

Transport  
for NSW

# Mariyung Fleet:

## Rail Infrastructure Upgrades- Morisset Platform Extension

Environmental impact assessment  
checklist

July 2024



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# Document review tracking

Version No.	Date	Prepared by	Reviewed by	Comments
1.0	2/07/2024	Redacted	Redacted	Draft for review
2.0	9/07/2024	Redacted	Redacted	Final for Certification
3.0	11/07/2024	Redacted	Redacted	Final for Determination

Environmental impact assessment checklist



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# 1. Details of the proposal

Proposal	Details
Proposal name	Mariyung Fleet: Rail Infrastructure Upgrades – Morisset Platform Extension
Location	Morisset Railway Station, NSW
Timeframe	Late July 2024 -September 2024

# 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.

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 needs 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, signaling and lighting.

## 2.2 Scope of works

This Environmental Impact Assessment (EIA) Checklist has been prepared for platform extension and associated works required to ensure the Mariyung fleet can safely be accommodated at Morisset Station (the Proposal). The Proposal includes:

- 3.8m structure extension at the city end of Platform 2 comprising two precast reinforced concrete culverts and cast-insitu deck;
- New fencing, end platform gate and maintenance access stairs;
- New lighting for extended platform including light pole and associated services;
- New CCTV camera mounted to the existing light pole & associated services.

Approximate layout of the Proposal is shown in Figure 1 and proposed structural design is shown in Figure 2.

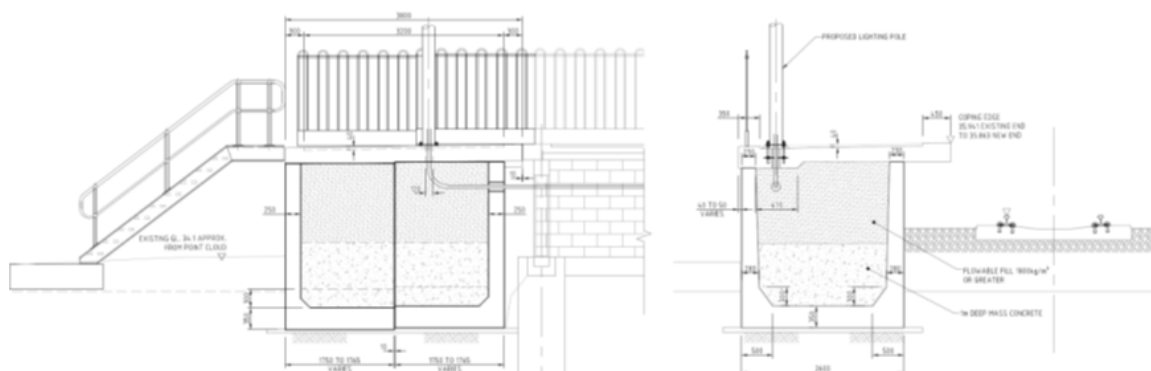


Figure 1 - The Proposal





Figure 2 - Proposed platform extension structural arrangement



## 2.3 Construction details

Construction would be undertaken by Sydney Trains on behalf of Transport as part of the Rail Infrastructure Upgrades project, unless otherwise agreed with Transport.

### Access and ancillary facilities

The Proposal site is shown in Figure 1 and is located entirely within the rail corridor. Works would be undertaken primarily at the end of Platform 2 at the south western end of the station, , with some minor work on the existing platform.

Access to the Proposal site would be via existing rail corridor access gates and access tracks via Dora Street (Gate# N00 123.187D) and off the station car park (Gate# N00 123.187D) shown in Figure 3. Access gates would be locked at all times except during site access and/or egress where traffic management will be in place. Where required, temporary ancillary facilities for laydown and amenity for workers would be provided within the Proposal site.

Figure 3 – Access arrangements





### Construction staging

Construction of the Proposal would include the following stages:

- Set-up of site facilities, deliveries and temporary controls including fencing, environmental controls and safety controls;
- Removal of existing stairs from the end of Platform 2 and installation of temporary structural support prior to excavation;
- Excavation, where required, for surface drainage and platform extension;
- Installation of pre-cast concrete culverts;
- Installation (formwork, reinforcement, pour) of concrete platform deck;
- Finishing works on platform including fencing, asphalt surface, platform coping painting and tactiles;
- Installation of light pole including new under platform connection to existing low voltage conduits;
- Installation of CCTV camera onto existing light pole approximately 70m from the existing end of Platform 2, including connections through existing communications conduits;
- Site demobilisation, removal of waste and temporary controls.

### Construction duration and working hours

Construction would commence in late July 2024 and is likely to take around month to complete.

Most work would be carried out during standard construction hours (Monday to Friday; 0700 to 1800). Some Out of Hours Work may be required to allow for the main structural works and finishing works to be completed. Works undertaken outside of standard construction hours would be undertaken in accordance with the requirements of the Sydney Trains Environmental Protection Licence (EPL 12208).

### Construction plant and equipment

The following types of plant and equipment are proposed to be used throughout the construction duration:

- |   |                           |
|---|---------------------------|
| • 1x 40t franna crane                   | • 1x flat-bed truck       |
| • 1x 12t hi-rail excavator              | • 1x water cart           |
| • 1x 5t hi-rail excavator               | • Up to 20x light vehicle |
| • 2x 10t hi-rail articulated dump-truck | •                         |

Vehicles would regularly enter and depart the Proposal site during all shifts with traffic control in place.

### Construction personnel

The works would require a team of up to one hundred (100) personnel throughout the construction duration.

### Impacts on utilities/authorities

No public utilities are expected to require relocation as a result of the Proposal.

### Wastes generated

Waste is expected to be as follows:

- Spoil from excavations
- Construction waste; steel, plastics, timber, concrete, bricks

### Hazardous/dangerous goods

No hazardous/dangerous goods are required for the construction or operation of the Proposal.



### 3. Site characteristics

Characteristic	Details
Land use	Morisset Station is located within the Lake Macquarie Local Government Area (LGA), which is subject to the Lake Macquarie Local Environmental Plan 2014 (Lake Macquarie LEP 2014) between (Lot: 3, DP1002965 and Lot: 10, DP DP1191340 ). Morisset Station is on the Main Northern line in New South Wales, Australia.
Social context	<p>The Proposal site is surrounded by commercial, recreational, educational and residential land uses. The nearest locations are:</p> <ul style="list-style-type: none"><li>• Lions Park at 105 Dora St Morisset, New South Wales located northwest of the Proposal site</li><li>• 126 Macquarie St, Morisset NSW is the nearest residential area on the south east side of the station</li><li>• Lake Macquarie Hotel-Motel, 83 Dora St is located on the northwest of the station</li><li>• Al's Coffee Cart at 82/99-101 Dora St, Morisset NSW 2264 located in northwest</li><li>• 111 Dora Street, Morisset NSW is the nearest residential area on the north side of the station</li><li>• St John Vianney Primary School is approximately 180 metres from the Proposal site</li></ul>
Flora and fauna	<p>A search of relevant databases was undertaken on 19 June 2024 to determine the likelihood of occurrence for threatened fauna and flora species, populations and ecological communities within a 5km radius around the Proposal site. The searches identified the following located in the vicinity of the Proposal:</p> <ul style="list-style-type: none"><li>• Swamp Sclerophyll Forest (an Endangered Ecological Community under the Commonwealth <i>Environmental Protection and Biodiversity Conservation Act 1999</i> and NSW <i>Threatened Species Conservation Act 1995</i>)</li><li>• <i>Angophora inopina</i> (a vulnerable species under the NSW <i>Threatened Species Conservation Act 1995</i>)</li></ul> <p>The searches also identified possible species that may utilise the Proposal site for habitat. Common species include scribbly gum (<i>Eucalyptus haemastoma</i>), red bloodwood (<i>E. gummifera</i>), brown stringybark (<i>E. capitellata</i>), smooth-barked apple (<i>Angophora costata</i>) and grey gum (<i>E. punctata</i>). Understorey species include hill banksia (<i>Banksia spinulosa</i> var. <i>collina</i>), banksia (<i>Banksia oblongifolia</i>), and mountain devil (<i>Lambertia formosa</i>). Paperbarks (<i>Melaleuca</i> spp.) occur in poorly drained area is a cleared vegetation site.</p> <p>In general, the open-forest has been extensively cleared. While some small areas of disturbed bushland remain, no vegetation removal is proposed.</p> <p>The ecological records obtained from the Commonwealth Department of Climate Change, Energy, the Environment, and Water (DCCEEW) Protected matters Report are attached in Appendix A.</p>
Aboriginal Heritage	AHIMS Web Service search was conducted on 19 June 2024 and noted that there are no listed Aboriginal heritage places within the Proposal site or a buffer of 50 to 200 metres. There are four Aboriginal sites recorded within a 1km radius of the Proposal Site. Refer to Appendix A for more information about the search.
Non-Aboriginal heritage	A Statement of Heritage Impact (SoHI) has been prepared by Artefact (Appendix B). The following items are relevant to the Proposal site:



Characteristic	Details				
	Item name	Address	Listing	Item no.	Significance
	Morisset Railway Station Group and Residences	Dora Street, Morisset, NSW	TAHE s170	SHI 4801056	Local
	Garden Suburb To Wyee, Railway Line	Garden Suburb, extent of LGA	TAHE s170	SHI 4805752	Local
	Great Northern Railway	Line passes through Lake Macquarie City from Garden Suburb to Wyee	Lake Macquarie LEP	189	Local
Hydrology and flooding	<p>A search on the Council website, on 19 June 2024 found that while the Local Environment Plan (LEP) flooding mapping currently does not list the site as in a flood planning area, Lake Macquarie Council (LMC) is undertaking a flood study with investigation areas which include land adjacent to the Proposal site along Dora Street. More information about the search is provided in Appendix A</p> <p>Lake Macquarie is located approximately 2km east of Morisset Station, and the nearest surface waterbody is Dillwynia Creek approximately 200 meters. There are local informal drainage lines running perpendicular to the corridor.</p>				
Soils and contamination	<p>The Proposal site is located entirely within the rail corridor and it has 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>A search was conducted on 19 June 2024 on eSPADE tool showed that the Soil Landscape profile is small areas of Gorokan (gk) soil landscape have been included in the southern locations of the Doyalson soil landscape.</p> <p><u>Acid Sulphate Soil (ASS).</u></p> <p>There is no known indication of Acid Sulphate Soil (ASS) and the Proposal site is mapped as Class 5 ASS risk in the LEP which is the lowest risk category.</p> <p>No other contamination at the Proposal site. More information is provided in Appendix A.</p>				

## 4. Control measures

Characteristic	Yes	No
Will a project and site specific EMP be prepared? Construction will be undertaken in accordance with Sydney Trains procedures and documentation as outlined in Table 7-1.	<input type="checkbox"/>	<input checked="" 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 takes into account 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 6-1 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 no 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	The proposal will have no impact on the local heritage, therefore consultation with Council is not required.
2.12	Consultation with councils- development with impacts on flood liable land	While the LEP flooding mapping currently does not list the Proposal site as in a flood planning area, Council is undertaking a flood study with investigation areas which include land adjacent to the Proposal site along Dora Street. Therefore consultation has been undertaken for due



Section	Description	Relevance to the proposal
		diligence. A consultation letter was sent on 12 June 2024 to Lake Macquarie City Council seeking their feedback and advice. No response has been received to date. Should Council provide a response prior to or during construction, it will be provided to Sydney Trains for information.
2.13	Consultation with State Emergency Service-development with impacts on flood liable land	While the LEP flooding mapping currently does not list the Proposal site as in a flood planning area, Council is undertaking a flood study with investigation areas which include land adjacent to the Proposal site along Dora Street. Therefore consultation has been undertaken for due diligence. Formal notification of the works has been sent on 12 June 2024 to SES. A response from SES was received on 5 July 2024, who confirmed while the Proposal site is not affected by riverine flooding, it may be affected by severe storms and flash flooding. Control measures are outlined in Table 7-1 would mitigate any risk.
2.14	Consultation with councils-development with impacts on certain land within the coastal zone	No impact on the coastal zone and no need to consult with Council about this matter
2.15	Consultation with public authorities other than councils	No additional consultation with public authorities is required
2.122	Traffic generating development	The Proposal is not deemed a traffic-generating development. Accordingly, consultation with the relevant division of Transport is not required

## 6.2 Community engagement

Sydney Trains 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 at least five business days 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.

Any enquiries or complaints received will be directed to the appropriate teams within Sydney Trains and Transport for actioning.

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 : <https://www.transport.nsw.gov.au/projects/current-projects/rail-infrastructure-upgrades-project> 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 control measures would be implemented by those undertaking the construction.	<ol style="list-style-type: none"> <li>1. Construction of the Proposal would be undertaken in accordance with relevant Sydney Trains procedures and management plans.</li> <li>2. Prior to commencing work on-site, a comprehensive briefing and local induction shall be conducted using the project environmental approvals to address potential risks and hazards associated with the work, as well as outlining the responsibilities of all staff and contractors.</li> <li>3. Any modifications to the Proposal if approved, would be subject to further assessment and approval. This assessment would need to demonstrate that any environmental impacts resulting from the change have been minimised.</li> </ol>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Flora and fauna	<p>No vegetation would be removed or impacted for the Proposal. No habitat would be impacted by the Proposal.</p> <p>Vegetation adjacent to the Proposal site and access roads, has the potential to be impacted through vehicle movements, parking and storage of materials outside of designated areas.</p> <p>Weeds may be present in proximity to the Proposal site and have the potential to spread due to the movement of construction plant and equipment.</p>	<ol style="list-style-type: none"> <li>4. Work areas and access tracks shall be restricted to areas of previous disturbance and established access routes to avoid impact to surrounding vegetation.</li> <li>5. Work areas and access tracks shall be clearly defined in construction documentation to avoid impact to surrounding vegetation and communicated to relevant personnel.</li> <li>6. Should any tree or vegetation require trimming, cutting, pruning or removal, separate approval is required.</li> <li>7. Weed control measures, consistent with Sydney Trains Vegetation Management Guideline and the <i>Pesticides Regulation 2017</i>, would be developed and</li> </ol>	<input checked="" 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>With the implementation of the proposed control measures, any potential impacts on flora and fauna would be minimised.</p> <p>Due to the nature of the scope of work, impacts on threatened ecological communities or threatened flora species are not anticipated.</p>	<p>implemented 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> <p>8. Soil and vegetation that could contain weed material is to be removed from machinery prior to any movements off site.</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	<p><u>Drainage</u></p> <p>The Proposal site comprises undulating terrain along the rail corridor with a steeper slope toward Dora Street. There is an absence of formal track drainage at the southern of Platform 2, however there is an informal drainage line running perpendicular to the running lines approximately 50m to the country side of the platform end. As part of the Proposal, drainage around the extended platform would need minor regrading. This ground disturbance has the potential to be a source for erosion and sedimentation.</p> <p><u>Flooding:</u></p> <p>While Council is undertaking a flood study with investigation areas which include land adjacent to the Proposal site along Dora Street, it is not anticipated that the Proposal would impact local riverine flooding. During construction, severe storms and subsequent flash flooding have the potential to impact the Proposal.</p> <p><u>Water Quality:</u></p> <p>There is potential for the Proposal impact on the waterways as a result of erosion and sedimentation or from spills such as fuels, oils and chemicals during construction related to plant operation and maintenance.</p> <p>With the implementation of the proposed control measures, any potential impacts on water and flooding would be minimised.</p>	<p>9. Erosion and sedimentation controls shall be installed in accordance with EMS-14-PR-0012 and 'Blue Book' – Managing Urban Stormwater: Soils and Construction 14th Edition (Landcom, 2004); and maintained throughout construction.</p> <p>10. Any stockpiles and all fuels, chemicals and liquids will be stored in an impervious bunded area a minimum of 50 metres away from:</p> <ul style="list-style-type: none"> <li>• rivers, creeks or any areas of concentrated water flow</li> <li>• flooded or poorly drained areas</li> <li>• slopes above 10%.</li> </ul> <p>11. Refuelling of vehicles or machinery, and maintenance activities will occur in impervious bunded areas located a minimum of 50 metres from drainage lines or waterways.</p> <p>12. An emergency spill kit shall be kept on site at all times and maintained throughout the construction work. The spill kit must be appropriately sized for the volume of substances at the work site and personnel inducted in its use.</p> <p>13. In the event of a pollution incident, works would cease in the immediate vicinity and notification shall be made in accordance with Sydney Trains requirements. All environmental Incidents will be notified to the Safety Incident and Injury Hotline 1800 772 779 9 or enter incident directly into SHEM. The EPA would be notified if required, in accordance with Part 5.7 of the POEO Act.</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
Air quality	<p>There is potential for air quality to be impacted from minor ground disturbance activities through dust or exhaust from plant and equipment.</p> <p>With the implementation of the proposed control measures, any potential impacts on air quality would be minimised.</p>	<p>14. To minimise air quality impacts and the generation of dust, measures shall be implemented in accordance with the Sydney Trains Air Guide (GUI9) including:</p> <ul style="list-style-type: none"> <li>plant and machinery would be switched off when not in use, and not left idling</li> <li>vehicle and machinery movements during construction would be restricted to designated areas and sealed/compacted surfaces where practicable</li> <li>apply water (or alternate measures) to exposed surfaces (e.g. unpaved roads, stockpiles, hardstand areas and other exposed surfaces)</li> <li>cover stockpiles when not in use</li> <li>appropriately cover loads on trucks transporting material to and from the construction site and securely fix tailgates of road transport trucks prior to loading and immediately after unloading</li> <li>prevent mud and dirt being tracked onto sealed road surfaces.</li> </ul>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Soils and contamination	<p>There is potential for erosion of soils or the encountering of contamination due to minor ground disturbance activities. However, with appropriate controls in place it is expected that this risk is appropriately managed.</p> <p>Due to the nature of the rail corridor and the historic use of hazardous materials, there is the potential to encounter contaminated material or asbestos-containing material during the Proposal.</p>	<p>15. Work shall be planned to minimise disturbance to soil in accordance with EMS-14-PR-0012 Erosion and Sediment Control.</p> <p>16. 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 EMS-07-PR-0004 Contaminated Land Management should be followed for encountered Contamination.</p> <p>17. 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</p>	<input checked="" 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>determine the nature, extent and degree of the asbestos contamination. Any removal of asbestos will be undertaken by an experienced, appropriately licensed removal contractor in accordance with the How to Safely Remove Asbestos Code of Practice (Safe Work Australia, 2022).</p> <p>18. Daily inspections for spills and contamination (e.g. vehicle tracking, unauthorised material movement, containment failures, etc) shall be undertaken.</p> <p>19. A stockpile management plan shall be developed to segregate potentially contaminated materials from clean materials.</p>			
Noise and vibration	<p>The Proposal site is surrounded by a mix of landuses. The nearest sensitive receivers are:</p> <ul style="list-style-type: none"> <li>130 Macquarie St, Morisset NSW is the nearest residential area on the southeast side of the station</li> <li>110 Macquarie St, Morisset NSW is the nearest residential area on the southeast side of the station</li> <li>126 Macquarie St, Morisset NSW is the nearest residential area on the southeast side of the station</li> <li>111 Dora Street, Morisset NSW is the nearest residential area on the north side of the station</li> <li>St John Vianney Primary School is approximately 180 metre from the Proposal site</li> </ul> <p>The TfNSW Construction Noise Estimator Tool (Public Transport Infrastructure) has been used to predict worst-case construction noise impacts (with all plant and equipment working currently) of the Proposal at the nearest residential receiver. The tool predicted a worst-case noise level of 67dBA LAeq with the dominant noise source being excavators.</p>	<p>20. All works shall be carried out in a manner to minimise noise and vibration to the surrounding area in accordance with Sydney Trains EPL Licence – 12208, TfNSW Construction Noise and Vibration Guideline (Public Transport Infrastructure) and EPA Guidelines; including:</p> <ul style="list-style-type: none"> <li>programming of noisy activities to standard hours or evening periods</li> <li>regularly training workers and contractors (such as at the site induction and toolbox talks) on the importance of minimising emissions and how to use equipment in ways to minimise noise and vibration</li> <li>avoiding any unnecessary emissions when carrying out manual operations and when operating plant</li> <li>ensuring spoil is placed and not dropped into awaiting trucks or other plant/vehicles</li> <li>avoiding/limiting simultaneous operation of noisy or vibratory plant and equipment within discernible range of a sensitive receiver where practicable</li> <li>switching off any equipment not in use for extended periods e.g. heavy vehicles engines would be switched off whilst being unloaded</li> <li>avoiding deliveries at night/evenings or other sensitive times wherever practicable</li> </ul>	<input checked="" 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>In practice, the noise levels will vary due to the fact that plant will not all be operating concurrently. As such, noise levels expected to be lower than the worst-case noise levels presented and can be minimised through control measures.</p> <p>No vibration generating works are proposed.</p>	<ul style="list-style-type: none"> <li>no idling of delivery trucks</li> <li>ensuring truck drivers are informed of designated vehicle routes, parking locations and acceptable delivery hours for the site</li> <li>minimising talking loudly; no swearing or unnecessary shouting, or loud stereos/radios onsite; no dropping of materials from height where practicable, no throwing of metal items and slamming of doors</li> <li>maximising the offset distance between noisy or vibratory plant and sensitive receivers and maintaining safe working distances for workers</li> <li>directing noise-emitting plant away from sensitive receivers</li> <li>regularly inspecting and maintaining plant to avoid increased noise levels from rattling hatches, loose fittings etc</li> <li>avoid the simultaneous operation of noisy plant items within discernible range of a sensitive receiver.</li> </ul> <p>21. Measures in compliance with Conditions O13.4 and O13.5 of the EPL shall be undertaken, including:</p> <ul style="list-style-type: none"> <li>identification of noise sensitive receivers that may be affected;</li> <li>identify hours of work for the proposed activities</li> <li>identify noise impacts at noise sensitive receivers</li> <li>select and apply reasonable and feasible work practices to minimise noise impacts; and</li> <li>notify the identified noise sensitive receivers at least 5 business days and no more than 14 business days prior to the commencement of maintenance activities undertaken outside of the hours specified in Condition O13.1</li> <li>completion and approval of Maintenance Quantitative Noise Assessment for the Proposal.</li> </ul>			



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
Aboriginal heritage	AHIMS Web Service search was conducted on 19 June 2024 and noted that there are no listed Aboriginal heritage places within the Proposal site or a buffer of 50 to 200 metres. No impact on the Aboriginal heritage is expected.	22. Should an unexpected Aboriginal object be identified during construction, work in the immediate vicinity of the find is to stop and the area must be fenced off with suitable markers (star pickets, flagging or barrier mesh). The Sydney Trains Project Manager and Environment Division are to be notified and the procedures outlined in the Sydney Trains Unexpected Archaeological Finds Procedure (EMS-09-PR0164) must be followed.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Non-Aboriginal heritage	The Proposal was assessed through a Statement of Heritage Impact (SoHI) undertaken by Artefact (Appendix B). The SoHI has concluded: <ul style="list-style-type: none"> <li>The main platform extension works are located outside of the curtilage of Morisset Station (SHI 4801056) and significant elements of the station would not be impacted.</li> <li>The only work that would be undertaken within the curtilage of Morisset Station (SHI 4801056) would be the installation of a new cable from the conduit from the new CCTV camera on the platform to the CCTV rack in the platform building. However, the cable conduit would use an existing communication containment and cable trays. These are not considered to be significant fabric, and no new penetrations would be required. As a result, the cable conduit installation to the platform building would not impact significant fabric.</li> <li>Only the significant elements of Morisset Station contribute to the significance of Garden Suburb To Wyee, Railway Line (SHI 4805752) and Great Northern Railway (LEP 189).</li> <li>Overall, it is assessed that the proposed works would cause neutral physical impacts to Morisset Station (SHI 4801056), Garden</li> </ul>	23. Transport Heritage Specialist shall endorse the SoHI as part of the project approvals. 24. Should an unexpected historic relic or object be identified during construction, work in the immediate vicinity of the find is to stop and the area must be fenced off with suitable markers (star pickets, flagging or barrier mesh). The Sydney Trains Project Manager and Environment Division are to be notified and the procedures outlined in the Sydney Trains Unexpected Archaeological Finds Procedure (EMS-09-PR0164) must be followed 25. Site establishment in particular shall be away from any heritage items or trees in accordance with EMF-HE-FS-0166 Temporary works and protection at heritage sites fact sheet. 26. Any accidental damage to heritage items shall be reported immediately to the project manager and an SEQR Heritage Specialist consulted to determine methodology and approvals for making good damage. 27. Stockpiling against historic buildings shall not be permitted.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	All works shall be carried out in a manner assessed in the SoHI, with mitigations in the SOHI are to be implemented. If there are any changes to scope then further assessment and approval may be required.



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>Suburb To Wyee, Railway Line (SHI 4805752), and Great Northern Railway (LEP 189). There would be no impacts to the heritage significance of these stations.</p> <p>The Proposal site is located along the alignment of the former Down Refuge Siding which was established in the c1910s and removed in the late 1980s. However, it has been assessed by Artefact that there is nil to low potential to contain archaeological remains of the former Down Refuge Siding that may reach the threshold of local significance. Excavations for the works may cause negligible archaeological impacts. However, the risk of archaeological impacts is low, and any impacts would be limited to archaeological 'works'. There would be no impacts to archaeological 'relics' in the meaning of the Heritage Act.</p>				
Community and socioeconomic	<p>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.</p> <p>Potential noise impacts have been addressed above.</p> <p>There would be no adverse social impacts given the temporary and minor nature of the works.</p>	28. Community members shall be notified of upcoming works as required.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Traffic and parking	<p>All works are proposed to take place in the rail corridor therefore impacts would be limited to vehicles entering and exiting the sites, using the local road network and parking in the vicinity of the stations or in the rail corridor. Vehicles would regularly enter/departing the worksite during all shifts.</p> <p>Minor impacts may include increased travel time due to reduced speed limits around the Proposal site especially on Dora Street and increased truck and construction machinery movement.</p>	<p>29. Traffic management measures will be included in construction documentation, in consultation with Council, where required.</p> <p>30. Traffic impacts shall be assessed, and where local traffic will be impacted, a traffic management plan will be developed and implemented.</p> <p>31. Qualified traffic control shall be used.</p> <p>32. In the event of significant traffic delays on the local network resulting from construction traffic, notification to the emergency services shall be undertaken.</p>	<input checked="" 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
	Temporary partial or complete road closures may also be required. Some parking may be utilised during construction periods. Given the short duration of the more intensive construction works (i.e. during possessions) any impact to local traffic and parking are expected to be minor and minimised through the implementation of control measures.	<p>33. Construction vehicles 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>34. Offsite staging areas will be in low impact areas. If impractical, additional controls shall be identified in the construction documentation and implemented. •</p> <p>35. Works areas particularly on the platform shall be demarcated to restrict public access with cones, tape, barricading or similar whilst works are undertaken.</p>			
Waste and resource management	<p>Removal of the platform fencing and stairs would be required as part of the Proposal to facilitate the platform extension.</p> <p>Other wastes likely to be generated include spoil, concrete, steel and general construction waste.</p> <p>The Proposal is designed in accordance with Transport's Baseline Sustainability Requirements (BSRs) which specifies the following targets for waste diversion which relate to the Proposal:</p> <ul style="list-style-type: none"> <li>• 100% of usable spoil shall be reused, recycled or repurposed</li> <li>• 90% of inert, non-hazardous waste shall be reused, recycled or repurposed</li> <li>• 100% of clean concrete is reused, recycled or repurposed.</li> </ul>	<p>36. All spoil and waste must be classified in accordance with the Waste Classification Guidelines Part 1: Classifying waste (EPA, 2014) prior to disposal at an appropriately licensed facility. Ensure the requirements of Sydney Trains EMS-09-PR-0018 Waste Management System Procedure are met (including classification, tracking, recovery, and disposal) of all liquid and non-liquid waste as required.</p> <p>37. Where practicable, waste shall be reused, recycled or repurposed to meet the targets of the BSRs</p> <p>38. Where possible, platform fencing and stairs shall be salvaged and considered for reuse. Where this is not possible, these items shall be recycled.</p> <p>39. Removal and appropriate disposal of general waste generated by the contractors during the proposed works shall be responsibility of the contractors unless advised differently by Sydney Trains</p> <p>40. Stockpiles / leftover construction waste shall be removed from site as soon as possible.</p> <p>41. No weed infested material shall be spread within corridor.</p> <p>42. Only use approved waste contractors and dispose of all wastes leaving site to facilities licenced to receive the waste</p>	<input checked="" 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
Economic	It is not anticipated that local business would experience more than a minor disruption during construction as the works would occur mostly during scheduled track possessions over an extended period and entirely within the rail corridor.	43. Business owners will be notified as required	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Visual and urban design	Construction works would be contained within the rail corridor with temporary fencing, hoarding or barriers erected during works and retained between possessions for public safety and security, and to reduce the visual impact of the works to nearby sensitive visual receivers such as residents. Such changes would have minor visual impact given the scale and temporary nature of the works. During night works, there is potential for light spill to impact the residents on the southern side of the corridor.	44. Any night works that require temporary lighting for safety, operation and security shall be directed away from sensitive receivers. 45. The Proposal site or work areas would be screened with fencing and shade cloth, as required, to minimise visual impacts. 46. Temporary hoardings, barriers, traffic management and signage would be removed when no longer required.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Hazard and risk	A search of the Rural Fire Service shows the Proposal is partly located within bushfire prone land. Severe storms and flash flooding have the potential to impact construction of the Proposal. The mitigation measures would be implemented to minimise the risk of the bushfire and flash flooding.	47. Bushfire risk management measures shall be incorporated into site documentation to minimise risk of bushfire from construction activities particularly during high risk days. High risk activities would be undertaken with care or avoided where possible during high risk bushfire weather. 48. Severe weather event mitigation measures shall be incorporated into site documentation, including but not limited to: <ul style="list-style-type: none"> <li>checking for Severe Weather Warnings prior to the commencement of works.</li> <li>consideration of construction traffic disruption from the Proposal and surrounding developments.</li> </ul>	<input checked="" 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
Climate change and sustainability	The Proposal is designed in accordance with 'The Transport for NSW' Baseline Sustainability Requirements (BSRs). The design has specified materials which meet the BSRs including initiatives such as cement replacement in concrete.	49. Materials selection shall be in accordance with the sustainability initiatives specified within the design.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Cumulative impacts	Cumulative impacts have been considered in relation to the Sydney Trains' Morisset to Vales Point Resignalling (MVP) project. MVP works are Morisset are primarily related to signalling and trackworks and would use alternate construction access and laydown areas. The Proposal would not be expected to significantly contribute to an increase of impacts. With Sydney Trains undertaking the construction of the Proposal it is expected that cumulative impacts of construction can be minimised and managed.	Nil	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Other [such as landuse, shared heritage and geotechnical]	No further impacts have been identified.	Nil	<input checked="" 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 (for Rail Development and Delivery E&S use only)		
			Yes	No	Comments
General	No operational impacts are anticipated. The Proposal is required for safe operation of the Regional Rail fleet and are in-keeping with standard design of rail infrastructure.	Nil	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Flora and fauna	No operational impacts are anticipated	Nil	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Water and flooding	No operational impacts are anticipated	Nil	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Air quality	No operational impacts are anticipated	Nil	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Soils and contamination	No operational impacts are anticipated	Nil	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Noise and vibration	No operational impacts are anticipated	Nil	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Aboriginal heritage	No operational impacts are anticipated	Nil	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Non-Aboriginal heritage	No operational impacts are anticipated	Nil	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Community and socioeconomic	No operational impacts are anticipated	Nil	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Traffic and parking	No operational impacts are anticipated	Nil	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Waste and resource management	No operational impacts are anticipated	Nil	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Economic	No operational impacts are anticipated	Nil	<input checked="" type="checkbox"/>	<input type="checkbox"/>	



Aspect	Nature and extent of impacts (negative and positive) during operation if control measures implemented	Control measures	Endorsed (for Rail Development and Delivery E&S use only)		
			Yes	No	Comments
Visual and urban design	The Proposal is designed to minimise the light spill in accordance with AS/NZS 4282:2019 Control of the obtrusive effects of outdoor lighting.	Nil	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Hazard and risk	No operational impacts are anticipated	Nil	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Climate change and sustainability	No operational impacts are anticipated	Nil	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Cumulative impact	No operational impacts are anticipated	Nil	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Other [such as landuse, shared heritage and geotechnical]	No operational impacts are anticipated	Nil	<input checked="" type="checkbox"/>	<input type="checkbox"/>	



## 8. 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 8-1) 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 of the proposal

Name	Role	Signature	Date
Redacted	Author	Redacted	
Redacted	Transport Environment and Sustainability representative	Redacted	
Redacted	Transport Community and Place Representative	Redacted	
Redacted	Transport Project Manager	Redacted	



## 9. Project approvals

THIS SECTION IS FOR RAIL DEVELOPMENT AND DELIVERY, ENVIRONMENT AND SUSTAINABILITY USE ONLY.

### 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:

Nil

**Is further assessment required?**

- ☒ No      No further assessment required.
- ☐ Yes      Further assessment required

### 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*.

Name	Role	Signature	Date
Redacted	Project Director	Redacted	



## 10. Abbreviations

Term	Meaning
AHIMS	Aboriginal Heritage Information Management System
AS	Australian Standard
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
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



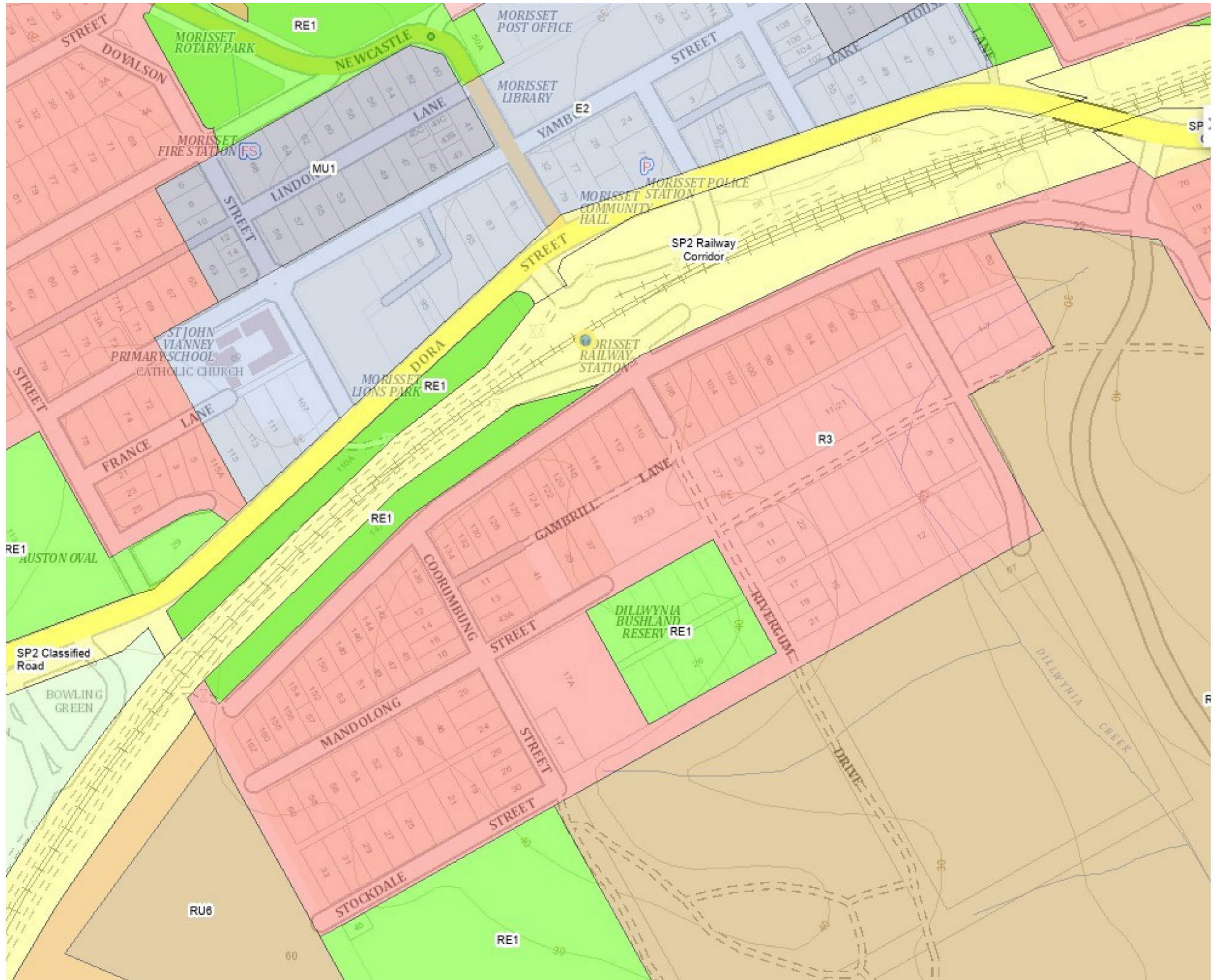
## 11. Definitions

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>

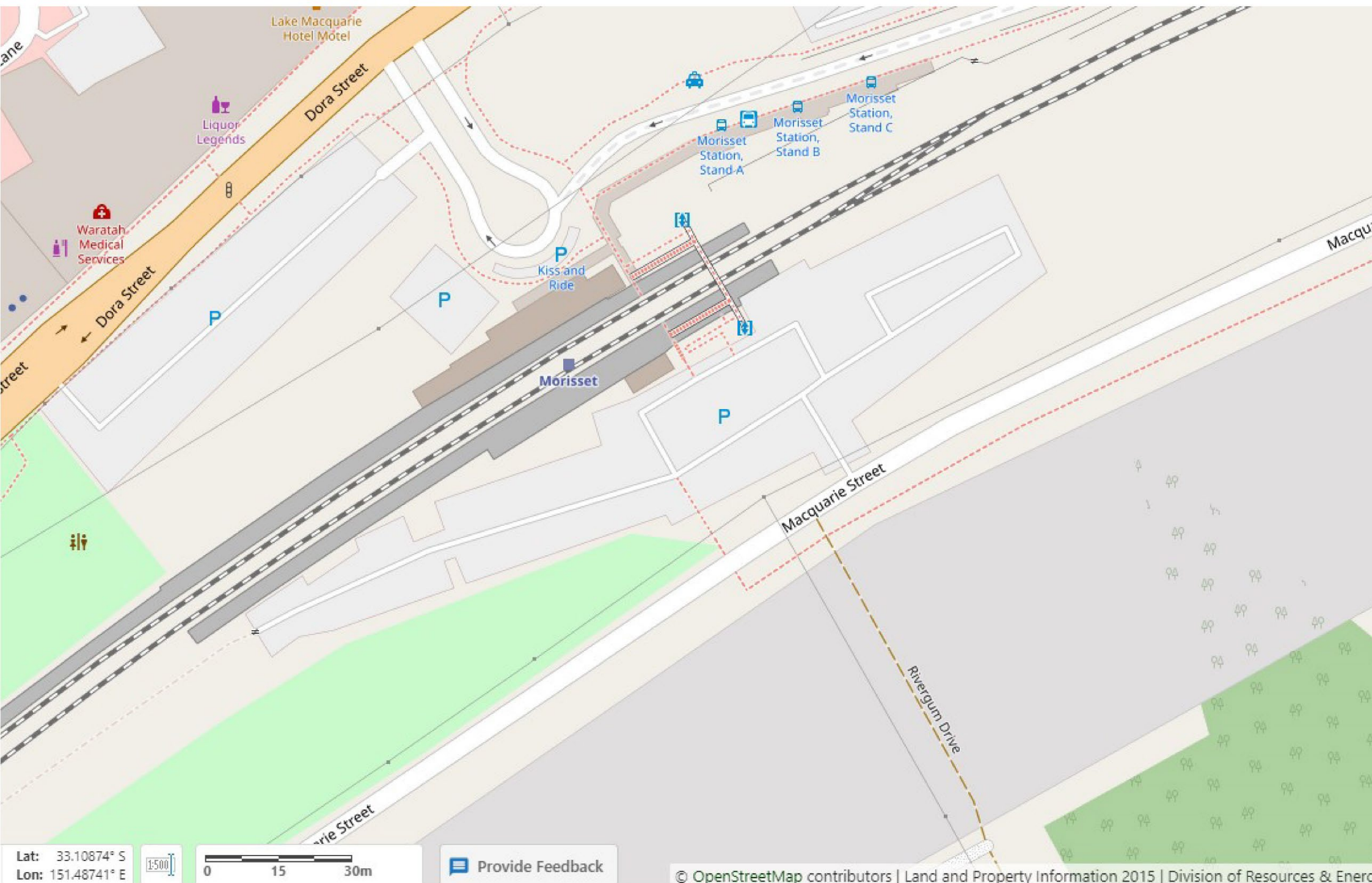


## Appendix A: Background Searches









Lat: 33.10874° S  
Lon: 151.48741° E

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[Provide Feedback](#)

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Australian Government

Department of Climate Change, Energy,  
the Environment and Water

# EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 27-Jun-2024

[Summary](#)

[Details](#)

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)



# Summary

## Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

<a href="#">World Heritage Properties:</a>	None
<a href="#">National Heritage Places:</a>	None
<a href="#">Wetlands of International Importance (Ramsar</a>	None
<a href="#">Great Barrier Reef Marine Park:</a>	None
<a href="#">Commonwealth Marine Area:</a>	None
<a href="#">Listed Threatened Ecological Communities:</a>	4
<a href="#">Listed Threatened Species:</a>	86
<a href="#">Listed Migratory Species:</a>	48

## Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <https://www.dcceew.gov.au/parks-heritage/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

<a href="#">Commonwealth Lands:</a>	3
<a href="#">Commonwealth Heritage Places:</a>	None
<a href="#">Listed Marine Species:</a>	54
<a href="#">Whales and Other Cetaceans:</a>	None
<a href="#">Critical Habitats:</a>	None
<a href="#">Commonwealth Reserves Terrestrial:</a>	None
<a href="#">Australian Marine Parks:</a>	None
<a href="#">Habitat Critical to the Survival of Marine Turtles:</a>	None

## Extra Information

This part of the report provides information that may also be relevant to the area you have

<a href="#">State and Territory Reserves:</a>	1
<a href="#">Regional Forest Agreements:</a>	1
<a href="#">Nationally Important Wetlands:</a>	None
<a href="#">EPBC Act Referrals:</a>	18
<a href="#">Key Ecological Features (Marine):</a>	None
<a href="#">Biologically Important Areas:</a>	3
<a href="#">Bioregional Assessments:</a>	1
<a href="#">Geological and Bioregional Assessments:</a>	None



# Details

## Matters of National Environmental Significance

Listed Threatened Ecological Communities

[ Resource Information ]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community</a>	Endangered	Community likely to occur within area	In feature area
<a href="#">Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland</a>	Endangered	Community may occur within area	In feature area
<a href="#">River-flat eucalypt forest on coastal floodplains of southern New South Wales and eastern Victoria</a>	Critically Endangered	Community likely to occur within area	In feature area
<a href="#">Subtropical and Temperate Coastal Saltmarsh</a>	Vulnerable	Community likely to occur within area	In buffer area only

Listed Threatened Species

[ Resource Information ]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.

Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
<a href="#">Anthochaera phrygia</a> Regent Honeyeater [82338]	Critically Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Ardenna grisea</a> Sooty Shearwater [82651]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
<a href="#">Botaurus poiciloptilus</a> Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area	In feature area



Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Calidris canutus</a> Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Callocephalon fimbriatum</a> Gang-gang Cockatoo [768]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Calyptorhynchus lathami lathami</a> South-eastern Glossy Black-Cockatoo [67036]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Charadrius leschenaultii</a> Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Climacteris picumnus victoriae</a> Brown Treecreeper (south-eastern) [67062]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Diomedea antipodensis</a> Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
<a href="#">Diomedea antipodensis gibsoni</a> Gibson's Albatross [82270]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
<a href="#">Diomedea epomophora</a> Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only



Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Diomedea exulans</a> Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
<a href="#">Diomedea sanfordi</a> Northern Royal Albatross [64456]	Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Erythrotriorchis radiatus</a> Red Goshawk [942]	Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Falco hypoleucos</a> Grey Falcon [929]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Grantiella picta</a> Painted Honeyeater [470]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Lathamus discolor</a> Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Limosa lapponica baueri</a> Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Macronectes giganteus</a> Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Macronectes halli</a> Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only



Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Melanodryas cucullata cucullata</a> South-eastern Hooded Robin, Hooded Robin (south-eastern) [67093]	Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Neophema chrysostoma</a> Blue-winged Parrot [726]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Pachyptila turtur subantarctica</a> Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
<a href="#">Pycnoptilus floccosus</a> Pilotbird [525]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Rostratula australis</a> Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area	In feature area
<a href="#">Stagonopleura guttata</a> Diamond Firetail [59398]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Sternula nereis nereis</a> Australian Fairy Tern [82950]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Thalassarche bulleri</a> Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Thalassarche bulleri platei</a> Northern Buller's Albatross, Pacific Albatross [82273]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Thalassarche cauta</a> Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In buffer area only



Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Thalassarche eremita</a> Chatham Albatross [64457]	Endangered	Foraging, feeding or related behaviour may occur within area	In buffer area only
<a href="#">Thalassarche impavida</a> Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Thalassarche melanophris</a> Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
<a href="#">Thalassarche salvini</a> Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
<a href="#">Thalassarche steadi</a> White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area	In buffer area only
FISH			
<a href="#">Epinephelus daemeli</a> Black Rockcod, Black Cod, Saddled Rockcod [68449]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
FROG			
<a href="#">Heleioporus australiacus</a> Giant Burrowing Frog [1973]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
<a href="#">Litoria aurea</a> Green and Golden Bell Frog [1870]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Mixophyes balbus</a> Stuttering Frog, Southern Barred Frog (in Victoria) [1942]		Species or species habitat likely to occur within area	In feature area



Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Mixophyes iteratus</a>			
Giant Barred Frog, Southern Barred Frog [1944]	Vulnerable	Species or species habitat likely to occur within area	In feature area
MAMMAL			
<a href="#">Chalinolobus dwyeri</a>			
Large-eared Pied Bat, Large Pied Bat [183]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Dasyurus maculatus maculatus (SE mainland population)</a>			
Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Notamacropus parma</a>			
Parma Wallaby [89289]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Petauroides volans</a>			
Greater Glider (southern and central) [254]	Endangered	Species or species habitat likely to occur within area	In feature area
<a href="#">Petaurus australis australis</a>			
Yellow-bellied Glider (south-eastern) [87600]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Petrogale penicillata</a>			
Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)</a>			
Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Potorous tridactylus tridactylus</a>			
Long-nosed Potoroo (northern) [66645]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Pseudomys novaehollandiae</a>			
New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Pteropus poliocephalus</a>			
Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area



Scientific Name	Threatened Category	Presence Text	Buffer Status
PLANT			
<a href="#">Acacia bynoeana</a> Bynoe's Wattle, Tiny Wattle [8575]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Angophora inopina</a> Charmhaven Apple [64832]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Caladenia tessellata</a> Thick-lipped Spider-orchid, Daddy Long-legs [2119]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Corunastylis insignis</a> Wyong Midge Orchid 1, Variable Midge Orchid 1 [84692]	Critically Endangered	Species or species habitat likely to occur within area	In buffer area only
<a href="#">Cryptostylis hunteriana</a> Leafless Tongue-orchid [19533]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Cynanchum elegans</a> White-flowered Wax Plant [12533]	Endangered	Species or species habitat likely to occur within area	In feature area
<a href="#">Diuris praecox</a> Newcastle Doubletail [55086]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
<a href="#">Eucalyptus camfieldii</a> Camfield's Stringybark [15460]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Euphrasia arguta</a> [4325]	Critically Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Genoplesium branwhiteorum listed as Corunastylis sp. Charmhaven (NSW 896673)</a> [93200]	Critically Endangered (listed as Corunastylis sp. Charmhaven	Species or species habitat known to occur within area	In buffer area only
<a href="#">Grevillea parviflora subsp. parviflora</a> Small-flower Grevillea [64910]	Vulnerable	Species or species habitat known to occur within area	In feature area



Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Melaleuca biconvexa</a> Biconvex Paperbark [5583]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Persicaria elatior</a> Knotweed, Tall Knotweed [5831]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Pterostylis gibbosa</a> Illawarra Greenhood, Rufa Greenhood, Pouched Greenhood [4562]	Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Rhizanthella slateri</a> Eastern Underground Orchid [11768]	Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Rhodamnia rubescens</a> Scrub Turpentine, Brown Malletwood [15763]	Critically Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Rhodomyrtus psidioides</a> Native Guava [19162]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
<a href="#">Rutidosis heterogama</a> Heath Wrinklewort [13132]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Syzygium paniculatum</a> Magenta Lilly Pilly, Magenta Cherry, Daguba, Scrub Cherry, Creek Lilly Pilly, Brush Cherry [20307]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Tetralthea juncea</a> Black-eyed Susan [21407]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Thelymitra adorata</a> Wyong Sun Orchid [84724]	Critically Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Thesium australe</a> Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat likely to occur within area	In feature area



Scientific Name	Threatened Category	Presence Text	Buffer Status
REPTILE			
<a href="#">Caretta caretta</a> Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area	In buffer area only
<a href="#">Chelonia mydas</a> Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
<a href="#">Dermochelys coriacea</a> Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In buffer area only
<a href="#">Eretmochelys imbricata</a> Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
<a href="#">Hoplocephalus bungaroides</a> Broad-headed Snake [1182]	Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Natator depressus</a> Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
SHARK			
<a href="#">Carcharodon carcharias</a> White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
<a href="#">Sphyrna lewini</a> Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat likely to occur within area	In buffer area only



Listed Migratory Species			[ Resource Information ]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
<a href="#">Anous stolidus</a>			
Common Noddy [825]		Species or species habitat may occur within area	In buffer area only
<a href="#">Apus pacificus</a>			
Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
<a href="#">Ardenna grisea</a>			
Sooty Shearwater [82651]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
<a href="#">Calonectris leucomelas</a>			
Streaked Shearwater [1077]		Species or species habitat known to occur within area	In buffer area only
<a href="#">Diomedea antipodensis</a>			
Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
<a href="#">Diomedea epomophora</a>			
Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
<a href="#">Diomedea exulans</a>			
Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
<a href="#">Diomedea sanfordi</a>			
Northern Royal Albatross [64456]	Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Fregata ariel</a>			
Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area	In buffer area only
<a href="#">Macronectes giganteus</a>			
Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In buffer area only



Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Macronectes halli</a> Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
<a href="#">Phaethon lepturus</a> White-tailed Tropicbird [1014]		Species or species habitat may occur within area	In buffer area only
<a href="#">Thalassarche bulleri</a> Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Thalassarche cauta</a> Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
<a href="#">Thalassarche eremita</a> Chatham Albatross [64457]	Endangered	Foraging, feeding or related behaviour may occur within area	In buffer area only
<a href="#">Thalassarche impavida</a> Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Thalassarche melanophris</a> Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
<a href="#">Thalassarche salvini</a> Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
<a href="#">Thalassarche steadi</a> White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Migratory Marine Species			
<a href="#">Carcharodon carcharias</a> White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area	In buffer area only



Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Caretta caretta</a> Giant Burrowing Frog [1973]	Endangered	Foraging, feeding or related behaviour known to occur within area	In buffer area only
<a href="#">Chelonia mydas</a> Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
<a href="#">Dermochelys coriacea</a> Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In buffer area only
<a href="#">Eretmochelys imbricata</a> Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
<a href="#">Lamna nasus</a> Porbeagle, Mackerel Shark [83288]		Species or species habitat likely to occur within area	In buffer area only
<a href="#">Mobula alfredi as Manta alfredi</a> Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat may occur within area	In buffer area only
<a href="#">Mobula birostris as Manta birostris</a> Giant Manta Ray [90034]		Species or species habitat may occur within area	In buffer area only
<a href="#">Natator depressus</a> Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Migratory Terrestrial Species			
<a href="#">Cuculus optatus</a> Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area	In feature area
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area



Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Monarcha melanopsis</a> Black-faced Monarch [609]		Species or species habitat known to occur within area	In feature area
<a href="#">Motacilla flava</a> Yellow Wagtail [644]		Species or species habitat likely to occur within area	In feature area
<a href="#">Myiagra cyanoleuca</a> Satin Flycatcher [612]		Species or species habitat known to occur within area	In feature area
<a href="#">Rhipidura rufifrons</a> Rufous Fantail [592]		Species or species habitat known to occur within area	In feature area
<a href="#">Symposiachrus trivirgatus as Monarcha trivirgatus</a> Spectacled Monarch [83946]		Species or species habitat may occur within area	In feature area
Migratory Wetlands Species			
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Calidris canutus</a> Red Knot, Knot [855]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area	In buffer area only
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat likely to occur within area	In feature area
<a href="#">Charadrius leschenaultii</a> Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area	In feature area



Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Limosa lapponica</a> Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In feature area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Pandion haliaetus</a> Osprey [952]		Breeding known to occur within area	In feature area
<a href="#">Pluvialis fulva</a> Pacific Golden Plover [25545]		Species or species habitat likely to occur within area	In buffer area only
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area	In buffer area only



Other Matters Protected by the EPBC Act

Commonwealth Lands

[\[ Resource Information \]](#)

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State	Buffer Status
Communications, Information Technology and the Arts - Australian Postal Corporation		
Commonwealth Land - Australian Postal Commission [11755]	NSW	In feature area
Communications, Information Technology and the Arts - Australian Postal Corporation		
Commonwealth Land - Australian Telecommunications Commission [11756]	NSW	In buffer area only
Commonwealth Land - Australian Telecommunications Commission [11731]	NSW	In buffer area only



Listed Marine Species		[ Resource Information ]	
Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area
<a href="#">Anous stolidus</a> Common Noddy [825]		Species or species habitat may occur within area	In buffer area only
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
<a href="#">Ardenna grisea as Puffinus griseus</a> Sooty Shearwater [82651]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
<a href="#">Bubulcus ibis as Ardea ibis</a> Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Calidris canutus</a> Red Knot, Knot [855]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In buffer area only
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat likely to occur within area overfly marine area	In feature area
<a href="#">Calonectris leucomelas</a> Streaked Shearwater [1077]		Species or species habitat known to occur within area	In buffer area only



Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Charadrius leschenaultii</a>			
Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Diomedea antipodensis</a>			
Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
<a href="#">Diomedea antipodensis gibsoni as Diomedea gibsoni</a>			
Gibson's Albatross [82270]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
<a href="#">Diomedea epomophora</a>			
Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
<a href="#">Diomedea exulans</a>			
Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
<a href="#">Diomedea sanfordi</a>			
Northern Royal Albatross [64456]	Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Fregata ariel</a>			
Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area	In buffer area only
<a href="#">Fregata minor</a>			
Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area	In buffer area only
<a href="#">Gallinago hardwickii</a>			
Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Haliaeetus leucogaster</a>			
White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area	In feature area



Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Lathamus discolor</a> Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Limosa lapponica</a> Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In feature area
<a href="#">Macronectes giganteus</a> Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Macronectes halli</a> Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
<a href="#">Merops ornatus</a> Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Monarcha melanopsis</a> Black-faced Monarch [609]		Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Motacilla flava</a> Yellow Wagtail [644]		Species or species habitat likely to occur within area overfly marine area	In feature area
<a href="#">Myiagra cyanoleuca</a> Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Neophema chrysostoma</a> Blue-winged Parrot [726]	Vulnerable	Species or species habitat may occur within area overfly marine area	In feature area



Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Numenius madagascariensis</a>			
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Pachyptila turtur</a>			
Fairy Prion [1066]		Species or species habitat known to occur within area	In buffer area only
<a href="#">Pandion haliaetus</a>			
Osprey [952]		Breeding known to occur within area	In feature area
<a href="#">Phaethon lepturus</a>			
White-tailed Tropicbird [1014]		Species or species habitat may occur within area	In buffer area only
<a href="#">Pluvialis fulva</a>			
Pacific Golden Plover [25545]		Species or species habitat likely to occur within area	In buffer area only
<a href="#">Pterodroma cervicalis</a>			
White-necked Petrel [59642]		Species or species habitat may occur within area	In feature area
<a href="#">Rhipidura rufifrons</a>			
Rufous Fantail [592]		Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Rostratula australis as Rostratula benghalensis (sensu lato)</a>			
Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
<a href="#">Sterna striata</a>			
White-fronted Tern [799]		Migration route may occur within area	In feature area
<a href="#">Symposiachrus trivirgatus as Monarcha trivirgatus</a>			
Spectacled Monarch [83946]		Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Thalassarche bulleri</a>			
Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area	In buffer area only



Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Thalassarche bulleri platei</a> as <a href="#">Thalassarche sp. nov.</a>			
Northern Buller's Albatross, Pacific Albatross [82273]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Thalassarche cauta</a>			
Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
<a href="#">Thalassarche eremita</a>			
Chatham Albatross [64457]	Endangered	Foraging, feeding or related behaviour may occur within area	In buffer area only
<a href="#">Thalassarche impavida</a>			
Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area	In buffer area only
<a href="#">Thalassarche melanophris</a>			
Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
<a href="#">Thalassarche salvini</a>			
Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
<a href="#">Thalassarche steadi</a>			
White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
<a href="#">Tringa nebularia</a>			
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine area	In buffer area only
Reptile			
<a href="#">Caretta caretta</a>			
Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area	In buffer area only
<a href="#">Chelonia mydas</a>			
Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only



Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Dermochelys coriacea</a>			
Leatherback Turtle, Leathery Turtle, Luth Endangered [1768]		Species or species habitat known to occur within area	In buffer area only
<a href="#">Eretmochelys imbricata</a>			
Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
<a href="#">Natator depressus</a>			
Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only

Extra Information

State and Territory Reserves			[ <a href="#">Resource Information</a> ]
Protected Area Name	Reserve Type	State	Buffer Status
Lake Macquarie	State Conservation Area	NSW	In buffer area only

Regional Forest Agreements	[ <a href="#">Resource Information</a> ]
Note that all areas with completed RFAs have been included. Please see the associated resource information for specific caveats and use limitations associated with RFA boundary information.	

RFA Name	State	Buffer Status
<a href="#">North East NSW RFA</a>	New South Wales	In feature area

EPBC Act Referrals					[ <a href="#">Resource Information</a> ]
Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status	
<a href="#">Caravan Park &amp; Lifestyle Living</a>	2022/09220		Post-Approval	In buffer area only	
<a href="#">Ramsgate Estate Wyee Point, NSW</a>	2023/09456		Completed	In buffer area only	

Controlled action				
<a href="#">Newstan Mine Extension Project</a>	2019/8528	Controlled Action	Assessment Approach	In buffer area only



Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Controlled action				
<a href="#">Open cut coal mine and extension to underground mine.</a>	2006/2542	Controlled Action	Completed	In buffer area only
<a href="#">Residential Development in Cooranbong, NSW</a>	2007/3828	Controlled Action	Post-Approval	In buffer area only
<a href="#">Upgrade existing coal preparation, infrastructure &amp; transport as part of Coal Logistics Project, NS</a>	2013/6906	Controlled Action	Post-Approval	In buffer area only
Not controlled action				
<a href="#">construction of additional coal handling facilities at the Wyee Rail Unloader</a>	2004/1364	Not Controlled Action	Completed	In buffer area only
<a href="#">Cooranbong residential subdivision and Local Water Centre development, NSW</a>	2014/7315	Not Controlled Action	Completed	In buffer area only
<a href="#">Haul Road to connect the Cooranbong Colliery to Newstan and Eraring Haul Road</a>	2009/4722	Not Controlled Action	Completed	In buffer area only
<a href="#">Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia</a>	2015/7522	Not Controlled Action	Completed	In feature area
<a href="#">Mandalong Mine Power Line, Mandalong, NSW</a>	2018/8321	Not Controlled Action	Completed	In buffer area only
<a href="#">Wallarrah Peninsula Residential development</a>	2004/1490	Not Controlled Action	Completed	In buffer area only
Not controlled action (particular manner)				
<a href="#">Eraring Battery Energy Storage System, NSW</a>	2021/8956	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
<a href="#">Multipurpose Centre Dora St Lot 122 DP 881828 Morisset</a>	2003/1084	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
<a href="#">Residential Development Subdivision</a>	2011/5953	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
Referral decision				
<a href="#">Mine Modification</a>	2010/5442	Referral Decision	Completed	In buffer area only
<a href="#">Morisset Event Space BDAR</a>	2022/9173	Referral Decision	Referral Publication	In feature area
<a href="#">Residential Subdivision Dickson Road Lots 231 &amp; 233 DP755271</a>	2003/1105	Referral Decision	Completed	In buffer area only



Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Referral decision				

Biologically Important Areas			[ Resource Information	
Scientific Name		Behaviour	Presence	Buffer Status
Seabirds				
<a href="#">Ardena grisea</a>				
Sooty Shearwater [82651]		Foraging	Likely to occur	In buffer area only
<a href="#">Ardena tenuirostris</a>				
Short-tailed Shearwater [82652]		Foraging	Likely to occur	In buffer area only
<a href="#">Ardena tenuirostris</a>				
Short-tailed Shearwater [82652]		Foraging	Likely to occur	In buffer area only

Bioregional Assessments			]Resource Information ]	
SubRegion	BioRegion	Website	Buffer Status	
Hunter	Northern Sydney Basin	<a href="#">BA website</a>	In feature area	



# Caveat

## 1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

## 2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

## 3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

## 4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.



# Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environmental and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- Natural history museums of Australia
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-South Australian Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence](#)
- [Forestry Corporation, NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- [-Australian Tropical Herbarium, Cairns](#)
- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.



Please feel free to provide feedback via the [Contact us](#) page.

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Department of Climate Change, Energy, the Environment and Water

GPO Box 3090

Canberra ACT 2601 Australia

+61 2 6274 1111



Date: 19 June 2024

Redacted

7Harvest Steert  
Macquarie Park New South Wales 2113

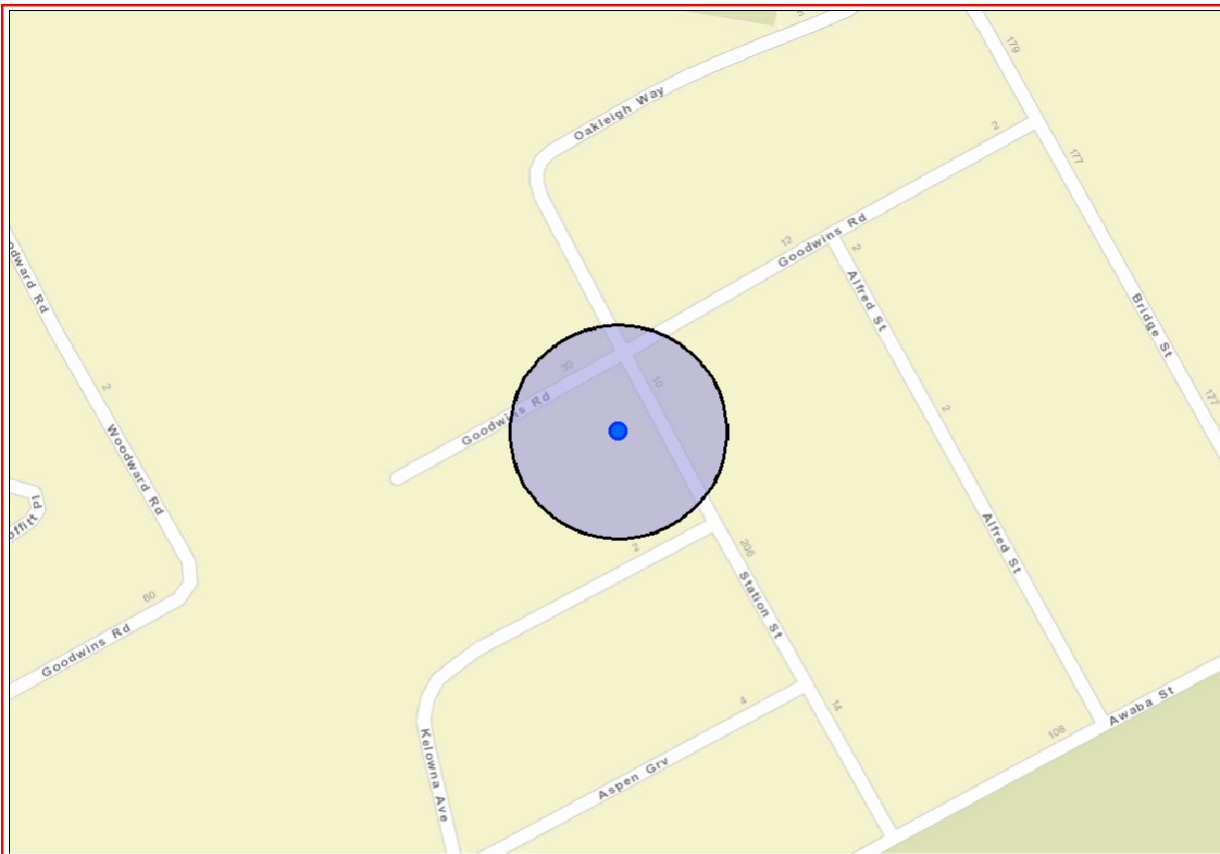
Attention: Redacted

Email: Redacted

Dear Sir or Madam:

**AHIMS Web Service search for the following area at Address : 10 STATION STREET MORISSET 2264 with a Buffer of 50 meters, conducted by Redacted on 19 June 2024.**

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *



**If your search shows Aboriginal sites or places what should you do?**

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette](https://www.legislation.nsw.gov.au/gazette) (<https://www.legislation.nsw.gov.au/gazette>) website. Gazettal notices published prior to 2001 can be obtained from Heritage NSW upon request

**Important information about your AHIMS search**

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
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- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.



Transport for NSW - Macquarie Park  
7 Harvest Street  
Macquarie Park New South Wales 2113

Date: 19 June 2024

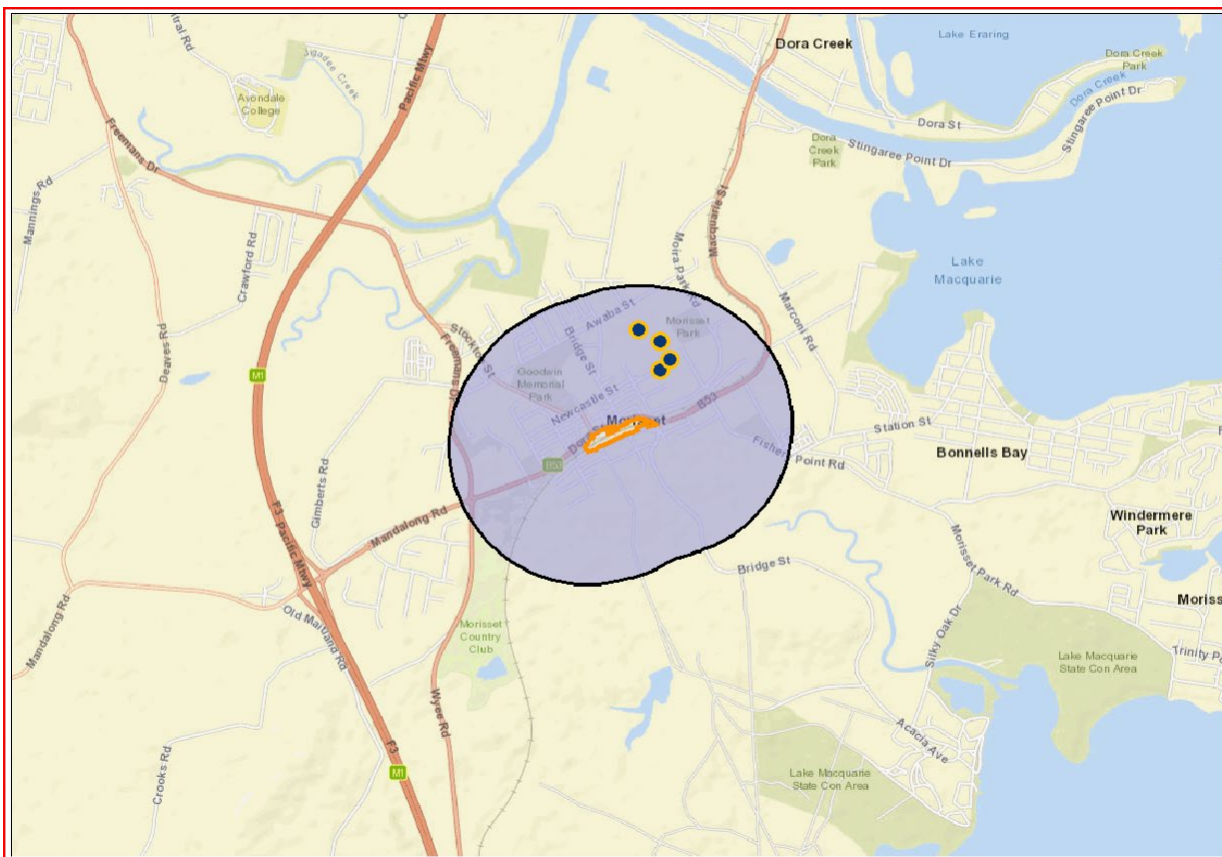
Attention: **Redacted**

Email: **Redacted**

Dear Sir or Madam:

**AHIMS Web Service search for the following area at Lot : 3, DP:DP1002965, Section : - with a Buffer of 1000 meters, conducted by **Redacted** on 19 June 2024.**

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

<b>4</b>	<b>Aboriginal sites are recorded in or near the above location.</b>
<b>0</b>	<b>Aboriginal places have been declared in or near the above location. *</b>



**If your search shows Aboriginal sites or places what should you do?**

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Redacted

Date: 19 June 2024

7Harvest Steert  
Macquarie Park New South Wales 2113

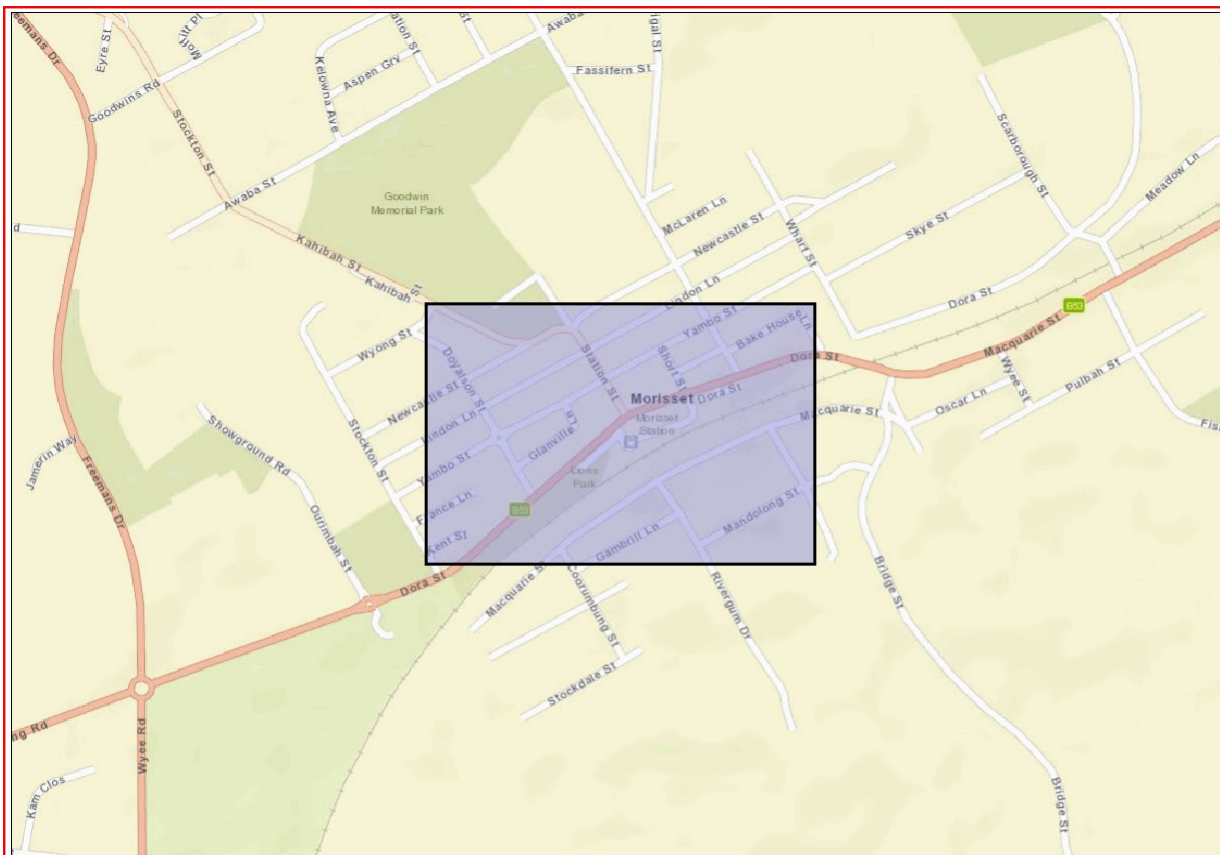
Attention: Redacted

Email: Redacted

Dear Sir or Madam:

**AHIMS Web Service search for the following area at Lat, Long From : -33.1108, 151.4838 - Lat, Long To : -33.1064, 151.4915, conducted by Redacted on 19 June 2024.**

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



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Redacted

Date: 19 June 2024

7Harvest Steert  
Macquarie Park New South Wales 2113

Attention: Redacted

Email: Redacted

Dear Sir or Madam:

**AHIMS Web Service search for the following area at Lat, Long From : -33.1099, 151.4859 - Lat, Long To : -33.1077, 151.4898, conducted by Redacted on 19 June 2024.**

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *



### **If your search shows Aboriginal sites or places what should you do?**

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# Lake Macquarie Local Environmental Plan 2014

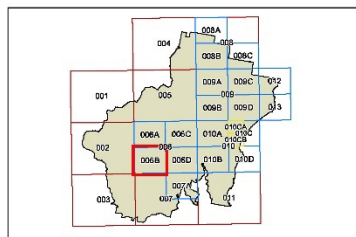
## Flood Planning Map - Sheet FLD\_006B

### Flood Planning Land

 Flood Planning Area

### Cadastral

Cadastral 13/6/2014 © Land and Property Information (LPI)



0 200 400  
Metres

Scale: 1:20,000 @ A3

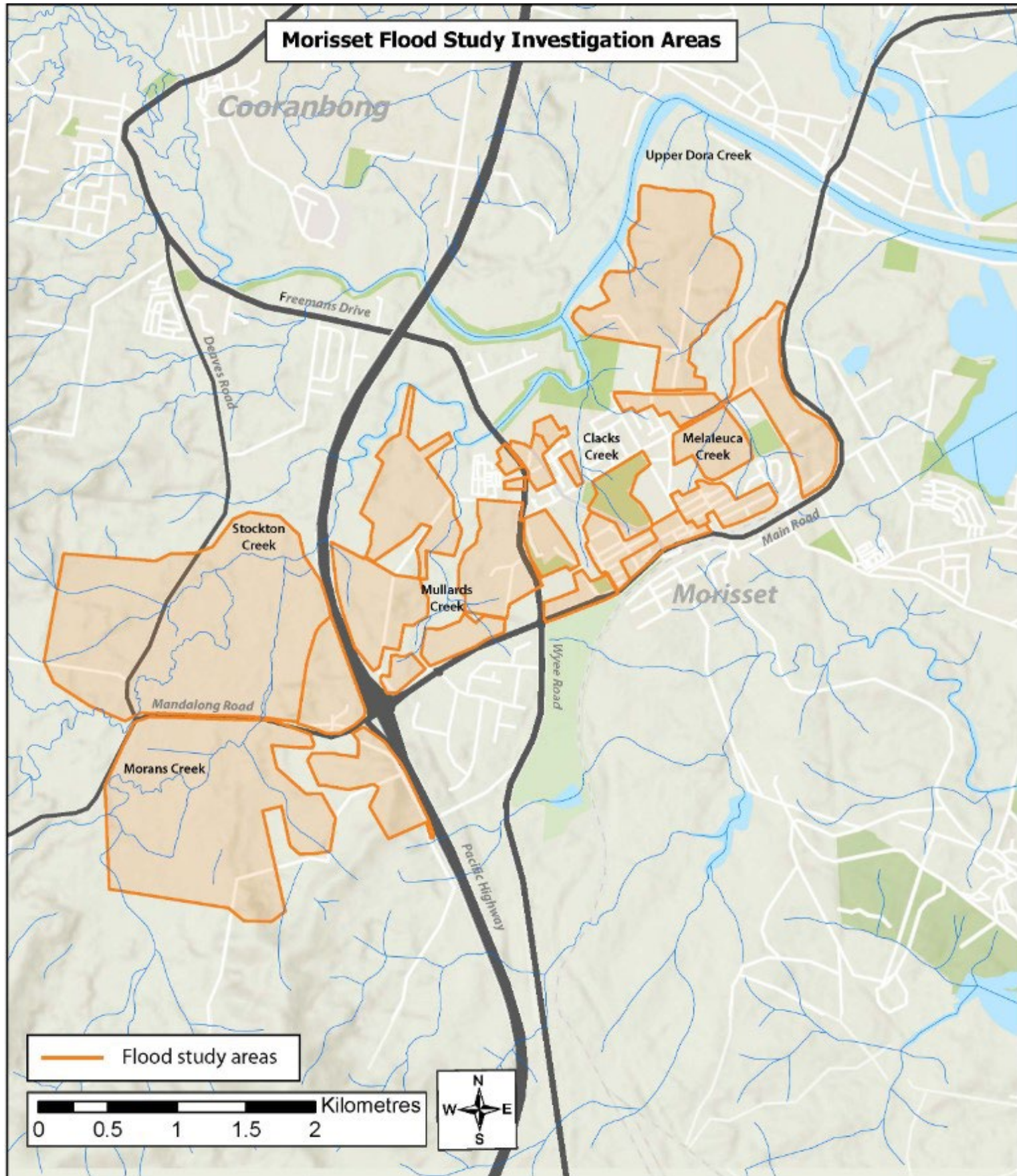
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MGA Zone 56

Map Identification Number: 4650\_COM\_FLD\_006B\_020\_20140825

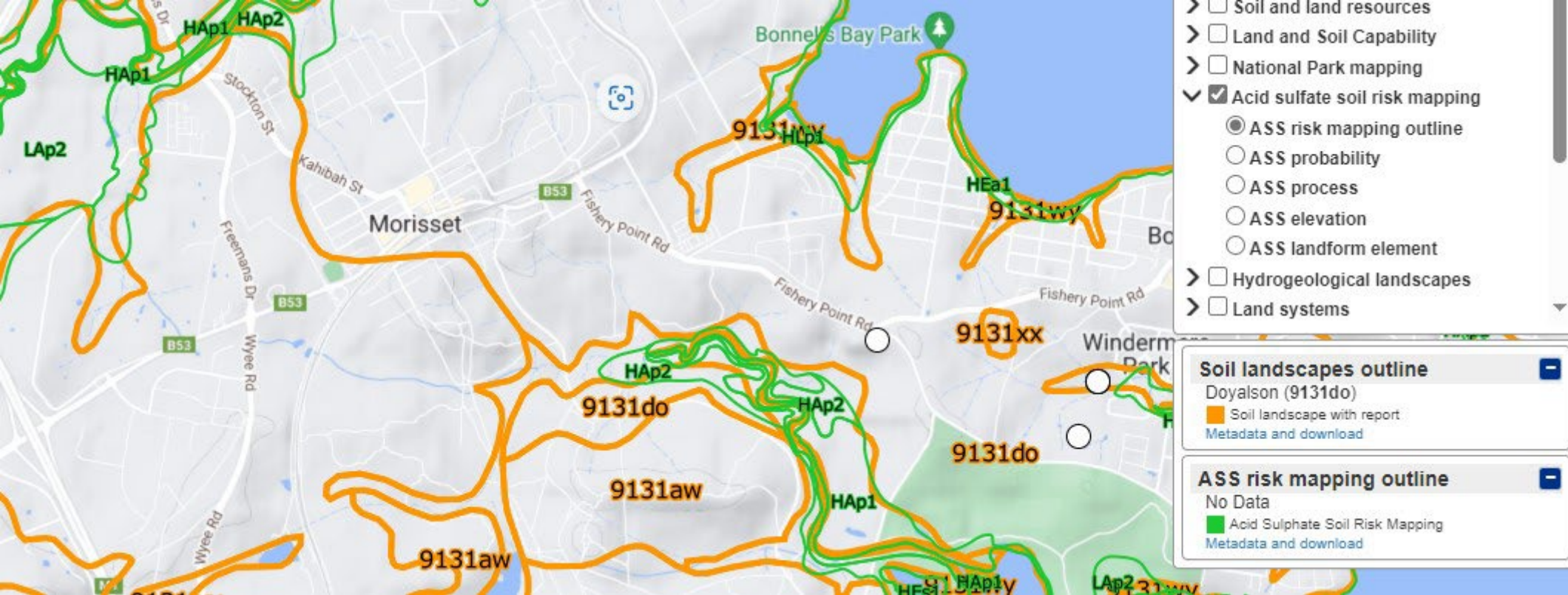




# Morisset Flood Study Investigation Areas









do

## DOYALSON



**Landscape**—gently undulating rises on Munmorah Conglomerate. Slope gradients <10%; local relief to 30 m. Broad crests and ridges and long gently inclined slopes. Predominantly cleared eucalypt open-forest.

**Soils**—moderately deep (50–150 cm) Yellow Earths (Gn2.24), Yellow Podzolic Soils (Dy2.21, Dy3.21) and Soloths (Dy2.41, Dy3.41) occur on sandstones and conglomerates; moderately deep (50–150 cm) Yellow Podzolic Soils (Dy2.11, Dy3.21), Soloths (Dy2.41) and some Red Podzolic Soils (Dr3.21) occur on fine-grained siltstones and claystone; moderately deep to deep (100–>150 cm) Yellow Leached Earths (Gn2.74), Grey Earths (Gn2.94), Soloths (Dy3.41) and Gleyed Podzolic Soils (Dg4.41) occur along drainage lines.

**Limitations**—high erosion hazard, foundation hazard (localised), high run-on (localised), mine subsidence district, seasonal waterlogging (localised), hardsetting, stoniness, strongly acid soils of low fertility.

### Topography

Generally undulating rises with local relief to 30 m and slope gradients <10%. Broad crests and ridges and long gently inclined slopes are the major landform elements. Drainage lines are broad. Rock outcrop is usually absent.

### Vegetation

The open-forest has been extensively cleared although some small areas of disturbed bushland remain. Common species include scribbly gum (*Eucalyptus haemastoma*), red bloodwood (*E. gummifera*), brown stringybark (*E. capitellata*), smooth-barked apple (*Angophora costata*) and grey gum (*E. punctata*). Understorey species include hill banksia (*Banksia spinulosa* var. *collina*), banksia (*Banksia oblongifolia*), and mountain devil (*Lambertia formosa*). Paperbarks (*Melaleuca* spp.) occur in poorly drained areas.

### Land Use

Land use includes urban residential (for example, Doyalson, San Remo and Lake Munmorah), collieries (Munmorah State Coal Mine) and power stations (Munmorah). Some areas of grazing occur and uncleared bushland remains.

### Included Soil Landscape

Small areas of Gorokan (**gk**) soil landscape have been included in the southern locations of the Doyalson soil landscape.

### SOILS

#### Dominant Soil Materials

**do1—Brown loose loamy sand.** Brown loose sand to loamy sand with coarse-grained texture and single-grained structure with sandy fabric. It occurs as topsoil ( $A_1$  horizon). When organic matter is high, weak sub-angular structure with rough ped fabric can occur. This material is often water repellent. The surface condition is loose or gravelly. Colour ranges from brownish black (10YR 3/1) to dull yellowish brown (10YR 5/3). The pH ranges from moderately acid

### LOCATION

Gently undulating rises on Munmorah Conglomerate north of Tuggerah Lake on the Central Coast Lowlands. It includes the urban centres of Doyalson, Blue Haven, Lake Munmorah, San Remo, Bluff Point, Budgewoi, Mannering Park, Dora Creek, Morisset, Cooranbong and parts of Toronto.

### LANDSCAPE

#### Geology

Narrabeen Group—Clifton Subgroup—Munmorah Conglomerate Formation: conglomerate, pebbly sandstone, grey green and grey siltstone and claystone. Some small areas of coarse quartz sandstone at the base of the Tuggerah Formation may have been included.



(pH 5.0) to slightly acid (pH 6.0). Gravel-sized sandstone rock fragments, quartz and conglomerate pebbles may be common. Roots are common and charcoal fragments often present.

**do2—Hardsetting bleached yellowish brown clayey sand.** Light yellow clayey sand with sandy fabric. It usually occurs as shallow subsoil (A<sub>2</sub> horizon) but is sometimes exposed at the surface (A<sub>1</sub> horizon).

This material is often hardsetting when dry. Colours range from dull yellowish brown (10YR 5/3) to dull yellow orange (10YR 7/3). Dry colours are often bleached (10YR 7/2 to 10YR 8/1). Pale orange mottles are often present along root channels. The pH ranges from strongly acid (pH 4.5) to moderately acid (pH 5.5). Roots are common, charcoal fragments are few and sandstone rock fragments, quartz and conglomerate pebbles are often present.

**do3—Earthy bright yellowish brown sandy clay loam.** Light sandy clay loam to sandy clay loam with massive structure and porous earthy fabric. It occurs as a subsoil (B horizon).

Texture usually increases with depth from light sandy clay loam to sandy clay loam. Occasionally texture reaches a clay with a moderately developed blocky structure. Infilled faunal casts are common in the upper portion of this material. Colour ranges from brown (10YR 4/4) to more common bright yellowish brown (10YR 6/6). Orange mottles are common. The pH ranges from strongly acid (pH 4.5) to moderately acid (pH 5.5). Sandstone rock fragments and quartz and conglomerate pebbles are often common, but roots are few and charcoal fragments are absent.

**do4—Earthy light grey clay.** Light grey sandy clay loam to medium clay with massive structure and dense earthy fabric. It occurs as deep subsoil overlying bedrock (B<sub>3</sub>–C horizon).

Texture is dependent on the amount of clay in the parent material and may range from sandy clay loam to medium clay with coarse sand grains present.

Occasionally weak to moderate angular blocky structure is present. Colour ranges from common light grey (2.5Y 8/1, 10YR 8/1) to dull yellow orange (10YR 7/2, 10YR 6/4). Red, yellow or orange mottles are common. The pH ranges from strongly acid (pH 4.5) to slightly acid (pH 6.0). Stones including sandstone rock fragments, quartz and conglomerate pebbles are often present. Charcoal fragments are absent and roots are few.

**do5—Strongly pedal clay.** Light to medium clay with strongly developed structure and smooth ped fabric. It occurs as subsoil (B horizon) on fine-grained bedrock. Ped size ranges considerably from small (5–20 mm) polyhedral and sub-angular blocky to large (20–100 mm) prismatic or sub-angular blocky. This material often has low wet bearing strength. Colour ranges from reddish brown (5YR 4/8) to dull yellow orange (10YR 7/2). Grey and/or orange and/or red mottles are often present and increase in number with depth. The pH ranges from moderately acid (pH 5.0) to slightly acid (pH 6.0). Small rock fragments are commonly present, roots are few and charcoal fragments are rare or absent.

## Occurrence and Relationships

**Coarse sandstones and conglomerates.** Generally up to 10 cm of brown loose loamy sand (**do1**) overlies 10–30 cm of hardsetting bleached yellowish brown clayey sand (**do2**) and 30–60 cm of earthy bright yellowish brown sandy clay loam (**do3**) [Yellow Earths (Gn2.24), Yellow Podzolic Soils (Dy2.21, Dy3.21) and Soloths (Dy2.41, Dy3.41)]. **do3** occasionally overlies up to 50 cm of massive pale grey clay (**do4**). Occasionally **do1** has been eroded away and **do2** is exposed at the surface. Total soil depth ranges between 50 and 150 cm, and the boundaries are all gradational except for that between **do2** and **do3** which is clear.

Occasionally **do1** and **do2** overlie bedrock [Siliceous Sands and Lithosols (Uc1.22)]. Total soil depth is <50 cm.

**Fine-grained substrate material.** Occasional lenses of fine-grained bedrock such as siltstone and mudstone occur which have up to 10 cm of **do1** overlying up to 30 cm of **do2** and >100 cm of strongly pedal clay (**do5**) [Yellow Podzolic Soils (Dy2.11, Dy3.21), Soloths (Dy2.41) some Red Podzolic Soils (Dr3.21)]. Total soil depth is 75–200 cm, and the boundaries between soil materials are usually sharp.

**Drainage lines and footslopes.** Up to 20 cm of **do1** overlies up to 30 cm of **do2** which in turn overlies >100 cm of **do4** [Grey Earths (Gn2.94), Yellow Leached Earths (Gn2.74), Soloths (Dy3.41) and Gleyed Podzolic Soils (Dg4.41)].

## LIMITATIONS TO DEVELOPMENT

### Landscape Limitations

Erosion hazard  
Seasonal waterlogging  
(localised) High run-on  
(footslopes)  
Mine subsidence district  
Foundation hazard  
(localised)

### Soil Limitations

<b>do1</b>	Very low fertility Strongly acid Stoniness (localised) Low available water-holding capacity High permeability High potential aluminium toxicity Sodicity
<b>do2</b>	Very low fertility Strongly acid Hardsetting surface Stoniness (localised) Sodicity High erodibility High potential aluminium toxicity Low available water-holding capacity
<b>do3</b>	Very low fertility Strongly acid Stoniness (localised) Hardsetting surface High potential aluminium toxicity Low available water-holding capacity
<b>do4</b>	Very low fertility Low permeability Strongly acid Stoniness (localised) Sodicity High potential aluminium toxicity



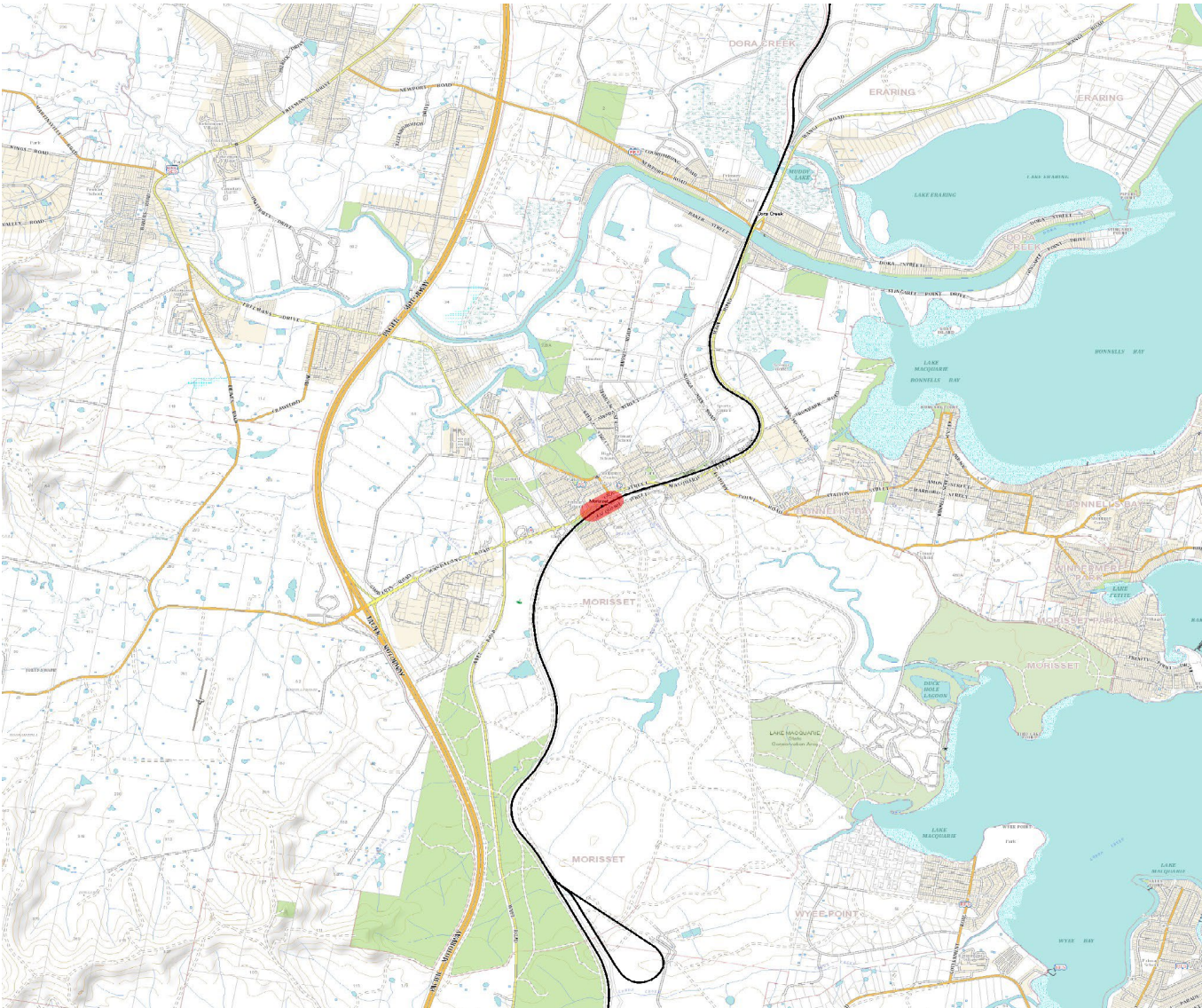




# Sydney Trains Environmental Information System SER Report

This report has been automatically generated on 2024/07/04 - 11:54 from the Sydney Trains Environmental Information System in order to indicate potential environmental constraints which may be present within the chosen area of interest. This is the SER report contains a limited Environment dataset, check procedures to confirm if this report is appropriate for your project.

## Area of Interest

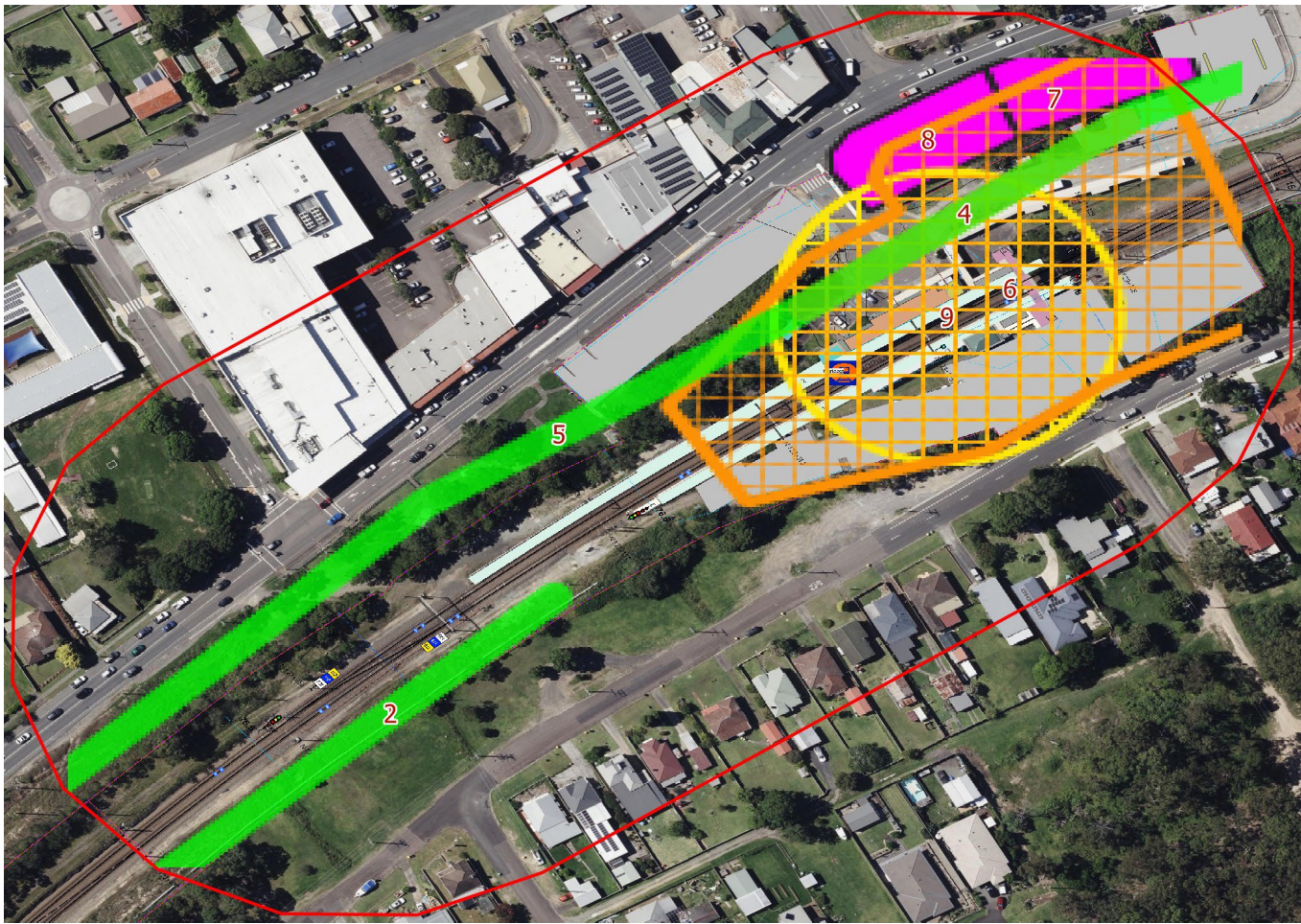


## Summary

Layer Name	Result
contaminated_lands	Affected
hazmat_register	Affected
Heritage_sites	Affected
HSM_ELECTRICAL_FEEDER	Affected
Aboriginal_Heritage_sites	Not affected
AcidSulfateSoilRisk	Not affected
AP_Export	Not affected
HSMS_ESS_SHAPE	Not affected
HydroLine	Not affected
NPWS_Estate	Not affected
Special_and_Controlled_Areas	Not affected

## SER Report Results Map





SER Report Result Tables

1SER_REPORT_ID	Category	EF_ESS_ID	EF_INFO	END_POLE	FDR_NAME	INSTRUCTIO	START_POLE	Sub_Categ
1	Threatened Species	1412		122	674	Plants must not be disturbed or damaged. Contact the Environmental Officer prior to any disturbance in the area, including slashing, clearing, pesticide or eathworks.	102	Angophora inopina
2	Threatened Species	1219		122	674	Plants or soil of this threatened Community must not be disturbed or damed in any way, including grasses, ground cover, shrubs and trees. Contact the Environmental Officer prior to any disturbance in	104	Swamp Sclerophyll Forest



1SER_REPORT_ID	Category	EF_ESS_ID	EF_INFO	END_POLE	FDR_NAME	INSTRUCTIO	START_POLE	Sub_Categ
3	Threatened Species	1228		49	855	Plants or soil of this threatened Community must not be disturbed or damaged in any way, including grasses, ground cover, shrubs and trees. Contact the Environmental Officer prior to any disturbance in	31	Swamp Sclerophyll Forest
4	Non aboriginal Her	1663	Historic Heritage Item – Morisset Railway Station and Residences (Poles 44-45)	45	855	Contact the Environmental Officer prior to any disturbance in the area, including slashing, clearing, pesticide or eathworks.	44	Cultural landscape or plantings
5	Threatened Species	1207		49	855	Plants must not be disturbed or damaged. Contact the Environmental Officer prior to any disturbance in the area, including slashing, clearing, pesticide or eathworks.	31	Angophora inopina

Heritage\_sites

1SER_REPORT_ID	CLS_ID	Hazard	Instruction	KM_END	KM_START	SITEADDRESS	SITE_NAME	SiteMap
7	53	Known contaminated land risk	Contact Environment Officer prior to disturbance			22 Dora Street, Morisset	Morisset - Former Assistant SM's Residence	<a href="#">Site Map</a>
8	54	Known contaminated land risk	Contact Environment Officer prior to disturbance			24 Dora Street, Morisset	Morisset - Former SMs Residence	<a href="#">Site Map</a>

contaminated\_lands

1SER_REPORT_ID	Asset_type	Branch	Email	Email_1	End_KM	FolderURL	Lat	Line_Manag	Location	Long	NextInspec	Occupier	Phone_Num	Phone_num_	Radius
9	Stations	Customer Operations		Redacted		<a href="#">Morisset Station Hazmat folder</a>	-33.109019	Redacted	Newcastle	151.487984	16/03/2027		Redacted	Redacted	50

hazmat\_register

## Caveat

Data used on this site includes data provided under Creative Commons license from NSW Department of Planning, Industry and Environment, NSW Department of Customer Service and the Commonwealth of Australia, and under license from NSW Office of Environment and Heritage’s Atlas of NSW Wildlife, which holds data from a number of custodians. No representations are made by the Licensor as to the accuracy of the Data made available, and the Licensee acknowledges that the Data may contain omissions and errors. Please refer to the OEH Sensitive Species Data Policy The information presented in this report has been collated from a range of data sources. All known potential environmental constraints within the selected study area are included in this report however it is acknowledged that these data may include errors and omissions. Additional data not included in the Sydney Trains Environmental Information System, such as bushfire prone land or Commonwealth threatened species, may also apply to your project area. For further information please contact environmental support staff.



## Appendix B: Statement of Heritage Impact



09 July 2024

Redacted

Senior Environmental Advisor

Transport for Tomorrow

Email: Redacted

Dear Redacted

**Re: Regional Infrastructure Upgrades and New Intercity Fleet Stations Project: Morisset Station, Statement of Heritage Impact**

## Project background

Transport for NSW is replacing the existing rolling stock on the rail network running from Sydney to Newcastle on the Newcastle and Central Coast Line, to Lithgow on the Blue Mountains Line, and to Kiama and the Illawarra and South Coast Line. The upgrades to the intercity line stations will enable the safe operation of the Mariyung trains.

The combined scope of the Regional Infrastructure Upgrades - NIF Stations Project spans over 102 stations of the Intercity Network, across 226 platforms, several of which are bi-directional encompassing 322 running directions (Platform Directions) at those platforms.

Artefact Heritage and Environment (Artefact) have been engaged by Transport for Tomorrow, on behalf of Transport for NSW, to prepare a Statement of Heritage Impact (SoHI) to review the proposed station and infrastructure upgrade works at Morisset Station. Morisset Station is a heritage item of local significance listed on the Transport Asset Holding Entity (TAHE) Section 170 Heritage and Conservation Register (TAHE s170 Register).

The aim of this report is to identify the potential impacts that the proposed upgrade works would have on heritage and archaeological assets at Morisset Station. The report also provides advice on appropriate heritage approval pathways and provides management recommendations for mitigating the heritage impacts.

## Study area

The study area assessed in this report consists of the city (southern) side of platform 2 on the down main rail track at Morisset Station. Morisset Station occupies parts of DP1191340 Lot 10 and DP1002965 Lot 3. It is bounded Dora Street to the northwest and Macquarie Street to the southeast. It is situated within the suburb of Morisset of the City of Lake Macquarie Local Government Area (LGA), and the parish of Morisset in the County of Northumberland.

The location of the study area is shown in Figure 1.



## Proposed works

The proposed works at Morisset Station consist of the extension of the southern end of platform 2. The works will feature the following:

- 3.8m long platform extension comprised of two precast reinforced concrete culvert units with an insitu deck
- New mid-hinged swing-down type light pole with LED luminaire
- New end of platform gate and staircase for corridor access
- Extension of tactiles, coping edge and fencing on platform
- A new CCTV camera mounted to an existing light pole 74m from the platform end, which would connect to the station building via an existing communication conduit.

The construction of the platform extension will include the following activities:

- Removal of existing fence, date and stairs at the end of the platform
- Removal of existing warning signage, which is to be salvaged for reuse
- Excavation of about 1.8m below track for the platform extension footprint
- Construction and installation of the new platform extension. The existing platform end would not be cut down, instead the new extension would feature a strip edge to act as an isolation joint between the extension and the existing platform deck
- The concrete slab edge would be finished with slip resistant paint coloured to match the existing asphalt pavement
- Replacement of existing junction box and conduit connecting to existing light pole with new junction box and 50mm low voltage conduit attached via saddle clamps
- Regrading of the ground surface to ensure run-off water grades away from the platform structure.

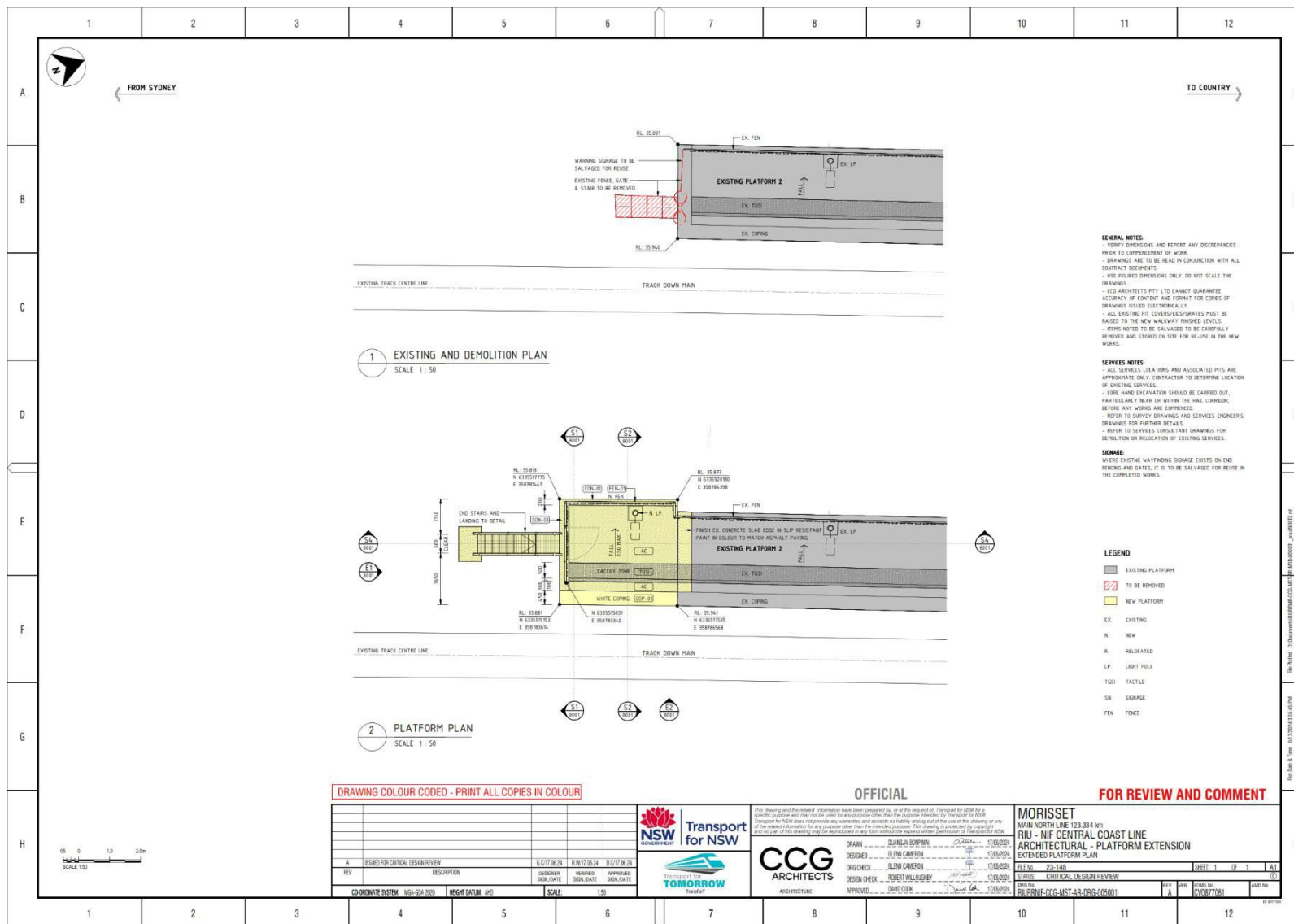
Extracts of the design plans for Morisset Station are shown in Figure 2 to Figure 4.





Figure 1: Study area





**Figure 2: Plan of proposed platform extension (Source: Transport for Tomorrow 2024)**



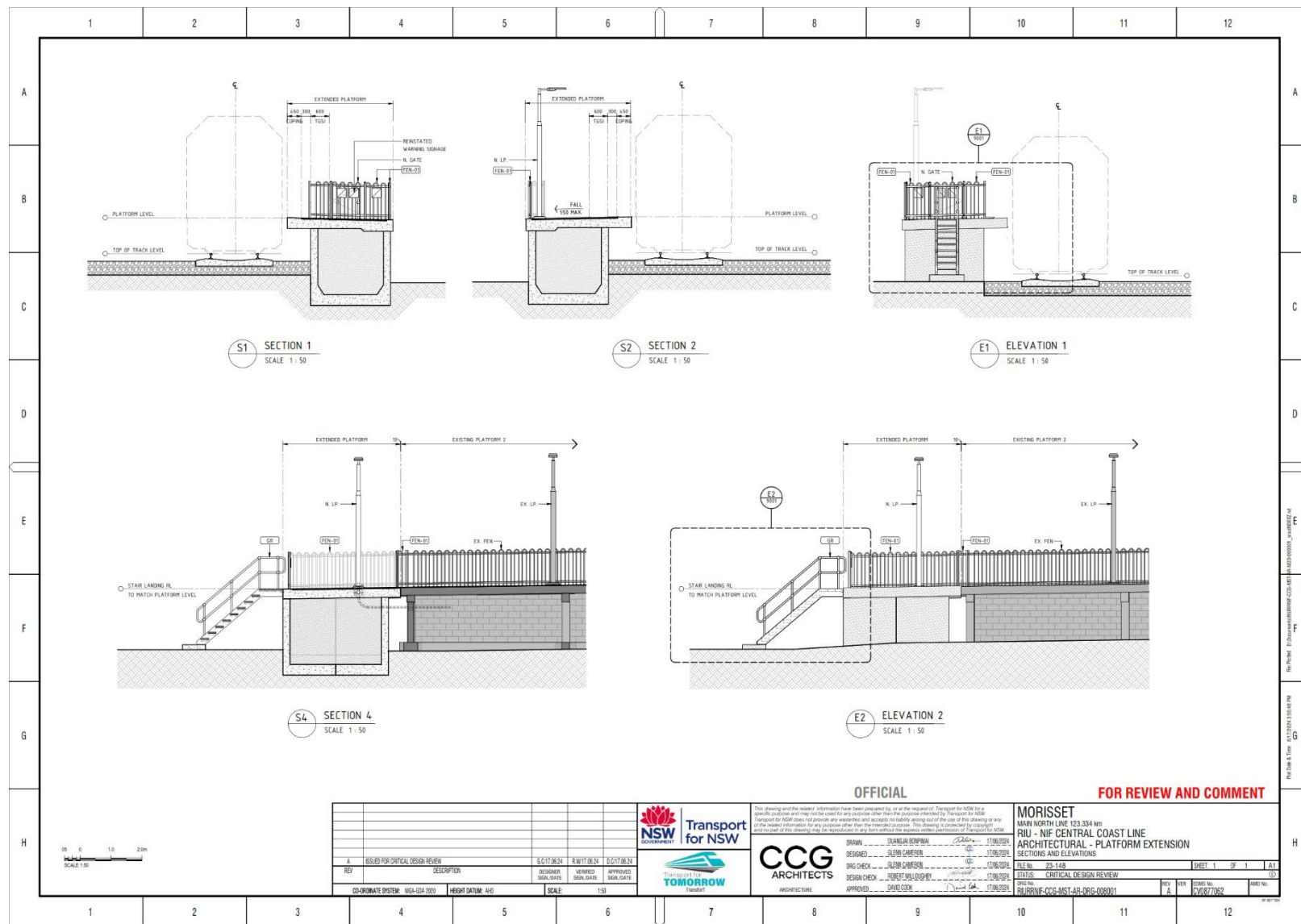
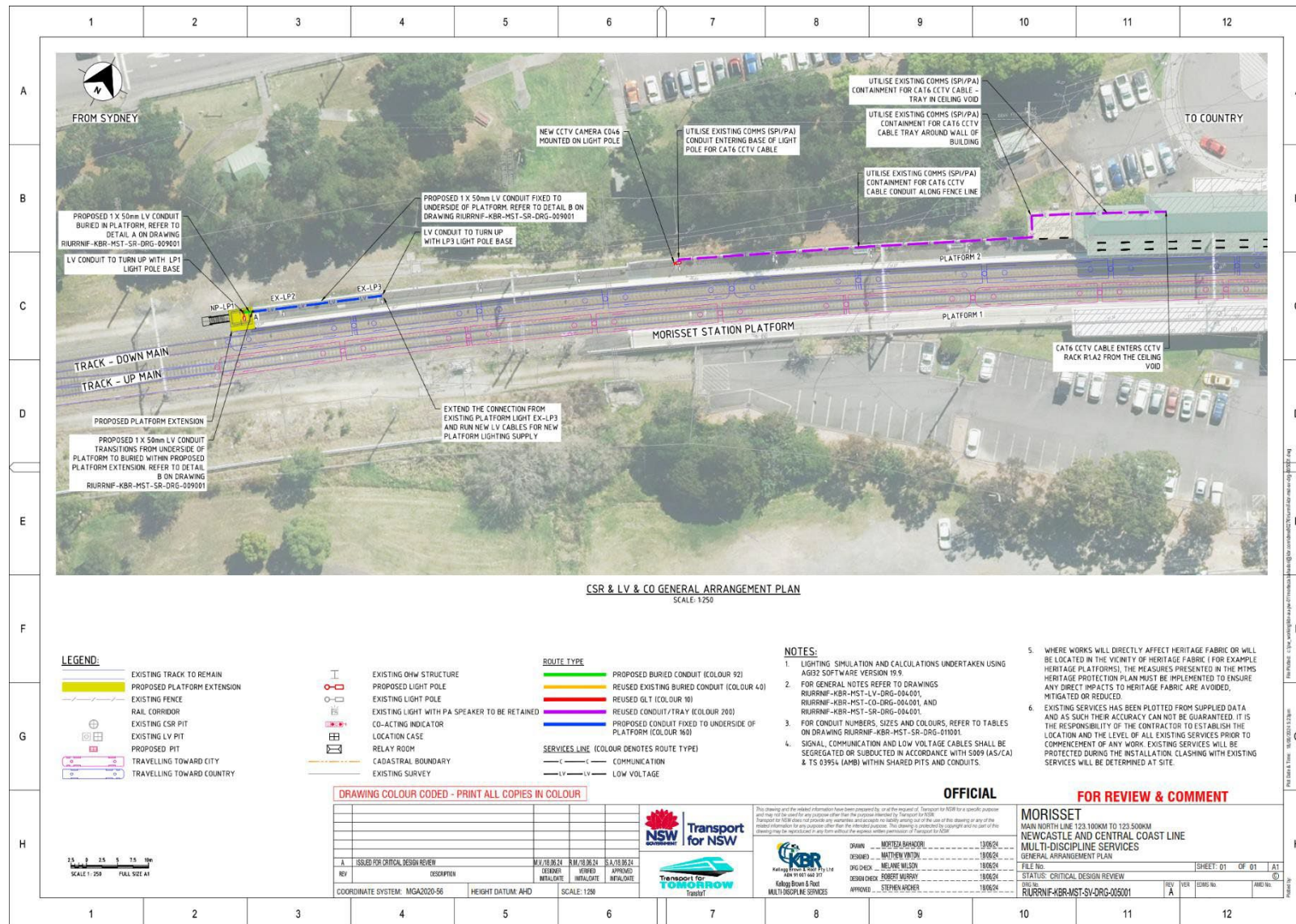


Figure 3: Section of proposed platform extension (Source: Transport for Tomorrow 2024)



## Regional Infrastructure Upgrades and New Intercity Fleet Stations Project Morisset Station: Statement of Heritage Impact



**Figure 4: Proposed CCTV camera and conduit installation (Source: Transport for Tomorrow 2024)**



## Limitations

This report has relied on a desktop assessment of the study area without a site visit being undertaken. As the works are limited to a short platform extension it is assumed that there would be no visual impacts outside of the station, and therefore impacts to heritage items in the surrounding area are not considered. A high level non-Aboriginal (historical) archaeological assessment is provided, which primarily relies on previously prepared assessments. This report does not include an assessment of Aboriginal heritage.

## Methodology

This report has been prepared in consideration of relevant state and federal heritage legislation, including the following:

- *Environmental Protection and Biodiversity Conservation Act 1999*
- *NSW Heritage Act 1977* (Heritage Act)
- *NSW Environmental Planning and Assessment Act 1979*
- *State Environmental Planning Policy (Transport and Infrastructure) 2021*.

This report has been informed by, and has been prepared in accordance with, relevant heritage guidelines and standards including:

- *Assessing heritage significance: Guidelines for assessing places and objects against the Heritage Council of NSW criteria* (Department of Planning and Environment, 2023)
- *Guidelines for preparing a statement of heritage impact* (Department of Planning and Environment, 2023)
- *Material Threshold Policy* (Department of Planning and Environment, 2022)
- *Investigating Heritage Significance Guidelines* (NSW Government, 2021)
- *Levels of Heritage Significance* (NSW Heritage Office, 2008)
- *Assessing Significance for Historical Archaeological Sites and 'Relics'* (Department of Planning, 2009)
- *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* (Australia ICOMOS 2013).

## Heritage listings

A search of relevant state and federal statutory heritage registers was undertaken on 17 June 2024. This included a search of the following:

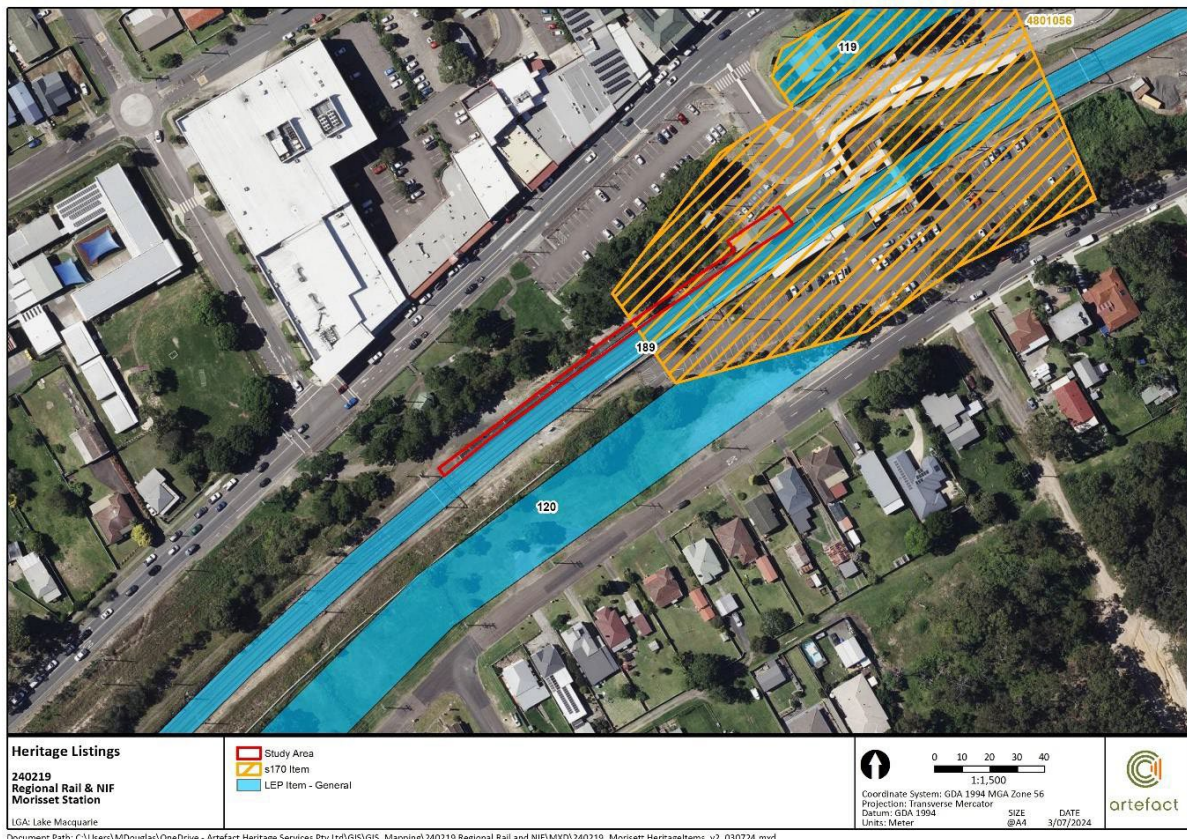
- World Heritage List
- Commonwealth Heritage List
- National Heritage List
- State Heritage Register
- TAHE Register
- Lake Macquarie Local Environmental Plan 2014 (Lake Macquarie LEP)
- NSW State Heritage Inventory (SHI) database.

A summary of the relevant heritage listings is provided in Table 1 and shown in Figure 5.



**Table 1: Results of register searches relevant to the study area**

Item name	Address	Listing	Item no.	Significance
Morisset Railway Station Group and Residences	Dora Street, Morisset, NSW	TAHE s170	SHI 4801056	Local
Garden Suburb To Wyee, Railway Line	Garden Suburb, extent of LGA	TAHE s170	SHI 4805752	Local
Great Northern Railway	Line passes through Lake Macquarie City from Garden Suburb to Wyee	Lake Macquarie LEP	189	Local



**Figure 5: Heritage items within and near the study area. The s170 curtilage of Garden Suburb To Wyee, Railway Line is not shown, but it is assumed that it matches the curtilage of LEP 189**

## Historical overview

The historical overview of Morisset Station has been extracted from the SHI entry for the s170 heritage item:

*Railway construction passed through Morisset with the opening of line on 15 August 1887. The construction name was 'Coorumbung' and when opened, the station was renamed 'Morrisset'. On 1 February 1889, the spelling was changed to 'Morisset', the name it carries today.*



*The station name honours James Thomas Morisset, the military Commandant of Newcastle penal settlement from 1818 until 1823. Morisset is remembered locally as the first European to make an overland trip from Newcastle to Sydney in 1823, camping under a tree on the west side of Lake Macquarie near the present Morisset railway station. A Eucalyptus tree on the southern boundary of the station is remembered in local tradition as the same tree, protected during early logging and land-clearing, and is marked with a commemorative plaque.*

*The line was constructed as 'single line' and at the time of opening in 1887, Morisset comprised a single platform on the down side of the line with a small station building. A crossing loop (on the Up side), a goods siding and goods shed on the Down side at the Newcastle-end of the platforms, with signals and points completing the layout.*

*By 1910, the section through Morisset had been duplicated. The arrangement at Morisset included two side platforms, one each for the Up and Down lines, with a new, larger station building and signal box on the Down platform. A footbridge connected the two platforms. New 'back-in, dead-end' Refuge Sidings were added, with the down Refuge Siding at the Sydney-end of the platform and the up Refuge Siding at the Newcastle-end of the platform. The Goods Siding and Goods Shed remained as built.*

*In 1937, a new station building (in brick) and some improvements to sidings and crossovers were completed. It is likely that this redevelopment was associated with the increased number of female patients who were being transferred from the Gladesville Hospital to the Morisset Hospital by train, following the arrival of the first female patients and female nursing staff at Morisset Hospital in March 1934.*

*From the 1940s through to the 1960s, a few improvements were completed at Morisset, mainly associated with sidings and the introduction of automatic signals in various sections of the main lines near Morisset.*

*Electrification of the main line between Gosford and Newcastle was opened in May 1984, an extension of the Sydney-Gosford electrification which had been completed in 1960. The new electrification project involved new or rebuilt platforms, station buildings, footbridges, overbridges and underbridges, line side buildings, sidings and a myriad of structures in that section in order to permit the operation of the wider electric passenger rollingstock and electric locomotives. Accordingly, major upgrading was undertaken at Morisset, and that included total replacement of the some original station buildings and platforms. Lifts have been installed to aid passengers with access to the platforms and footbridge.*

*The down Refuge Siding has been removed. It survived until the late 1980s, but was in practice, too short for most trains.<sup>1</sup>*

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<sup>1</sup> Heritage NSW, 2022a. "Morisset Railway Station Group and Residences". *SHI database no. 4801056*, accessed online at: <https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=4801056>.





**Figure 6: Historical image of Morisset Station in 1896. Source: Snowball, Ralph (1849-1925). 'Railway Station, Morisset, NSW, 25 February 1896'**

### Assessment of significance

The following statement of heritage significance for Morisset Station has been extracted from the SHI entry for the s170 item:

*Morisset Railway Station has heritage significance at a local level. Opened in 1897 Morisset station had a direct impact on the development of the local area, with the central commercial area of Morisset growing around the station. The current station building, built in 1938, physically represents the growth of Morisset in the 1930s, associated with the opening of Morisset Hospital and in particular the increasing demand on rail transport created by the Hospital. The current form of the station group reflects changing technological and social requirements of the station since the late 19th century. The Station has aesthetic significance as a good example of a 1930s railway station building with a highly intact incorporated signal box, with simple detailing typical of the interwar period. The two residences, particularly the Station Master's Residence, are good representative examples of the standard design Type J1 and J2 railway residences that were constructed for several decades from the 1880s.*

*A Eucalyptus sp. tree on the southern boundary of the station ('Morisset's tree') has local heritage significance as a rare remnant tree that may predate European*



*settlement of the area, and which is historically associated with James Thomas Morisset, early military Commandant of the Newcastle penal settlement.<sup>2</sup>*

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The s170 SHI entry for Garden Suburb To Wyee, Railway Line does not contain a detailed statement of significance.<sup>3</sup> Therefore, the following statement of significance has been extracted from the SHI entry for the LEP listed Great Northern Railway:

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*SIGNIFICANCE - 1993: At State level, the Main Northern Line changed the relationship of Sydney & the North, by speeding up communications & transport. It changed profoundly the relationship of Newcastle with its hinterland & the north, & the standing of Newcastle as a great commercial centre. It confirmed the importance of Newcastle as a great coaling port, comparable with Cardiff in Wales. Locally, the railway brought changes to the pattern of development of Lake Macquarie. It was the route by which Lake Macquarie coal was carried to its markets. It linked the towns & villages of western Lake Macquarie with Newcastle, & was a way for holidaymakers to reach the Lake. It opened the Lake to residential development &, since electrification, has become a commuting link to both Newcastle & Sydney for residents of Lake Macquarie.*

*LEVEL of SIGNIFICANCE - 1993: State Significance - high*

*Regional Significance - high*

*Local Significance - very high*

*Group Significance - very high<sup>4</sup>*

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It is noted that the s170 curtilage for Morisset Station does not include the entire station, namely it does not include about 75m of the southern section of Platform 2 where the platform extension would be constructed. This is likely because this section of platform 2 was part of more modern extension works in 1997.<sup>5</sup> As a result, this section of the platform is considered to be of little to no significance to the heritage listing for Morisset Station. Furthermore, because the heritage values of Garden Suburb To Wyee, Railway Line are partially linked to Morisset Station, this section of the platform is also considered to be of little to no significance to the heritage listings for Garden Suburb To Wyee, Railway Line and Great Northern Railway.

## Physical description

The physical description of relevant parts of Morisset Station have been extracted from the SHI entry for the s170 item:

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*Morisset Railway Station is located in a large open area between Dora and Macquarie Streets at the centre of Morisset. The station comprises two platforms, a station building (with incorporated signal box); modern waiting room; modern footbridge; and two railway residences. The main approach to the station is by*

<sup>2</sup> Heritage NSW, 2022a. "Morisset Railway Station Group and Residences". *SHI database no. 4801056*.

<sup>3</sup> Heritage NSW, 2022b. "Garden Suburb to Wyee, Railway Line". *SHI database no. 4805752*, accessed online at: <https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=4805752>.

<sup>4</sup> Heritage NSW, 2024. "Great Northern Railway". *SHI database no. 1910139*, accessed online at: <https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=1910139>.

<sup>5</sup> Heritage NSW, 2022a. "Morisset Railway Station Group and Residences". *SHI database no. 4801056*.



*means of a forecourt off Dora Street which, along with the adjacent Lions Park, creates a landscaped setting for the main station building. There are car parks adjacent to the station, accessed from both Dora and Macquarie Streets. The southern car park is located on the former siding and goods yard.*

#### STATION BUILDING & SIGNAL BOX (PLATFORM 2) (1938)

*Exterior: The principal building at Morisset Railway Station is on the Down line: a single storey brick building dating from 1938 with a corrugated metal hipped roof. This functional building lacks the elaborate detail associated with earlier twentieth century station designs, and has a cantilevered steel-framed awning on the platform (southern) side with a box gutter. The station features timber framed double hung sash windows and doors, with brick window sills and lintels, and some original terrazzo thresholds remain extant. A c.1990s ramp (with hand rail) leading from the ticket office to the platform is a visually intrusive item. Simple brick chimneys remain at both the east and west ends of the building. The eastern end of the building contains a Type H2 signal box with large sets of sliding windows with clear glazing.*

*Internal: Morisset station building has simple internal finishes with rendered walls, fibre cement ceilings with battens and tiled floors (modern). Some original furniture remains extant, including original timber benches in the waiting room/ticket office. Two single timber rollover indicators are on display in the waiting room ticket area. They include clock faces, no foot pedals and are covered with protective perspex sheets. A rare timber sliding door top hung from a metal track leads from the ticket office to the signal box. Internally, the Signal Box retains a high degree of original fabric including a 34 lever mechanical signalling frame, timber framed pulling list, timber framed Morisset control panel (dated 1963), Vales Point control panel (push button type), timber cabinets with signal logs and keys, timber telephone cabinet, warning bells, detonator box, padlocks, shelving, etc. The signal box has a raised timber floor, with interlocking equipment below. A separate relay room has equipment from the c1960s and more recent upgrades....*

#### ...PLATFORMS

*Platform 1 is a modern concrete structure of crude construction. Platform 2 features an asphalt surface and concrete face on a steel frame made of railway tracks.<sup>6</sup>*

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The following description of the Great Northern Railway has been extracted from the SHI entry for the LEP heritage item:

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#### PHYSICAL CHARACTERISTICS - 1993:

*DESCRIPTION: The railway line passes through Lake Macquarie from Tickhole Tunnel in Garden Suburb, down Tickhole Creek to railway stations at Cardiff, across Winding Creek to Sulphide Junction (Cardiff Workshops), Cockle Creek, Teralba, Booragul, Fassifern, Awaba, Dora Creek, Morisset & Wyee.*

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<sup>6</sup> Heritage NSW, 2022b. "Morisset Railway Station Group and Residences". SHI database no. 4801056.



*The 1887 railway was built on steep grades at Winding Creek & from Teralba to Fassifern. Major deviations were soon built (1902/3) which lengthened the line, and new stations were introduced at Cardiff (1902) and much later at Booragul (1926).*

*The City of Lake Macquarie section of the Main Northern Line travels through undulating and often picturesque country, with successive cuttings and embankments on most of the route, and two major bridges.<sup>7</sup>*

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**Figure 7: View of the southern end of Platform 2 (right) at Morisset Station<sup>8</sup>**

<sup>7</sup> Heritage NSW, 2024. "Great Northern Railway". *SHI database no. 1910139*.

<sup>8</sup> Bilal K., 2018. Morisset Station. *Foursquare City Guide*. Accessed online at: <https://foursquare.com/v/morisset-station/4b8f6922f964a520c65333e3/photos>.



## Historical archaeological assessment

### Previous assessments

This report provides a high-level assessment of historical archaeological potential for the study area. This assessment is primarily based on two previous studies that have assessed the archaeological potential of Morisset Station. In 2021 Aurecon conducted a preliminary heritage impact assessment for Morisset Station as part of the Morisset and Vales Point (MVP) Resignalling Works,<sup>9</sup> and in 2023 Artefact provided an updated archaeological impact assessment for the same project.<sup>10</sup> Information regarding the areas of Morisset Station relevant to the current study area have been reproduced from Aurecon's report and are provided below.

Aurecon identified the following four phases of post-contact historical development for the MVP Resignalling Works project area:

- Phase 1 – Early exploration, land grants and settlement (1790s – 1860s)
- Phase 2 – Construction of the railway (1880s)
- Phase 3 – Duplication of the railway (1910 – 1930s)
- Phase 4 – Post-war development and electrification (1940s onwards).

### Zone 1 – Morisset Station

Aurecon identified Morisset Station as Zone 1 and made the following conclusions:

---

*There is low potential for subsurface deposits or works associated with the former 19th Century platform or the former c.1910 platform on the Down side including all buildings and structures pre-dating the current Station due to the broad-scale clearance, demolition and disturbance that occurred at duplication in the c.1910s and electrification in the c.1980s.*

*Structural remains from historical phases 2 – 3 including stone foundations, concrete coping, original footings, or gravel associated with the former platform surfaces, or elements of rail infrastructure such as rail tracks, sleepers, services, roads and pathways, remnant landscaping, culverts, and water receptacles would all be considered 'works' under the Act and not 'relics' under the Heritage Act. They would therefore not be covered by the archaeological 'relics' provisions of the Act.<sup>11</sup>*

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The following significance assessment was provided for Zone 1:

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*Zone 1 has some very limited potential to contain remains in the form of artefact deposits associated with the c.1880s Morisset station platform and related components, and the c.1910s Down platform. This potential would be manifested in artefact bearing deposits; however, it is unlikely that substantial intact areas of deposits survive. Any remains are likely to be highly truncated and disturbed and may not adequately contribute to research potential and historical information. Intact archaeological evidence at Morisset, specifically artefact bearing deposits*

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<sup>9</sup> Aurecon, 2021. *Morisset and Vales Point Resignalling Works, preliminary Heritage Impact Assessment*. Report to Sydney Trains.

<sup>10</sup> Artefact, 2023. *Morisset to Vales Point Project: Non-Aboriginal (Historical) Archaeological Inputs for Detail Design Phase*. Report to CCG Architects.

<sup>11</sup> Aurecon, 2021: 124.



*dating from Phases 1-3 may hold the ability to demonstrate the rail history of the late 19th Century as well as early to mid-20th Century railway development in the Morisset area and may meet the threshold for local significance dependant on the nature and extent of the find.*

*Fragmented remains of former rail infrastructure and built elements such as remnant footings, rail tracks, sleepers, services, roads and pathways, remnant landscaping, culverts, water receptacles and wells would be considered works and are unlikely to meet the threshold for local significance. These elements would not contribute to historical or research questions and as such would not be considered significant at a local or State level.<sup>12</sup>*

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### **Zone 3 – Remainder of the study area**

Aurecon made the following conclusions regarding the remainder of the MVP Resignalling Works project area (Zone 3):

*There is low to nil potential for any subsurface works or deposits associated with the colonial development in the area or the construction of the line in the late 19th Century. Most former known structures such as signal huts have been removed, replaced, or demolished, largely between the 1960s and 1980s, so remains are likely to be extremely disturbed and fragmented or non-existent.*

*This includes potential subsurface deposits or works associated with former c.1915 brick culverts or former c.1880s brick culverts, former c.1910s Down Refuge Siding on the City side of Morisset Station, the former c.1880s saw mill located on the Country side of Morisset Station, the former c.1920s Dora Street Road Overbridge, and any other structures or infrastructure associated with early colonial and rail development along the study area such as timber posts and fencing, timber sleepers, track, structure footings, or any rubbish or ash pits. Redevelopment and constant disruption of the archaeological record in the rail corridor has resulted in very low to no potential for any such remnants to remain intact.<sup>13</sup>*

---

The following significance assessment was provided for Zone 3:

*Any potential subsurface archaeological evidence in these areas are not expected to survive across much of the study area. Any possible resources will not yield information that will contribute to a greater understanding of the cultural history of NSW or the Lake Macquarie district and are likely to be highly disturbed or fragmented.*

*If any potential deposits or works are found of the historical culverts, former saw mill, former Down Refuge Siding or former Dora St bridge, these could be archaeologically significant at a Local level depending on the nature, extent, and condition of the resources if located. Information revealed from these resources could hold minor information about late 19 Century rail development and technology at Morisset. It could also hold substantial research potential about the*

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<sup>12</sup> Aurecon, 2021: 135.

<sup>13</sup> Aurecon, 2021: 132.



late 19th Century and early 20th Century timber industry in the area, if any intact deposits or works were located from the former saw mill.

However, outside Zone 1 there is limited localised areas of potential historical archaeological resources that are expected to survive. Former rail infrastructure and built elements such as remnant footings, rail -racks, sleepers, services, roads and pathways, remnant landscaping, culverts, water receptacles and wells would be considered works and are unlikely to meet the threshold for local significance.<sup>14</sup>

### Archaeological context summary

The following table summary of historical archaeological context was provided for the MVP Resignalling Works project.

**Table 2: Summary of historical archaeological potential<sup>15</sup>**

Phase of historical development	Zone	Item	Potential for survival	Significance
Phases 2-3	All zones	Artefact bearing deposits associated with early rail history 1880s-1930s of the Morisset area	Low	Nil
Phase 1	All zones	Early colonial structures associated with exploration and early settlement	Nil	Local
Phase 2	Zone 1, 1.1 and 1.2	c.1880s Morisset Station platform and station building; c.1880s goods shed, loading bank, sidings, stockyards, dam	Low to moderate	Nil
Phase 3	Zone 1	c.1910 Down Platform at Morisset	Low to moderate	Nil
Phases 2-3	Zone 1, 1.1 and 1.2	Rail infrastructure; remnant footings; rail-tracks, sleepers, services, roads and pathways; remnant landscaping, culverts and water receptacles	Low	Nil
Phases 2-3	Zone 2 and 3	Corridor infrastructure; remnant footings; rail-tracks, sleepers, services, roads and pathways; remnant landscaping, culverts and water receptacles and wells	Low to nil	Nil

### Assessment of archaeological potential

The proposed excavation works at Morisset Station would be located at the southern end of the platform 2. This area is within the Zone 3 area that was previously assessed by Aurecon for the MVP Resignalling Works project. This area was assessed as generally having nil to low archaeological potential for remains such as former rail tracks and sleepers, and except for specific features, it was determined that archaeological remains associated with this area typically would not reach the threshold of local significance. One historical feature of note that was identified by Aurecon and is relevant to the current study area is the former Down Refuge Siding located on the city side of the station that was established in c1910s and removed in the late 1980s.<sup>16</sup> A review of available historical

<sup>14</sup> Aurecon, 2021: 138.

<sup>15</sup> Aurecon, 2021: 161.

<sup>16</sup> Aurecon, 2021: 99.



plans indicates that the proposed platform extension footprint is located along the alignment for the former Down Refuge Siding (Figure 8). Whilst it was assessed that there is nil to low potential for remains of the Down Refuge Siding to be present within the study area, any surviving archaeological remains could be significant at a local level subject to their nature, extent and level of intactness.

### Summary of archaeological potential

The study area has nil to low potential to contain archaeological remains that may reach the threshold of local significance associated with the former Down Refuge Siding. Historical archaeological potential would by and large be limited to infrastructure 'works' such as railway track, sleepers, footings and/or poles of former signals. No archaeological 'relics' as defined by the Heritage Act are expected to be present.



**Figure 8: Excerpt from Morisset Station Arrangements, c.1915, showing the former Down Refuge Siding**

## Assessment of heritage impact

### Physical impacts

The proposed platform extension would be located within the curtilage of the heritage listed Garden Suburb To Wyee, Railway Line (SHI 4805752) and Great Northern Railway (LEP 189). Only the CCTV conduit connection to the platform building would be located within the curtilage of Morisset Station (SHI 4801056).

The platform extension works would involve the removal of the existing fence and gate at the end of the current platform, and localised impacts for the construction of the new platform (including



excavations, new stairs, and new platform gate), installation of new conduits, installation of the CCTV camera, and modification/extension of wearing surfaces, the coping edge, tactiles, and fencing where the platform extension would be connected. However, the current platform would otherwise remain largely as it is. These works would primarily be limited to the 1997 platform 2 extension which is not part of earlier fabric of the station group, and is assessed as having little to no contribution to the significance of Morisset Station (SHI 4801056), Garden Suburb To Wyee, Railway Line (SHI 4805752) and Great Northern Railway (LEP 189). Similarly, the new CCTV camera would be mounted to an existing pole outside of the station curtilage and is not considered to be significant fabric. As a result, it is assessed that these proposed works would not impact significant fabric.

The only work that would be undertaken within the curtilage of Morisset Station (SHI 4801056) itself would be the installation of a new cable from the conduit from the new CCTV camera on the platform to the CCTV rack in the platform building. However, the cable conduit would use an existing communication containment and cable trays. These are not considered to be significant fabric, and no new penetrations would be required. As a result, the cable conduit installation to the platform building would not impact significant fabric.

As the current section of platform 2 where the construction works would be undertaken is not considered to be significant fabric, there is no risk of potential impacts to significant heritage fabric as a result of vibrations generated by the works.

Overall, it is assessed that the proposed works would cause **neutral** physical impacts to Morisset Station (SHI 4801056), Garden Suburb To Wyee, Railway Line (SHI 4805752), and Great Northern Railway (LEP 189). There would be no impacts to the heritage significance of these listings.

## Visual impacts

The proposed works would involve the construction of a platform extension and associated activities that would be within an area visible to the public. The platform extension, including elements such as the new stairs and extended fencing, would be located about 75m from the curtilage of Morisset Station (SHI 4801056) and therefore would not visually impact the station group. It is located within the curtilages of Garden Suburb To Wyee, Railway Line (SHI 4805752) and Great Northern Railway (LEP 189) and would introduce a new structure within these curtilages. However, the extension would be installed alongside an existing modern platform extension, would be similar in scale and design, would feature matching wearing surfaces, and would be extremely localised in relation to the overall railway alignment. As a result, any visual impact from the platform extension would be minimal. The new CCTV camera on the platform would be small in size, would be visually unobtrusive, and would be located outside of the Morisset Station (SHI 4801056) curtilage. The new cable conduit connecting to the platform building would be collocated with existing cable trays, and would largely be located out of sight. Therefore, it would not impact the setting of the station group.

Overall, it is assessed that the proposed works would cause **negligible** visual impacts to Garden Suburb To Wyee, Railway Line (SHI 4805752) and Great Northern Railway (LEP 189), and **neutral** visual impacts to Morisset Station (SHI 4801056). There would be no impacts to the heritage significance of these stations.



## Archaeological impacts

The proposed excavation location in the study area has nil to low potential to contain archaeological remains associated with the former Down Refuge Siding, which may reach the threshold of local significance. Based on the low-nil potential for survival, it is assessed that impacts to archaeological remains associated with the former Down Refuge Siding would be **negligible**. Potential impacts limited to items assessed to be 'works' would also be **negligible** due to their inability to contain any research value.

## Cumulative impact assessment

Additional planned upgrade works at Morisset Station include the MVP Resignalling Works project. It was assessed that works for that project would cause moderate adverse impacts to Morisset Station (SHI 4801056) as a result of the removal of existing signals and associated infrastructure, and the decommissioning of the significant signal box. It was assessed that these works would cause neutral impacts to Garden Suburb To Wyee, Railway Line (SHI 4805752) and Great Northern Railway (LEP 189). It has been assessed that the proposed works would generally cause **neutral to negligible** impacts to these heritage items. As a result, it is considered that there would be **little to no** change to the cumulative impact level to these heritage items.

## Summary of heritage impact

A statement of heritage impact has been prepared according to NSW Heritage guidelines in Table 3.

**Table 3: Statement of heritage impact**

Development	Discussion
What aspects of the Proposal respect or enhance the heritage significance of the study area?	The proposed works would not physically impact any significant fabric and would facilitate the ongoing operation of Morisset Station. The platform extension would be largely consistent with the existing platform in terms of scale and shape. The cable conduit connection to the platform building would utilise existing cable trays to avoid the requirement for new connection points on significant fabric. There would be little to no change in the overall cumulative impact level to the identified heritage items when considering other recent project works.
What aspects of the Proposal could have a detrimental impact on the heritage significance of the study area?	<p>The proposed works would include the construction of a new structure within the curtilages of Garden Suburb To Wyee, Railway Line (SHI 4805752) and Great Northern Railway (LEP 189). However, the platform extension would be visually consistent with existing infrastructure and would only affect a localised area of the overall railway alignment.</p> <p>Archaeological potential associated with the former Down Refuge Siding has been assessed to be nil to low. As such, it is considered unlikely that substantial archaeological remains would be impacted. Given that archaeological remains defined as 'works' generally have little or no research value, any impact by the proposed works would not be considered to be detrimental.</p>
Have more sympathetic options been considered and discounted?	The proposed design is considered to be a suitably sympathetic and non-intrusive means of performing the necessary upgrades. Considering the platform extension is not impacting significant fabric and is located away from the significant station building, it is not likely that alternative designs would further reduce heritage impacts while still adhering to relevant design standards.



## Approval pathway

Morisset Station (SHI 4801056) and Garden Suburb To Wyee, Railway Line (SHI 4805752) are listed on the TAHE s170 Register. This report must be provided to Transport for NSW heritage specialists for review and endorsement, on behalf of TAHE. As impacts to Great Northern Railway (LEP 189) would be negligible, no consultation with Lake Macquarie Council regarding impacts to local heritage would be required in accordance with the *State Environmental Planning Policy (Transport and Infrastructure) 2021*. It has been assessed that potential archaeological remains within the study area would be limited to archaeological 'works', therefore, no excavation permits or exceptions are required under s139 of the Heritage Act.

## Conclusions and recommendations

### Conclusions

This SoHI has made the following conclusions:

- The proposed works are located within the curtilage of Morisset Station (SHI 4801056) and would cause **neutral** physical and visual impacts to the heritage item
- The proposed works are located within the curtilages of Garden Suburb To Wyee, Railway Line (SHI 4805752) and Great Northern Railway (LEP 189), and would cause **neutral** physical and **negligible** visual impacts to the heritage items
- The study area has nil to low potential to contain archaeological remains of the former Down Refuge Siding that may reach the threshold of local significance. Excavations for the works may cause **negligible** archaeological impacts. However, the risk of archaeological impacts is low, and any impacts would be limited to archaeological 'works'. There would be no impacts to archaeological 'relics' in the meaning of the Heritage Act
- No permits or exceptions are required under the Heritage Act, and no consultation with Lake Macquarie Council is required under the *State Environmental Planning Policy (Transport and Infrastructure) 2021*.

### Recommendations

This SoHI makes the following recommendations:

- This report is to be submitted to Transport's heritage specialists to inform them of the works and impacts within the s170 listed Morisset Station Group (SHI 4801056) and the Garden Suburb To Wyee, Railway Line (SHI 4805752)
- Due to the assessed nil to low archaeological potential, the works can be managed under an unexpected finds procedure. The Sydney Trains *Unexpected Archaeological Finds procedure 'EMS-09-PR-0164'* must be implemented for all ground disturbing works.
  - Should there be any unexpected finds during works, there may be a requirement for a s140 excavation permit to allow impact or removal of the exposed items should they be assessed to be archaeological 'relics' as defined by the Heritage Act
- If there are substantial changes to the proposed design, further assessment should be undertaken to identify if there would be any additional heritage impacts.



## References

- Aurecon, 2021. *Morisset and Vales Point Resignalling Works, preliminary Heritage Impact Assessment*. Report to Sydney Trains.
- Artefact, 2023. *Morisset to Vales Point Project: Non-Aboriginal (Historical) Archaeological Inputs for Detail Design Phase*. Report to CCG Architects.
- Bilal K., 2018. Morisset Station. Foursquare City Guide. Accessed online at: <https://foursquare.com/v/morisset-station/4b8f6922f964a520c65333e3/photos>.
- Heritage NSW, 2022a. "Morisset Railway Station Group and Residences". *SHI database no. 4801056*, accessed online at: <https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=4801056>.
- Heritage NSW, 2022b. "Garden Suburb to Wyee, Railway Line". *SHI database no. 4805752*, accessed online at: <https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=4805752>.
- Heritage NSW, 2024. "Great Northern Railway". *SHI database no. 1910139*, accessed online at: <https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=1910139>.



## 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 C-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. Control measures outlined in the Impact Assessment would be implemented to manage and minimise adverse 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 personnel and activities. Permanent changes to the platform would not be considered a transformation as it is in-keeping with the rail environment.	Minor, short term, negative
c	Any environmental impact on the ecosystems of the locality	During construction, any potential impacts to vegetation would be avoided.	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 would not result in any substantial effect on listed or unlisted heritage values. No impact to heritage significance is expected.	Nil
f	Any impact on the habitat of protected fauna (within the meaning of the <i>National Parks and Wildlife Act 1974</i> )?	There are no impacts to the habitat of protected fauna as all work is restricted to previously disturbed areas.	Nil



ID	Factor	Comment	Impact
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 works are not expected to endanger any species of animal, plant or other form of life, noting works are restricted to previously disturbed areas.	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 of 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
j	Any risk to the safety of the environment?	The Proposal is unlikely to cause any pollution or safety risks to the environment provided the recommended mitigation measures are implemented. Construction of the the proposal would be managed in accordance with a Site Environmental Management Plan. To reduce any risks to the environment.	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
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. Operation of the Proposal is unlikely to result in pollution of the environment.	Minor, short term, negative
m	Any environmental problems associated with the disposal of waste?	All spoil and waste must be classified in accordance with the Waste Classification Guidelines Part 1: Classifying waste (EPA, 2014) prior to disposal at an appropriately licensed facility.	Minor, short term, negative



ID	Factor	Comment	Impact
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?	Cumulative impacts have been considered in relation to the Sydney Trains' Morisset to Vales Point Resignalling (MVP) project. MVP works are Morisset are primarily related to signalling and trackworks and would use alternate construction access and laydown areas. The Proposal would not be expected to significantly contribute to an increase of impacts. With Sydney Trains undertaking the construction of the Proposal it is expected that cumulative impacts of construction can be minimised and managed.	Minor, short term, negative
p	Any impact on coastal processes and coastal hazards, including those under projected climate change conditions?	The Proposal would not impact on any 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 concurrently with Future Transport Strategy 2056. The Mariyung program implements some of the key initiatives of this Greater Sydney Region Plan to contribute to a modern and up to date rail system.	Nil
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.	Nil



## Appendix D: Consideration of Commonwealth environmental factors

Table D-1: Matters of national environmental significance

Environmental factor	Comment	Impact
a) Any impact on a World Heritage property?	There are no World Heritage properties nearby the Proposal site.	Nil
b) Any impact on a National Heritage place?	There are no National Heritage places nearby the Proposal site.	Nil
c) Any impact on a wetland of international importance (often called 'Ramsar' wetlands)?	There are no wetlands of international importance nearby the Proposal site.	Nil
d) Any impact on nationally threatened species, ecological communities or migratory species?	The open-forest has been extensively cleared although some small areas of disturbed bushland remain. Common species include scribbly gum ( <i>Eucalyptus haemastoma</i> ), red bloodwood ( <i>E. gummifera</i> ), brown stringybark ( <i>E. capitellata</i> ), smooth-barked apple ( <i>Angophora costata</i> ) and grey gum ( <i>E. punctata</i> ). Understorey species include hill banksia ( <i>Banksia spinulosa</i> var. <i>collina</i> ), banksia ( <i>Banksia oblongifolia</i> ), and mountain devil ( <i>Lambertia formosa</i> ). No impact would be expected on the nationally threatened species, ecological communities or migratory species.	Nil
e) Any impact on a Commonwealth marine area?	There are no Commonwealth marine areas nearby the Proposal site.	Nil
f) Does the proposal involve a nuclear action (including uranium mining)?	The Proposal would not involve a nuclear action.	Nil
Additionally, any impact (direct or indirect) on the environment of Commonwealth land?	There are no parcels of Commonwealth land nearby the Proposal site..	Nil



