

# Mariyung Fleet:

## Rail Infrastructure Upgrades - Signalling, overhead wiring, and lighting upgrades

### Activity-based Environmental Impact Assessment checklist

May 2024



Document review tracking

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# 1. Details of the proposal

Table 1-1: Details of the proposal

Proposal	Details
Proposal name	Mariyung Fleet: Rail Infrastructure Upgrades- Signalling, overhead wiring and lighting upgrades
Location	Multiple sites throughout the NSW rail network
Timeframe	Mid 2024 - expected to be completed in 2026

# 2. Description of proposed activity

## 2.1 Project background

Transport for NSW (Transport) is delivering a new, state-of-the-art fleet of intercity trains called the Mariyung fleet.

The new trains will provide a new level of comfort and convenience for the thousands of customers who travel between Sydney and the Central Coast, Newcastle, the Blue Mountains and the South Coast.

To accommodate the new Mariyung fleet, Transport need to modify some existing rail infrastructure at various locations across the rail network to support the changes to the operating model.

Work across the Mariyung fleet will include modifications within the rail corridor, including platforms, train stopping markers, signalling and lighting.

This Environmental Impact Assessment (EIA) Checklist has been prepared for infrastructure upgrades for the Mariyung fleet.

## 2.2 Scope of works

This Activity-based Environmental Impact Assessment (EIA) Checklist assesses typical upgrades required to signalling, overhead wiring (OHW) and lighting across the Central Coast and Newcastle, Blue Mountains and South Coast lines (the Proposal), including investigations and temporary site facilities. Other infrastructure upgrades, such as modifications to stabling yards and provisioning sites, platform extensions, changes to car marker or balise infrastructure, are assessed separately.

### 2.2.1 Activity-based Impact Assessment Process

The Proposal would include works at a range of work sites which are located in highly modified, non-sensitive environments within the rail corridor. Although work would be carried out at numerous locations, the scope of works would generally be the same at each location. These works would typically have minimal potential for significant environmental impacts (Section 7) and would involve access to work sites using existing access points as necessary.

As a result of the minimal potential for significant environmental impacts, a three-step assessment process would be used to identify potential impacts associated with the proposed works. Step 1 would be a desktop study to identify the range of potential impacts typically associated with the Proposal, and Step 2 would involve the completion of a Site Specific Environmental Checklist (SSEC) to capture any potential environmental impacts associated with a work site. Step 3 would capture changes to the scope of works or construction methodology. This three-step process is described in more detail below.

#### Step 1 – Activity-based Checklist

As described above, the scope of works would generally be the same at each work site, and accordingly this Activity-based EIA Checklist considers potential environmental impacts expected to occur as a result of the pre-defined scope at each work site, rather than the environmental impacts of each specific work site (identified in Step 2 below).



### Step 2 – Site Specific Environment Checklist

Notwithstanding the above, the local environmental conditions and constraints would vary between work sites (e.g. presence of vegetation, heritage listings etc.). Accordingly, a secondary step would be undertaken for each work site prior to the commencement of works, to confirm if the impacts identified in Step 1 are consistent with the individual work site conditions. The secondary assessment would take the form of a SSEC, which is to be completed by the construction contractor for each work site, and submitted for approval by Transport Environment & Sustainability Representative (TESR) at least 21 days prior to the commencement of work (unless otherwise agreed with the TERS). This SSEC would review the proposed scope of work with respect to the key environmental constraints at a work site to identify the requirement for further control measures and /or approvals (e.g. heritage, biodiversity) prior to work commencing. Completion of the SSEC would include the procurement of technical consultants needed to prepare specialist reports (i.e. biodiversity, heritage) which are required to support the approval of the SSEC.

A copy of the SSEC template is provided as Appendix A.

### Step 3 - Change to the scope of work

If the scope of work or construction methods described in this Activity-based EIA Checklist change significantly following the awarding of the contract, a supplementary environmental impact assessment would be prepared in accordance with Section 111 of the EP&A Act (1979). Any minor changes to the scope of work at a specific location would be covered in the SSEC (refer to Appendix A) which is to be completed prior to commencement of construction work for each work site. Any required supplementary environmental assessment would be included as an attachment to the Site SSEC, along with any necessary approvals, in particular, approvals under the Heritage Act 1977 (Heritage Act). Such SSEC and procurement of specialist reports would be the responsibility of the Construction Contractor undertaking the works. This must be submitted for approval to TERS at least 21 days prior to the commencement of work.

## 2.2.2 Description of Activities

Typical activities associated with the Proposal involve the following:

- Investigative work;
- Site and facility establishment;
- Signalling upgrades, including:
  - Modification and/or relocation of signalling equipment;
  - Track infrastructure upgrades;
  - Combined Services Route (CSR) modification;
  - New signage installation (i.e. speed, safety, security).
- OHW upgrades, including:
  - OHW replacement;
  - Over-track structure upgrade or replacement;
  - Upgrade to bridge screens;
  - Removal of redundant structure.
- Lighting upgrades, including:
  - Modification and/or relocation of lighting including wiring;
  - Installation of new light posts, fittings or LV supply services
  - Removal of redundant structures.
- Platform furniture modifications, including:
  - Modification, installation and/or relocation of platform seating, rubbish bins, fencing and other items.

Given the preliminary level of design available at the time of preparing this Activity-based EIA Checklist, the assessment has been based on a typical suite of construction activities that would likely be carried out as part of the works following detailed design. At any one of the work sites, the individual activities are likely to include a combination of the activities listed above. Further detail of activities and typical infrastructure is provided in Appendix B.

## 2.3 Construction details

### Access and ancillary facilities

Ancillary facilities would be required to support the Proposal. Any ancillary facilities would generally be in proximity to the work sites and located within the rail corridor or under agreement with landowner. Where possible, existing yards or compounds would be used for administrative purposes and for the storage and laydown of construction materials, plant and equipment. The Construction Contractor would be required to complete a SSEC (refer to Appendix A) for each proposed ancillary facility and submit to the TESR for approval at least 21 days prior to commencement of work.

Depending on the scheduling of work, the establishment, operation and demobilisation of the ancillary facilities would occur prior to and after a scheduled possession period. Alternatively, temporary site compounds would remain in operation for the duration required to the Proposal in the vicinity.

Access would utilise existing roads and access routes to access the rail corridor, where possible

### Construction duration and working hours

The work is planned to commence in mid-2024. Typically work at a single work site would occur for a short period, such as a weekend track possession, before moving to the next work site.

The work would generally be undertaken in standard working hours (7:00am to 6:00pm Monday to Friday and 8:00am to 1:00pm Saturday). Where construction is required during a scheduled track possession, work would be subject to prior approval from TfNSW through submission of a TfNSW Out of Hours Works Application (OOHW) via the online system, and the affected community would be notified as outlined in the TfNSW Construction Noise and Vibration Guideline – Public Infrastructure (TfNSW, 2023) and aligned with the TfNSW Standard Requirements.

### Construction plant and equipment

The following types of plant and equipment are likely to be used during construction:

- |                                  |   |   |
|----------------------------------|---|---|
| • Super-sucker / vacuum truck    | • Water truck                             | • Hi-rail trucks                        |
| • Hi-rail truck with cable winch | • Excavator                               | • Hi-rail telehandlers                  |
| • Delivery truck (flatbed)       | • Dump truck                              | • Hand tools                            |
| • Generator                      | • Truck and dog                           | • Small site sheds                      |
| • Lighting Towers                | • Concrete trucks (incl. pumps, booms)    | • Franna Crane                          |
| • Boring equipment               | • Compactor                               | • Elevated Work Platform (EWP)          |
| • Front end loader               | • Light commercial and passenger vehicles | • Hi-rail truck with cable drum / spool |
| • Oxy-acetylene cutter           | • Crane                                   |   |

### Construction personnel

It is anticipated that on average 10 to 15 site personnel would be required at each work site, with the potential to increase to an estimated 60 to 80 during possessions. Workers would be spread within the rail corridor depending on the number of active sites.

#### Impacts on utilities/authorities

There is a potential for some services to require relocation, including electrical and communication equipment owned by Sydney Trains. No public utilities are expected to require relocation as a result of the work.

#### Wastes generated

Waste generated during construction of the Proposal is expected to be minimal and may include spoil, concrete, steel and rail infrastructure. All waste generated would be disposed of in accordance with relevant legislative requirements.

## 3. Site characteristics

Table 3-1: Site characteristics

Characteristic	Details
Land use	The proposed work would generally be undertaken within the relatively flat and level rail corridor across the Sydney Trains network which is zoned SP2 Infrastructure. Temporary site compounds would be located inside the rail corridor as noted in Appendix B. Work would also occur within the existing buildings within the station precincts e.g. equipment rooms.
Social context	Works would occur across the Sydney metropolitan rail network where adjacent land use is typically a combination of light-industrial, commercial, residential and also roadways. The Proposal and the location of the site works in the rail corridor, the impact to the community is anticipated to be negligible.
Flora and fauna	<p>There is generally a minimal amount of vegetation within the rail corridor, mostly limited to grasses and weeds which tend to be located towards the boundary of the rail corridor. Typically, works would occur in areas away from vegetation within the rail corridor, for example on the platforms or within the rail formation.</p> <p>Given the highly disturbed and active nature of the sites, fauna habitat is minimal. Any native fauna found within the vicinity of the sites are likely to be an adaptive species such as possums and common native birds, mobile in nature and capable of relocating away from the construction works as required.</p> <p>Weeds may be present in proximity to the Proposed work sites and have the potential to spread due to the movement of construction plant and equipment across the sites.</p> <p>With implementation of the proposed control measures, any potential impacts to flora and fauna would be minimised.</p>
Aboriginal Heritage	Works are not expected to impact Aboriginal heritage. If minimal ground disturbance is required, it would be limited to disturbed areas as works are contained to the rail corridor.
Non-Aboriginal heritage	Works would occur across the NSW rail network. A number of locations have associated heritage listings on the State Heritage Register (SHR), TAHE s170 register, and LEPs. Prior to works at each Proposed work site commencing (unless otherwise agreed with Transport), a search of the Heritage databases (State and Local) would be carried out as part of Site Specific Environmental Checklist (Appendix A).
Hydrology and flooding	<p>The Proposal may be located on land susceptible to flooding, however the works would not impact on the land nor flood patterns.</p> <p>Given the location of the Proposal works it is expected that all areas within the rail corridor would be serviced by the existing drainage and stormwater catchment network which contain swale drainage and/or subsurface drainage pipes that drain stormwater away from the rail track to the surrounding local receiving waters</p>



Characteristic	Details
Soils and contamination	<p>Railway corridors have the potential to contain various contaminated materials from historical and operational sources. Such sources relate to the long-term operation of the railway and the history of nearby contaminating activities. Possible sources of contamination may include fill materials, hazardous materials from structures, leaks and spills of fuels or chlorinated, historical use of pesticides, and asbestos dust from train brake pads.</p> <p><i>Acid sulphate soils (ASS)</i></p> <p>The acid sulphate risks probability maps would be assessed during the Site Specific Environment Checklist (Appendix A) to determine the ASS risk at each signalling upgrade work site.</p> <p><i>Contamination</i></p> <p>The NSW EPA contaminated land records of notices would be assessed during the Site Specific Checklist (Appendix A) for any records of contamination at each work site.</p>

## 4. Control measures

Table 4-1: Control measures

Characteristic	Yes	No
Will a project and site specific EMP be prepared?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Are appropriate control measures already identified in an existing EMP?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## 5. Legislative framework

The *Environmental Planning & Assessment Act 1979* (EP&A Act) establishes the system of environmental planning and assessment in NSW. Division 5.1 specifies the environmental impact assessment requirements for activities undertaken by public authorities, such as Transport for NSW (Transport), which do not require development consent under Part 4 of the EP&A Act. Division 15, Section 2.92 and Section 2.93 of the *State Environmental Planning Policy (Transport and Infrastructure) 2021* (SEPP (Transport and Infrastructure)) allows for the development of 'rail infrastructure facilities' by or on behalf of a public authority without development consent on any land. Consequently, development consent is not required for the Proposal however, the environmental impacts of the Proposal have been assessed under the provisions of Division 5.1 of the EP&A Act.

Section 171 of the Environmental Planning & Assessment Regulation 2021 (EP&A Regulation) sets out the environmental factors which must be considered when determining if an activity assessed under Division 5.1 of the *Environmental Planning & Assessment Act 1979* (EP&A) has or is likely to have a significant impact on the environment.

The purpose of this impact assessment checklist is to provide an environmental impact assessment which considers, to the fullest extent possible, all matters affecting, or likely to affect, the environment by reason of that activity, fulfilling the requirements of section 5.5 of the EP&A Act, the EP&A Regulation and the Guidelines for Division 5.1 Assessments (DPE, 2022). Appendix C specifically responds to the environmental factors for consideration under Section 171 of the EP&A Regulation.

The (Commonwealth) EPBC Act provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places - defined in the EPBC Act as 'matters of National Environmental Significance (NES)'. The EPBC Act requires the assessment of whether the Proposal is likely to significantly impact on matters of NES or Commonwealth land. These matters are considered in full in Appendix D.

As the Proposal would not or is not likely to have a significant impact on any matters of NES or on Commonwealth land, a referral to the Commonwealth Minister for the Environment is not required.

## 6. Engagement

### 6.1 SEPP (Transport and Infrastructure) consultation

Sections 2.10-2.15 of the SEPP (Transport and Infrastructure) require that public authorities undertake consultation with councils and other agencies when proposing to carry out development without consent. Table 6-2 provides details of consultation requirements and outcomes for the Proposal under the SEPP (Transport and Infrastructure).

Table 6-1: Summary of SEPP (Transport and Infrastructure) consultation requirements

Section	Description	Relevance to the proposal
2.10	Consultation with councils- development with impacts on council-related infrastructure or services	There is not proposed impact to council related infrastructure and services. Therefore, consultation with Council is not required
2.11	Consultation with councils- development with impacts on local heritage	There is not proposed impact to council related infrastructure and services. Therefore, consultation with Councils is not required.
2.12	Consultation with councils- development with impacts on flood liable land	The Proposal may be located on land susceptible to flooding, however the works would not impact on land nor flood patterns. Therefore, consultation with Councils is not required. Should this change during detailed design, consultation with Councils would occur
2.13	Consultation with State Emergency Service- development with impacts on flood liable land	The Proposal may be located on land susceptible to flooding, however the works would not impact on land nor flood patterns. Therefore, consultation with the SES is not required. Should this change during detailed design, consultation with SES would occur
2.14	Consultation with councils- development with impacts on certain land within the coastal zone	The Proposal may be located within the coastal zone, however the works would not impact land or coastal processes. Therefore consultation with Councils is not required. Should this change during detailed design, consultation with Councils would occur.
2.15	Consultation with public authorities other than councils	<p>Under this section of the SEPP, potential specified development that would require consultation and has been considered for the Proposal is:</p> <ul style="list-style-type: none"> <li>Land adjacent to or on land reserved under the National Parks and Wildlife Act 1974.</li> </ul> <p>While parts of the rail corridor may be adjacent to land reserved under the National Parks and Wildlife Act 1974, consultation with Department of Climate Change, Energy, the Environment and Water (DCCEEW) is not considered to be required as the Proposal would not impact such land.</p> <p>Should this change during detailed design, consultation with DCCEEW would occur.</p>
2.122	Traffic generating development	The Proposal is not deemed a traffic-generating development. Accordingly, consultation with the relevant division of TfNSW is not required

## 6.2 Community engagement

Transport for NSW would communicate and/or engage with residents, businesses, and community members, and other stakeholders in the lead- up to and during construction.

This would help to ensure that:

- the community and stakeholders are notified in advance of any upcoming work, including changes to pedestrian or traffic access arrangements and out of hours construction activities
- accurate and accessible information is made available
- a timely response is given to issues and concerns raised by the community.

The Transport for NSW email address [projects@transport.nsw.gov.au](mailto:projects@transport.nsw.gov.au) , Transport for NSW Infoline (1800 684 490) and 24-hour Construction Response Line (1800 775 465) would continue to be available during the construction phase. Targeted notification methods, such as the use of letters, notifications, signage and verbal communications, would be provided when necessary. The Transport for NSW Mariyung Fleet project website <https://www.transport.nsw.gov.au/projects/current-projects/mariyung-fleet> and Rail Infrastructure Upgrades project website would also include updates on the progress of construction.

## 7. Impact assessment

### 7.1 Construction

An environmental impact assessment associated with the construction of the Proposal is provided in Table 7-1.

Table 7-1: Construction impact assessment for the Proposal

Aspect	Nature and extent of impacts (negative and positive) during construction if control measures implemented	Control measures	Endorsed (for Rail Development and Delivery E&S use only)		
			Yes	No	Comments
General	Nature and extent of impacts are detailed below. General Environmental Management Control measures would be implemented	<ol style="list-style-type: none"> <li>1. A project wide Construction Environmental Management Plan (CEMP) (or equivalent as agreed by the Transport Director Environment &amp; Sustainability) shall be prepared by the Contractor in accordance with the relevant requirements of the Contract, Conditions of Approval, Control Measures, any conditions of any licences, permits or other approvals issued by government authorities for the Proposal, all relevant legislation and regulations, and accepted best practice management. The CEMP shall comply with the relevant requirements of Environmental Management Plan Guideline, NSW Department of Planning, Industry and Environment, 2020) and be approved by Transport Director Environment &amp; Sustainability (DES) prior to the commencement of construction and following any revisions made throughout construction. The CEMP must be implemented for the duration of construction.</li> <li>2. Where required, SSEC(s) shall be completed by the Construction Contractor for each work site (unless otherwise agreed with the TESR) and submitted for approval by TESR at least 21 days prior to the commencement of work (unless otherwise agreed with the TESR).</li> <li>3. An Environmental Controls Map (ECM) shall be prepared in accordance with Transport's Environmental Control Map Guideline (EMF-EM-GD-0148) prior to the commencement of construction for implementation for the construction unless otherwise agreed with the TESR. The ECM is to be approved by the TESR and may be prepared in stages, as set out in the CEMP.</li> </ol>	<input type="checkbox"/>	<input type="checkbox"/>	

Aspect	Nature and extent of impacts (negative and positive) during construction if control measures implemented	Control measures	Endorsed (for Rail Development and Delivery E&S use only)		
			Yes	No	Comments
		<p>4. Any modifications to the Proposal if approved, would be subject to further assessment and approval by Transport. This assessment would need to demonstrate that any environmental impacts resulting from the change have been minimised. The further assessment must be submitted to Transport 6 weeks prior to commencement of works relating to the modification and approved prior to the commencement works.</p> <p>5. Prior to the commencement of construction, all contractors shall be inducted on the key project environmental and sustainability risks, procedures, mitigation measures and conditions of approval. As part of the site induction, a heritage induction or site specific heritage briefing would be provided to workers informing them of the location of known heritage items and guidelines to follow if unexpected heritage items or deposits are location during construction.</p>			
Flora and fauna	<p>No vegetation would be removed or impacted for the Proposal. No habitat would be impacted by the Proposal.</p> <p>Weeds may be present in proximity to the Proposed work sites and have the potential to spread due to the movement of construction plant and equipment across the sites.</p> <p>Occasional threatened species may be present in and around the signalling upgrade work sites. Where identified in the Site Specific Checklist (Appendix A) these would be considered in the design and the area avoided as far as practicable.</p> <p>With implementation of the proposed control measures, any potential impacts to flora and fauna would be minimised.</p>	<p>6. Trees, vegetation and habitat to be retained shall be protected through temporary protection measures in accordance with Transport's Vegetation Management (Protection and Removal) Guideline (SD-11) and Fauna Management Guideline (DMS-SD-115).</p> <p>7. Separate approval, in accordance with Transport's Removal or Trimming of Vegetation Application (EMF-EM-TT-0144), is required for the trimming, cutting, pruning or removal of all trees or vegetation where the impact has not already been identified in the planning approval for the Proposal</p> <p>8. Where tree or vegetation removal is required, replacement would be in accordance with the Transport's Tree and hollow replacement guidelines (EMF-BD-GD-0012).</p> <p>9. Weed control measures, consistent with Transport's Biodiversity Management Guideline (EMF-BD-GD-0039) and the <i>Pesticides Regulation 2017</i>, would be developed and implemented as part of the CEMP to manage the potential dispersal and establishment of weeds during the construction phase of the Proposal. This would include the management and disposal of weeds in accordance with the <i>Biosecurity Act 2015</i>.</p>	<input type="checkbox"/>	<input type="checkbox"/>	

Aspect	Nature and extent of impacts (negative and positive) during construction if control measures implemented	Control measures	Endorsed (for Rail Development and Delivery E&S use only)		
			Yes	No	Comments
Water and flooding	<p>Given the location of proposed, it is expected that all areas within the rail corridor would be serviced by the existing drainage and stormwater catchment network which contain swale drainage and/or subsurface drainage pipes that drain stormwater away from the rail track to the surrounding local receiving waters.</p> <p>Potential mechanisms by which the proposed works could impact on water quality include:</p> <ul style="list-style-type: none"> <li>• Sediment run-off from extracted soils on the site</li> <li>• Spillage of chemicals, oils or fuels from the site</li> <li>• Uncontrolled wash-down of plant, equipment or concrete trucks/containers, excavation slurry.</li> </ul> <p>Typical construction activities associated with the Proposed works would result in minimal ground disturbance. Any excavations would be undertaken within disturbed and/or fill material immediately adjacent to the rail line, including soil, aggregates and ballast. Disturbance to the existing drainage network is not anticipated. As a result, potential impacts on water quality and drainage are not expected.</p> <p>In addition, no earthworks and/or ground disturbance activities would be required for the establishment, operation and demobilisation of the temporary site compound hence potential impacts to water quality are not anticipated.</p> <p>The proposed works are not anticipated to significantly influence local topography as any ground disturbance impacts associated with excavations or the use of the construction compound sites would be reinstated at completion of the works to a condition similar or better than the pre-construction conditions.</p>	<p>10. Site specific erosion and sediment control measures shall be implemented in accordance with the 'BlueBook' – Managing Urban Stormwater: Soils and Construction 14<sup>th</sup> Edn (Landcom, 2004).</p> <p>11. All chemicals and hazardous liquids shall be stored away from drainage lines, within an impervious bunded area in accordance with Australian Standards, EPA Guidelines and Transport's Chemical Storage and Spill Response Guideline (EMF-EM-GD-0137).</p> <p>12. Adequate water quality and hazardous materials procedures (including spill management procedures, use of spill kits and procedures for refuelling and maintaining construction vehicles/equipment) shall be implemented in accordance with relevant EPA guidelines and the Transport's Chemical Storage and Spill Response Guideline (EMF-EM-GD-0137) during the construction phase. All staff would be made aware of the location of the spill kits and be trained in how to use the kits in the case of a spill.</p>	<input type="checkbox"/>	<input type="checkbox"/>	
Air quality		13. Air quality measures shall be consistent with Transport's Air Quality Management Guideline (EMF-AQ-GD-0063).	<input type="checkbox"/>	<input type="checkbox"/>	



Aspect	Nature and extent of impacts (negative and positive) during construction if control measures implemented	Control measures	Endorsed (for Rail Development and Delivery E&S use only)		
			Yes	No	Comments
Soils and contamination	Railway corridors have the potential to contain various contaminated materials from historical and operational sources. Such sources relate to the long-term operation of the railway and the history of nearby contaminating activities. Possible sources of contamination may include fill materials, hazardous materials from structures, leaks and spills of fuels or chlorinated, historical use of pesticides, and asbestos dust from train brake pads	<p>14. If previously unidentified contamination (excluding asbestos) is discovered during construction, work in the affected area must cease immediately, and an investigation must be undertaken and report prepared to determine the nature, extent and degree of any contamination. The level of reporting must be appropriate for the identified contamination in accordance with relevant EPA guidelines, including the Guidelines for Consultants Reporting on Contaminated Sites (Office of Environment and Heritage, 2011). The event must be reported in Transport incident management system as a report only event in accordance with the Transport Environmental Incident Procedure.</p> <p>15. A copy of any contamination report shall be submitted to the TESR for review. The DES shall determine whether consultation with the relevant Council and/or EPA is required prior to continuation of construction within the affected area. Works in the vicinity of any contaminated material shall not re-commence until clearance has been received from the TESR.</p> <p>16. If previously unidentified asbestos contamination is discovered during construction, work in the affected area must cease immediately, and an investigation must be undertaken and a report prepared to determine the nature, extent and degree of the asbestos contamination. The level of reporting must be appropriate for the identified contamination in accordance with relevant EPA, Safe Work Australia and SafeWork NSW guidelines and include the proposed methodology for the remediation of the asbestos contamination. Remediation activities must not take place until receipt of the investigation report. The event must be reported in Transport incident management system as a report only event in accordance with the Transport Environmental Incident Procedure. Works may only recommence upon receipt of a validation report from a suitably qualified contamination specialist that the remediation activities have been undertaken in accordance with the investigation report and remediation methodology.</p>	<input type="checkbox"/>	<input type="checkbox"/>	

Aspect	Nature and extent of impacts (negative and positive) during construction if control measures implemented	Control measures	Endorsed (for Rail Development and Delivery E&S use only)		
			Yes	No	Comments
		17. Any concrete washout shall be established and maintained in accordance with Transport's Concrete Washout Guideline – draft (EMF-EM-GD-0145) with details included in the CEMP and location marked on the ECM unless otherwise agreed with the TESR.			
Noise and vibration	<p>Proposed works would be located within the existing rail corridor. Land uses in close proximity are expected to include light-industrial, commercial, residential and roadways.</p> <p>Background noise is expected to vary considerably, with road and rail traffic considered to be the major external source</p> <p>Noise emissions during construction would be associated with operating plant and equipment including hi-rail EWPs, hi-rail trucks (winch and cable trucks), diesel powered generators, flat bed delivery trucks, and light-vehicles for site personnel transportation.</p> <p>Due to the anticipated short-term nature of the proposed works a noise assessment of the potential noise from construction would be evaluated using the Site Specific Checklist. This would evaluate construction activities based on hours of works, methodology, plant and equipment and screening between the noise source and the receiver. Construction works would occur for a short period (i.e. up to two days/nights) at each work site during a scheduled possession period before moving to the next work site. The works may then be completed at that work site during a subsequent possession, also for a short period of time. It is expected that work would only occur at the same work site for one to two scheduled possession periods. The Proposed work is generally expected to be completed during weekend possessions. The works may be undertaken outside of the standard construction hours for safety reasons to avoid live rail operations. Out of hours works may have short-term minor impacts</p>	<p>18. Noise and vibration measures shall be consistent with Transport's Construction Noise and Vibration Guideline (Public Transport Infrastructure) (EMF-NV-GD-0060).</p> <p>19. The use of hand tools shall be prioritised, where possible. In the event that Out of Hours Works (OOHW) are required, further assessment would be undertaken and an OOHW application submitted via the online OOHW application system for approval by the Transport prior to OOHW being undertaken. The community would be notified in line with the Transport's Construction Noise and Vibration Guideline (Public Transport Infrastructure) (EMF-NV-GD-0060) and the TfNSW Standard Requirements.</p> <p>20. The SSEC would be used to consider background noise and utilise AS 1055:2018 to approximate background noise levels if existing background noise levels are not available.</p>	<input type="checkbox"/>	<input type="checkbox"/>	

Aspect	Nature and extent of impacts (negative and positive) during construction if control measures implemented	Control measures	Endorsed (for Rail Development and Delivery E&S use only)		
			Yes	No	Comments
	on surrounding residential receivers and / or commercial receivers. Accordingly, a range of additional noise management measures above the standard measures identified in the CNVS may be required. The additional noise mitigation measures would include periodic notification (such as letterbox drop), verification of noise levels and specific notification (such as phone calls) to affected stakeholders. Vibration Works associated with the proposed works would not require the use of vibration generating equipment.				
Aboriginal heritage	The proposed works are not expected to impact on any known Aboriginal sites. The work sites would be located in areas that have been subject to previous disturbance from construction of rail infrastructure and surrounding development. Due to the disturbed nature of work sites, it is considered unlikely that any unknown Aboriginal heritage items would be encountered during construction	21. If unforeseen Aboriginal objects are uncovered during construction, the procedures contained in the Unexpected Heritage Finds Guideline (DMS-SD-115) would be followed, and works near the find would cease immediately. The Construction Contractor would immediately notify the TfNSW Project Manager and TfNSW Senior Environment & Sustainability Officer so they can assist in coordinating next steps which are likely to involve consultation with an Aboriginal heritage consultant, Heritage NSW and the Local Aboriginal Land Council. If human remains are found, work would cease, the	<input type="checkbox"/>	<input type="checkbox"/>	
Non-Aboriginal heritage	The proposed work are located throughout the rail network and are likely intercept a variety of items and places of heritage significance, including items listed on the Section 170 Heritage and Conservation Register (typically stations) and on the State Heritage Register (SHR). The proposed works have the potential to impact on items and places of heritage and or archaeological significance through the following mechanisms: <ul style="list-style-type: none"> <li>Excavation may be required for sub-surface service location activities or for the excavation for structure footing or OHW anchor blocks. Excavation of the ground surface has the potential to impact on known</li> </ul>	22. Any works within the curtilage of an item or places listed on the SHR, including temporary site compound areas, would require approval under the NSW Heritage Act 1977 (unless otherwise advised by Transport's Heritage Specialist). 23. Following detailed design and further heritage assessment, if the Construction Contractor identifies the need to obtain heritage approval(s) for the undertaking of the works, it is noted that Transport is the applicant of any approvals submitted to Heritage NSW. The Construction Contractor would be responsible for the preparation of the heritage applications or exemption notifications (including any necessary assessments and the engagement of a suitably qualified heritage consultant).	<input type="checkbox"/>	<input type="checkbox"/>	

Aspect	Nature and extent of impacts (negative and positive) during construction if control measures implemented	Control measures	Endorsed (for Rail Development and Delivery E&S use only)		
			Yes	No	Comments
	<p>or unknown items of heritage and or archaeological significance.</p> <ul style="list-style-type: none"> <li>Existing structures to be removed or replaced may have heritage significance, or contain archaeological significance.</li> <li>Fixtures may themselves have heritage significance or potential archaeological significance, or the structure or item upon which they are fixed could also have heritage or archaeological significance Placement of new fixtures therefore has the potential to impact on the heritage significance of existing structures</li> <li>Movement of plant and machinery within close proximity of heritage items has the potential to cause inadvertent damage through collision or other forms of impact.</li> </ul> <p>With the implementation of appropriate mitigation measures and controls it is considered that there will be minimal risk of impact to items and or places of heritage significance as a result of the Proposal. The Site Specific Environmental Checklist (Appendix A) would identify any requirements for further heritage assessment and approvals prior to works commencing.</p>	<p>24. To allow for Transport review (and any necessary changes), processing and review by the relevant authority, submission targets of all necessary supporting documentation shall be as follows, unless otherwise agreed with TESR:</p> <ul style="list-style-type: none"> <li>Exemption notifications under Section 57 of the NSW Heritage Act 1977 would be required to be submitted to Transport six (6) working weeks prior to the commencement of construction for relevant works.</li> <li>Heritage approval applications under Section 60 of the NSW Heritage Act 1977 would be required to be submitted to Transport fifteen (15) working weeks prior to the commencement of construction for relevant works.</li> <li>For any other heritage approvals such as a Section 170 Demolition Notification or Section 140 Permit, would be required to be submitted to Transport at least eight (8) working weeks prior to commencement of construction for relevant works.</li> </ul> <p>25. All necessary heritage approvals (including permits and/or exemptions and/or approvals for impact to heritage items and/or potential archaeology) must be appended to the relevant SSEC and shall be in place prior to the Transport's final approval of the SSEC.</p> <p>26. If previously unidentified or unexpected non-Aboriginal heritage/archaeological items are uncovered during construction, the procedures contained in Transport's Unexpected Heritage Items Procedure (EMF-HE-PR-0076) would be followed, and work within the vicinity of the find would cease immediately. The TESR shall be immediately notified to co-ordinate a response, which may include direction to seek appropriate advice from a suitably qualified and experienced Heritage Advisor (in consultation with Heritage NSW(if applicable)). Works in the vicinity of the find shall not re-commence until written approval to recommence has been received from the DES.</p> <p>27. Consideration for a gooseneck luminaire and pole typology is adopted at all State Heritage Register (SHR) and Section 170 listed railway stations to support heritage approvals and</p>			

Aspect	Nature and extent of impacts (negative and positive) during construction if control measures implemented	Control measures	Endorsed (for Rail Development and Delivery E&S use only)		
			Yes	No	Comments
Community and socioeconomic		compliance with the NSW Heritage Act 1977. Specifications of an appropriate typology and the arrangement along the platform is to be developed in the next design stage in consultation with a heritage architect and the TfNSW Heritage Specialists.			
	Due to the nature of Proposal and the location of the site works in the rail corridor, the impact to the community is anticipated to be minor.  Potential noise impacts have been addressed above. There would be no adverse social impacts given the temporary and minor nature of the works.	28. Contact details for a 24-hour construction response line, Project Infoline and email address would be provided for ongoing stakeholder contact throughout the construction phase.  29. The community would be kept informed of construction progress, activities and impacts by the Construction Contractor in accordance with the Community Liaison Management Plan.	<input type="checkbox"/>	<input type="checkbox"/>	
Traffic and parking	Construction works associated with the proposed work would generate heavy and light vehicle movements from use of the local road network to access the work sites. As such there may be minor localised increases in traffic movements at the beginning and end of each shift. This is not anticipated to affect the local traffic movements in the area.  Work areas on platforms would be demarcated to restrict pedestrian access if required, for example, if works occur during normal operation of the station. If access to the platform would be limited, staff, drivers and guards would be informed.	30. Prior to the commencement of construction, a Traffic Management Plan (TMP) would be prepared by the Construction Contractor and would include at a minimum: <ul style="list-style-type: none"> <li>ensuring adequate road signage at construction work sites to inform motorists and pedestrians of the work site ahead to ensure that the risk of road accidents and disruption to surrounding land uses is minimised</li> <li>maximising safety and accessibility for pedestrians and cyclists</li> <li>ensuring adequate sight lines to allow for safe entry and exit from the site</li> <li>ensuring access to stations, businesses and residential properties (unless affected property owners have been consulted and appropriate alternative arrangements made)</li> <li>managing impacts and changes to on and off street parking and requirements for any temporary replacement provision</li> <li>parking locations for construction workers away from stations and busy residential areas and details of how this would be monitored for compliance</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	

Aspect	Nature and extent of impacts (negative and positive) during construction if control measures implemented	Control measures	Endorsed (for Rail Development and Delivery E&S use only)		
			Yes	No	Comments
		<ul style="list-style-type: none"> <li>routes to be used by heavy construction-related vehicles to minimise impacts on sensitive land uses and businesses</li> <li>details for relocating kiss and ride, taxi ranks and rail replacement bus stops if required, including appropriate signage to direct customers, in consultation with the relevant bus/taxi operators. Particular provisions would also be considered for the accessibility impaired</li> <li>measures to manage traffic flows around the area affected by the Proposal, including as required regulatory and direction signposting, line marking and variable message signs and all other traffic control devices necessary for the implementation of the TMP.</li> </ul> <p>31. Consultation with the relevant roads authorities would be undertaken during preparation of the construction TMP and/or relevant Traffic Guidance Scheme. The performance of all project traffic arrangements must be monitored during construction</p> <p>32. Contractors shall park in the rail corridor where possible to reduce the impact to public parking, and the community and residents shall be notified in advance about any changes impacting car parking</p> <p>For works occurring during normal operation (i.e. not in a possession), works areas shall be demarcated to restrict public access with cones, tape, barricading or similar whilst works are undertaken</p>			
Waste and resource management	Waste likely to be generated during construction of the proposed work includes spoil, concrete, steel and rail infrastructure.	<p>33. Waste that cannot be reused or recycled at appropriately licensed facilities shall be disposed of at a NSW Government licensed waste management facility.</p> <p>34. All waste generated during construction must be classified in accordance with the EPA's Waste Classification Guidelines, with appropriate records and disposal dockets retained for audit purposes and reporting to Transport</p>	<input type="checkbox"/>	<input type="checkbox"/>	
Economic	There would be no adverse economic impacts.	Nil	<input type="checkbox"/>	<input type="checkbox"/>	



Aspect	Nature and extent of impacts (negative and positive) during construction if control measures implemented	Control measures	Endorsed (for Rail Development and Delivery E&S use only)		
			Yes	No	Comments
Visual and urban design	The visual impact of construction of the Proposal from all viewpoints is expected to be negligible. Temporary visual impacts may be noticed from receivers near temporary site compounds, however this is considered to be a low impact and would be short-term in duration.	<p>35. Worksite compounds would be screened with shade cloth (or similar material, where necessary) to minimise visual impacts from key viewing locations.</p> <p>36. Temporary hoardings, barriers, traffic management and signage would be removed when no longer required.</p> <p>37. During construction, graffiti would be removed in accordance with TfNSW's Standard Requirements.</p> <p>Light spill from the construction area into adjacent visually sensitive properties would be minimised by directing construction lighting into the construction areas and ensuring the site is not over-lit.</p> <p>This includes the sensitive placement and specification of lighting to minimise any potential increase in light pollution.</p>	<input type="checkbox"/>	<input type="checkbox"/>	
Hazard and risk	No additional risks have been identified	38. Where non-compliances or incidents arise, an event report must be completed in the Transport incident management system and returned to the Principal's Representative in accordance with Transport's Environmental Incident Procedure (EMF-EM-PR-0001).	<input type="checkbox"/>	<input type="checkbox"/>	
Climate change and sustainability	Due to the minimal nature of the works, there is not expected to be impacts resulting from climate change.	Nil	<input type="checkbox"/>	<input type="checkbox"/>	
Cumulative impacts	No further Cumulative impacts have been identified.	Nil	<input type="checkbox"/>	<input type="checkbox"/>	
Other [such as landuse, shared heritage and geotechnical]	No further impacts have been identified.	Nil	<input type="checkbox"/>	<input type="checkbox"/>	

## 7.2 Operations

An environmental impact assessment associated with the operation of the Proposal is provided in Table 7-2.

Table 7-2: Operations impact assessment for the proposal

Aspect	Nature and extent of impacts (negative and positive) during operation if control measures implemented	Control measures	Endorsed <i>(for Rail Development and Delivery E&amp;S use only)</i>		
			Yes	No	Comments
General	The Proposal is required for safe operation of the Maryung fleet and are in-keeping with standard design of rail infrastructure.	Nil	<input type="checkbox"/>	<input type="checkbox"/>	
Flora and fauna	No operational impacts are anticipated	Nil	<input type="checkbox"/>	<input type="checkbox"/>	
Water and flooding	No operational impacts are anticipated	Nil	<input type="checkbox"/>	<input type="checkbox"/>	
Air quality	No operational impacts are anticipated	Nil	<input type="checkbox"/>	<input type="checkbox"/>	
Soils and contamination	No operational impacts are anticipated	Nil	<input type="checkbox"/>	<input type="checkbox"/>	
Noise and vibration	No operational impacts are anticipated	Nil	<input type="checkbox"/>	<input type="checkbox"/>	
Aboriginal heritage	No operational impacts are anticipated	Nil	<input type="checkbox"/>	<input type="checkbox"/>	
Non-Aboriginal heritage	No operational impacts are anticipated	Nil	<input type="checkbox"/>	<input type="checkbox"/>	
Community and socioeconomic	No operational impacts are anticipated	Nil	<input type="checkbox"/>	<input type="checkbox"/>	
Traffic and parking	No operational impacts are anticipated	Nil	<input type="checkbox"/>	<input type="checkbox"/>	
Waste and resource management	No operational impacts are anticipated	Nil	<input type="checkbox"/>	<input type="checkbox"/>	
Economic	No operational impacts are anticipated	Nil	<input type="checkbox"/>	<input type="checkbox"/>	
Visual and urban design	The visual impact of proposed works from all viewpoints is expected to be negligible. The permanent installations as a	39. Lighting scheme would be prepared by a suitably qualified lighting designer and	<input type="checkbox"/>	<input type="checkbox"/>	

Aspect	Nature and extent of impacts (negative and positive) during operation if control measures implemented	Control measures	Endorsed <i>(for Rail Development and Delivery E&amp;S use only)</i>		
			Yes	No	Comments
	result of the proposal are consistent with existing infrastructure within the rail corridor. Lighting would be designed to consider light spill, glare and baseline sustainability requirements.	prepared in accordance with relevant standards to minimise impact of lighting.			
Hazard and risk	No operational impacts are anticipated	Nil	<input type="checkbox"/>	<input type="checkbox"/>	
Climate change and sustainability	No operational impacts are anticipated	Nil	<input type="checkbox"/>	<input type="checkbox"/>	
Cumulative impact	No operational impacts are anticipated	Nil	<input type="checkbox"/>	<input type="checkbox"/>	
Other [such as landuse, shared heritage and geotechnical]	No operational impacts are anticipated	Nil	<input type="checkbox"/>	<input type="checkbox"/>	

## 8. Certification

Table 8-1: Certification

Considerations	Yes	No
Are you confident that the impacts of the activity are known and understood?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Are you confident that the impacts of the activity can be managed so as not to significantly affect the environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

I certify (refer to Table 8-2) that to the best of my knowledge this EIA checklist:

- Examines and takes into account to the fullest extent possible all matters affecting or likely to affect the environment as a result of activities associated with the project.
- Takes into account the environmental factors listed in Section 171 of the EP&A Regulation.
- Is accurate in all material respects and does not omit any material information.

Table 8-1: Certification pf the proposal

Name	Role	Signature	Date
Redacted	Author	Redacted	DD -MMM-YYYY
Redacted	Transport Environment and Sustainability representative	Redacted	DD -MMM-YYYY
Redacted	Transport Community and Place Representative	Redacted	DD -MMM-YYYY
Redacted	Transport Senior Project Manager	Redacted	DD -MMM-YYYY

## 9. Project approvals

### 9.1 Planning approvals

Is the project a part of an activity/development which has already been approved under the EP&A Act?

- ☐ Yes      If yes, this assessment cannot be used.
- ☒ No      If no, is the project to be assessed under Part 4 or Division 5.1?

If the project is to be assessed under Division 5.1, has this assessment found that the activity is likely to significantly affect the environment (including critical habitat) or threatened species, populations or ecological communities, or their habitats?

- ☐ Yes      If yes, the project is required to be assessed under Division 5.2.
- ☒ No      If no, with the inclusion of the proposed control measures the project can be appropriately assessed under Division 5.1.

### 9.2 Environmental approvals

Identify all other approvals required for the project:

1. Where required based on design updates, approvals or exemptions under the NSW Heritage Act 1977.

Is further assessment required?

- ☐ No      No further assessment required.
- ☒ Yes      Further assessment required (Site Specific Environment Checklists)

### 9.3 Endorsement by Senior Environment & Sustainability Representative

I endorse the assessment of the Proposed Activity as outlined in this Environmental Impact Assessment Checklist.

Name	E&S Manager Position	Signature	Date
Redacted	Senior Manager, Environment & Sustainability	Redacted	

9.4 Decision statement

Under delegation from the Secretary Transport of New South Wales, I certify that I have reviewed and endorsed the contents of this environmental impact assessment checklist, and to the best of my knowledge, it is in accordance with the EP&A Act, the EP&A Regulation and the Guidelines approved under Section 170 of the EP&A Regulation, and the information is neither false nor misleading.

I determine that the proposed activity may be carried out subject to the following conditions of approval.

- 1. Works are to be undertaken in accordance with the proposed control measures (including any Planning and Environment endorsement comments) identified in the impact assessment tables in this *Environmental impact assessment checklist*.
- 2. Should detailed design result in additional potential impacts and a change to consultation requirements of the SEPP (Transport and Infrastructure) (Table 6-2), consultation with the relevant council or agency is to be undertaken. Any recommendations from the relevant council or agency are to be incorporated into the design prior to completion and/or construction control measures prior to commencement of construction.

Name	Role	Signature	Date
Redacted		Redacted	DD -MMM-YYYY



## 10. Abbreviations

Term	Meaning
AHIMS	Aboriginal Heritage Information Management System
AS	Australian Standard
APAS	Australian Paint Approval Scheme
ASS	Acid Sulfate Soils
BCA	Building Code of Australia
BC Act	<i>Biodiversity Conservation Act 2016 (NSW)</i>
CEMP	Construction Environmental Management Plan
CCTV	Closed Circuit Television
DDA	<i>Disability Discrimination Act 1992 (Cwlth)</i>
DES	TfNSW Director Environment & Sustainability
DPE	NSW Department of Planning and Environment
DSAPT	<i>Disability Standards for Accessible Public Transport (2002)</i>
E&S	Environment and Sustainability, a branch within Safety, Environment and Regulation (SER) of Transport for NSW
ECM	Environmental Control Map
EMS	Environmental Management System
EPA	NSW Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979 (NSW)</i>
EP&A Regulation	Environmental Planning and Assessment Regulation 2021 (NSW)
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cwlth)</i>
EPL	Environment Protection Licence
Heritage Act	<i>Heritage Act 1977 (NSW)</i>
SEPP (Transport and Infrastructure)	<i>State Environmental Planning Policy (Transport and Infrastructure) 2021 (NSW)</i>
LEP	Local Environmental Plan
LGA	Local Government Area
NML	Noise Management Level
OEH	Former NSW Office of the Environment and Heritage
PoEO Act	<i>Protection of the Environment Operations Act 1997 (NSW)</i>
SEPP	State Environmental Planning Policy
SHI	State Heritage Inventory
VOC	Volatile Organic Compounds

## 11. Definitions

Term	Meaning
Concept design	The concept design is the preliminary design presented in this EIA Checklist, which would be refined by the Contractor (should the Proposal proceed) to a design suitable for construction (subject to Transport for NSW acceptance).
Construction	Includes all work in respect of the Project, other than survey, acquisitions, fencing, investigative drilling or excavation, building/road dilapidation surveys, or other activities determined by the TfNSW DES to have minimal environmental impact such as minor access roads, minor adjustments to services/utilities, establishing temporary construction compounds (in accordance with this approval), or minor clearing (except where threatened species, populations or ecological communities would be affected, unless otherwise agreed by the DES).
Contractor	The entity appointed by Transport for NSW to undertake the construction of the Proposal. The Contractor is therefore responsible for all work on the proposal, both design and construction.
Determining authority	A Minister or public authority on whose behalf an activity is to be carried out or public authority whose approval is required to carry out an activity (under Division 5.1 of the EP&A Act).
Disability Standards for Accessible Public Transport	The Commonwealth Disability Standards for Accessible Public Transport 2002 (as amended), authorised under the Commonwealth Disability Discrimination Act 1992 (DDA).
Out of hours work	Defined as work undertaken outside standard construction hours (i.e., outside of 7am to 6pm Monday to Friday, 8am to 1pm Saturday and no work on Sundays/public holidays).
Proponent	A person or body proposing to carry out an activity under Division 5.1 of the EP&A Act.
The Proposal	The construction and operation of the proposed work.
Sensitive receivers	Land uses which are sensitive to potential noise, air and visual impacts, such as residential dwellings, schools and hospitals.
Transport Environment and Sustainability Representative	<p>Within Rail Development and Delivery Projects this includes:</p> <ul style="list-style-type: none"> <li>• Environment and Sustainability Officer</li> <li>• Senior Environment and Sustainability Officer</li> <li>• Environment and Sustainability Manager</li> <li>• Senior Manager Environment and Sustainability</li> </ul>

## Appendix A: Site specific environmental checklist (template)

[This Appendix is only relevant for activity based EIA checklists. Delete from EIA Checklist if not applicable]

This Site Specific Environmental Checklist is to be used in conjunction with the [Insert project] Activity Based EIA Checklist (document reference: insert Deskside ID).

This checklist is to be used to identify any potential gaps or supplementary assessment requirements that have not already been addressed in the EIA Checklist. This checklist contains the following five parts:

1. Part A – Site details
2. Part B – Work activities and assessment requirements
3. Part C – Environmental Control Map (ECM)
4. Part D – Supplementary information
5. Part E – Declaration and Transport sign off

This checklist should be completed and approved by Transport for NSW (TfNSW) for all work sites associated with the [Insert project] prior to commencement of works described in this checklist.

### Part A – Site details

#### Site location

[Refer to Environmental Control Map included in Part C]

#### Proposed date of commencement of works:

#### Scope of work summary

[For example: discuss activities, equipment, materials and number of staff required on site]

## Part B – Work activities and assessment requirements

ID	Question	Yes	No
Gen 1	Are the proposed works limited to those described and assessed in the EIA Checklist?	Yes <input checked="" type="checkbox"/> Proceed to HE1	No <input type="checkbox"/> Further assessment and approval would need to be undertaken in accordance with the EP&A Act prior to the commencement of works. Any identified gaps identified with the proposed works and the EIA Checklist should be raised immediately with Transport so an appropriate approval pathway can be determined. Provide any further details in Part D.
HE1	Are the proposed works located within the curtilage of an item(s) listed on the State Heritage Register (Heritage Act 1977), or TAHE Section 170 Heritage and Conservation Register, or any other statutory heritage listing?	Yes <input checked="" type="checkbox"/> Proceed to HE2	No <input type="checkbox"/> Works are to be undertaken in accordance with mitigation measures in the EIA Checklist. Proceed to HE3.
HE2 (a)	Do the proposed works require any site establishment within a heritage curtilage? [Provide a brief description of the works to be carried out within the heritage curtilage (local, s170 or state listed) in Part D and include approximate location on the ECM in Part C.]	Yes <input type="checkbox"/> Further heritage approvals/exemptions would need to be obtained prior to works. Please include further details in Part D and tick the appropriate approval requirements.	No <input type="checkbox"/> If no for HE2 a and b ensure the works are undertaken in accordance with mitigation measures in the EIA Checklist. Proceed to HE3
HE2 (b)	Do the proposed works involve impacts to heritage elements of heritage listed sites?	Yes <input type="checkbox"/> See above (HE2(a))	No <input type="checkbox"/> See above (HE2(a))
HE3	Do the works require any ground excavation?	Yes <input type="checkbox"/> Include further details in Part D and include approx. location on ECM. The excavation extent would require assessment for archaeological impact. Include evidence of this assessment in Part D.	No <input type="checkbox"/> Works are to be undertaken in accordance with mitigation measures in the EIA Checklist. Proceed to HE4.
HE4	Do the works require the removal, relocation or modification of any railway furniture (ie moveable heritage items)?	Yes <input type="checkbox"/> Provide approx. location on the ECM. The structure to be impacted would need to be assessed for archaeological potential and associated heritage impact by a suitably qualified person. Following determination of impacts, relevant heritage approvals / exemptions would need to be obtained prior to the commencement of work in accordance with the NSW <i>Heritage Act 1977</i> . Include evidence of archaeological assessment and any required approvals / exemptions in Part D.	No <input type="checkbox"/> Ensure the works are undertaken in accordance with mitigation measures in the EIA Checklist. Proceed to HE5.

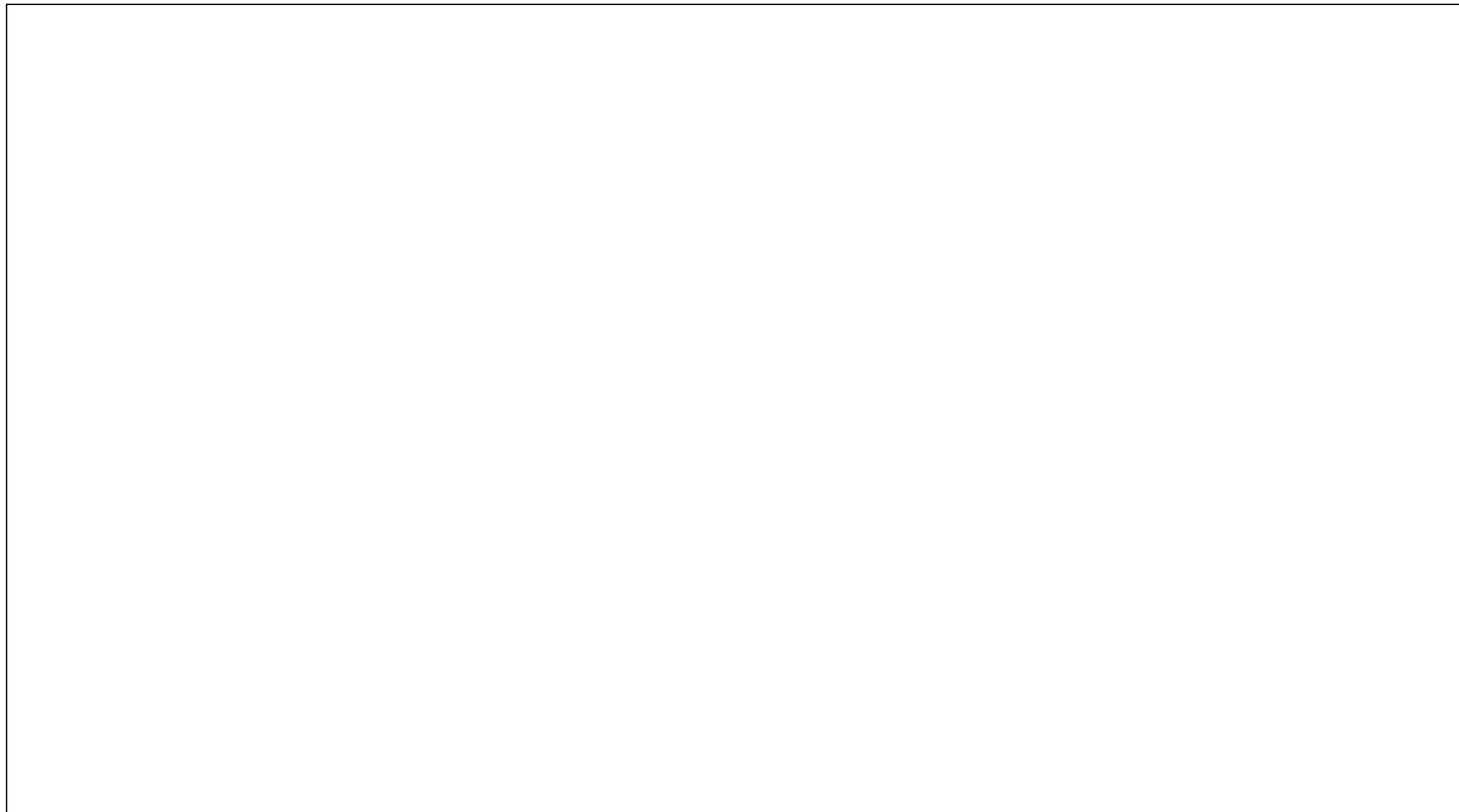
ID	Question	Yes	No
HE5 (a)	Undertake a search of the Heritage NSW Aboriginal Heritage Information System (AHIMS). Are there any recorded Aboriginal sites within the vicinity of works (inclusive of any ancillary facilities) [Include relevant information from a) in Part D]	Yes <input type="checkbox"/> Provide further information in Part D and notify Transport immediately for discussion regarding appropriate approval pathways.	No <input type="checkbox"/> Ensure the works are undertaken in accordance with mitigation measures in the EIA Checklist. Proceed to HE5(b).
HE5 (b)	Are there any landscape features in the vicinity of the works that are likely to indicate presence of Aboriginal objects (e.g. waterways, rock shelters, ridgelines, sand dunes and wetlands)? [Include relevant information from b) in Part D]	Yes <input type="checkbox"/> See above (HE5(a))	No <input type="checkbox"/> Ensure the works are undertaken in accordance with mitigation measures in the EIA Checklist. Proceed to HE5(c).
HE5 (c)	Is there no evidence of past disturbance of the work area and surrounds? [Include relevant information from c) in Part D]	Yes <input type="checkbox"/> See above (HE5(a))	No <input type="checkbox"/> Ensure the works are undertaken in accordance with mitigation measures in the EIA Checklist. Proceed to FF1.
HE5 (d)	Noting responses to HE5(a) to (c) above, is there considered to be <u>more</u> than a low risk of impacting an object or place of Aboriginal heritage significance?	Yes <input type="checkbox"/> Provide further information in Part D including specialist assessment	No <input type="checkbox"/> Ensure the works are undertaken in accordance with mitigation measures in the EIA Checklist. Proceed to FF1.
FF1	Would the works require any vegetation removal or potential impact on the habitat of any native fauna? [Complete a search of the Atlas of NSW Wildlife for the site and include as an attachment in Part E.]	Yes <input type="checkbox"/> Provide further information in Part D and approx. location of impact on the ECM. Any vegetation removal or trimming would require approval of the Transport Removal or trimming of vegetation application form (EMF-EM-TT-0144). If required, complete Part D and attach as required.	No <input type="checkbox"/> Ensure the works are undertaken in accordance with mitigation measures in the EIA Checklist. Proceed to NO1.
NO1	Is work required outside of standard working hours (7am to 6pm Monday to Friday, 8am to 1pm Saturdays)? [Attach completed assessments and application forms in Part D. All out of hour works and activities would be undertaken with additional mitigation measures as required by section 7.2 of the Construction noise and vibration guideline (public transport infrastructure) (EMF-NV-GD-0060). The Construction noise estimator tool (public transport infrastructure) (EMF-NV-TT-0068) may be used for estimation of noise levels for construction]	Yes <input type="checkbox"/> The contractor is required to prepare and submit a Transport online Out of hours work application form (PEGA) for approval prior to the works being undertaken.	No <input type="checkbox"/> Ensure that the works are undertaken in accordance with section 7 of the Construction noise and vibration guideline (public transport infrastructure) (EMF-NV-GD-0060) and the standard noise mitigation measures and controls outlined in the planning approval. Proceed to CO1.
CO1	Would the works impact any areas of known contamination? [Complete a Contaminated Lands search. EPA Contaminated Land Records <a href="https://apps.epa.nsw.gov.au/prclmapp/">https://apps.epa.nsw.gov.au/prclmapp/</a> Detail any within 200m otherwise nearest site (within 2km)]	Yes <input type="checkbox"/> Provide further information on location of contamination or hazardous materials and proposed mitigation measures	No <input type="checkbox"/> Ensure the works are undertaken in accordance with mitigation measures in the EIA Checklist. Proceed to S171.

ID	Question	Yes	No
S171	When considering the likely impact of the activity on the environment, is there a change in the assessment made against the Section 171(2) environmental factors (of the Environmental Planning & Assessment Regulation 2021) included in the approved activity-based EIA Checklist?	Yes <input type="checkbox"/> Provide further information in Part D.	No <input type="checkbox"/>



## Part C – Environmental control map

Refer to Transport’s environmental control map guideline (EMF-EM-GD-0148) for ECM content, inclusions and layout



Part D – Supplementary information

[Provide details below of any additional supplementary information required for the works]

Additional information:

Attachment number	Details	Additional information attached		
1.	Transport online Out of hours application form (PEGA application #)	NA <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
2.	Search results from the Atlas of NSW Wildlife	NA <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
3.	Additional flora and fauna assessment	NA <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.	Transport Removal or trimming of vegetation application (EMF-EM-TT-0144)	NA <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
5.	Additional heritage assessment	NA <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
6.	Additional heritage approvals (specify):	NA <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
7.	Other (specify):	NA <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Part E – Declaration and sign-off

Document prepared by:

Name	Role	Signature	Date
Redacted		Redacted	Click or tap to enter a date.

Transport sign-off

Reviewed by:

Name	Role	Signature	Date
Redacted		Redacted	Click or tap to enter a date.

Signed by:

Transport sign-off position must be by Senior Manager Environment & Sustainability or above.

Name	Role	Signature	Date
Redacted		Redacted	Click or tap to enter a date.

Further comment:

## Appendix B: Detailed Scope of Works

Scope of Works	Activity	Details
Investigative works		<ul style="list-style-type: none"> <li>Visual inspections, including observations of ground services and pits, inspection of services, CSR, switch rooms etc.</li> <li>Non-intrusive investigations including the use of remote sensing equipment, ground-penetrating radar and service location wands.</li> <li>Intrusive investigation to locate sub-surface services including Non-Destructive Digging (NDD), excavation of boreholes or test pits using machine or hand-excavation.</li> <li>All excavations / voids would be reinstated at completion of the investigation to pre-existing surface levels</li> </ul>
Temporary site and facility establishment and demobilisation		<ul style="list-style-type: none"> <li>Establishment and removal of compound facilities and staging area such as erection of temporary fencing, amenities and plant/material storage areas within the rail corridor</li> <li>Establishment and removal of environmental control measures</li> <li>Installation and removal of traffic and pedestrian management controls.</li> <li>Clean-up of site including waste removal and reinstatement works.</li> </ul>
Signalling Upgrade	Modification and /or relocation of signalling equipment	<ul style="list-style-type: none"> <li>Modifications to existing signals</li> <li>Interlocking modifications in existing signalling locations/relay rooms</li> <li>Installation of new and relocated signals and bases</li> <li>Installation of new signal gantry structure(s) and associated signals</li> <li>Removal of redundant gantry and post mounted signals</li> <li>Modifications to existing track drainage where required to suit new signalling arrangements.</li> </ul>
	Track infrastructure upgrades	<ul style="list-style-type: none"> <li>Installation of new and removal of redundant European Train Control System (ETCS) balises</li> <li>Removal of redundant train stops and track circuit equipment</li> <li>Installation of new and relocated train stops</li> <li>Installation of new and relocated track circuit equipment</li> <li>Installation of new and removal of redundant Insulated Rail Joint's (IRJ).</li> </ul>
	CSR modifications	<ul style="list-style-type: none"> <li>Modifications to the existing CSR routes</li> <li>Excavation and installation of new and altered CSR routes</li> <li>Excavation and installation of new Underline Crossings (ULX) and the extension to existing ULX routes and associated cable installation.</li> </ul>
	New signage installation	<ul style="list-style-type: none"> <li>Modifications to existing and/or installation of new track signage (e.g speed, safety, security, yard limit boards) to accommodate new signalling arrangement</li> <li>Removal of redundant signage</li> </ul>

OHW Upgrades	OHW replacement	<p>Replacement of OHW if required would include:</p> <ul style="list-style-type: none"> <li>Using an EWP, truck and cable winch and spool, the existing overhead wiring would be disconnected and removed from the overhead structures, spooling the redundant wiring onto the cable drum for re-use / recycling as appropriate.</li> <li>Temporary rollers would be suspended from the overhead structures allowing a guide wire to be pulled through the rollers from one end of the OHW replacement section to the other end. Once the guide wire has been pulled through, the replacement OHW is attached to the guidewire and pulled through.</li> <li>Where the existing OHW fixing structures cannot be utilised (including droppers, hangers and anchors) new fixtures would be installed as required using an EWP. If new anchor structures are required, these would be constructed as close as possible to the existing structures.</li> <li>Construction of the replacement anchor would involve excavation and concrete pouring activities and removal of the existing anchor structure.</li> <li>Where required in a tunnel or on a bridge structure, new fixtures and fittings would be attached by masonry drilling / rock drilling, steel drilling and bolting.</li> </ul>
	Over-track structure upgrade or replacement	<p>Upgrade or replacement of the OHW structures such as single masts, cantilever masts, portal structures, anchor structures, and walkway structures including:</p> <ul style="list-style-type: none"> <li>Excavation for structure footing</li> <li>Concrete pour for structure footing</li> <li>Delivery of support structure component and crane into place where required</li> <li>Erection of pre-fabricated support structures</li> <li>Stringing of new overhead wiring</li> <li>Demolition and removal of any redundant support structures</li> </ul>
	Upgrade to bridge screens	<p>In the event where existing OHW bridge screens are not compliant when the OHW upgrade is complete, new bridge screens would be installed. The scope of works for bridge screens generally involves the following;</p> <ul style="list-style-type: none"> <li>Structural assessment of the mounting structure</li> <li>Design of the screens and fixing of the screens</li> <li>Installation, testing and commissioning of the screens.</li> </ul>
	Removal of redundant structures	<ul style="list-style-type: none"> <li>Removal of redundant infrastructure for appropriate salvage or recycling at a licenced waste facility.</li> <li>Reinstatement or repair of any voids or fixing points.</li> </ul>

## Transport for NSW

Lighting upgrades	Modification and/or relocation of light posts, fittings or LV services	<ul style="list-style-type: none"> <li>• Repositioning of existing light posts or fixtures to meet lighting criteria, including minor excavation and concrete pour for footings, moving structures and reinstatement of any voids</li> <li>• Upgrading of existing light fixtures to LED</li> <li>• Associated power supply upgrades, diversion or relocation to the LV supply including excavation of service routes, cable pulling, testing and commissioning.</li> </ul>
	Installation of new light posts, fittings or LV services	<ul style="list-style-type: none"> <li>• Installation of new post mounted LED lighting up to 5 metres in height, including minor excavation and concrete pour for footings, delivery and erection of posts with light fittings</li> <li>• Installation of new surface-mounted LED lighting including direct fixing to existing structures within the station for example under awnings</li> <li>• Associated power supply upgrades, diversion or relocation to the LV supply including excavation of service routes, cable pulling, testing and commissioning.</li> </ul>
	Removal of redundant structures	<ul style="list-style-type: none"> <li>• Removal of redundant light posts, fixtures and services for appropriate salvage or recycling at a licenced waste facility.</li> <li>• Reinstatement or repair of any voids or fixing points.</li> </ul>
Platform furniture modifications		<ul style="list-style-type: none"> <li>• Repositioning of existing platform furniture (including but not limited to platform seating, rubbish bins, fencing, boarding ramps and other furniture) including minor excavation and concrete pour for footings, moving items and reinstatement of any voids.</li> <li>• Installation of new platform furniture as required, including minor excavation and concrete pour for footings, delivery and installation.</li> <li>• Removal of redundant platform furniture for appropriate salvage or recycling at a licenced waste facility.</li> </ul>

## Appendix C: Consideration of Section 171 Environmental Factors

The following environmental factors, listed in section 171(2) of the Environmental Planning and Assessment Regulation 2021, have been taken into account to assist in assessing the likely impacts of the Proposal on the environment. This consideration is required to comply with sections 5.5 and 5.7 of the EP&A Act.

Table A-0-1: Consideration of section 171 of the EP&A Regulation factors

ID	Factor	Comment	Impact
a	Any environmental impact on a community?	The Proposal has the potential to result in short-term negative impacts during the construction phase due to increased noise and dust from construction activities, construction traffic and visual impacts.	Minor, short term, negative
b	Any transformation of a locality?	During construction there would be some minor visual impacts associated with the presence of construction equipment and activities	Minor, short term, negative
c	Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality?	The Proposal is within the rail corridor which is highly disturbed. The Proposal would not involve vegetation removal and therefore no impact on the ecosystem is anticipated	Nil
d	Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality?	The Proposal is located within the existing rail corridor. The Proposal has the potential to result in short-term negative impacts during the construction phase due to increased noise and dust from construction activities, construction traffic and visual impacts	Minor, short term, negative
e	Any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations?	The Proposal sites are not typically within local or state heritage curtilages. Occasional sites may be within, or adjacent to, locally or state heritage curtilages. In this scenario, a heritage exemption	Minor, short term, negative

ID	Factor	Comment	Impact
		would be sought (and received) prior to works commencing at that location	
f	Any impact on the habitat of protected fauna (within the meaning of the <i>National Parks and Wildlife Act 1974</i> )?	The Proposal is within the rail corridor which is highly disturbed. The Proposal would not involve vegetation removal and therefore would not impact on the habitat of protected fauna.	Nil
g	Any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air?	The Proposal is within the rail corridor which is highly disturbed. The Proposal would not involve vegetation removal and therefore is unlikely to endanger any species of animal, plant or other form of life, whether living on land, in water or in the air	Nil
h	Any long-term effects on the environment?	The Proposal is unlikely to have any long-term effects on the environment.	Nil
i	Any degradation of the quality of the environment?	The Proposal is unlikely to have any degradation on the quality of the environment. During construction there would be minor impacts to the environment, primarily from noise and dust emissions and reduction in visual amenity	Nil
j	Any risk to the safety of the environment?	The Proposal is unlikely to have any degradation on the quality of the environment. During construction there would be minor impacts to the environment, primarily from noise and dust emissions and reduction in visual amenity	Minor, short term, negative
k	Any reduction in the range of beneficial uses of the environment?	The Proposal is unlikely to have any reduction in the range of beneficial uses of the environment.	Nil



ID	Factor	Comment	Impact
l	Any pollution of the environment?	Construction of the Proposal could result in pollution of the environment (e.g. noise and dust emissions), however provided the recommended management and mitigation measures are implemented, this risk is expected to be minor.	Minor, short term, negative
m	Any environmental problems associated with the disposal of waste?	All waste requiring off-site disposal would be classified in accordance with the Waste Classification Guidelines (EPA 2014) prior to disposal at an appropriate waste facility licenced to accept waste of the relevant classification.  All spoil to be removed from site would be tested to confirm the presence of any contamination. Any contaminated spoil would be disposed of at an appropriately licensed facility. Disposal of contaminated waste would be undertaken in accordance with SafeWork NSW requirements.	Minor, short term, negative
n	Any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply?	The Proposal is to unlikely increase demands on resources that are, or are likely to become, in short supply	Nil
o	Any cumulative environmental effect with other existing or likely future activities?  expected to be minor and would be limited to the construction phase	The Proposal may have cumulative impacts due to the construction of other developments within the locality. These impacts are	Minor, short term, negative
p	Any impact on coastal processes and coastal hazards, including those under projected climate change conditions?	The Proposal is unlikely to have any impact on the coastal processes	Nil
q	Applicable local strategic planning statements, regional strategic plans or district strategic plans made under the Act, Division 3.1.	The Greater Sydney Region Plan includes strategies to transform land use and transport patterns to boost liveability, productivity and sustainability this plan has been prepared	Nil

ID	Factor	Comment	Impact
		concurrently with Future Transport Strategy 2056. The NIF program implements some of the key initiatives of this Greater Sydney Region Plan to contribute to a modern and up to date rail system.	
r	Other relevant environmental factors.	In considering the potential impacts of this proposal all relevant environmental factors have been considered, refer to Impact Assessment of this assessment.	

## Appendix D: Consideration of Commonwealth environmental factors

Table B-0-1: Matters of national environmental significance

Environmental factor	Comment	Impact
a) Any impact on a World Heritage property?	The Proposal would have no impact on a World Heritage property. Any changes to the situation will be assessed in the next stage	Nil
b) Any impact on a National Heritage place?	The proposal would impact on a National Heritage place. Any changes to the situation will be assessed in the next stage	Nil
c) Any impact on a wetland of international importance (often called 'Ramsar' wetlands)?	The proposal would have no impact on a wetland of international importance. Any changes to the situation will be assessed in the next stage.	Nil
d) Any impact on nationally threatened species, ecological communities or migratory species?	<p>The proposal would have no impact on a nationally listed threatened species, ecological community or migratory species.</p> <p>The significance of impacts must be assessed in accordance with the <i>Matters of National Environmental Significance - Significant Impact Guidelines</i> (Commonwealth) and take into account any relevant information provided in recovery plans, threat abatement plans and other conservation guidance. The assessment of significance can be included as an appendix to the minor works REF.</p> <p>If there would be significant impacts on nationally-listed threatened species, ecological communities and/or migratory species the proposal must either be reconsidered, or a project REF prepared. For more information refer to the Biodiversity assessment guidelines (EMF-BD-GD-0010). If there would be a significant impact on other matters of national environmental significance or on the environment of Commonwealth land, contact the Senior Specialist (Planning and Assessment) for advice on how to proceed.]</p>	Nil
e) Any impact on a Commonwealth marine area?	The proposal would have no impact on a Commonwealth marine area. Any changes to the situation will be assessed in the next stage	Nil
f) Does the proposal involve a nuclear action (including uranium mining)?	The proposal would not involve a nuclear action. Any changes to the situation will be assessed in the next stage	Nil
Additionally, any impact (direct or indirect) on the environment of Commonwealth land?	The proposal would have no impact (either directly or indirectly) on the environment of Commonwealth land. Any changes to the situation will be assessed in the next stage	Nil

