements (where required)
  - Constructing new kerbs, gutters and other drainage
  - Erection of directional, wayfinding, regulatory and other signage
  - Erection of roadside furniture
  - Road paving and pavement marking
  - Constructing tie-ins to existing roads
  - Installing / modifying traffic lights, induction loops and signage
- Drainage and culvert works
- Viva pipeline installation works

- Light rail civil infrastructure and track and stop slabs, including installation of services conduits, placing steel reinforcement and concrete formwork and pouring concrete
- New bridge between Melrose Park and Wentworth Point:
  - Excavation works at approaches and supports
  - Construction of bridge abutments on the approaches to the bridge
  - Piling and construction of pile caps
  - Construction of bridge piers
  - Constructing bridge superstructure, which may include:
    - Lifting and installing concrete girders and/or precast concrete bridge segments using cranes
    - Off-site assembly of structural elements and lifting into place
    - In-situ concrete pouring of bridge superstructure elements
    - Concrete pouring the bridge deck
  - Other bridge fit-out works, including installing handrails and other safety and operational infrastructure.
- Provision of active transport links for pedestrians and cyclists
- Urban and architectural design and finishes of the corridor and public domain, including replacement public car parking and construction of a new amenities building (if required)
- Landscaping and rehabilitation
- Site demobilisation and temporary works removal
- Testing and commissioning of the infrastructure works.

The works in Substage 3 are "Construction" under the *Parramatta Light Rail Stage 2 Conditions of Approval (SSI 10035)*.

2.2.2 Main Works A – Main alignment construction works

Main Works Part A of the project will include construction of the project alignment works including the Parramatta CBD turnback and from Camellia to Wentworth Point. The extent of works for Main Works Parts A and B area is shown in Figure 2-3. This stage will comprise the following:

- Main alignment construction works from the western extent of the project in Camellia to Wentworth Point. This will include:
  - Property demolition
  - Tree and vegetation removal and offset planting
  - Earthworks and retaining structures
  - Road works including connections to the existing road network:
    - Removing existing kerb, gutters, median strips and redundant infrastructure
    - Milling and excavation to the level required for the installation of the track slab
    - Placing and compacting road base and road pavement works
    - Integration with existing road pavements (where required)
    - Constructing new kerbs, gutters and other drainage
    - Erection of directional, wayfinding, regulatory and other signage
    - Erection of roadside furniture
    - Road paving and pavement marking
    - Constructing tie-ins to existing roads
    - Installing / modifying traffic lights, induction loops and signage
  - Drainage works
  - Light rail civil infrastructure and track and stop slabs, including installation of services conduits, placing steel reinforcement and concrete formwork and pouring concrete
  - New bridge over the Parramatta River between Camellia and Rydalmere
  - New bridge over Silverwater Road between Rydalmere and Ermington
  - New bridge in Ken Newman Park connecting to Boronia Street
  - Provision of active transport links for pedestrians and cyclists
  - Urban and architectural design and finishes of the corridor and public domain, including replacement public car parking and construction of a new amenities building
  - Landscaping
  - Testing and commissioning
- Main alignment construction works for the Macquarie Street turnback in the Parramatta CBD and Footbridge Boulevard turnback in Wentworth Point
- Supply and system works along the whole alignment between Camellia and Wentworth Point and at the Macquarie Street turnback. This will include:
  - Stops
  - Adjustments to Parramatta Light Rail Stage 1 stabling and maintenance facility in Camellia to increase its operational capacity
  - Substations
  - High voltage traction works
  - The Central Control System
  - The light rail signalling system
  - Elements of the road intersection signalling system
  - The communications and passenger information systems
  - The procurement of light rail vehicles
  - Supply of light rai vehicle maintenance vehicles

- Testing and commissioning.

Figure 2-3: Extent of works for Main Works – Main alignment construction works and supply, operate and maintain system works

2.2.3 Main Works B – Main alignment construction works

Main Works Part B of the project will include construction of the project alignment works from Wentworth Point to the Carter Street Precinct in Lidcombe. The extent of works for Main Works Parts A and B area is shown in Figure 2-3. This stage will comprise the following:

- Main alignment construction works from the eastern extent of the project from the intersection of Hill Road and Footbridge Boulevard to the southern extent of the project in Lidcombe. This will include:
  - Property demolition
  - Tree and vegetation removal and offset planting
  - Earthworks and retaining structures
  - Road works including connections to the existing road network:
    - Removing existing kerb, gutters, median strips and redundant infrastructure
    - Milling and excavation to the level required for the installation of the track slab
    - Placing and compacting road base and road pavement works
    - Integration with existing road pavements (where required)
    - Constructing new kerbs, gutters and other drainage
    - Erection of directional, wayfinding, regulatory and other signage
    - Erection of roadside furniture
    - Road paving and pavement marking

        - Constructing tie-ins to existing roads
        - Installing / modifying traffic lights, induction loops and signage
    - Drainage works
    - Light rail civil infrastructure and track and stop slabs, including installation of services conduits, placing steel reinforcement and concrete formwork and pouring concrete
    - Removal of existing bridge on Hill Road in Sydney Olympic Park and construction of a new bridge
    - Strengthening of the bridge on the Holker Busway in Sydney Olympic Park
    - Provision of active transport links for pedestrians and cyclists
    - Urban and architectural design and finishes of the corridor and public domain, including replacement public car parking and construction of a new amenities building
    - Landscaping
    - Testing and commissioning
- Supply and system works along the whole alignment between Camellia and Lidcombe and at the Macquarie Street turnback. This will include:
    - Stops, not previously delivered in Main Works Part A
    - Adjustments to Parramatta Light Rail Stage 1 stabling and maintenance facility in Camellia to increase its operational capacity, not previously delivered in Main Works Part A
    - Substations, not previously delivered in Main Works Part A
    - High voltage traction works, not previously delivered in Main Works Part A
    - The Central Control System, if not previously delivered in Main Works Part A
    - The light rail signalling system, not previously delivered in Main Works Part A
    - Elements of the road intersection signalling system, not previously delivered in Main Works Part A
    - The communications and passenger information systems, not previously delivered in Main Works Part A
    - The procurement of light rail vehicles, not previously delivered in Main Works Part A
    - Supply of light rai vehicle maintenance vehicles
    - Testing and commissioning.

2.3 Operate and Maintain Stage

Operation and maintenance of the alignment from Parramatta CBD to Carter Street, with further detail to be provided in a future iteration of the Staging Report, once details are confirmed.

2.3.1 Operational staging

Currently TfNSW are not proposing to stage operation of the project. Should TfNSW elect to stage operation of the project at a later date this Staging Report will be revised, endorsed by the ER and submitted to the Department of Planning, Housing and Infrastructure prior to the commencement of the stage (refer to section 4).

2.4 Project timing

The proposed indicative timing for each stage of the project is outlined in Table 2-1.

Table 2-1: Indicative timing of construction stages

Stage	Substage	Indicative Commencement Date	Estimated Completion Date
Enabling Works – Bridge between Melrose Park and Wentworth Point	Substage 1 – Pre-construction	Q1 2025	Q1 2025
	Substage 2 – Preliminary construction works	Q1 2025	Q3 2027
	Substage 3 – Main construction works	Q2 2025	Q4 2027
Main Works A – Main alignment construction works and supply of light rail vehicles	Pre-construction to Main Construction	2028	2033
Main Works B – Main alignment construction works and supply, operate and maintain system works	Pre-Construction to Main Construction	TBA – Subject to Government investment decision	TBA – Subject to Government investment decision
Operate and Maintain	Operations	TBA – On completion of Construction Stages	TBA – On completion of Construction Stages

2.5 Managing cumulative impacts

The EIS assessed cumulative impacts which may occur during construction of the project, including impacts from concurrent project construction stages and where construction occurs concurrently with other major projects. This included an assessment of cumulative impacts for transport and traffic, noise and vibration, Aboriginal heritage, non-Aboriginal heritage, land use and property, socio-economic, landscape and visual, biodiversity, water, soil and contamination, hazards and risk, air quality, and waste and resource management.

When developing appropriate measures to manage cumulative impacts, it is acknowledged that the extent of cumulative impacts varies with each environmental aspect whether that be for noise, traffic, air quality, amenity, etc. Similarly, the duration of cumulative impact can vary depending on construction works along the project route. For example, the duration of affect will occur from the time a work zone has noticeable effects to "the receiver", during the peak effect period (where construction impacts occur immediately adjacent to a receiver), before moving away from the receiver again and decreasing in noticeable effects until the impact of construction has passed.

2.5.1 Other major projects

Projects with the potential for cumulative impacts with Parramatta Light Rail Stage 2 were identified in the EIS. These include the major projects of Parramatta Light Rail Stage 1 and Sydney Metro West, and a number of other development and road projects.

Cumulative impacts will be further identified by considering any overlap in the extent of environmental impact by any additional activities that the project is made aware of and has potential to generate a cumulative impact between the two work fronts. For example, whether the maximum distance of noise impact intersects with other noise generating works, or the extent of modified pedestrian access interfaces with another activity resulting in an undesirable outcome. Preference will be given to managing cumulative impacts to reduce the length and level of disruption caused by environmental impacts in any affected area.

During the construction of the project, TfNSW will seek to coordinate construction activities both within the project, where concurrent staging applies, and with external construction projects.

Where cumulative impacts result from works by external construction projects in the road reserve this will be coordinated through the Sydney Coordination Office and in consultation with the proponents of the other major projects, to identify potential cumulative impacts and potential strategies to minimise these impacts.

In addition, ongoing consultation with key stakeholders and design integration with adjacent developments will be undertaken regularly. Construction environmental management plans, sub-plans and procedures will incorporate measures, where feasible, to manage cumulative construction impacts.

2.5.2 Project cumulative impacts

The project commits to coordinating work across and between stages to manage cumulative construction impacts while minimising the duration of construction in any one location (area of environmental impact as a result of the project) as far as reasonably practicable. This will be achieved through governance / coordination meetings; reviews of each stage's detailed program; reviews of interface activities, such as shared workspaces, haulage routes and/or transport, traffic and access impacts; and maintaining a register of out-of-hours work (OOHW) applications for the project. This is further detailed in Table 2-2.

In general, representatives from each stage (either TfNSW or if nominated, the contractor) must attend regular Project Governance Meetings during periods of work or construction to discuss the delivery program and upcoming activities that require consultation with the community and stakeholders.

Each stage contractor's environmental manager is required to attend regular environmental management governance meetings with TfNSW, the ER and if nominated, other interface contractors. During these meetings concurrent works will be discussed along with how these works can be best managed to minimise impacts such as coordinating out-of-hours work and respite periods.

In addition, each contractor's environmental manager may be required to attend meetings chaired by TfNSW with key stakeholders to discuss and resolve environmental issues. TfNSW will meet with City of Parramatta Council and SOPA on a monthly basis and with other stakeholders as required.

During these interface meetings key milestones of each stage's program will be discussed, and any milestones that could be coordinated to minimise cumulative impacts between project stages or with external construction projects shall be brought to the attention of the TfNSW Project Director to facilitate demonstrable, improved cumulative outcomes on behalf of the proponent.

Where management of cumulative impacts results in interface requirements between stages, such as shared workspaces, similar haulage routes and/or combined transport, traffic and access impacts, the Project Management team for each stage shall monitor and report on these to the TfNSW Project Director. Monitoring and reporting shall capture construction progress, community and environmental outcomes and further recommendations of the interface agreement to minimise the duration of construction and its associated impacts in any one location as far as reasonably practicable.

A register of OOHW applications shall be prepared and maintained by the TfNSW Planning and Environment team to ensure that mitigation measures across all packages can achieve the required noise and vibration outcomes, in particular provision of respite compliant with mitigation measure NV8. Where conflicts arise the competing OOHW applications shall be brought to the attention of the TfNSW Project Director to facilitate demonstrable, improved cumulative outcomes on behalf of the proponent.

2.5.3 Principles and mechanisms to minimise cumulative impacts

As outlined above the initial step to minimising cumulative impacts is awareness of the projects' construction programs and identification of potential cumulative impacts. Once the potential impacts are identified, the project will implement appropriate management measures including hours of construction, respite and other noise mitigation measures (screening, community consultation regarding alternate work programs etc.).

The suite of mitigation measures best adapted to the impacted zone will be determined through community consultation. The steps to managing cumulative impacts are:

- TfNSW Place Managers' and the Contactor's Project Managers to identify:
  - Suite of mitigation measures to address cumulative impact via liaison with Sydney Coordination Office and Councils, as appropriate;
  - External construction projects that will commence construction during the stage's construction period.
- Separation of time and place, staging of works to minimise cumulative impacts;
- Include cumulative mitigation measures in the construction environmental management plan (CEMP), subplans and other relevant documentation, e.g. construction noise and vibration impact statements and Construction traffic management;
- Monitor complaints to identify unexpected/emerging cumulative impacts;
- Up-date approach in CEMP and specific sub-plans, as needed.

Table 2-2: Cumulative aspects and their management measures

Cumulative Aspect	Mitigation Measure	Accountable Organisation	Accountable Team / Role
Access	Stakeholder meetings (including with Sydney Coordination Office, City of Parramatta Council, Sydney Olympic Park Authority)	TfNSW / Stakeholder	TfNSW Project Director
	Governance meetings	Contractor / TfNSW	Construction Manager / Project Manager
	Property access plans	Contractor	TfNSW Senior Project Manager / Property
	CEMP implementation (Traffic and Access Management)	Contractor	Construction Manager / Environmental Manager
	Community communication strategy implementation	Contractor / TfNSW	Construction Manager / Community Engagement Manager
Significant Business disruptions	Stakeholder meetings (City of Parramatta Council, Sydney Olympic Park Authority)	TfNSW / Stakeholder	TfNSW Project Director
	Governance meetings	Contractor / TfNSW	Construction Manager / Project Manager
	Business Reference Group Meeting	TfNSW	Parramatta Light Rail Business Reference Group
	Community communication Strategy implementation	Contractor / TfNSW	Construction Manager / Community Engagement Manager
Noise and vibration	Stakeholder meetings (including with Sydney Coordination Office, City of Parramatta Council)	TfNSW / Stakeholder	TfNSW Project Director

Cumulative Aspect	Mitigation Measure	Accountable Organisation	Accountable Team / Role
	Governance meetings	Contractor / TfNSW	Construction Manager / Project Manager
	CEMP implementation (Noise and Vibration) and construction noise and vibration impact statements	Contractor	Construction Manager / Environmental Manager
	Community communication strategy implementation	Contractor / TfNSW	Construction Manager / Community Engagement Manager
OOHW Respite	OOHW Register	TfNSW	TfNSW Project Director /Senior Manager Environment
	OOHW Protocol	Contractor / TfNSW	TfNSW Project Director /Senior Manager Environment
	Stakeholder meetings (including Sydney Coordination Office, City of Parramatta Council)	TfNSW / Stakeholder	TfNSW Project Director
	Governance meetings	Contractor / TfNSW	Construction Manager / Project Manager
	CEMP implementation (Noise and Vibration) and construction noise and vibration impact statements	Contractor	Construction Manager / Environmental Manager
Parking	Construction Parking Strategy	TfNSW / Contractor	Sydney Coordination Office Interface
	Stakeholder meetings (including with Sydney Coordination Office, City of Parramatta Council, Sydney Olympic Park Authority)	TfNSW / Stakeholder	TfNSW Project Director

Cumulative Aspect	Mitigation Measure	Accountable Organisation	Accountable Team / Role
	Community communication strategy implementation	Contractor / TfNSW	Construction Manager / Community Engagement Manager
Respite periods	Stakeholder meetings (including with Sydney Coordination Office, City of Parramatta Council)	TfNSW / Stakeholder	TfNSW Project Director
	Governance meetings	Contractor / TfNSW	Construction Manager / Project Manager
	CEMP implementation (Noise and Vibration) and construction noise and vibration impact statements	Contractor	Construction Manager / Environmental Manager
	Community communication strategy implementation	Contractor / TfNSW	Construction Manager / Community Engagement Manager
Traffic	Network Management Strategy	TfNSW	Sydney Coordination Office Interface
	Stakeholder meetings (including with Sydney Coordination Office, City of Parramatta Council, Sydney Olympic Park Authority)	TfNSW / Stakeholder	TfNSW Project Director
	CEMP implementation (Traffic and Access Management)	Contractor	Construction Manager / Environmental Manager
	Community communication strategy implementation	Contractor / TfNSW	Construction Manager / Community Engagement Manager
Visual	Stakeholder meetings (including with Sydney Coordination Office, City of	TfNSW / Stakeholder	TfNSW Project Director

Cumulative Aspect	Mitigation Measure	Accountable Organisation	Accountable Team / Role
	Parramatta Council, Sydney Olympic Park Authority)		
	Governance meetings	Contractor / TfNSW	Construction Manager / Project Manager
	CEMP implementation	Contractor	Construction Manager / Environmental Manager
	TfNSW Branding Guidelines	Contractor / TfNSW	Construction Manager / Community Engagement Manager
	Community Consultation Strategy implementation	Contractor / TfNSW	Construction Manager / Community Engagement Manager

DRAFT

3 Addressing the Conditions of Approval and mitigation measures

The applicability of the CoA and Updated Mitigation Measures (UMMs) to each stage of the project has been assessed, allocated and confirmed in relation to the Response of Submissions Report (October, 2023) and the Conditions of Approval (February, 2024). This assessment and allocation is based on the scope of works (refer to section 2), the geographic location of the works (refer to section 2) and the risk assessment located in Appendix C of the CEMF. The CEMF is directly aligned to the Staging Report (this document) with regard to staging and management of Construction at each stage, including sub-stages.

No aspect of the staged approach to construction will affect the ability of the project to comply with the mitigation measures or the conditions of approval. Implementation of the mitigation measures and conditions of approval will be progressively completed as each stage is initiated and the measure / condition is triggered.

3.1 Requirements of the Planning Approval

The CoA, UMMs require the preparation of and consultation on various plans, protocols and strategies which govern the construction and operation of the project. The development of these documents will largely be the responsibility of TfNSW's contractors, however some plans, or elements of specific plans will remain the responsibility of TfNSW.

The Updated Mitigation Measures will be implemented as appropriate to the scope, risks and timing of each stage. Table 3-1 summarises the mitigation measures applicable to design, pre-construction and construction activities for the project and how they will be delivered for each stage.

The CEMP and sub-plans will outline how the project will implement these mitigation measures, along with other management and monitoring requirements. It will be prepared in accordance with Chapter 23 (Approval to environmental management and mitigation) of the EIS and the Staging Report. The CEMF also identifies:

- CEMPs and sub-plans required for each stage of construction.
- The consultation and endorsement level for the CEMPs and sub-plans for each construction stage. The endorsement level being one of the following:

    1. Low Risk Stage – to be self endorsed and consultation with stakeholders is not mandatory,
    2. Medium Risk Stage – to be endorsed by the ER and consultation with stakeholders required, and
    3. High Risk Stage – to be endorsed by the Planning Secretary and consultation with stakeholders required.

The Staging Report (this document) may be updated from time-to-time to assess, allocate and confirm the applicability of each condition of the *Parramatta Light Rail Stage 2 Condition of Approval* as relevant for new or revised stages. Each revised Staging Report would be endorsed by the Environmental Representative and submitted to the Planning Secretary (refer to section 4).

3.2 Compliance

The Updated Mitigation Measures detailed in the CEMPs and sub-plans will be monitored during construction to confirm their effectiveness and whether any additional measures are required. Site inspections will be regularly undertaken to check and update measures as necessary.

Environmental site monitoring will also be undertaken to confirm project impacts and existing environmental values in accordance with monitoring commitments made in this document.

The CEMP will provide for an internal compliance monitoring program where each contractor will periodically monitor and report on project performance against relevant statutory and other obligations, including the conditions of approval. It is the role of each contractor to ensure compliance with the mitigation measures and conditions of approval as they relate to their specific package. The TfNSW Planning and Environment Team's role is to oversee contractors to ensure they maintain compliance with the planning approval at all times.

Contractors will maintain their own internal audit program to ensure they meet the requirements set out in the mitigation measures, the conditions of approval and contract. TfNSW will conduct its own due diligence auditing across all stages with a specific focus on compliance with the conditions of approval. TfNSW will monitor compliance with the mitigation measures and conditions of approval across all stages through surveillance, environmental inspections, record-keeping and compliance reporting.

TfNSW (acting as the Principal to contracted works) has developed a compliance monitoring system to track the conditions of all licences, permits and approvals of this project, as implemented by the Contractors.

The Contractor is required to:

(i) use the Principal's compliance reporting system to undertake self-regulation to confirm that all Contractor's Activities are compliant with all Authority Approvals;

(ii) implement a reporting structure in addition to any other reporting requirements under the Deed, TfNSW Policy and follow the applicable parts of the Planning Approval.

The Contractor must submit to TfNSW (via the Principal's Representative) a report every six months that demonstrates ongoing compliance with the Environment and Sustainability Requirements.

Independent external environmental audits will also be carried out in accordance with *Independent Audit Post-Approval Requirements* (Department of Planning, Industry and Environment, 2020) and *AS/NZS ISO 19011:2003 – Guidelines for quality and/or environmental management systems auditing* (Standards Australian, 2003).

In accordance with *Conditions A27, A29 and A30*, an Environmental Representative will be engaged by TfNSW (via tender process) to undertake an independent compliance monitoring role for the project. As stated in Conditions A30, their role will include, but not limited to:

- Undertake regular site inspections with the contractor's environmental managers and TfNSW representatives;
- Review compliance with the mitigation measures and conditions of approval on a periodic basis;
- Review management plans and provide advice in relation to the level of risk associated with construction works;
- Provide independent advice on matters relating to compliance to the contractors, TfNSW and Department of Planning, Housing and Infrastructure if requested.

In accordance with *Conditions A32 and A35*, an Acoustics Advisor (AA) will be engaged by TfNSW (via tender process) to undertake an independent compliance monitoring role for the project. As stated in Condition A35, their role will include, but not limited to:

- Review compliance with the updated mitigation measures and conditions of approval throughout the project;

- Review and monitor the implementation of noise and vibration documents (CEMPs, CNVIS and Out-of-hours-Works), including recommendations to improve noise and vibration impacts on the project;
- Provide independent advice on noise and vibration relating to compliance to the contractors, TfNSW and Department of Planning, Housing and Infrastructure if requested.

DRAFT

Table 3-1: Applicability of PLR2 Conditions of Approval (CoA) to each stage.

CoA Topic	CoA	Timing (implementation period)	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and maintain
			Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
GENERAL								
	A1	Design, pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	A2	Design, pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	A3	Design, pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	A4	Design, pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	A5	Design, pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	A6	Design, pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	A7	Design, pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
FLEXIBILITY PROVISIONS								
	A8	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
TIMING AND APPROVALS								
	A9	Design, pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	A10	Design, pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable

CoA Topic	CoA	Timing (implementation period)	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and maintain
			Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
	A11	Design, pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
EVIDENCE OF CONSULTATION								
	A12	Design, pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
ARCHAEOLOGICAL REMEDIATION								
	A13	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
STAGING								
Staging the delivery of the CSSI	A14	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	A15	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	A16	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	A17	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	A18	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
Staging, Combining and Updating Strategies, Plans and Programs	A19	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	A20	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
OPTIONS ANALYSIS								

CoA Topic	CoA	Timing (implementation period)	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and maintain
			Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
Macquarie Street Turnback	A21	Design	N/A	N/A	N/A	Applicable	N/A	N/A
Rydalmere Substations	A22	Design	N/A	N/A	N/A	Applicable	N/A	N/A
INDEPENDENT APPOINTMENTS								
	A23	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	A24	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	A25	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	A26	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
ENVIRONMENTAL REPRESENTATIVE								
	A27	Design	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	A28	Design	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	A29	Design	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	A30	Design	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	A31	Design	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
ACOUSTICS ADVISOR								
	A32	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	A33	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	A34	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	A35	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable

CoA Topic	CoA	Timing (implementation period)	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and maintain
			Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
NOTIFICATION OF COMMENCEMENT								
	A36	Pre-Construction, Construction, Operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	A37	Design, pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
AUDITING								
	A38	Construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	A39	Construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	A40	Construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	A41	Construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	A42	Construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	A43	Operation	N/A	N/A	N/A	N/A	N/A	Applicable to Operation only
INCIDENT AND NON-COMPLIANCE NOTIFICATION AND REPORTING								
Incident Notification, Reporting and Response	A44	Pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	A45	Pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
Non-compliance Notification	A46	Pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	A47	Pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
IDENTIFICATION OF WORK								

CoA Topic	CoA	Timing (implementation period)	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and maintain
			Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
	A48	Pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
COMMUNITY INFORMATION, CONSULTATION AND INVOLVEMENT								
Community Communication Strategy	B1	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	B2	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	B3	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	B4	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
COMPLAINTS MANAGEMENT SYSTEM								
	B5	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	B6	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	B7	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	B8	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	B9	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
Community Complaints Mediator	B10	Pre-Construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	B11	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable

CoA Topic	CoA	Timing (implementation period)	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and maintain
			Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
	B12	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	B13	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	B14	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
PROVISION OF ELECTRONIC INFORMATION								
	B15	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	B16	Design, pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
CONSTRUCTION ENVIRONMENTAL MANAGEMENT								
Construction Environmental Management Framework	C1	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	C2	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	C3	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
SITE ESTABLISHMENT WORK								
Ancillary Facility Site Establishment Management Plan	C4	Design, pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A

CoA Topic	CoA	Timing (implementation period)	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and maintain
			Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
Use of Decommissioning of Ancillary Facility	C5	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	C6	Construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
Minor Ancillary Facilities	C7	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
Boundary screening	C8	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN								
Construction Environmental Management Plan	C9	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	C10	Design	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	C11	Design	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	C12	Pre-Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	C13	Pre-Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	C14	Pre-Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	C15	Pre-Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	C16	Pre-Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	C17	Pre-Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	C18	Pre-Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A

CoA Topic	CoA	Timing (implementation period)	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and maintain
			Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
	C19	Pre-Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
CONSTRUCTION MONITORING PROGRAMS								
	C20	Pre-Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	C21	Pre-Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	C22	Pre-Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	C23	Pre-Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	C24	Pre-Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	C25	Pre-Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	C26	Pre-Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	C27	Pre-Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	C28	Pre-Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
OPERATIONAL ENVIRONMENTAL MANAGEMENT								
	D1	Operation	N/A	N/A	N/A	N/A	N/A	Applicable
	D2	Operation	N/A	N/A	N/A	N/A	N/A	Applicable
	D3	Operation	N/A	N/A	N/A	N/A	N/A	Applicable
	D4	Operation	N/A	N/A	N/A	N/A	N/A	Applicable
	D5	Operation	N/A	N/A	N/A	N/A	N/A	Applicable
	D6	Operation	N/A	N/A	N/A	N/A	N/A	Applicable
	D7	Operation	N/A	N/A	N/A	N/A	N/A	Applicable

CoA Topic	CoA	Timing (implementation period)	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and maintain
			Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
	D8	Operation	N/A	N/A	N/A	N/A	N/A	Applicable
AIR QUALITY AND ODOUR								
	E1	Construction, Operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
BIODIVERSITY								
Biodiversity Credits	E2	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E3	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E4	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E5	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
Key Fish Habitat	E6	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E7	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
Unexpected Finds Protocol	E8	Pre-construction, Construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
Re-use of Timber	E9	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
FLOODING								
	E10	Design, pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
Flooding Management Objectives	E11	Design, pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E12	Design, pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable

CoA Topic	CoA	Timing (implementation period)	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and maintain
			Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
	E13	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
HERITAGE								
	E14	Design, pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E15	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E16	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E17	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E18	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E19	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
Environmental Heritage	E20	Design, Pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E21	Design, pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E22	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E23	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E24	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E25	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E26	Design, pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A

CoA Topic	CoA	Timing (implementation period)	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and maintain
			Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
Aboriginal Cultural Heritage	E27	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E28	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E29	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
NOISE AND VIBRATION								
Land Use Survey	E30	Design, Pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
Work Hours	E31	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
Highly Noise Intensive Work	E32	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
Variation to Work Hours	E33	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
Out-Of-Hours Work Protocol – Works Not Subject to an EPL	E34	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
Construction Noise Management Levels and Vibration Criteria	E35	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E36	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E37	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A

CoA Topic	CoA	Timing (implementation period)	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and maintain
			Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
	E38	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E39	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E40	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E41	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
Construction Noise and Vibration Mitigation and Management	E42	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
Construction Vibration Mitigation – Heritage	E43	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E44	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E45	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
Utility Coordination and Respite	E46	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
Out-of-Hours Works Periods and Mitigation	E47	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
Operational Noise and Vibration	E48	Design, pre-construction, construction, operation	N/A	N/A	N/A	Applicable	Applicable	Applicable

CoA Topic	CoA	Timing (implementation period)	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and maintain
			Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
Mitigation Measures								
	E49	Design, operation	N/A	Applicable	Applicable	Applicable	Applicable	Applicable
	E50	Design, operation	N/A	N/A	N/A	Applicable	Applicable	Applicable
	E51	Design, operation	N/A	N/A	N/A	Applicable	Applicable	Applicable
Operational Noise and Vibration Validation	E52	Operation	N/A	N/A	N/A	N/A	N/A	Applicable
Operational Noise and Vibration Compliance Report	E53	Operation	N/A	N/A	N/A	N/A	N/A	Applicable
PLACE, DESIGN AND VISUAL AMENITY								
Construction Sites	E54	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
Driver Facilities	E55	Design	N/A	N/A	N/A	Applicable	Applicable	N/A
Design Outcomes	E56	Design, pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E57	Design, pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
Lighting and Security	E58	Design, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E59	Design, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable

CoA Topic	CoA	Timing (implementation period)	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and maintain
			Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
Active Transport Facilities	E60	Design, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
Design Review Panel and Design Review	E61	Design, Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E62	Design, Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E63	Design, Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E64	Design, Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
Operation of the Design Review Process	E65	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E66	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E67	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E68	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E69	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E70	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
Place, Design and Landscape Plan	E71	Construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable

CoA Topic	CoA	Timing (implementation period)	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and maintain
			Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
	E72	Construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E73	Construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
Tree Management	E74	Design, pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E75	Design, pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E76	Design, pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E77	Design, pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E78	Design, pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E79	Construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E80	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
Operational Maintenance	E81	Construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E82	Construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
LAND USE AND PROPERTY								
	E83	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E84	Design, pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E85	Construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E86	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable

CoA Topic	CoA	Timing (implementation period)	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and maintain
			Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
Condition Survey	E87	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E88	Pre-construction,construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E89	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
SOCIAL								
Boat Trailer Parking	E90	Construction	N/A	Applicable	Applicable	N/A	N/A	N/A
	E91	Construction, operation	Applicable	Applicable	Applicable	Applicable		
	E92	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable		
Event Management	E93	Construction	N/A	N/A	N/A	N/A	Applicable	Applicable
CONTAMINATION AND SOILS								
	E94	Pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
Role of Site Auditor	E95	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E96	Design, pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E97	Design, pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
Contamination Investigations	E98	Pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E99	Pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A

CoA Topic	CoA	Timing (implementation period)	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and maintain
			Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
	E100	Pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E101	Pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
Site Audit Statements	E102	Pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E103	Pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E104	Pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E105	Pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E106	Pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
Unexpected Finds	E107	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
SUSTAINABILITY								
	E108	Design, Pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E109	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E110	Construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
TRAFFIC AND TRANSPORT								
Construction traffic management	E111	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E112	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E113	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A

CoA Topic	CoA	Timing (implementation period)	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and maintain
			Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
Road Dilapidation	E114	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E115	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
Construction Parking Management	E116	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E117	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E118	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
Access to Property and Businesses	E119	Pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
Pedestrian and Cyclist Access	E120	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E121	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
Pedestrian and Cycling Infrastructure Strategy	E122	Design, pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
Road Safety	E123	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E124	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
Road Network Performance	E125	Design, pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable

CoA Topic	CoA	Timing (implementation period)	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and maintain
			Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
	E126	Operation	N/A	N/A	N/A	N/A	N/A	Applicable
	E127	Operation	N/A	N/A	N/A	N/A	N/A	Applicable
Public Transport – Construction	E128	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable to construction works only		N/A
	E129	Operation	N/A	N/A	N/A	N/A	N/A	Applicable
UTILITIES MANAGEMENT								
Utilities Management Strategy	E130	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E131	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
WASTE								
	E132	Pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E133	Pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E134	Pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E135	Pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
HAZARDS								
	E136	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A

CoA Topic	CoA	Timing (implementation period)	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and maintain
			Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
	E137	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
WATER								
	E138	Design, pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
Construction Requirements	E139	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E140	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
Groundwater	E141	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
Stormwater Drainage	E142	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
	E143	Pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
	E144	Design, pre-construction, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable

Table 3-2: Applicability of PLR2 Updated Mitigation Measures (UMMs) to each stage, by exception only.

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
TT1		The design will continue to be refined to avoid or minimise impacts on the surrounding road and transport network and property accesses as far as reasonably practicable.	Design	N/A – stage does not include permanent changes to the road network or access	N/A – stage does not include permanent changes to the road network or access	Applicable	Applicable	Applicable	N/A – stage does not include permanent changes to the road network or access
TT2		Input will be sought from relevant stakeholders (including local councils, Sydney Olympic Park Authority, Royal Agricultural Society of NSW, bus and ferry operators) prior to finalising the design of those aspects of the project that affect the operation of road and other transport infrastructure under the management of these stakeholders. This will include confirming ongoing operation and maintenance arrangements.	Design	N/A – stage does not include changes to operation of road or other transport infrastructure	Applicable - changes to the navigation channel	Applicable	Applicable	Applicable	Applicable
TT3		Where the project permanently affects access to and from a public road, input will be sought from relevant property owners and occupants regarding alternative access arrangements prior to finalising the design. Where any legal access to a property is permanently affected and a property has no other legal means of access, alternative access to and from a public road will be provided to an equivalent standard, where feasible and reasonable. Where an alternative access is not feasible or reasonable, and a property or part of a property is left with no access to a public road, consideration will be given to acquisition of the property or part of the property in accordance with the provisions of the *Land Acquisition (Just Terms Compensation) Act 1991* (NSW).	Design	N/A – stage does not include permanent changes to access	N/A – stage does not include permanent changes to access	Applicable	Applicable	Applicable	N/A – stage does not include permanent changes to access

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
TT4		Road safety audits will be undertaken where changes to the road network are proposed, in accordance with relevant Austroads guidelines, to ensure the safety of all road users is considered during design development.	Design	N/A – stage does not include permanent changes to the road network	N/A – stage does not include permanent changes to the road network	Applicable	Applicable	Applicable	N/A – stage does not include permanent changes to the road network
TT5		Opportunities to reduce the loss of on and off street parking will be reviewed during design development.	Design	N/A – stage does not include permanent changes to parking	N/A – stage does not include permanent changes to parking	Applicable	Applicable	Applicable	N/A - stage does not include permanent changes to parking
TT6		Opportunities to mitigate impacts on parking at Ermington Boat Ramp will be reviewed during design development.	Design	N/A – stage does not include changes to the permanent carpark arrangements at Ermington boat ramp	N/A – stage does not include changes to the permanent carpark arrangements at Ermington boat ramp	Applicable	N/A – stage does not impact upon the Ermington boat ramp or parking	N/A - stage does not impact upon the Ermington boat ramp or parking	N/A - stage does not impact upon the Ermington boat ramp or parking
TT7		A parking management strategy will be prepared to provide an overarching framework for parking management during construction and operation. The strategy will include measures to manage: • the reduction in on-street parking availability, such as provision of alternative parking arrangements for accessible and service spaces, staged removal, resident parking schemes, and managed staff parking arrangements • construction worker parking, such as provision of designated parking areas within the project site, encouraging use of public transport, and shuttle bus arrangements.	Design	Applicable, where the stage removes on-street parking or where personnel numbers exceed onsite parking availability	Applicable, where the stage removes on-street parking or where personnel numbers exceed onsite parking availability	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
TT8	C14(a)	A traffic and access management plan will be prepared prior to construction and implemented as part of the CEMP. The plan will detail processes and responsibilities to minimise traffic and access delays and disruptions and identify and respond to changes to road access and on-street parking arrangements. The plan will include, as appropriate, additional reasonable and feasible measures identified as an outcome of consultation (in accordance with mitigation measure TT12)	Pre-construction, construction	N/A	Applicable	Applicable	Applicable	Applicable	N/A
TT9	C15	The traffic and access management plan will include measures to manage staging of construction works to ensure that satisfactory capacity and minimum levels of service are maintained for all users.	Pre-construction, construction	N/A	Applicable	Applicable	Applicable	Applicable	N/A
TT10	C14(b)	A maritime works and navigation management plan will be prepared prior to construction and implemented as part of the CEMP. The plan will detail processes and responsibilities to manage marine construction vessels and impacts on navigation during construction of the bridges over the Parramatta River. The plan will include, as appropriate, additional reasonable and feasible measures identified as an outcome of consultation (in accordance with mitigation measure TT12).	Pre-construction, construction	N/A	Applicable	Applicable	Applicable	Applicable	N/A
TT11		Opportunities to minimise impacts to recreational use of the Parramatta River will be considered during construction planning, based on a review of the usage of the facilities at Ermington Boat Ramp and at other existing boat ramps in the vicinity of the project site.	Pre-construction	Applicable where the stage requires the closure of the Ermington Boat Ramp	Applicable where the stage requires the closure of the Ermington Boat Ramp	Applicable	N/A – stage does not impact upon the Ermington boat ramp or parking	N/A – stage does not impact upon the Ermington boat ramp or parking	N/A – stage does not impact upon the Ermington boat ramp or parking

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
TT12		Consultation with relevant stakeholders will be undertaken regularly to facilitate the efficient delivery of the project and to minimise impacts on road, river and transport infrastructure customers and users. Stakeholders will include the City of Parramatta and City of Ryde councils, Sydney Olympic Park Authority, Royal Agricultural Society of NSW, bus and ferry operators, emergency services, and recreation groups. Additional measures identified as an outcome of consultation will be implemented during construction, where reasonable and feasible. This will include modifying work areas, activities and construction access arrangements to address traffic flow and access issues identified by key stakeholders, where practicable.	Pre-construction, construction	Applicable where the stage results in impacts to road, river and transport infrastructure	Applicable where the stage results in impacts to road, river and transport infrastructure	Applicable	Applicable	Applicable	Applicable
TT13	B1-B4	The Community Communication Strategy (mitigation measure SE1) will include mechanisms to inform the community of the dates and durations of changes to transport services and access arrangements (including access restrictions for the Parramatta River) and proposed alternative services and access provisions.	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
TT14		Access to properties, including residences, businesses and community infrastructure, will be maintained. Where temporary disruption to access cannot be avoided, consultation will be undertaken with the owners, occupants and managers of affected properties and infrastructure, to confirm their access requirements and determine alternative arrangements.	Construction	Applicable where the stage impacts upon access	Applicable where the stage impacts upon access	Applicable	Applicable	Applicable	N/A
TT15		Safe pedestrian and cyclist access will be maintained around and/or through work areas. Where disruption to access cannot be	Construction	Applicable	Applicable where the stage impacts upon	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		avoided, alternative routes that comply with relevant accessibility standards and guidelines will be provided, signposted and communicated. Alternative access arrangements will be established prior to implementing restrictions on existing routes.			pedestrian and cyclist access				
TT16		Modifications to existing bus stops, implementation of new stops and services, and alterations to service patterns, will be undertaken in consultation with relevant key stakeholders, including Customer Journey Management, bus and ferry operators, the City of Parramatta and City of Ryde councils, and Sydney Olympic Park Authority. Advance notification of changes to services will be provided to affected customers.	Construction	Applicable where the stage impacts upon bus services	Applicable where the stage impacts upon bus services	Applicable where the stage impacts upon bus services	Applicable where the stage impacts upon bus services	Applicable where the stage impacts upon bus services	N/A
TT17		Traffic management for special events in the Parramatta CBD, at Rosehill Gardens Racecourse and Sydney Olympic Park (including Sydney Showground) will be considered during construction. Where special events require specific traffic and pedestrian management, measures will be developed and implemented in consultation with relevant stakeholders, including event organisers, venue managers, City of Parramatta Council, Australian Turf Club, Sydney Olympic Park Authority and Royal Agricultural Society of NSW.	Construction	N/A	N/A	N/A	Applicable	Applicable	N/A
TT18		The potential for cumulative construction transport and traffic impacts will be reviewed and coordinated with other projects, in consultation with relevant stakeholders, including Customer Journey Management, Customer Journey Planning, Traffic and Transport Liaison Group, City of Parramatta Council, Sydney Olympic Park Authority and	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		Royal Agricultural Society of NSW. The review will include: • other projects with the potential to affect access and capacity • reviews of programs for traffic staging, lane, footpath, cycleway and road closures for all projects • coordinating works and identifying efficient re-routing options as appropriate.							
TT19		Pre-construction condition surveys will be completed for local roads, footpaths and other Council assets within 100 metres of the project which could be affected or damaged during construction. Where damage to an asset is caused by the project it will be restored to at least the condition it was pre-works or compensation will be offered to the asset owner. A copy of the pre-construction condition report will be provided to the relevant Council prior to the commencement of works within the vicinity of the asset.	Pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
TT20		A review of operational network performance will be carried out 12 months and three years from the opening of the project to confirm the operational impacts of the project. Appropriate changes that balance the performance outcomes for light rail and general traffic will be considered to address identified issues along the alignment. For surrounding arterial roads, feasible and reasonable mitigation measures will be identified in consultation with the Department of Planning and Environment and other relevant stakeholders (including relevant council(s) and Sydney Olympic Park Authority) to manage identified traffic performance impacts.	Operation	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	Applicable

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
TT21	D3	A light rail operation during special events management plan will be prepared and implemented as part of the project's Operational Environmental Management System. The plan will detail processes, responsibilities and measures to manage light operations during special events, including how the project will operate in 'event mode'. The plan will be prepared in consultation with event organisers, venue managers, City of Parramatta Council, Australian Turf Club, Sydney Olympic Park Authority, and Royal Agricultural Society of NSW.	Operation	N/A	N/A	N/A	Applicable	Applicable	Applicable
NV1		An operational noise and vibration review of the developed design will be undertaken to review the potential for operational impacts and confirm feasible and reasonable mitigation measures to be incorporated in the design. The review will include: • reviewing compliance monitoring for Parramatta Light Rail Stage 1 to refine the assumptions used and confirm the effectiveness of the mitigation that has been implemented • surveying relevant buildings to determine appropriate façade noise reduction performances • a road traffic noise assessment for the reconfiguration of South and Boronia streets conducted in accordance with the *Road Noise Criteria Guideline* (Transport for NSW, 2022) and the *Road Noise Mitigation Guideline* (Transport for NSW, 2022) • consideration of feedback from, and preferences of, directly affected landowners/landholders. The operational noise and vibration review will be undertaken in consultation with relevant	Design	N/A – stage does not include permanent works	N/A – stage does not include permanent works	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		council(s) and the NSW EPA. The review will be developed in accordance with the *Rail Infrastructure Noise Guideline* (NSW EPA, 2013), the *Noise Policy for Industry* (NSW EPA, 2017) and the *NSW Road Noise Policy* (DECCW, 2011).							
NV2		Public address systems at stops will be designed to comply with the *Noise Policy for Industry* (NSW EPA, 2017) intrusiveness and sleep disturbance noise trigger levels at all locations.	Design	N/A	N/A	N/A	Applicable	Applicable	N/A
NV3		Traction power substations will be designed to comply with the *Noise Policy for Industry* (NSW EPA, 2017).	Design	N/A	N/A	N/A	Applicable	Applicable	N/A
NV4		Consideration will be given to implementing operational noise mitigation early in the construction program to reduce the potential for construction noise impacts, where the mitigation will not be impacted by future works.	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
NV5	C14(c), C18	A noise and vibration management plan will be prepared as part of the CEMP and implemented during construction. The plan will detail processes, responsibilities and measures to manage noise and vibration and minimise the potential for impacts during construction, aligned with the results of community consultation and consistent with the management approach and mitigation measures in the *Construction Noise and Vibration Strategy* (Transport for NSW, 2019). Measures that mitigate potential noise and vibration at the source will be prioritised.	Pre-construction, construction	N/A	Applicable	Applicable	Applicable	Applicable	N/A
NV6		Location and activity-specific construction noise and vibration impact assessments will be undertaken:	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		• prior to works with the potential to generate noise levels above 75 dBA and/or exceed relevant human response and cosmetic damage criteria for vibration • prior to works that need to occur outside the primary project working hours • where any changes to heavy vehicle routes affect local roads not considered by the noise and vibration assessment (Updated Noise and Vibration Report). • where works will impact upon threatened and migratory fauna and Green and Golden Bell Frog habitat within Sydney Olympic Park. The assessments will be based on a more detailed understanding of construction methods, including the size and type of construction equipment, duration and timing, and detailed reviews of local receivers, as required. The results of the assessments will be documented in construction noise and vibration impact statements. Where potential exceedances are identified, the statements will define feasible and reasonable mitigation and management measures, developed in accordance with the *Construction Noise and Vibration Strategy* (Transport for NSW, 2019), and measures developed as part of the biodiversity management plan and the Green and Golden Bell Frog management plan in relation to potential noise and vibration impacts (see mitigation measures BD11 and BD12). Potentially impacted receivers will be informed of the nature of works to be carried out, the expected noise levels and duration, and will be provided with details of the complaints management system (mitigation measure SE3).							

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		The measures will be implemented for the duration of the specific activity.							
NV7		A minimum of 2.4 metre high solid hoarding will be provided around construction compounds located close to residential areas, where construction noise is predicted to exceed noise management levels during recommended standard hours, including those compounds currently proposed near sensitive receivers on/around: • John Street • Broadoaks Park • Ken Newman Park west and east • Hope Street • Wharf Road • Wentworth Point north • Hill Road north • Dawn Fraser Avenue east and west.	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
NV8	B2	Appropriate respite periods will be identified, in consultation with the community and in accordance with the *Construction Noise and Vibration Strategy* (Transport for NSW, 2019), for work: • with the potential to result in noise levels above 75 dBA and/or • that needs to occur outside the primary project working hours. The following will be taken into account when determining appropriate respite: • the need to efficiently undertake construction • the communities' preferred noise and vibration management approach • the construction schedules of other major projects in close proximity to the project works.	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
NV9		Where construction activities are predicted to exceed noise management levels at sensitive receivers, no work would be permitted in that area one weekend per month, unless it is otherwise agreed by a substantial majority of the sensitive receivers impacted by the proposed works.	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
NV10		The potential for cumulative construction impacts will be reviewed during construction planning in consultation with the proponents of other projects. Where the potential for cumulative impacts is identified, feasible and reasonable mitigation and management measures will be developed and included in the noise and vibration management plan (mitigation measure NV5).	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
NV11		An out-of-hours work protocol will be developed to define the process for considering, approving and managing out-of-hours work that is not subject to an environment protection licence (i.e, works subject to exemptions under the licence, including low noise impact and emergency works). The protocol will include implementing feasible and reasonable measures and communication requirements in accordance with the *Construction Noise and Vibration Strategy* (Transport for NSW, 2019). Measures will focus on proactive communication and engagement with potentially affected receivers, provision of respite periods and/or alternative accommodation for defined exceedance levels.	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
NV12		All work outside the recommended standard hours defined by the *Interim Construction Noise Guideline* (DECC, 2009) will be scheduled using the hierarchy of preferred	Construction	N/A	Applicable	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		working hours described by Chapter 7 (Project description – construction) (section 7.5) as far as practicable, and in consultation with the community and key stakeholders (including the NSW EPA). Highly noise and vibration intensive works as defined in the *Construction Noise and Vibration Strategy* (Transport for NSW, 2019) will be limited to recommended standard hours as far as practicable.							
NV13		Where buildings or structures are predicted to exceed the screening criteria for structural damage, a dilapidation survey will be undertaken prior to any construction works. Where required, the vibration management level will be refined based on the type and condition of the building or structure. For heritage buildings and structures, the dilapidation survey will consider the heritage value of the structure in consultation with a structural engineer and heritage specialist.	Pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
NV14		A survey will be undertaken to identify vibration sensitive receivers (including buildings, structures, utilities, remediation infrastructure, heritage items or sites and equipment) within 200 metres of the project site. Vibration criteria will be identified based on relevant standards or manufacturer's data. Where vibration criteria are not available, conservative criteria will be used. Appropriate measures will be developed and implemented where potential exceedances of the criteria are identified.	Pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
NV15		Vibration generating activities will be managed to minimise the potential for impacts on vibration sensitive receivers,	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		(identified in accordance with mitigation measure NV14). Prior to the commencement of vibration-intensive works within the minimum working distances for cosmetic damage, the potential for impacts will be assessed. This will include a more detailed assessment of potentially affected receivers to assess the susceptibility to damage from vibration. Where there is potential for damage, alternate methods that generate less vibration will be investigated and substituted where feasible and reasonable. For heritage items or sites, the more detailed assessment will consider the sensitivity of the receiver in consultation with a heritage specialist to ensure susceptible components are adequately monitored and managed. Where residual risks remain, vibration monitoring will be undertaken. Vibration monitors will provide real-time notification of exceedances of levels approaching cosmetic damage. Any identified vibration-related damage to the receivers will be rectified, including as recommended by a heritage specialist for heritage items.							
NV16		Monitoring of noise and vibration will be undertaken within 12 months of the commencement of operation to compare actual noise and vibration performance against that predicted by the operational noise and vibration review (mitigation measure NV1). The results of monitoring will be documented in an operational noise and vibration compliance report. Additional feasible and reasonable mitigation measures will be considered where any additional receivers are	Operation	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	Applicable

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		identified as qualifying for consideration of noise mitigation in accordance with the relevant guidelines.							
AH1		The design will continue to be refined to avoid direct impacts on identified places of Aboriginal heritage as far as reasonably practicable.	Design	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
AH2		Aboriginal consultation will continue to be undertaken through the life of the project in accordance with the *Procedure for Aboriginal Cultural Heritage Consultation and Investigation* (Roads and Maritime Services, 2012) and the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010). This includes managing potential impacts on objects/aspects of cultural significance in consultation with registered Aboriginal parties.	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
AH3		A heritage interpretation strategy will be developed to guide incorporation of appropriate interpretation and integration of Aboriginal and non-Aboriginal heritage in the design. The strategy will be prepared and implemented in accordance with *Interpreting Heritage Places and Items: Guidelines* (NSW Heritage Office, 2005) and the *Heritage Interpretation Policy* (NSW Heritage Council, 2005). The strategy will include measures to ensure a meaningful design response to Aboriginal heritage and cultural values. It will be developed in consultation with relevant stakeholders, including registered Aboriginal parties, and will take into account the recommendations of the Cultural Values Assessment Report (Appendix G of the	Design	N/A – stage does not include permanent works	N/A – stage does not include permanent works	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		Aboriginal Cultural Heritage Assessment Report). The design will include appropriate interpretation of Aboriginal heritage in accordance with the heritage interpretation strategy.							
AH4		Aboriginal stakeholders will continue to be consulted and involved during design development in accordance with Transport for NSW's Aboriginal Culture and Heritage Framework, *Draft Connecting with Country* (Government Architect NSW, 2020) and *Designing with Country* (Government Architect NSW, 2020) and in consultation with the Design Review Panel.	Design	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
AH5		Test excavations will be undertaken to confirm the nature and extent of potential archaeological deposits/shell middens at: • PAD1 Ermington Boat Ramp • PAD3 Rydalmere Wharf • PAD6 Ken Newman Park • Macquarie Street PAD3 (AHIMS 45-6-2977) • Church Street PAD1 (AHIMS 45-6-4015) • Ermington SHL01 (AHIMS 45-6-4078) • Ermington SHL02 (AHIMS 45-6-4079). The excavations will be undertaken in accordance with a project-specific excavation methodology developed as described in section 12.2 of the Aboriginal Cultural Heritage Assessment Report. The test excavation program will be completed prior to the commencement of construction, and any ground disturbing works in these areas. Where testing confirms that Aboriginal objects are present:	Design	Applicable	Applicable	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		• options to modify the project will be investigated in accordance with mitigation measure AH1 • the assessments of significance provided in the Aboriginal Cultural Heritage Assessment Report will be updated. Unavoidable impacts will be managed in consultation with registered Aboriginal parties. Any salvage required will be undertaken in accordance with the salvage methodology (mitigation measure AH6).							
AH6		A detailed salvage methodology will be prepared (if required) following test excavations. The methodology will be prepared by a suitably qualified archaeologist in consultation with registered Aboriginal parties. The salvage methodology will include: • the process for consultation with Heritage NSW and registered Aboriginal parties in accordance with the Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW, 2010), and Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH, 2011) • requirements in relation to the short and long-term management of Aboriginal objects recovered during testing and salvage, including care agreements, where relevant. Where salvage is required, registered Aboriginal parties will be engaged to assist the salvage process, which will be managed by an appropriately qualified archaeologist. Detailed analysis and reporting of cultural material collected will be provided to Heritage NSW in accordance with section 89A of the *National Parks and Wildlife Act 1974*. This will include recording salvaged objects on the	Design	Applicable	Applicable	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		NSW Aboriginal Heritage Information Management System (AHIMS) register and updating site records.							
AH7	C14(d), C15	An Aboriginal cultural heritage management plan will be prepared prior to construction and implemented as part of the CEMP. The plan will include measures to minimise the potential for impacts and manage Aboriginal heritage, including: • outcomes of further investigations (mitigation measures AH5) • salvage methodology (mitigation measure AH6) • requirements for an induction and cultural awareness training for construction workers and supervisors (mitigation measure AH8) • unexpected finds procedure (mitigation measure AH9) • measures to protect sites from inadvertent impacts from vehicles and equipment.	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
AH8	C14(d), C15	A requirement for cultural and historic heritage awareness training will be included in the Aboriginal cultural heritage management plan. Cultural heritage awareness training will be provided by an Aboriginal representative at the commencement of substantial works for the project.	Pre-construction, construction	N/A	Applicable	Applicable	Applicable	Applicable	N/A
AH9		Where previously unidentified Aboriginal objects are encountered during construction, this will be managed in accordance with Transport for NSW's *Unexpected heritage items procedure* (2022), included in the heritage interpretation strategy (mitigation measure AH3) and Aboriginal cultural heritage management plan (mitigation	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		measure AH7), and recorded on the AHIMS register.							
NAH1		The design will continue to be refined to avoid direct impacts on items/sites of non-Aboriginal heritage significance and archaeological sites of State significance, and to minimise impacts on archaeological sites of local significance, as far as reasonably practicable.	Design	N/A – stage does not include permanent works	N/A – stage does not include permanent works	Applicable	Applicable	Applicable	N/A
NAH2		For areas of archaeological significance where harm cannot be avoided, the Research Design and Excavation Methodology will be implemented to ensure there is appropriate management informed by significance and relevant research questions. A management rating system will be adopted based on the approach provided in the Updated Historical Archaeological Assessment, which will be further refined following the outcomes of test excavations and site-specific research.	Design	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
NAH3		Test excavations will be undertaken, prior to construction, to clarify significance, extent and integrity of deposits in accordance with the Research Design and Excavation Methodology (see Appendix B of the Updated Historical Archaeological Assessment). Where testing confirms that archaeological resources are present, additional site-specific research will be undertaken to refine the understanding of significance to ensure future management is in line with research values.	Design	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
NAH4		The design will be prepared in accordance with the urban design requirements and	Design	N/A – stage does not include	N/A – stage does not include	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		recommendations in the Updated Statement of Heritage Impact. The design will minimise the potential for visual impacts on heritage items by incorporating sympathetic form, fabric and colour, where feasible.		permanent works	permanent works				
NAH5		Design refinement will be undertaken to minimise potential impacts on Bulla Cream Dairy (Willowmere) (Parramatta LEP Item No. I64) as far as practicable. This will include minimising encroachment of the curtilage, retaining significant heritage fabric (i.e. Billiards Room in addition to the Main House), and retaining or relocating significant tree plantings where practicable. Adaptive reuse options for Bulla Cream Dairy (Willowmere) will be investigated and implemented in accordance with *New Uses for Heritage Places: Guidelines for the Adaptation of Historic Buildings and Sites* (Heritage Council of NSW and Royal Australian Institute of Architects NSW Chapter, 2008). This will be undertaken in consultation with the property owner and the City of Parramatta Council.	Design	N/A	N/A	N/A	Applicable	Applicable	N/A
NAH6		A heritage interpretation strategy will be developed to guide incorporating appropriate interpretation and integration of heritage in the design. The strategy will include interpretation requirements for specific parts of the project, particularly where heritage items will be impacted, or archaeological sites are proposed to be excavated. The strategy will be prepared and implemented in accordance with *Interpreting Heritage Places and Items: Guidelines* (NSW Heritage Office, 2005) and the *Heritage Interpretation Policy* (NSW Heritage Council, 2005) and developed in consultation with	Design	N/A – stage does not include permanent works	N/A – stage does not include permanent works	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		relevant stakeholders, including City of Paramatta Council and City of Ryde Council, and Sydney Olympic Park Authority. The strategy will provide a framework for interpreting the heritage items impacted by the project, set out the key interpretative themes and identify communication strategies, and the location and form of interpretation. These may include approaches such as interpretative signage, historical/artefact displays at local museums or visitor centres, and online media about heritage items and the history of surrounding suburbs. The design will include appropriate interpretation of non-Aboriginal heritage in accordance with the heritage interpretation strategy.							
NAH7		Photographic archival recording will be carried out for affected sections of the following items: • Bulla Cream Dairy (Willowmere) (Parramatta LEP Item No. I64) • House at 46 John Street, Rydalmere (unlisted). Photographic archival recording will be carried out prior to works commencing in the vicinity of the item, and in accordance with *How to Prepare Archival Records of Heritage Items* (Heritage Office, 1998) and *Photographic Recording of Heritage Items Using Film or Digital Capture* (Heritage Office, 2006). Once complete, a report will be prepared detailing the history and significance of the item, relevant findings from the archival recording and an overview of the project.	Pre-construction	N/A	N/A	N/A	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
NAH8	C14(d)	A heritage management plan will be prepared and implemented as part of the CEMP. The plan will include measures to manage non-Aboriginal heritage and minimise the potential for impacts during construction. The plan will be prepared in consultation with relevant heritage agencies (Heritage NSW, Sydney Olympic Park Authority, City of Parramatta Council and City of Ryde Council) and take into account the outcomes of further investigations, including test excavations and the Research Design and Excavation Methodology. The heritage management plan will define a requirement for non-Aboriginal historical heritage awareness training for site workers prior to commencement of construction works. The awareness training will promote an understanding of heritage items that may be impacted during the works.	Pre-construction, construction	N/A	Applicable	Applicable	Applicable	Applicable	N/A
NAH9		An unexpected finds procedure for land and maritime based archaeological resources will be developed as part of the heritage management plan, consistent with Transport for NSW's *Unexpected heritage items procedure* (2022) and *Skeletal remains: guidelines for the management of human skeletal remains under the Heritage Act 1977* (Heritage Office, 1998).	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
NAH10	C14(d)	Significant heritage fabric at the Bulla Cream Dairy (Willowmere) that is proposed to be retained and the fenced preservation area of Ermington Wharf/Wharf/Former Pennant Hills Wharf (and visible remnants) will be fenced and marked on site plans within the CEMP and heritage management plan as areas to be avoided/protected during construction.	Pre-construction, construction	N/A	N/A	N/A	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
NAH11		Potential vibration impacts on items of heritage significance will be managed in accordance with the *Construction Noise and Vibration Strategy* (Transport for NSW, 2019) and mitigation measures NV13 to NV15.	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
LP1		The design will continue to be refined to minimise land requirements and potential impacts on land uses and properties as far as reasonably practicable. Consultation with landowners/landholders will be ongoing to confirm feasible and reasonable measures to minimise impacts on their operations/properties.	Design	N/A – stage does not include permanent works	N/A – stage does not include permanent works	Applicable	Applicable	Applicable	N/A
LP2		Consultation with key stakeholders (including City of Parramatta Council, Sydney Olympic Park Authority, the Department of Planning, Housing and EnvironmentInfrastructure, Royal Agricultural Society of NSW, and relevant developers) will be ongoing to ensure that the design of the project is integrated as far as practicable with adjoining developments, proposed developments and urban renewal areas (including those subject to the *Camellia-Rosehill Place Strategy* (DPE, 2022), structure planning for Melrose Park North and Melrose Park South, the *Parklands Plan of Management 2010* (Sydney Olympic Park Authority, 2010), the *Sydney Olympic Park Master Plan 2030* (Sydney Olympic Park Authority, 2018) (including the *Sydney Olympic Park Master Plan 2030 Interim Metro Review* (Sydney Olympic Park Authority, 2022)), the *Sydney Olympic Park Vision and Strategy 2050* (Sydney Olympic Park Authority, 2022), and the *Carter Street Precinct Development Framework* (DPIE, 2020)). This will include identifying measures and design responses to manage the interface	Design	N/A – stage does not include permanent works	N/A – stage does not include permanent works	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		between the project and adjoining land uses and properties as far as reasonably practicable.							
LP3		The location of the turnback facility in Parramatta CBD will be further refined in consultation with City of Parramatta Council. This will include identifying measures and design responses to maximise customer experience and manage the interface between the turnback facility and adjoining land uses.	Design	N/A	N/A	N/A	Applicable	Applicable	N/A
LP4		A residual land management plan will be prepared to define the proposed approach to managing residual land, including consulting on proposed future uses with key stakeholders, and required actions in relation to the identified land.	Design	N/A	N/A	Applicable where the stage results in residual land	Applicable where the stage results in residual land	Applicable where the stage results in residual land	N/A
LP5		Construction planning will minimise the duration that land is required to the shortest possible duration, particularly where the land requirements affect recreation/open space areas.	Pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
LP6		All property acquisitions will be undertaken in accordance with the requirements of the *Land Acquisition (Just Terms Compensation) Act 1991*, the land acquisition reforms announced by the NSW Government in 2016, and the recommendations of the Auditor General's 2021 review of Transport for NSW's acquisition practices.	Pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
LP7		Transport for NSW will appoint Personal Relationship Manager(s) to assist residential landowners and tenants who may be affected by acquisition. The Personal Relationship Manager(s) will maintain regular contact with these individuals to provide assistance with	Pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		the acquisition process, including updates on the project, and respond to queries. The Personal Relationship Manager(s) will work with the landowners and tenants to offer assistance and support throughout the acquisition process.							
LP8		Transport for NSW will seek to secure agreements with affected landowners/landholders, to guide property-level design requirements and the management of construction on, or immediately adjacent to, private properties. Property adjustment plans will be prepared in consultation with impacted landowners/landholders. The plans will define the works required to properties affected by acquisition and those requiring adjustments as a result of the project. Works will include, but not be limited to, adjustments to driveways, fences, trees and landscaping.	Pre-construction	Applicable where stage directly affects private property	Applicable where stage directly affects private property	Applicable	Applicable	Applicable	N/A
LP9		The location of all utilities and services, and requirements for access to, diversion, protection and/or support, will be confirmed prior to construction. This will include (as required) undertaking utilities investigations, including intrusive investigations, and consultation and agreement with service providers.	Pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
LP10		A rehabilitation strategy will be prepared to guide rehabilitation planning, implementation, monitoring and maintenance of disturbed areas outside the operational footprint following the completion of construction. The strategy will have regard to Appendix G (Rehabilitation recommendations) of *Managing Urban Stormwater – Soils and Construction – Volume 1* (Landcom, 2004).	Pre-construction	N/A – stage does not include permanent works	N/A – stage does not include permanent works	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		The strategy will be consistent with the residual land management plan for land owned by Transport for NSW.							
LP11		Land subject to temporary use will be rehabilitated as soon as practicable to the pre-construction condition (or as agreed with the landowner/landholder), taking into consideration the existing condition, location and land use characteristics. Rehabilitation will be undertaken in consultation with the relevant landowner/landholder, and in accordance with the rehabilitation strategy.	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
SE1	B1, B2	Transport for NSW will implement the Parramatta Light Rail Stage 2 Community Communication Strategy to guide the management and delivery of community and stakeholder engagement in the lead up to and during construction, and ensure that: • accurate and accessible information about the project is provided • feedback from the community is encouraged • opportunities for input to design development are provided, where relevant • community members and stakeholders with the potential to be affected by construction activities are notified in a timely manner about the timing of activities and potential for impacts • enquiries and complaints are managed (see mitigation measure SE3), and a timely response is provided for concerns raised. In relation to the potential for socio-economic impacts, this will include implementing approaches and protocols to:	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		• communicate with potentially affected residents, other community members, businesses and other key stakeholders to provide information about the project, and the likely nature, extent and duration of changes during construction • identify and engage with vulnerable persons that might be affected by the project • communicate information about potential access changes and delays (including changes to public and active transport facilities) • engage with owners and tenants of properties that will be impacted by acquisition. Engagement plans will be developed and implemented to define the specific requirements for engagement consistent with the Community Communication Strategy. The engagement plans will define tools and activities, timing and responsibilities, and monitoring requirements.							
SE2	B1, B2	Dedicated place managers will be available in the lead up to, and during, construction to listen to concerns and answer questions from the community and businesses. Place managers will provide a single point of contact for people (including business owners/operators) wanting to find out more about the project, including the impacts of construction, and the measures that will be implemented to minimise these impacts as far as possible.	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
SE3	B5-B9	Enquiries and complaints management systems will be developed, outlined in the Community Communication Strategy, and implemented before and during construction.	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		The complaints management systems will be maintained throughout the construction period and for a minimum of 12 months after construction finishes.							
SE4	C10	A social impact management plan (SIMP) will be prepared, in accordance with Section 5.2 of the *Social Impact Assessment Guideline for State Significant Projects* (DPIE, 2021), to manage the implementation of the proposed socio-economic mitigation measures and detail the specific management actions and targets that will be developed in response to these measures. The SIMP will define specific actions, roles and responsibilities, and a monitoring, reporting and adaptive management framework for construction.	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
SE5		Access to community facilities and infrastructure will be maintained during construction as far as practicable. Where alternate access arrangements need to be made, including changes to access for public and active transport facilities, these will be developed in consultation with relevant stakeholders and service providers, and communicated to users in accordance with the engagement plan. Changes to access arrangements will be managed in accordance with the traffic and access management plan (mitigation measure TT8).	Construction	Applicable where stage impacts access to community facilities and infrastructure	Applicable where stage impacts access to community facilities and infrastructure	Applicable where stage impacts access to community facilities and infrastructure	Applicable where stage impacts access to community facilities and infrastructure	Applicable where stage impacts access to community facilities and infrastructure	N/A
SE6	B1, B2	TfNSW will continue to consult with relevant key stakeholders (including facility managers) in relation to community infrastructure with the potential to be directly affected (by the project's land requirements) and/or indirectly affected (for example, as a result of amenity impacts or access changes).	Pre-construction, construction	Applicable where stage impacts community infrastructure	Applicable where stage impacts community infrastructure	Applicable where stage impacts community infrastructure	Applicable where stage impacts community infrastructure	Applicable where stage impacts community infrastructure	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		Consultation will be undertaken in accordance with the engagement plan (mitigation measure SE1) and will assist with identifying measures to minimise the potential impacts of the project on community infrastructure as far as possible. Stakeholders to be consulted will include, but not be limited to, City of Parramatta Council, City of Ryde Council, NSW Maritime, Melrose Park Public School and the Department of Education, and Sydney Olympic Park Authority.							
SE7		TfNSW will continue to consult with relevant councils and Sydney Olympic Park Authority to offset the direct impacts of the project's land requirements on open space (parks and reserves) through the provision of a net increase in open space, including active transport infrastructure, and improved open spaces and recreation facilities.	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
SE8		A project-specific social procurement and workforce development strategy will be developed and implemented to • nominate workforce development and social procurement targets and outcomes • define approaches to achieve nominated targets and outcomes • support job creation and skill development opportunities for the project.	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
SE9		A business management and activation plan will be prepared and implemented for businesses with the potential to be affected by the project, including those located on roads impacted by construction. The plan will identify businesses with the potential to be impacted by the project. It will detail feasible and reasonable measures,	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		developed in consultation with affected business owners/operators to: • minimise disruption for customers and deliveries as far as possible • maintain vehicular and pedestrian access during business hours, including alternative arrangements for times when access cannot be maintained • maintain visibility of the business to potential customers during construction, including alternative arrangements for times when visibility cannot be maintained • respond to other identified impacts as far as possible, including specific measures to assist small businesses with the potential to be adversely affected during construction. The plan will also include: • measures identified as an outcome of the small business support program (measure SE11) • maintaining a phone hotline that enables businesses to find out about the project or register any issues • establishment of business reference groups to provide information on the project and assist with the development of management measures • a feedback and monitoring mechanism to assess the effectiveness of measures.							
SE10		Alternative arrangements, including for pedestrian and vehicular access, will be developed in consultation with affected businesses and implemented before any changes are made to existing access. Adequate wayfinding to businesses will be provided before, and for the duration of, any disruption. Wayfinding will be provided in consultation with the City of Parramatta	Pre-construction, construction	Applicable where stage impacts upon access to businesses	Applicable where stage impacts upon access to businesses	Applicable where stage impacts upon access to businesses	Applicable where stage impacts upon access to businesses	Applicable where stage impacts upon access to businesses	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		Council, City of Ryde Council, Sydney Olympic Park Authority, Royal Agricultural Society of NSW and/or relevant road authority, and as outlined in the business management and activation plan (mitigation measure SE9).							
SE11		A small business support program will be established to provide assistance to small business owners with the potential to be impacted by construction. The program will assist local businesses develop proactive business strategies, including: • marketing and promotion • business diversification and business planning • engagement of specialists to provide training.	Pre-construction, construction	Applicable where stage impacts upon small businesses	Applicable where stage impacts upon small businesses	Applicable where stage impacts upon small businesses	Applicable where stage impacts upon small businesses	Applicable where stage impacts upon small businesses	N/A
SE12		An Aboriginal community and stakeholder engagement strategy and action plan will be prepared to define the strategies that will be implemented to minimise impacts on cultural values and ensure that: • information about the project is shared with Aboriginal stakeholders and communities in a timely manner • local Aboriginal cultural and community values are identified and understood • opportunities to reflect Aboriginal community and cultural values are identified and implemented.	Design, pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
LV1		The urban design requirements will be finalised in accordance with the vision, principles and outcomes defined in Technical Paper 1 (Design, Place and Movement) and the Supplementary Design, Place and Movement Report, to provide detailed urban design guidelines and key requirements for the project, including individual design elements.	Design	N/A – stage does not include permanent works	N/A – stage does not include permanent works	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		The urban design requirements will be finalised in consultation with key stakeholders, the operator, the rail regulator, and the Design Review Panel.							
LV2		Design development will be undertaken in accordance with the urban design requirements and with advice from the Design Review Panel.	Design	N/A – stage does not include permanent works	N/A – stage does not include permanent works	Applicable	Applicable	Applicable	N/A
LV3	E62	Opportunities to incorporate additional wire-free sections will be investigated in consultation with relevant stakeholders, including in visually sensitive environments, areas where existing above-ground infrastructure and significant street trees need to be retained and areas adjoining significant habitat in accordance with mitigation measure BD4.	Design, construction	N/A	N/A	N/A	Applicable	Applicable	N/A
LV4	E76	A tree register will be prepared by a qualified arborist to identify all trees with the potential to be impacted by the project, and the proposed impacts to trees, including: • definitions of tree and canopy • definition of what constitutes an impact (generally more than minor crown or root pruning of more than 10 per cent) • location of each tree • tree condition and values including ecological screening functions • where a tree requires removal, whether, in the opinion of the arborist, it can be successfully transplanted • the extent of the proposed impact (complete removal or extent of pruning).	Design	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
LV5	E76	The design will continue to be refined to avoid or minimise impacts on trees. Any tree within the project site boundary, that will not be	Design	Applicable	Applicable	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		directly impacted by infrastructure or utility works, will be assessed for retention through careful consideration of design and construction methods. This will include consideration of the following options: • operational requirements in relation to tree locations • adjustments to the design to avoid impacting trees (such as opportunities for localised narrowing of footpaths, use of porous pavement) • reduction in the standard offset distances required for underground services • consideration of the health of each tree, including its vigour and likely ability to survive in-situ pruning or transplanting.							
LV6	E77, E78, E80	A tree offset strategy will be developed to offset the loss of trees and achieve a net increase in tree number and canopy. The strategy will be prepared in accordance with the *Biodiversity Policy* (Transport for NSW, 2022) and the *Tree and hollow replacement guidelines* (Transport for NSW, 2022) to define and identify: • how impacts on trees will be offset • the tree replacement ratios that would apply to offset the removal of trees • locations for replacement trees • species and trees sizes to ensure a mix of species and a range of mature heights to provide visual diversity as appropriate to proposed planting locations • requirements for monitoring and maintenance. The strategy will also demonstrate how lessons learned from the preparation and implementation of the tree offset strategy for Parramatta Light Rail Stage 1 have been incorporated.	Design	N/A – stage does not include permanent works	N/A – stage does not include permanent works	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		The strategy will be developed, and locations of replacement trees confirmed, in consultation and/or partnership with City of Parramatta Council, City of Ryde Council and Sydney Olympic Park Authority.							
LV7	E58	Lighting will be designed and sited to minimise glare and light spill into adjoining areas in accordance with Australian/New Zealand Standard *AS/NZS 4282:2019 Control of the obtrusive effects of outdoor lighting* and relevant standards in the series *AS/NZS 1158:2005 Lighting for roads and public spaces.*	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
LV8	C8, E79	Opportunities to mitigate the high-moderate and high visual impacts to residential properties on Wharf Road south of Andrew Street (such as planting to provide screening of views to the bridge) would be investigated in consultation with property owners.	Design	N/A – stage does not include permanent works	N/A – stage does not include permanent works	Applicable	N/A	N/A	N/A
LV9	E80	Construction planning will demonstrate consideration of all practicable options to avoid or minimise impacts on trees, including: • review of the construction methodology and layout of work sites, compounds, access, ancillary infrastructure and fencing • consideration of alternative construction methods and equipment. Trees to be retained will be protected prior to the commencement of construction in accordance with Australian Standard *AS 4970–2009 Protection of trees on development sites.*	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
LV10	E74	Any tree pruning that is more than minor will be undertaken by a qualified arborist in	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		accordance with *AS 4373–2007 Pruning of amenity trees*.							
LV11	E54	Construction site hoarding and fencing will be designed, erected and maintained to minimise visual impacts. This will include: • erecting hoarding/fencing as early as possible in the site establishment phase to provide visual screening • using high quality materials suitable for parks and public spaces where sites are located close to sensitive receivers and public open space • featuring graphics, artwork or project information at appropriate locations in consultation with Transport for NSW • maintaining hoarding/fencing regularly, including the prompt removal of graffiti.	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
LV12	E58	Lighting of work areas, compounds, and work sites will be oriented to minimise glare and light spill impact on adjacent receivers.	Construction	N/A	Applicable	Applicable	Applicable	Applicable	N/A
LV13	E73	Following completion of construction, site restoration will be undertaken in accordance with the rehabilitation strategy (mitigation measure LP10). Temporary impacts on public open space will be rehabilitated in consultation with the relevant local council or Sydney Olympic Park Authority.	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
LV14	E79	Early planting and revegetation works will be undertaken where practicable to provide a screening buffer that has time to mature before the project is operational.	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
LV15	E79	Construction programming will provide for the progressive rehabilitation of disturbed areas as far as practicable, to minimise the duration	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		and extent of temporary visual and landscape character impacts.							
BD1	E2	Vegetation clearing will be limited to the minimum necessary to construct the project. The design and location of infrastructure will be further refined during each design phase to minimise or avoid impacts on native vegetation, fauna movement and habitat as far as practicable.	Design	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
BD2	E4-E7	Biodiversity offsets will be finalised in accordance with the NSW Biodiversity Offsets Scheme and the NSW Assessment Bilateral Agreement under the EPBC Act, in consultation with the NSW Department of Planning, Housing and Infrastructure Directorate. Offsets required under the *Fisheries Management Act 1994* will be finalised in consultation with DPI Fisheries.	Design	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
BD3	C19	Design development in Sydney Olympic Park and the Millennium Parklands will ensure that habitat connectivity and quality for the Green and Golden Bell Frog is maintained in consultation with Sydney Olympic Park Authority and a suitably qualified and experienced ecologist.	Design	N/A – stage does not include permanent works	N/A – stage does not include permanent works	Applicable	Applicable	Applicable	N/A
BD4	E56	The use of overhead wiring will be minimised as far as practicable in areas adjoining Grey-headed Flying-fox foraging habitat and the flight paths of the White-bellied Sea-eagle and migratory waders, particularly on the bridges over the Parramatta River, adjacent to Newington Nature Reserve and Narawang Wetland, and the Holker Busway.	Design	N/A	N/A	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
BD5	E56, E77(b)(c)	The planting of feed trees for the Grey-headed Flying-fox will be considered to improve habitat values, with a particular focus on locally indigenous winter-flowering species, such as Forest Red Gum (*Eucalyptus tereticornis*), Spotted Gum (*Corymbia maculata*) and Broad-leaved Paperbark (*Melaleuca quinquenervia*).	Design	N/A	N/A	Applicable	Applicable	Applicable	N/A
BD6	E78	Landscaping will use locally indigenous species to buffer the light rail alignment adjacent to vegetated areas, including Newington Nature Reserve, and along Hill Road and the Holker Busway, determined in consultation with Sydney Olympic Park Authority.	Design	N/A – stage does not include permanent works	N/A – stage does not include permanent works	Applicable	Applicable	Applicable	N/A
BD7	E58	Opportunities to minimise light and noise pollution to ecologically sensitive areas, particularly the Parramatta River, Newington Nature Reserve and the Millennium Parklands will be investigated and implemented, with regard to the *National Light Pollution Guidelines for Wildlife* (Department of the Environment and Energy, 2020), and in consultation with Sydney Olympic Park Authority.	Design	N/A – stage does not include permanent works	N/A – stage does not include permanent works	Applicable	Applicable	Applicable	N/A
BD8	E57	The design of the proposed bridges over the Parramatta River, and works to bridges in Sydney Olympic Park, will include provision for microbat-friendly roost features. The use of nest boxes appropriate for use by microbats and other small fauna will also be investigated and installed at other locations, in consultation with Sydney Olympic Park Authority and NSW National Parks and Wildlife Service.	Design	N/A	N/A	Applicable	Applicable	Applicable	N/A
BD9	C14, C19	Construction measures to avoid impacts on breeding of fauna, including threatened and	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		migratory fauna such as the White-bellied Sea-eagle, Southern Myotis and migratory waders, will be implemented. Such measures, including timing of construction, quieter construction methods, appropriate siting of lighting and/or the use of temporary noise barriers, will be implemented for works at: • Holker Busway (to minimise impacts on the breeding of the Southern Myotis during October to April) • Hill Road near the White-bellied Sea-eagle nest (breeding season from July to January) • Hill Road adjacent to Narawang Wetland, Newington Nature Reserve Wetland and Kronos Hill (to minimise impacts on migratory waders and the Green and Golden Bell Frog during spring and summer).						
BD10	E2	Impacts on estuarine mangrove vegetation at Haslams Creek will to be avoided or minimised as far as practicable. Works on the Holker Busway bridge will be undertaken via scaffolding attached to the bridge where practicable, rather than from the ground, to minimise impacts on estuarine mangrove vegetation.	Construction	N/A	N/A	N/A	Applicable	Applicable	N/A
BD11	C14, C19	A biodiversity management plan will be prepared prior to construction and implemented as part of the CEMP. The plan will include measures to protect biodiversity and minimise the potential for impacts during construction. The plan will include but not be limited to: • measures to manage potential impacts on the Green and Golden Bell Frog (see mitigation measure BD12)	Construction	N/A	Applicable	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		• measures to manage potential light, noise and vibration impacts on threatened and migratory fauna, such as the Green and Golden Bell Frog, within Sydney Olympic Park • measures to manage biosecurity risks (including pathogens and weeds) in accordance with the *Biosecurity Act 2015* (NSW) • locations and requirements for pre-clearing surveys, including where clearing is required within Sydney Olympic Park and areas of mangrove, saltmarsh or other riparian vegetation (see mitigation measure BD13) • an unexpected finds procedure • hygiene controls in relation to chytrid fungus, cinnamon fungus (*Phytophthora cinnamomi*) and myrtle rust (*Pucciniales fungi*) • locations and procedures for monitoring (see mitigation measures BD15, BD16 and BD18). The plan will be developed in accordance with the *Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects* (Roads and Traffic Authority (RTA), 2011) and the Policy and guidelines for fish habitat conservation and management (update 2013) (DPI, 2013). Management measures, including changes to measures to respond to monitoring outcomes, for works within Sydney Olympic Park and the Millennium Parklands will be developed in consultation with Sydney Olympic Park Authority.							
BD12	C14, C19	A Green and Golden Bell Frog management plan will be prepared as part of the biodiversity management plan by a qualified	Construction	N/A	Applicable	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		herpetologist, in consultation with Sydney Olympic Park Authority ecologists. The plan will define measures to: • ensure that habitat connectivity and quality is maintained during construction • minimise indirect impacts during construction (such as from noise and lighting). The plan will include requirements for: • temporary frog-proof fencing to be installed around work areas in Sydney Olympic Park where existing frog-proof fencing is impacted • permanent frog-proof fencing to be reinstated following construction • temporary noise barriers to be installed near Newington Nature Reserve wetland, Narawang Wetland, and Kronos Hill during construction.							
BD13	C19	Pre-clearing surveys will be completed prior to any works (including minor works) within sensitive areas, including at the following locations: • vegetated land within Sydney Olympic Park • areas of mangrove, saltmarsh or other riparian vegetation. • areas identified by the project ecologist as supporting known or potential habitat, for ground-dwelling and arboreal species • buildings/structures to be removed (for roosting microbats). Pre-clearing surveys and relocation of native fauna will be undertaken in accordance with Guide 1 (Pre-clearing process) and Guide 9 (Fauna handling) of the *Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects* (RTA, 2011).	Pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		Pre-clearing surveys of vegetated land within Sydney Olympic Park will be conducted in accordance with the *Sydney Olympic Park Biodiversity Strategy and Management Plan* (SOPA, 2022), in particular Section 3 (Frog habitat clearance) of Environmental Procedure 3 (Works in and near habitats).							
BD14	C19, E9, E77	A habitat restoration and revegetation plan will be prepared and implemented as a key part of the rehabilitation strategy (mitigation measure LP10) in consultation with relevant stakeholders, including City of Parramatta Council, Sydney Olympic Park Authority and landowners. The habitat restoration and revegetation plan will be prepared by a habitat restoration specialist and will include: • clear objectives for rehabilitation and re-establishment of native vegetation of local provenance in temporary disturbance areas, in accordance with Guide 3 (Re-establishment of native vegetation) of the *Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects* (RTA, 2011) • active revegetation of mangroves at the proposed bridges over the Parramatta River, taking into account future shading impacts • reuse of removed trees would be considered, in consultation with Sydney Olympic Park Authority ecologists and the NSW National Parks and Wildlife Service • requirements for ongoing monitoring.	Construction	N/A	N/A	Applicable	Applicable	Applicable	N/A
BD15	C19, C21	A fauna monitoring program, including monitoring locations, methods and timing, will be developed and implemented in consultation with the Environment and	Construction	N/A	Applicable	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		Heritage Group, Sydney Olympic Park Authority ecologists and Birdlife Australia, using available baseline data. The program will include monitoring during construction of: • frog fencing • microbat roosts (for any works along the Holker Busway during the microbat breeding season, and any roosts identified in buildings/structures to be removed) • the response of the White-bellied Sea-eagle and Green and Golden Bell Frog to construction noise.							
BD16	C19	Monitoring of indirect impacts on mangroves, saltmarsh and the Narrow-leafed Wilsonia (*Wilsonia backhousei*) population will be undertaken during and following construction. If an incident occurs in these areas, monitoring by a suitably qualified expert is required to determine the severity and potential need for additional offsets under the *Biodiversity Assessment Method* (DPIE, 2020).	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
BD17	D1	The operational environmental management system will define measures to manage potential operational risks to biodiversity in the Millennium Parklands (including maintenance, cleaning, herbicide and other chemical use and lighting considerate of the protection of the Green and Golden Bell Frog populations) in consultation with Sydney Olympic Park Authority.	Operation	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	Applicable
BD18	C19	The behavioural response of the White-bellied Sea-eagle and Green and Golden Bell Frog to operations will be monitored by a suitably qualified ecologist specialising in the subject species in consultation with the Environment and Heritage Group, Sydney Olympic Park Authority ecologists, NSW National Parks and	Operation	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	Applicable

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		Wildlife Service and/or Birdlife Australia during the first two years of operation, with an option to extend for a further three years, based on advice from the ecologist, as to whether sufficient data has been obtained. The monitoring methods (including the need for baseline data), reporting requirements, and adaptive management will be set out in the biodiversity management plan (BD11).							
W1	C14(f), E11, E138	A flood management strategy will be prepared, building on the results of the assessment presented in Technical Paper 10 (Hydrology, Flooding and Water Quality) to inform further design development and demonstrate how: • the project will achieve the Flood Management Objectives and Flood Immunity Standards • the risk of flooding to the project will be minimised • the potential impacts of the project on flood behaviour (under pre-project conditions) will be managed such that flooding characteristics will not be adversely impacted. The flood management strategy will: • be based on revised flood modelling taking into account further design development and construction planning • confirm the project's level of flood immunity • confirm the impacts of the project on flood behaviour in accordance with the *NSW Floodplain Development Manual* (DIPNR, 2005) • identify design responses and management measures in consultation with affected landowners/landholders to minimise:	Design	N/A – stage does not include permanent works	N/A – stage does not include permanent works	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		– flooding impacts above the one per cent AEP by adopting climate change adaptation measures – flooding impacts to flood sensitive areas and infrastructure within Sydney Olympic Park, including the Narawang Wetland, the Brick Pit and the existing leachate system – address potential impacts to the flood capacity and potential for scour as a result of the bridge piers. The strategy will be prepared by a suitably qualified and experienced specialist in consultation with City of Parramatta Council, City of Ryde Council, Sydney Olympic Park Authority, NSW State Emergency Service and the Department of Planning and Environment.							
W2	E140	Drainage and flood management infrastructure will be designed with regard to relevant drainage design requirements and guidelines, including the *Development Engineering Design Guidelines* (City of Parramatta Council, 2018) and *Sydney Olympic Park Authority Policy – Stormwater Management and Water Sensitive Urban Design* (Sydney Olympic Park Authority, 2016).	Design	N/A – stage does not include permanent works	N/A – stage does not include permanent works	Applicable	Applicable	Applicable	N/A
W3	E138, E141	The location and specification of water quality treatment measures will be determined with reference to the NSW and project-specific water quality objectives and existing water quality.	Design	N/A – stage does not include permanent works	N/A – stage does not include permanent works	Applicable	Applicable	Applicable	N/A
W4	E141	Further investigations and consultation with the owner of groundwater bore GW107659 will be undertaken to identify the potential for the project to affect existing water extraction and to identify appropriate management measures in accordance with the *NSW Aquifer*	Design	N/A	N/A	N/A	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		Interference Policy (Department of Primary Industries, 2012).							
W5	E141	Further investigations and consultation with the owner of groundwater bore GW063660 will be undertaken to identify if the bore can be retained. Any decommissioning required will be undertaken in accordance with the *Minimum Construction Requirements for Water Bores in Australia* (National Uniform Drillers Licensing Committee, 2012). Decommissioning will be developed in consultation and agreement with the bore owner.	Design	N/A	N/A	N/A	Applicable	Applicable	N/A
W6	E13, E139	Construction planning and the layout of construction work sites and compounds will be undertaken with consideration of overland flow paths and flood risk, avoiding flood liable land as far as practicable.	Pre-construction	Applicable	N/A	Applicable	Applicable	Applicable	N/A
W7	C14(f), E10	A flood and emergency response plan will be prepared and implemented. The plan will include measures, process and responsibilities to minimise the potential impacts of construction activities on flood behaviour as far as practicable. It will also include measures to manage flood risks and address flood recovery during construction.	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
W8	E10	Ongoing consultation will occur with the NSW State Emergency Service and relevant councils in relation to potential impacts to existing community emergency management arrangements for flooding.	Design, pre-construction, construction operation	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
W9	C14(f)	A soil and water management plan will be prepared as part of the CEMP and implemented during construction. The plan will detail processes, responsibilities and measures to manage potential soil and water	Pre-construction, construction	N/A	Applicable	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		quality impacts during construction, including measures to minimise the potential for pollutants to enter surface water and groundwater. The plan will be prepared in accordance with relevant guidelines and standards, including *Managing Urban Stormwater – Soils and Construction* - Volume 1 (Landcom, 2004) and Volume 2D *Main Road Construction* (DECC, 2008) (the Blue Book), *Best Practice Erosion and Sediment Control* (International Erosion Control Association (Australasia), 2008), and *Sydney Olympic Park Authority Policy - Stormwater Management and Water Sensitive Urban Design* (Sydney Olympic Park Authority, 2016) (for works in Sydney Olympic Park).							
W10	E143	Discharge to surface water will be undertaken in accordance with *Water Discharge and Reuse Guideline DMS-SD-024 version 4.1* (Transport for NSW, 2019), and project specific objectives.	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
W11		A water quality monitoring program will be developed and implemented as part of the soil and water management plan to monitor potential surface water quality impacts. The program will define: • monitoring parameters • monitoring locations • frequency and duration of monitoring. The monitoring program will include monitoring prior to the commencement of construction to validate the baseline water quality of potential receiving waters and confirm project-specific water quality criteria. Water quality monitoring will continue for a minimum of 12 months following the completion of construction, or until affected watercourses are rehabilitated to an	Pre-construction, construction	N/A	Applicable	Applicable	Applicable	Applicable	Applicable

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		acceptable condition (or as otherwise required by any project conditions of approval). The monitoring program will assess compliance with the project-specific water quality objectives and the efficacy of the mitigation measures and will include a trigger response action plan. It will be developed in consultation with the NSW EPA, City of Parramatta Council and Sydney Olympic Park Authority.							
W12	E142	Hydrodynamic modelling will be undertaken to inform the final bridge construction methodology and features of the temporary jetties to minimise the risk of river bank destabilisation or additional flooding to nearby areas. The modelling will also identify if additional measures, such as scour protection are required.	Pre-construction	N/A – stage does not include permanent works	N/A – stage does not include permanent works	Applicable	Applicable	Applicable	N/A
W13	C14(f)	The soil and water management plan will detail measures to manage potential changes to hydrodynamic processes within the Parramatta River and ensure appropriate mitigation measures are implemented to minimise erosion, scour and destabilisation of the river banks.	Pre-construction, construction	N/A	Applicable	Applicable	Applicable	Applicable	N/A
W14	E139	Works within or near watercourses will be undertaken with consideration of the *Guidelines for watercourse crossings on waterfront land* (DPI, 2012) and *Guidelines for controlled activities on waterfront land – Riparian corridors* (DPE, 2022).	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
W15	E141	Impacts on groundwater during construction will be minimised as far as practicable by: • avoiding the need to extract groundwater	Construction	N/A	Applicable	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		• minimising groundwater inflows and volumes into excavations.							
W16	E141	A dewatering management strategy will be prepared as part of the soil and water management plan and implemented during construction. The plan will detail measures for the appropriate management of extracted groundwater, including leachate.	Pre-construction, construction	N/A	Applicable	Applicable	Applicable	Applicable	N/A
W17	C14(a)	Emergency management arrangements will be developed to manage flood risks to people and vehicles accessing stops and facilities.	Operation	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	Applicable
CS1	E95, E98	Additional investigations will be undertaken to inform the design, construction planning, and preparation of remediation action plan(s) (RAP(s)) (if required). The investigations will include targeted investigation in the north of Wentworth Point. The results of site investigations will be assessed against the criteria contained with the *National Environment Protection (Assessment of Site Contamination) Measure 1999* (NEPC, 2013) to determine the need for any remediation. An independent site auditor accredited under the site auditor scheme under the CLM Act will review the scope and results of the further investigation, including any recommendations for further assessment, and provide a written opinion on the contamination risk and the appropriateness of the reports and any proposed recommendations.	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
CS2		The location, layout and functioning of the asbestos containment cells at 13A Grand Avenue, Camellia and the former Sandown Line will be confirmed.	Design	N/A	N/A	N/A	Applicable	N/A	Applicable

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		Where the project has the potential to affect the remediation systems in the stabling and maintenance facility, and the asbestos containment cells at 13A Grand Avenue and the former Sandown Line, the controls and protocols outlined in the existing long-term environmental management plan will be implemented such that the systems continue to operate effectively.							
CS3		The location, layout and functioning of the leachate management systems in Sydney Olympic Park will be confirmed. Where the project has the potential to affect the leachate management systems in Sydney Olympic Park, negotiation will be undertaken with Sydney Olympic Park Authority to understand the extent of the potential interaction. The controls and protocols outlined in the existing management plan will be implemented such that the systems continue to operate effectively.	Design	Applicable where the stage affects the leachate management system	Applicable where the stage affects the leachate management system	Applicable where the stage affects the leachate management system	Applicable where the stage affects the leachate management system	Applicable where the stage affects the leachate management system	N/A
CS4		Where the potential for disturbance of existing remediation systems in Camellia and Sydney Olympic Park is not consistent with the existing management plans, a remediation action plan(s) will be prepared in consultation with the landowners and NSW EPA. The plan(s) will describe how these systems will be managed during construction, and/or how these systems will be reinstated such that they continue to operate effectively after construction is complete.	Design	Applicable where the stage is not consistent with the existing management plans	Applicable where the stage is not consistent with the existing management plans	Applicable where the stage is not consistent with the existing management plans	Applicable	Applicable	Applicable
CS5	E101, E103	Where a remediation action plan(s) is/are determined to be required following further investigation it will be prepared and implemented in accordance with the *National Environment Protection (Assessment of Site Contamination) Measure 1999*.	Design	Applicable where a remediation plan is required	Applicable where a remediation plan is required	Applicable where a remediation plan is required	Applicable	Applicable	Applicable

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		The remediation action plan(s) will be prepared in consultation with landowner/s and reviewed by an independent site auditor (accredited under the site auditor scheme under the CLM Act), to certify the appropriateness of the plan(s) and that the site can be made suitable for the proposed use.							
CS6		Hazardous materials surveys will be undertaken to inform construction planning.	Pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
CS7	C14(f)	The soil and water management plan (mitigation measure W9) will detail processes, responsibilities and measures to manage potential soil impacts during construction, including potential impacts associated with the presence of existing contamination, stockpile management, saline soils and acid sulfate soils.	Pre-construction, construction	N/A	Applicable	Applicable	Applicable	Applicable	N/A
CS8		Physical controls (such as sediment curtains) will be implemented during works within the Parramatta River to minimise the disturbance and migration of contaminated sediments.	Pre-construction, construction	N/A	Applicable	Applicable	Applicable	Applicable	Applicable
CS9		The preferred methods to manage and dispose of contaminated materials and groundwater will be confirmed following further geotechnical and contamination investigations and incorporated into the waste and resource management plan (mitigation measure WR3).	Pre-construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
CS10	E1	Protocols to address and manage the potential for landfill gases along Hill Road and in Sydney Olympic Park will be developed as part of the air quality management plan (mitigation measure AQ1) and implemented during construction. The protocols will consider confined and/or enclosed spaces and	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		appropriate controls as required (e.g., forced ventilation) and will include appropriate occupational monitoring.							
CS11	C14(f)	An acid sulfate soils management plan will be prepared as part of the soil and water management plan in accordance with the *Acid Sulfate Soils Assessment Guidelines* (ASSMAC, 1998). The plan will define the process and measures to manage actual and potential acid sulfate soil and sediment disturbed during construction. The plan will include a summary of available acid sulfate soil information relevant to the project site and identify any further soil/water analysis required as a precursor to implementing the management plan. Acid sulfate soils will be disposed off-site (where required) in accordance with the *Waste Classification Guidelines – Part 1: Classifying waste* (NSW EPA, 2014) and *Part 4: Acid sulfate soils* (NSW EPA, 2014).	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
CS12	C14(f)	Temporary storage and containment systems for the stockpiling of contaminated material during construction will be designed to be impervious to the materials stored, resistant to fire (where required), prevent cross contamination of clean fill, covered to prevent contact with rainfall (when required), and managed and maintained to prevent any release of liquids and contaminated run-off to stormwater drains, waters and land.	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	N/A
CS13	E107	The discovery of previously unidentified contaminated material will be managed in accordance with an unexpected contaminated finds procedure, which will be included in the soil and water management plan.	Pre-construction, construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
CS14		Spills and leaks of vehicles or maintenance plant and equipment will be managed in accordance with Transport for NSW's standard operating procedures.	Operation	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	Applicable
CS15	E104	Ongoing management and monitoring measures will be implemented for any areas where minor, residual contamination remains following construction.	Operation	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	Applicable
HR1		The project will be designed in accordance with *Non-Ionising Radiation Protection Guidelines for Limiting Exposure to Time Varying Electric and Magnetic Fields* (ICNIRP, 2010) and Australian Standard *AS 2067:2016 Substations and high voltage installations exceeding 1 kV* to minimise the risk associated with electro-magnetic field exposure. Wiring, tracks and other infrastructure will be designed to mitigate risks associated with high voltage cabling and potential earth leakage.	Design	N/A – stage does not include permanent works	N/A – stage does not include permanent works	Applicable	Applicable	Applicable	N/A
HR2		Ongoing design development will be subject to detailed safety reviews through the Safety in Design process, to identify measures to mitigate, manage and reduce the risk of incidents arising from collisions during operation.	Design	N/A – stage does not include permanent works	N/A – stage does not include permanent works	Applicable	Applicable	Applicable	N/A
HR3	C10	The CEMP will detail incident management and emergency response processes, responsibilities and measures to manage hazards, and incident and emergency situations during construction.	Pre-construction, construction	N/A	Applicable	Applicable	Applicable	Applicable	N/A
HR4	C14(f)	The soil and water management plan will include a spill response procedure. The procedure will detail measures to manage hazardous substances and dangerous goods, including storage, handling and spill	Pre-construction, construction	N/A	Applicable	Applicable	Applicable	Applicable	N/A

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		response, in accordance with legislative requirements.							
HR5	E130	Valve shut downs on the Sydney Water drinking water trunk mains will be undertaken to confirm the condition and functionality of the nearest valves to the project site and whether any repairs or rectification works are required to the existing assets.	Pre-construction	N/A	N/A	N/A	Applicable	Applicable	N/A
HR6	E130	An incident and emergency response plan will be prepared to include the process to be followed in the event of an incident involving critical utilities such as the Sydney Water drinking water trunk mains, Jemena high pressure gas pipelines and fuel pipelines. The plan will be developed in consultation with the service providers and incorporate the findings from the utility investigations, the condition assessment of the Sydney Water drinking water trunk mains, and the safety management study (mitigation measure HR7).	Pre-construction, construction	N/A	Applicable	N/A	Applicable	Applicable	N/A
HR7	E136, E137	A safety management study will be undertaken to identify potential risks, including those associated with proposed alterations, to the gas and fuel pipelines in accordance with Australian and New Zealand Standard *AS/NZS 2885.6:2018 Pipelines – Gas and liquid petroleum, Part 6: Pipeline safety management*. The outcomes of the safety management study will be incorporated in construction planning and design development.	Design, pre-construction,	N/A	Applicable	Applicable	Applicable	Applicable	N/A
HR8		The transport of dangerous goods will be undertaken in accordance with the Dangerous Goods (Road and Rail Transport) Regulation 2009 and the Australian Code for the *Transport of Dangerous Goods by Road and Rail* (National Transport Commission, 2017).	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
HR9		Targeted safety campaigns to raise awareness about the operation of light rail vehicles will be undertaken in the lead up to the opening of the project and during operation to promote safe operation. This will focus on raising awareness and promoting safe behaviours around light rail vehicles.	Operation	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	Applicable	Applicable	Applicable
GHG1	E108	An energy and greenhouse gas strategy will be prepared to document the greenhouse reduction targets for the construction and operational stages of the project. The strategy will: • be prepared in accordance with Infrastructure Sustainability Council and NSW Government Resource Efficiency Policy (OEH, 2014) requirements • identify the key initiatives that will be explored further to meet these targets in accordance with the carbon emissions management hierarchy • be reviewed throughout the project lifecycle.	Design, construction, operation	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
GHG2	E108	Opportunities to reduce construction and operational greenhouse gas emissions will be investigated including, but not limited to: • purchasing electricity derived from a renewable energy source • the use of biodiesel in plant and equipment • connecting compound sites to grid electricity, where available • the use of low embodied energy and recycled materials • promoting the selection of energy efficient rolling stock, electrical equipment and maintenance vehicles. Preferred measures will be defined in the energy and greenhouse gas strategy.	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
AQ1	C10, E1	An air quality management plan will be prepared as part of the CEMP and implemented during construction. The plan will detail processes, responsibilities and measures to manage air quality, odour and landfill gas and minimise the potential for impacts during construction. The plan will include an air quality, odour and landfill gas monitoring program, which will be undertaken for the duration of construction.	Pre-construction, construction	N/A	Applicable	Applicable	Applicable	Applicable	N/A
AQ2	C10, E1	An odour management strategy will be developed prior to construction and implemented for the duration of works involving ground disturbance and the potential generation of landfill gases in Camellia, near the Parramatta River and in Sydney Olympic Park. The strategy will include: • proposed work methods and mitigation measures that aim to limit odour at sensitive receivers • routine observation of weather conditions • regular odour surveys at receptor locations by appropriately qualified professionals (mitigation measure AQ3) • measures to minimise the generation of odour at the end of each work day/shift • mechanisms for investigating odour complaints, including conduct of additional odour surveys (mitigation measure AQ3) • contingency and rectification measures should significant odour issues occur at sensitive receivers in the vicinity of the project site.	Pre-construction, construction	N/A	N/A	Applicable	Applicable	Applicable	N/A
AQ3	E1	Odour surveys will be undertaken at downwind receivers during works involving ground disturbance in Camellia, near	Construction	Applicable	Applicable where the stage	Applicable	Applicable where the stage requires ground disturbance	Applicable	Applicable

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		Parramatta River and in Sydney Olympic Park in accordance with *Determination of odorants in ambient air by field inspection* (VDI 3940, 1993). The odour surveys will be undertaken: • daily, for one hour when works commence, and prior to works completing • if wind conditions drop below three metres per second • if an odour complaint is received. If significant odour issues are observed in the vicinity of sensitive receivers, the contingency and rectification measures defined by the odour management strategy will be implemented (see AQ2).			requires ground disturbance near Parramatta River or Sydney Olympic Park		near Parramatta River or Sydney Olympic Park		
CC1	E108	The climate change risk assessment will continue to be refined in accordance with Australian Standard *AS 5334-2013 Climate change adaptation for settlements and infrastructure – A risk based approach* and the *Transport for NSW Climate Risk Assessment Guidelines* (Transport for NSW, 2021). Adaptation measures will be confirmed, and actions implemented, to address very high, high and medium risks where reasonable and feasible.	Design	N/A – stage does not include permanent works	N/A – stage does not include permanent works	Applicable	Applicable	Applicable	Applicable
CC2	D1	Operational procedures for emergency planning and management will be prepared and implemented to consider the increased risk of flooding, storm surges and heatwaves.	Operation	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	Applicable
CC3	D1	Operational procedures will be developed and implemented to appropriately respond to extreme climate events (temperature, winds or rainfall), as identified in the updated climate change risk assessment.	Operation	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	Applicable

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
WR1		Measures to minimise spoil generation will be confirmed during design development. This will include a focus on optimising the design to minimise spoil volumes, and the reuse of material on site.	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
WR2		Material procurement and resource use planning will be undertaken in accordance with the *Sustainable Design Guidelines* (Transport for NSW, 2020).	Design	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
WR3	C10	A waste and resource management plan will be prepared as part of the CEMP and implemented during construction. The plan will adopt the circular economy principles and the waste hierarchy contained in the *Waste Avoidance and Resource Recovery Act 2001* and the *Infrastructure Sustainability Rating Scheme Technical Manual* (Infrastructure Sustainability Council, 2021). It will detail processes, responsibilities and measures to manage waste and resource use, and minimise the potential for impacts during construction. The plan will include strategies to manage spoil, including preferred reuse options.	Pre-construction, construction	N/A	N/A	Applicable	Applicable	Applicable	N/A
WR4	E135	All waste will be classified in accordance with the *Waste Classification Guidelines* (NSW EPA, 2014) and managed in accordance with the POEO Act and associated regulations.	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
WR5	E133, E134	The disturbance, movement and disposal of special waste, including hazardous building materials such as asbestos containing materials, will be carried out in accordance with the Work Health and Safety Regulation 2011 and relevant guidelines.	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable
WR6	C10	Suitable areas will be identified to allow for contingency management of unexpected	Construction	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable

New ID	Relevant Conditions of Approval	Mitigation measure	Timing	Enabling Works – Bridge between Melrose Park and Wentworth Point			Main Works A – Main alignment construction works to Wentworth Point	Main Works B – Main alignment construction works to Wentworth Point	Operate and Maintain
				Substage 1 – Pre-construction works	Substage 2 – Preliminary construction works	Substage 3 – Main construction works			
		waste materials, including contaminated materials. Such areas will be hardstand or lined, appropriately stabilised and bunded, with sufficient space for stockpile storage.							
WR7	D1	Operational waste, including general litter clean up, will be managed consistent with the Parramatta Light Rail Stage 1 Operations Environmental Management Plan and the waste hierarchy principles contained in the *Waste Avoidance and Resource Recovery Act 2001*.	Operation	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	N/A to this construction stage	Applicable

DRAFT

4 Review

4.1 Changes to delivery strategy

This Staging Report details the staging of construction of the project, reflecting the current delivery strategy. As the project progresses the delivery strategy may change which may also result in changes to the stages outlined in the Staging Report. Where this occurs, TfNSW will undertake a reallocation exercise to confirm how the mitigation measures apply to the new or modified stages and subsequently update the Staging Report.

If changes are proposed to the staging of construction or operation, the revised Staging Report will be endorsed by the Environmental Representative and submitted to the Department of Housing, Planning and Infrastructure before the commencement of changes to the stage of construction or the stage of operation.

4.2 Project determination and changes to the planning approval

This Staging Report confirms mitigation measures which are appropriate to the scope, risks and timing of each construction stage.

During the project there may be changes to the planning approval, following the approval of a project modification. Following the determination of a modification, the approved project modification and associated construction activities would be reviewed, and if necessary, new or modified conditions of approval would be subject to the applicability and allocation processes described in earlier sections of this report.

Following updates to the revised Staging Report, it would be endorsed by the Environmental Representative and submitted to the Department of Planning, Housing and Infrastructure.

DRAFT

5 References

Acid Sulfate Soils Management Advisory Committee (1998), *Acid Sulfate Soils Assessment Guidelines*, August 1998. Available at: Acid Sulfate Soils Assessment Guidelines

Australian and New Zealand Governments (2018), *AS/NZS 2885.6:2018 Pipelines – Gas and liquid petroleum, Part 6: Pipeline safety management*. Available at: Pipelines - Gas and liquid petroleum - Part 6: Pipeline safety management

Australian and New Zealand Governments (2019), *AS/NZS 4282:2019 Control of the obtrusive effects of outdoor lighting*. Available at: Australian/New Zealand Standard AS/NZS 4282:2019 Control of the obtrusive effects of outdoor lighting

Australian and New Zealand Governments (2019), *AS/NZS 1158:2005 Lighting for roads and public spaces*. Available at: AS/NZS 1158:2005 Lighting for roads and public spaces

Australian Standard (2009), Australian Standard *AS 4970–2009 Protection of trees on development sites*. Available at: Australian Standard AS 4970–2009 Protection of trees on development sites

Australian Standard (2016), *AS 2067:2016 Substations and high voltage installations exceeding 1 kV*. Available at: AS 2067:2016 Substations and high voltage installations exceeding 1 kV

Standards Australia (2019), *AS/NZS ISO 19011:2019 – Guidelines auditing management systems*. Available at: AS/NZS ISO 19011:2019

Austroads (2022), *Guide to Road Safety Part 6: Road Safety Audit*. Available at: Austroads

City of Parramatta (2018), *Development Engineering Design Guidelines*. Available at: Development Engineering Design Guidelines

Department of Environment and Climate Change (DECC) (2008a), *Managing Urban Stormwater Soils and Construction Volume 2B Waste landfills*, June 2008. Available at: Managing Urban Stormwater: soils and construction. Volume 2B - Waste landfills (nsw.gov.au)

DECC (2008b), *Managing Urban Stormwater Soils and Construction Volume 2D Main road construction*. Available at: Managing Urban Stormwater: soils and construction. Volume 2D - Main road construction (nsw.gov.au)

DECC (2009), *Interim Construction Noise Guideline*. Available at: Interim Construction Noise Guideline (nsw.gov.au)

Department of Climate Change, Energy, the Environment and Water NSW (DECCW) (2010a), *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*. Available at: Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010

DECCW (2010b), *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*. Available at: Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW | NSW Environment and Heritage

Department of the Environment and Energy (2020), *National Light Pollution Guidelines for Wildlife Including Marine Turtles, Seabirds and Migratory Shorebirds*, January 2022. Available at: National Light Pollution Guidelines for Wildlife Including Marine Turtles, Seabirds and Migratory Shorebirds

Department of Planning, Industry and Environment (DPIE) (2020), *Biodiversity Assessment Method*. Available at: Biodiversity Assessment Method (nsw.gov.au)

DPIE (2020), *Carter Street Precinct Development Framework*. Available at: Carter Street Precinct Development Framework

DPIE (2020), Environmental Management Plan Guideline for Infrastructure Projects. Available at: Environmental Management Plan Guideline for Infrastructure Projects

DPIE (2020), *Independent Audit Post Approval Requirements*. Available at: Independent Audit

DPIE (2021), *NSW Waste and Sustainable Materials Strategy 2041*, Stage 1: 2021-2027. Available at: NSW Waste and Sustainable Materials Strategy 2041

DPIE (2021) *Social Impact Assessment Guideline for State Significance Infrastructure*. Available at: Social Impact Assessment Guideline for State Significance Infrastructure

Department of Primary Industries (DPI) (2012), *Guidelines for watercourse crossings on waterfront land*. Available at: Guidelines for watercourse crossings on waterfront land (nsw.gov.au)

DPI (2012), *Guidelines for controlled activities on waterfront land – Riparian corridors*. Available at: Guidelines for controlled activities on waterfront land – Riparian corridors

DPI (2012) *NSW Aquifer Interference Policy*. Available at: NSW Aquifer Interference Policy

DPI Fisheries (2013), *Policy and guidelines for fish habitat conservation and management Update 2013*. Available at: Policy and guidelines for fish habitat conservation and management (Update 2013) (nsw.gov.au)

Department of Planning, Housing and Infrastructure (DPHI) (2024), *Parramatta Light Rail Stage 2 Conditions of Approval*. Available at: Parramatta Light Rail Stage 2 Conditions of Approval

German Standards (1993), *VDI 3940:1993 Determination of odorants in ambient air by field inspection*. Available at: Determination of Odorants

Government Architect NSW (2023), *Connecting with Country*. Available at: Connecting with Country

Heritage Office (1998), *Skeletal remains: guidelines for the management of human skeletal remains under the Heritage Act 1977*. Available at: Skeletal remains: guidelines for the management of human skeletal remains

Heritage Office (2005), *Interpreting Heritage Places and Items*. Available at: Interpreting Heritage Places & Items.doc (nsw.gov.au)

Heritage Office NSW (2006), *How to Prepare Archival Records of Heritage Items*. Available at: How to Prepare Archival Records of Heritage Items

Heritage Office NSW (2008), *New Uses for Heritage Places: Guidelines for the Adaptation of Historic Buildings and Sites*. Available at: New Uses for Heritage Places: Guidelines for the Adaptation of Historic Buildings and Sites

Infrastructure Sustainability Council (2021), *Infrastructure Sustainability Rating Scheme Technical Manual Design & As-Built v2.1*. Available at: IS v2.1 - ISCouncil

International Commission on Non-Ionizing Radiation Protection (ICNIRP) (2010), *Non-Ionising Radiation Protection Guidelines for Limiting Exposure to Time Varying Electric and Magnetic Fields*. Available at: Non-Ionising Radiation Protection Guidelines

International Erosion Control Association (Australasia) (2008), *Best Practice Erosion and Sediment Control*. Available at: Publications - International Erosion Control Association (austieca.com.au)

Institute of Air Quality Management (IAQM) (2014), *Guidance on the assessment of dust from demolition and construction*, February 2014. Available at: Guidance on the assessment of dust from demolition and construction

Landcom (2004), *Managing Urban Stormwater: Soils and Construction – Volume 1*. Available at: Managing Urban Stormwater soils and construction Volume 1

National Environment Protection Council (NEPC) (2021), *National Environment Protection (Assessment of Site Contamination) Measure*. Available at: National Environment Protection (Assessment of Site Contamination) Measure

National Transport Commission (2018), Australian Code for the *Transport of Dangerous Goods by Road and Rail*. Available at: Australian Code for the Transport of Dangerous Goods by Road and Rail

National Uniform Drillers Licensing Committee (2020), *Minimum Construction Requirements for Water Bores in Australia*. Available at: Minimum Construction Requirements for Water Bores in Australia

New South Wales (NSW) Environment Protection Authority (EPA) (2011), *NSW Road Noise Policy*. Available at: NSW Road Noise Policy

NSW Environment Protection Authority (EPA) (2013), *Rail Infrastructure Noise Guideline*. Available at: Rail Infrastructure Noise Guideline

NSW Environment Protection Authority (EPA) (2014a), *Waste Classification Guidelines - Part 4: Acid sulfate soils*, November 2014. Available at: Waste Classification Guidelines - Part 4: Acid sulfate soils

NSW EPA (2014b), *Waste Classification Guidelines*. Available at: Waste Classification Guidelines

New South Wales (NSW) Environment Protection Authority (EPA) (2017), *Noise Policy for Industry*. Available at: Noise Policy for Industry

O'Gara E, Howard K, Wilson B, and Hardy GEStJ (2005), *Management of Phytophthora cinnamomi for Biodiversity Conservation in Australia: Part 2 – National Best Practice Guidelines*. A report funded by the Commonwealth Government Department of the Environment and Heritage by the Centre for Phytophthora Science and Management, Murdoch University, Western Australia. Available at: Management of Phytophthora cinnamomi for Biodiversity Conservation in Australia: Part 2 – National Best Practice Guidelines

OEH (Office of Environment and Heritage) (2011), *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*, April 2011. Available at: Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales

Office of Environment and Heritage (OEH) (2005), *Interpreting Heritage Places and Items: Guidelines*. Available at: Interpreting Heritage Places and Items Guidelines

OEH (2014), *NSW Government Resource Efficiency Policy*. Available at: NSW Government Resource Efficiency Policy

Roads and Maritime Services (2011), *Procedure for Aboriginal Cultural Heritage Consultation and Investigation*. Available at: Procedure for Aboriginal Cultural Heritage Consultation and Investigation

Sydney Olympic Park Authority (2016), *Sydney Olympic Park Authority Policy – Stormwater Management and Water Sensitive Urban Design*. Available at: Sydney Olympic Park Authority Policy – Stormwater Management and Water Sensitive Urban Design

Sydney Olympic Park Authority (2022), *Sydney Olympic Park Biodiversity Strategy and Management Plan*. Available at: Sydney Olympic Park Biodiversity Strategy and Management Plan

Transport for NSW (TfNSW) (2019), *Water Discharge and Reuse Guideline DMS-SD-024*, Version 4.1. Available at: Water Discharge and Reuse Guideline

TfNSW (2020), *Sustainable Design Guidelines*. Available at: Sustainable Design Guidelines

TfNSW (2021), *Transport for NSW Climate Risk Assessment Guidelines*. Available at: Transport for NSW Climate Risk Assessment Guidelines

TfNSW (2022) *Technical Paper 1: Design, Place and Movement*. Available at: Tech Paper 1 Design Place and Movement (nsw.gov.au)

TfNSW (2022), Parramatta Light Rail Stage 2 Environmental Impact Statement. Available at: Parramatta Light Rail Stage 2 Environmental Impact Statement

TfNSW (2022), *Road Noise Criteria Guideline*. Available at: Road Noise Criteria Guideline

TfNSW (2022), *Road Noise Mitigation Guideline*. Available at: Road Noise Mitigation Guideline

TfNSW (2022), *Transport for NSW's Aboriginal Culture and Heritage Framework.* Available at: Aboriginal Culture and Heritage Framework

TfNSW (2022), *Unexpected Heritage Items Procedure*. Available at: Unexpected heritage items procedure

TfNSW (2023), *Aboriginal Cultural Heritage Assessment Report.* Available at: Parramatta Light Rail Stage 2 - Aboriginal Cultural Heritage Assessment Report (nsw.gov.au)

TfNSW (2023) *Tree and hollow replacement guidelines*. Available at: Tree and hollow replacement guidelines

TfNSW (2024), *Biodiversity Management Guideline: Protecting and managing biodiversity on Transport for NSW projects*. Available at: Biodiversity Management Guideline: Protecting and managing biodiversity on Transport for NSW projects

TfNSW (2024) *Biodiversity Policy*. Available at: Biodiversity Policy

DRAFT

DRAFT

© Transport for NSW

Users are welcome to copy, reproduce and distribute the information contained in this report for non-commercial purposes only, provided acknowledgement is given to Transport for NSW as the source.

NSW GOVERNMENT

Department of Planning, Housing and Infrastructure

Our ref: SSI-10035-PA-125

[redacted]
Program Director Parramatta Light Rail Stage 2
Transport for NSW
Locked Bag 5085
Parramatta NSW 2124

28/08/2026

Subject: Parramatta Light Rail Stage 2 (SSI-10035), Staging Report Revision 1 (Condition A18)

Dear [redacted]

I refer to the revised Staging Report Revision 1, dated 21 August 2026 submitted to the Department for information in accordance with condition A18 of SSI-10035.

I note that the Staging Report Revision 1:

- includes the following revised stages:
  - Enabling Works - Bridge between Melrose Park and Wentworth Point
  - Stage A – Main alignment construction works including Parramatta CBD turnback and from Camellia to Wentworth Point
  - Stage B – Main alignment construction works from Wentworth Point to Carter Street
  - Operate and Maintain
- has been endorsed by the Environmental Representative; and
- has been reviewed by Transport for NSW with no issues raised.

The Department further notes that the revised Staging Report was subject to an alternative timeframe, which was approved by the Planning Secretary on 10 August 2026 in accordance with Condition A9.

Please note that if there are any inconsistencies between the Staging Report and the conditions of approval, then the requirements of the conditions of approval will prevail.

Please ensure that the Staging Report is placed on the project website at the earliest convenience as per condition B15.

If you wish to discuss the matter further, please contact [redacted].

Yours sincerely

[redacted]
Acting Team Leader
Infrastructure Management

As nominee of the Planning Secretary