Transport
for NSW

More Trains More Services 3A Metro Integration (MTMS 3A) - Sydney Terminal Area Reconfiguration Phase 2 (STAR 2)– IMR002A Erskineville Hi-Rail Pad

Environmental Impact Assessment Checklist

April 2024

OBJ

NSW GOVERNMENT

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Document control

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Versions

Version	Date	Amendment notes
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2.0	April 2024	First review and update to comment
3.0	April 2024	Final

Related policy and supporting information

- Transport Environment and Sustainability Policy
- Environment & Sustainability Management Framework

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Document review tracking

Version No.	Date	Prepared by	Reviewed by	Comments
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1. Details of the proposal

Proposal	Details
Proposal name	MTMS3A –STAR2 - IMR002A Erskineville Hi Rail Pad
Location	Erskineville
Timeframe	April 2024 until the end of 2024

1.1 Background of proposal

The More Trains, More Services (MTMS) program is designed to simplify and modernise the rail network. Passengers will be able to access more services on a simpler and more reliable network through the delivery of better infrastructure, new trains and extra services.

Delivering the program is essential to integrate Sydney Metro City & Southwest with the heavy rail network in 2024 and the introduction of the Mariyung trains to the South Coast Line.

Background and need

Due to new rail infrastructure such as crossovers being installed in Sydney Yard and Erskineville, the need for a hi-rail pad (service level crossing) to allow essential maintenance and adequate emergency incident response has been identified.

A majority of maintenance works are accessed via hi-rail pads placed along the rail corridor. Maintenance work usually requires hi-rail vehicles, machinery and materials to access the rail corridor at the nearest hi-rail pad to access the track and then travel the shortest distance to the worksite.

2. Description of proposed activity

Scope of works

The works would involve the installation of an approximately 25 metre long hi-rail pad for two tracks on the up and down Illawarra local lines. The new 25 metre wide hi-rail access pad would be positioned between approximate chainage 2.300 km and 2.342km. Appendix C includes technical drawings of the proposed works.

This Proposal would include the following:

- Establishment of site compound, amenities, and staging areas
- Construction of a permanent asphalt ramp and turning bay. This would require:
  - extension and widening of the existing asphalted access road into the proposed hi-rail pad
  - realignment of existing curb near the pre-build yard to facilitate vehicle turn paths
  - installation of a W-Beam barrier along the access road and ramp
  - installation of bollards between the Down Illawarra Local and Up Illawarra lines at the proposed hi-rail pad location
  - installation of bollards to protect the down leg of the over-head wiring structure.
- Protection and/or relocation of existing services and infrastructure including:
  - provision of a new drainage culvert or grated drain along the access road extension to maintain corridor drainage (parallel to track)
  - relocation of the existing compressed airline beneath the access road, parallel to the Down Illawarra Local
  - protection of the existing buried 1500v negative cables beneath the proposed access road extension.

- Track preparation works including rail adjustments, relocation of rail joints/welds (new closures). This would require the following:
  - replacement of railway sleepers, rail and ballast tamping within the hi-rail pad footprint, as required
  - construction of a retaining wall between the turning bay in the new access road and the Macdonaldtown yard
  - installation of an approximately 21 metre long by two-metre-high post and panel retaining wall against Macdonaldtown Yard boundary to enable access road widening.

Site Location

The proposed new hi-rail pad and associated works are located in the active rail corridor, within the 'Eveleigh Railway Workshops' State Heritage curtilage at Eveleigh, NSW (See Figure 1 - 3). The 'Eveleigh Railway Workshops' are situated in the suburb of Eveleigh, approximately 4km south of the Sydney Central Business District (CBD). The heritage curtilage of the complex is bounded by Redfern Station in the northeast to Erskineville and Macdonaldtown Stations in the southwest. The 'Eveleigh Railway Workshops' is also listed on the Transport Asset Holding Entity (TAHE) Section 170 Heritage and Conservation Register.

Figure 1: Proposed hi-rail pad work location at Erskineville, within the Eveleigh Railway Workshops area.

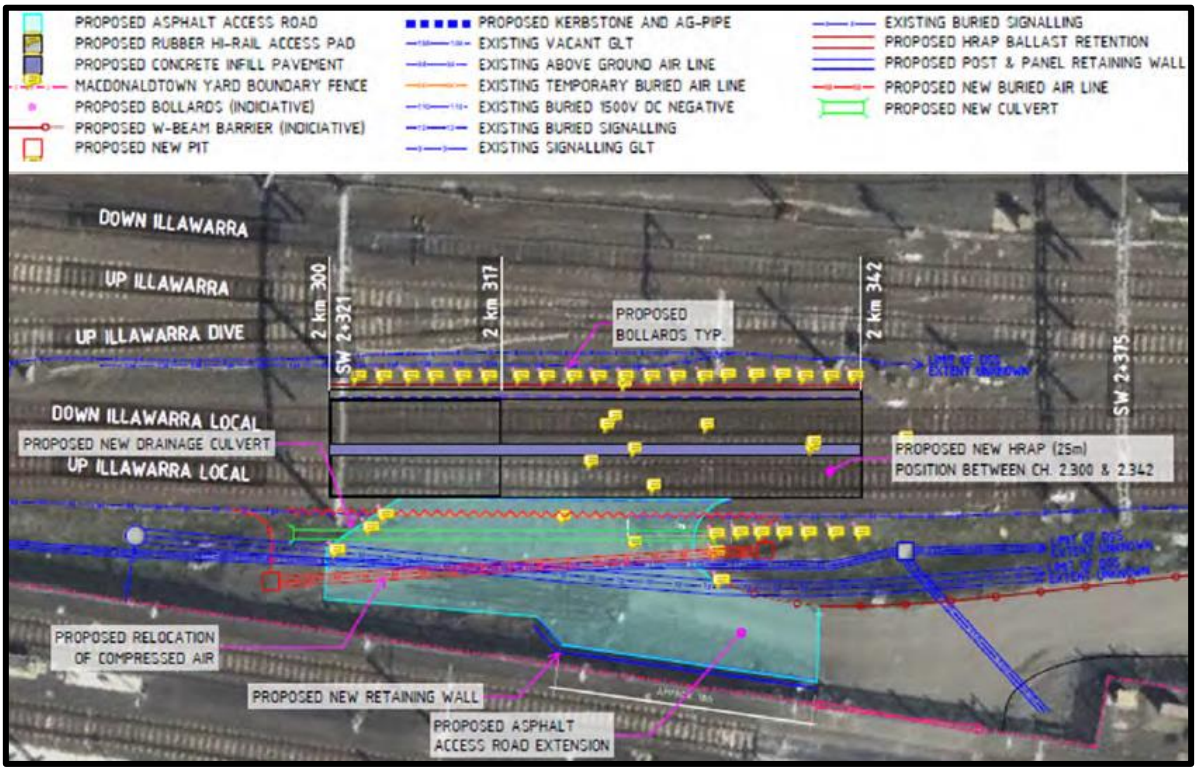


Figure 2: Detail of the proposed works, including the hi-rail access pad (HRAP), asphalted area (blue shading), retaining wall (blue solid line) and W-beam barrier red solid line). (Source: Transport for Tomorrow, 23 February 2024).

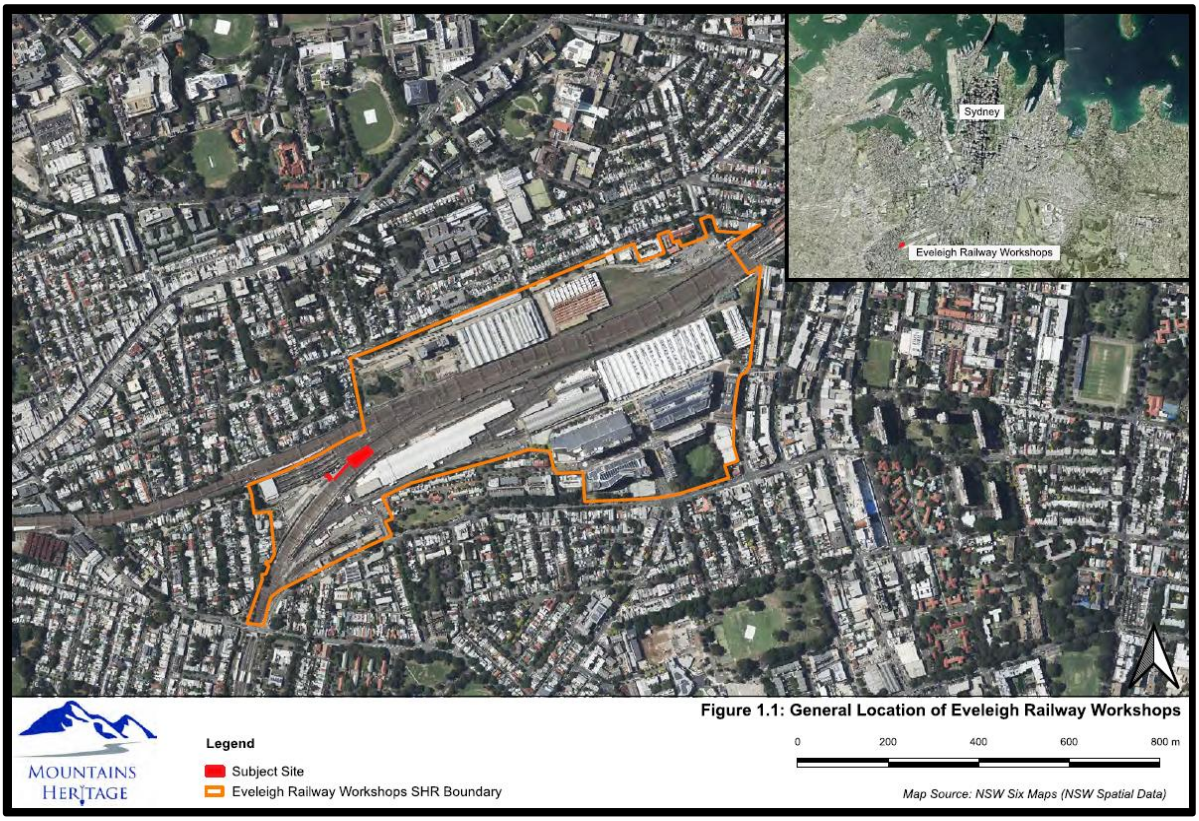


Figure 3: Location of proposed hi-rail Pad work area within the Eveleigh Railway Workshops heritage boundary (Source: Mountains Heritage February 2024)

Laydown Area & Ancillary Facilities

Temporary compound facilities and staging areas would be provided during construction works to accommodate site offices, amenities, storage of plant and equipment, stockpiling of materials and limited parking for construction personnel. The primary laydown would be located southwest of the work area at Macdonaldtown Triangle (Eveleigh) (Figure 4). Access and egress to the Sydney Terminal site work area for deliveries of materials, storage and plant and equipment for the proposal may be required.

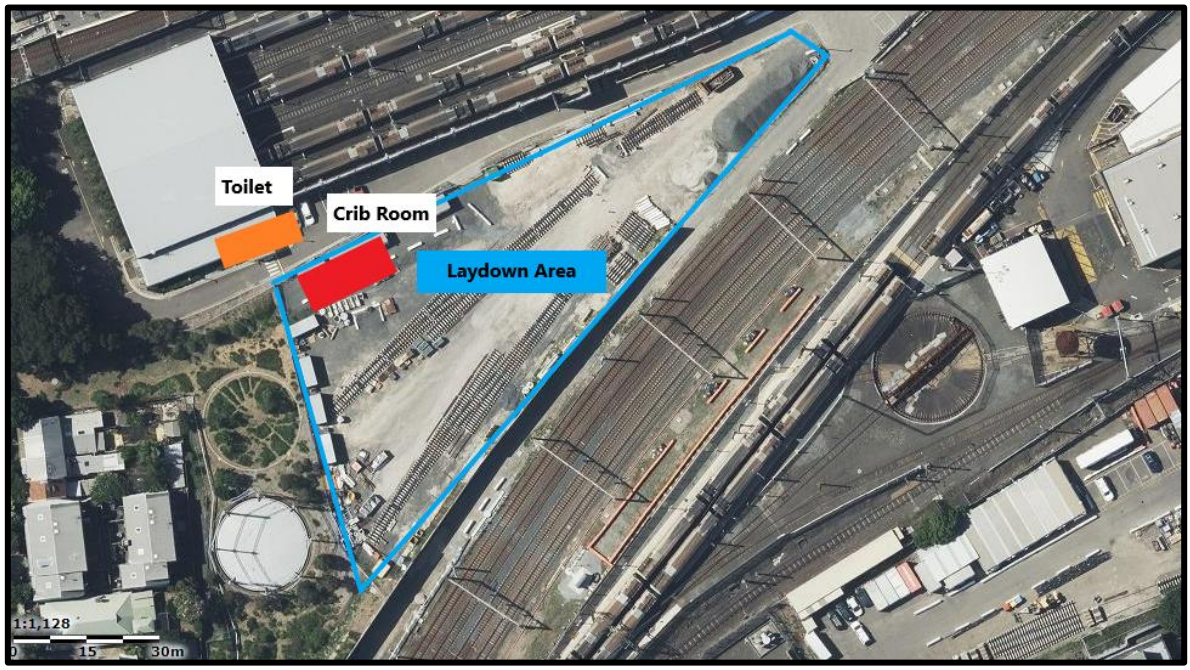


Figure 4: Macdonaldtown Laydown Area

Site Access

Site access would be via the Swanson Street rail access gate near Erskineville Station, to the southwest of the proposed work area (Figure 5).

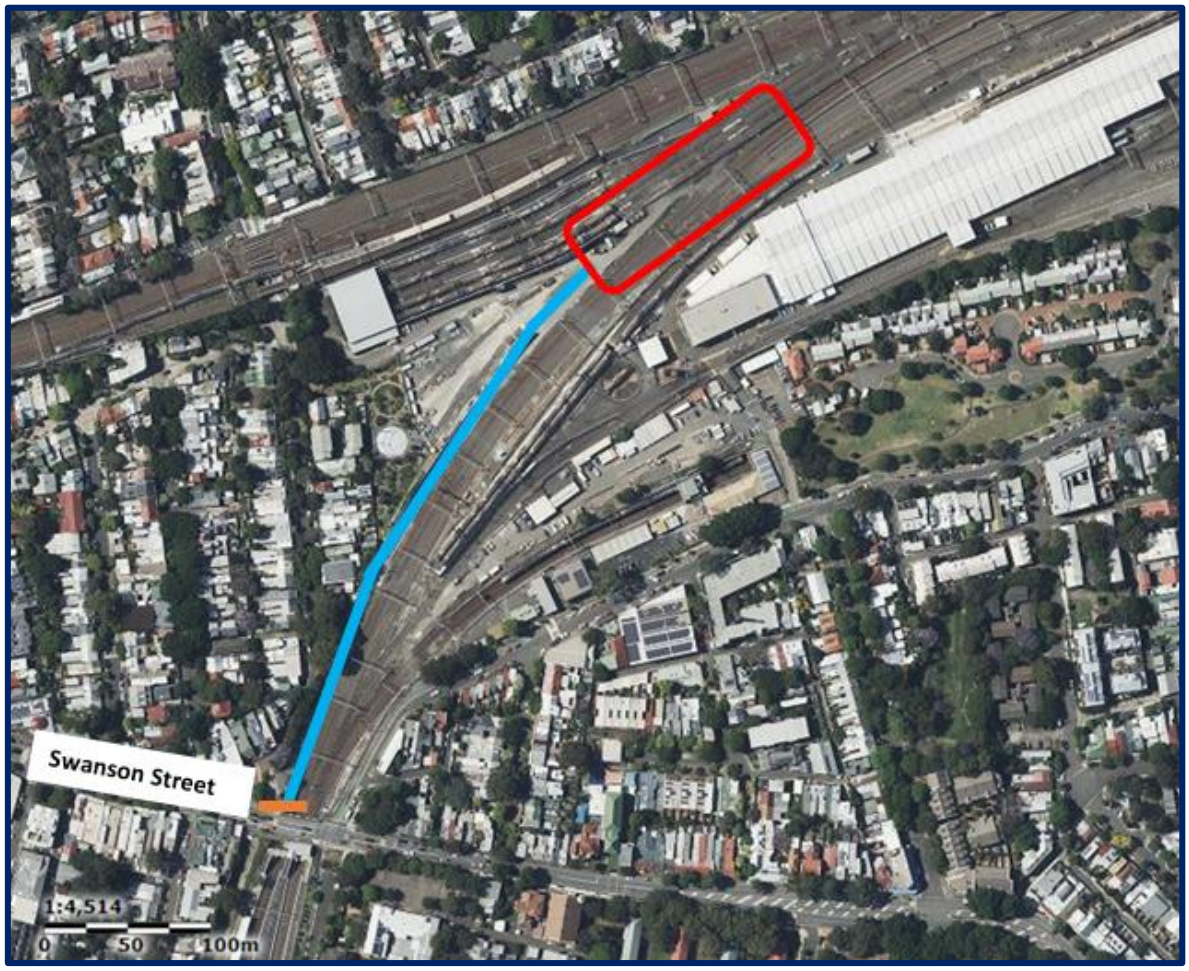


Figure 5: Site access for the proposed work area would be via the Swanson Street rail access gate.

Construction duration and working hours

Construction of the Proposal is scheduled to occur from April 2024 and take approximately eight months to complete.

Construction work is largely proposed to be undertaken during scheduled track possession periods, which are generally outside standard construction working hours (7:00am to 6:00pm Monday to Friday and 8:00am to 1:00pm Saturday). Associated works that are able to be completed under work site protection measures would be carried out during standard working hours.

Works undertaken outside standard hours would be subject to prior approval from TfNSW through submission of the TfNSW Out of Hours Works Application (OOHW) via the online system and the affected community would be notified, where required, as outlined in the *TfNSW Construction Noise and Vibration Guideline (Public Transport Infrastructure) (CNVG)*

Construction plant and equipment

Proposed construction plant and equipment would include;

- Utes/trucks
- Excavators
- Front end loaders
- Piling rig
- Concrete truck and pump
- Tamping machine
- Welder
- Crane
- Surveying equipment
- Hand Tools
- Traffic control
- Sucker Truck
- Dump Truck

Construction personnel

Up to approximately 40 staff are proposed to work during a possession.

Impacts on utilities/authorities

No utilities are anticipated to require relocation. Utility owners would be consulted if utilities are located during the construction works.

Wastes generated

Waste generated during the construction may include spoil, concrete, steel and rail infrastructure. Waste generation and disposal would be minimised through waste avoidance, recovery, reuse and recycling. Waste would be disposed of in accordance with relevant legislative requirements to the appropriate licensed waste facility.

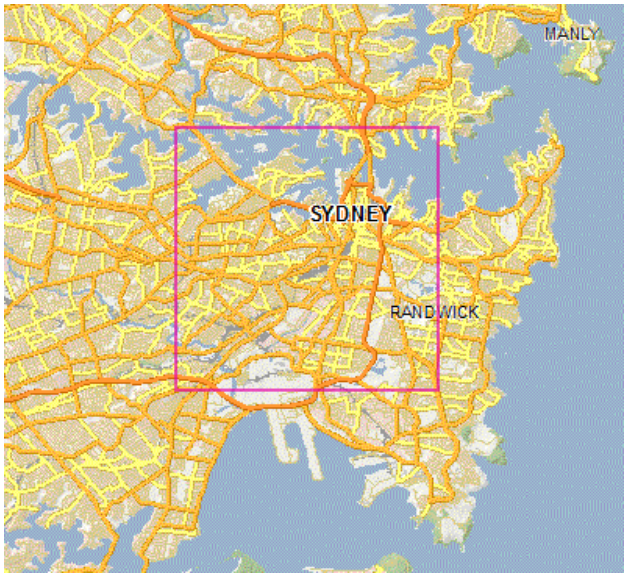
Hazardous/dangerous goods

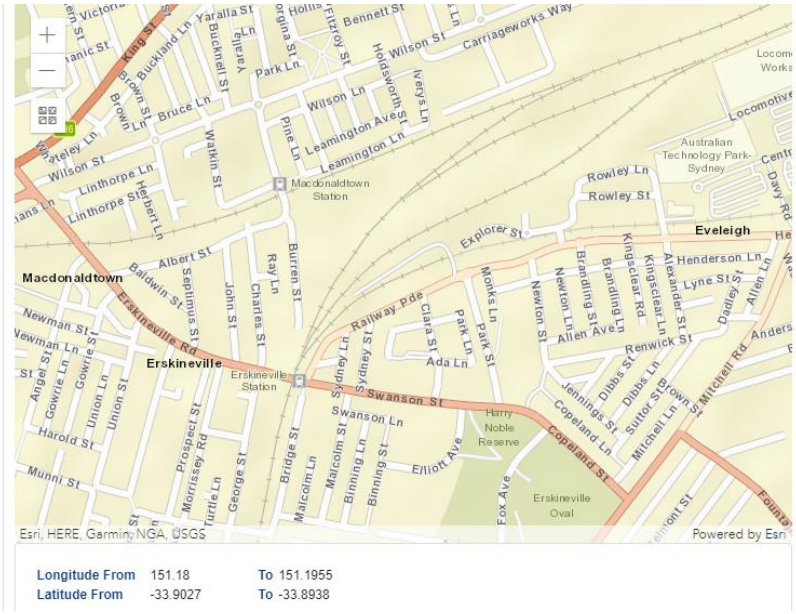
All hazardous and/or dangerous goods stored on site during construction would be located in a suitably bunded or ventilated and secured storage container.

Appropriate controls would be implemented during excavation to prevent exposure to asbestos if identified during the works.

3. Site characteristics

Characteristic	Details
Land use	The Proposal is located within existing rail corridor on land zoned SP2 Infrastructure Railways under *Sydney Local Environmental Plan 2012* (Sydney LEP). The land uses in the study area are summarised below: - Carriageworks (multi-arts centre), residential land uses comprising mainly of townhouses and The University of Sydney are located to the north east of the proposed location - The Eveleigh Maintenance Centre and stabling yard is located to the south and east within the rail corridor - Adjacent land use to the north, west, east and further south is characterised by a variety of residential, commercial, business, entertainment, educational and public recreation spaces.
Flora and fauna	The following biodiversity searches were conducted for the Proposal area on 19 March 2024 to identify the records of any threatened species, populations, ecological communities and migratory species listed under the *Biodiversity Conservation Act 2016* (BC ACT) and the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC-Act) - Bionet Wildlife Atlas - EPBC Act Protected Matters Search Tool (PMST)

Characteristic	Details
	 Figure 6: Bionet Atlas Search Area A review of the NSW Bionet Wildlife Atlas identified two threatened species within the search area in Figure 6, the white-fronted chat (*epthianura albifrons*) and the Long nosed Bandicoot (*Perameles nasuta*). These species are listed under the BC Act. The EPBC Act Protected Matters Report for the Proposal (Appendix D) identified the following threatened ecological communities within one kilometre of the Proposal area: ▪ Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland ▪ Western Sydney Dry Rainforest and Moist Woodland on Shale ▪ Cooks River/Castlereagh Ironbark Forest of the Sydney Basin Bioregion ▪ Eastern Suburbs Banksia Scrub of the Sydney Region ▪ Castlereagh Scribbly Gum and Agnes Banks Woodlands of the Sydney Basin Bioregion ▪ Coastal Upland Swamps in the Sydney Basin Bioregion ▪ River-flat eucalypt forest on coastal floodplains of southern New South Wales and eastern Victoria ▪ Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community A review of the EPBC Act Protected Matters Report also identified within one kilometre of the Proposal, 45 threatened fauna species, 15 threatened flora species, as well as 24 migratory bird species.

Characteristic	Details
Aboriginal Heritage	 Figure 7: Aboriginal Heritage Information Management Systems (AHIMS) search area An Aboriginal Heritage Information Management Systems (AHIMS) search was undertaken for the Proposal on 19 March 2024 (refer to Appendix E). The AHIMS search did not identify any Aboriginal sites or places within 200 metres of the Proposal area.
Non-Aboriginal heritage	The Proposal is located within the heritage curtilage of the 'Eveleigh Railway Workshops', a heritage complex recognised as one of Australia's finest industrial heritage items. The 'Eveleigh Railway Workshops' is listed on the NSW State Heritage Register (SHR;No.1140) and as such, is protected under the provisions of the *Heritage Act, 1977*. A Statement of Heritage Impact (SoHI) has been prepared for the Proposal and provided in Appendix F. The assessment concluded that the potential for relics or buried 'works' is low for the proposed works. The report also notes the works would not result in a significant visual impact to the heritage complex and that the potential for the proposed excavation to impact historical archaeological relics is low. To satisfy the requirements of the NSW *Heritage Act 1977,* a Section 60 has been granted under the Act (Approval ID 5988, received 22/03/2024) and is provided in Appendix G.
Hydrology and flooding	The Proposal is located in a highly urbanised landscape with large impervious areas due to roads, footpaths and buildings. There is no natural watercourse in the Proposal area. Within the railway corridor, surface water is generally collected into subsurface pit and pipe networks. The nearest surface water receptor is Shea's Creek, located approximately 1.5 km to the south/southeast of the site and Alexandra Canal located approximately 1.7 km to the south of the site. Localised perched groundwater is considered likely to be present (albeit limited in extent) underlying the site in intermittent zones within localised (shallow) filled areas and at the soil/rock interface. Regional groundwater is expected to be encountered at significant depth located within fractures of the deeper shale (and sandstone) bedrock. Regionally, groundwater is anticipated to follow the topographic gradient and flow south towards the Botany Sands formation and associated Shea's Creek/Alexandra Canal.
Soils and contamination	The 'Eveleigh Railway Workshops' area and surrounds are mapped as Class 5 ASS risk in the Sydney Local Environmental Plan which is the lowest category for Acid Sulphate Soils (ASS).

Characteristic	Details
	As identified through the NSW Office of Environment and Heritage (OEH 20227) eSPADE online database, the site is underlain with Blacktown soil landscape. Details of the underlying geology and soil landscape are as follows: - Wianamatta Group – Ashfield Shale consisting of laminite and dark grey siltstone and Bringelly Shale, with occasional calcareous claystone, laminite and coal. This dominant feature is occasionally underlain by claystone and laminite lenses. A search of the NSW Environment Protection Authority's (EPA) contaminated land register was undertaken on the 19 of March 2024 and identified the following contaminated site in the Proposal area: - Macdonaldtown Triangle (Eveleigh) – which would be utilised as a laydown area for the project. Additional contaminated sites identified outside of the Proposal area included: - Adjacent to Former Service Station (Newtown) - Former Service Station (Newtown) Railway corridors have the potential to contain various contaminated materials from historical and operational sources. Such sources relate to the long-term operation of the railway and the history of nearby contaminating activities. Possible sources of contamination include: - Leaks and spills from fuels, solvents and lubricants - Stockpiles of waste materials - Uncontrolled fill materials - Fuels, oils, wash down solvents, lead and asbestos from former train brakes - Heavy metals and pesticides associated with insect and weed control

4. Control measures

Characteristic	Yes	No
Will a project and site specific EMP be prepared?	☒	☐
Are appropriate control measures already identified in an existing EMP?	☒	☐

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 A specifically responds to the environmental factors for consideration under Section 171 of the EP&A Regulation.

The Proposal is located within the Redfern-Waterloo Authority sites listed in the State Environmental Planning Policy (Precincts - Eastern Harbour City) 2021. The Proposal area is within Zone G: Special Purpose Zone - Infrastructure. Within zone G, development may only be carried out with development consent. This provision is inconsistent with Section 2.92 of the SEPP (Transport and Infrastructure), which states that development for the purpose of "railway or rail infrastructure facilities", does not require consent. In the event of an inconsistency between the Precincts Eastern Harbour City SEPP and the TI SEPP, the Precincts Eastern Harbour City SEPP prevails (part 2.1 section 2.6 of the Precincts - Eastern Harbour City SEPP). However clause 24A of Appendix 3 of the Precincts Eastern Harbour City SEPP states that Appendix 3 does not restrict or prohibit, or enable the restriction or prohibition of , the carrying out of any development, by or on behalf of a public authority, that is permitted to be carried out with or without development consent under the TISEPP.

The Proposal therefore does not require consent under the Precincts - Eastern Harbour City SEPP.

The Proposal is also located within the Redfern-Waterloo potential precinct map in the State Environmental Planning Policy (Precincts – Central River City) 2021. The Proposal area is within a potential urban renewal precinct. Within this area, development must not be granted consent unless it is satisfied that the proposed development is consistent with the objective of developing the potential precinct for the purposes of urban renewal.

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 site at Eveleigh Railway Workshops is a State Heritage Item. Therefore, consultation with council is not required.
2.12	Consultation with councils- development with impacts on flood liable land	The Proposal is not located on flood prone land. Accordingly, consultation with Council is not required.
2.13	Consultation with State Emergency Service- development with impacts on flood liable land	The Proposal is not located on flood prone land. Accordingly, consultation with SES has not been undertaken.
2.14	Consultation with councils- development with impacts on certain land within the coastal zone	The Proposal is not located within the coastal zone. Consultation with Council is not required in regard to this aspect.
2.15	Consultation with public authorities other than councils	The Proposal does not require consultation with any public authorities, in addition to Councils.
2.122	Traffic generating development	The Proposal is not deemed a traffic-generating development. Accordingly, consultation with the relevant division of Transport for NSW is not required for the Proposal.

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	Environmental impacts relevant to the construction phase of the Proposal would be managed through the centralised documents of the Construction Environmental Management Plan (CEMP) and Environmental Control Maps (ECM).	1. A CEMP would be prepared by the contractor, in accordance with the relevant requirements of the Post Approval Guidance Environmental Management Plan Guideline (DPIE 2020) for approval by TfNSW Senior Manager Environment and Sustainability, prior to the commencement of construction and following any revisions made through the project. 2. Environmental Control Maps would be developed by the Contractor in accordance with the Environmental Control Map Guideline (EMF-EM-GD-0148) for approval by TfNSW, prior to the commencement of construction and following any revisions made throughout construction. 3. Prior to the commencement of construction, all Contractors would be inducted on the key project environmental risks, procedures, mitigation measures and conditions of approval. 4. Site inspections to monitor environmental compliance and performance would be undertaken during construction at appropriate intervals. 5. Any modifications to the Proposal, if approved, would be subject to further assessment and approval by TfNSW. This assessment would need to demonstrate that any environmental impacts resulting from modifications have been minimised.	☒	☐	

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
Flora and fauna	A flora and fauna desktop assessment of the Proposal site was undertaken using Bionet Wildlife Atlas (DPIE 2020) and the (EPBC Act Protected Matters Search Tool (DAWE 2020). No threatened species, communities, populations or their habitats are expected to occur within the Proposal site in the Eveleigh Railway Workshops area, which is within the rail corridor. No vegetation removal is anticipated for these works, therefore no impacts to threatened ecological communities, flora or fauna are expected.	6. Should there be a need to prune or remove any vegetation, approval would be required from TfNSW in accordance with the *Removal or Trimming Vegetation Application* (EMF-EM-TT-0144). 7. Construction of the Proposal would be undertaken in accordance with TfNSW's *Biodiversity Management Guideline (*EMF-BD-GD-0039)	☒	☐	
Water and flooding	There are no natural waterways located within the Proposal site. The nearest surface water body to the Proposal site is Sheas Creek which is 1.5 kilometres to the south. The other closest surface water bodies to the Proposal include Blackwattle Bay and Cockle Bay, around 2.4 kilometres north and 3 kilometres northwest respectively. During the proposed earthworks there is minimal risk of erosion and off-site movement of sediment. The risk would be slightly increased during high wind and rainfall events. The implementation of the proposed mitigation measures would limit the risk of windblown dust leaving the site and of sediment laden water entering the stormwater system during construction. Potential pollution from spills of chemical, fuels and other materials that could enter the drainage system and flow to waterways could be limited by the implementation of the proposed control measures.	8. Prior to commencement of works, a site-specific Erosion and Sediment Control Plan would be prepared in accordance with the 'Blue Book' *Managing Urban Stormwater: Soils and Construction Guidelines* (Landcom 2004) and updated throughout construction so it remains relevant to activities. 9. Vehicles and machinery would be properly maintained and routinely inspected to minimise the risk of fuel/oil leaks. Construction plant, vehicles and equipment would also be refuelled offsite, or in a designated refuelling area. 10. All fuels, chemicals and hazardous liquids would be stored away from drainage lines, within an impervious bunded area in accordance with Australian Standards, EPA Guidelines and TfNSW's *Chemical Storage and spill response guideline* (EMF-EM-GD-0137) 11. Fully stocked spill kit(s) would be present at all times during construction and situated around areas of high risk. 12. In the event of a pollution incident, works would cease in the immediate vicinity and the Contractor would immediately notify the TfNSW Project Manager and TfNSW Environment and Planning Manager. The EPA would be notified by TfNSW if required, in accordance	☒	☐	

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
		with Part 5.7 of the *Protection of the Environmental Operations Act 1997* (POEO Act). 13. Should groundwater be encountered during excavation works, it would be managed in accordance with the requirements of the *Waste Classification Guidelines* (EPA, 2014) and TfNSW's *Water Discharge and Reuse Guideline* (DMS_SD-024) 14. Any stormwater drains within the Proposal area should be marked on the ECM and appropriately controlled. 15. Appropriate mitigations would be implanted in accordance with the requirements of the TfNSW's *Concrete Washout Guideline* (EMF-EM-GD-0145)			
Air quality	The potential for air quality impacts during construction is related to dust generation as well as plant and machinery emissions. The greatest potential for dust generation would be during excavation works. The greatest potential for impact to the nearest receivers would occur during dry and windy conditions. Construction machinery and vehicles would also generate minor exhaust emissions. Dust generation would be minimised through the implementation of the identified control measures that would aim to keep the exposed surfaces to a minimum as well as stabilising disturbed surfaces and materials as soon as practicable. With appropriate control measures it is expected that any potential adverse impacts to air quality could be appropriately managed.	16. Air quality management and monitoring for the Proposal should be undertaken in accordance with the TfNSW *Air Quality Management Guideline* (EMF-AQ-GD-0063) 17. Methods for managing emissions would be incorporated into project inductions, training and pre-start/toolbox talks as per the CEMP. 18. Plant and machinery would be regularly checked and maintained in a proper and efficient condition. Plant and machinery would be switched off when not in use, and not left idling. 19. To minimise the generation of dust from construction activities, the following measures would be implemented: - Apply water to exposed surfaces as dust suppression to exposed surfaces such as stockpiles and unpaved roads. - Cover stockpiles when not in use. - Appropriately cover loads on trucks transporting material to and from the construction site and securely fix tailgates of road transport prior to loading and immediately after unloading. - Prevent mud and dirt being tracked onto sealed road surfaces.	☒	☐	

Aspect	Nature and extent of impacts (negative and positive) during construction if control measures implemented	Control measures	Endorsed *(for Rail Development and Delivery E&S use only)*		
			Yes	No	Comments
Soils and contamination	A review on potential for ASS indicates the site has an extremely low probability of ASS occurring in the natural ground surface. As such ASS is not expected to be encountered during excavation works. Railway corridors have the potential to contain various contaminated materials from historical and operational sources. A search of the NSW Environment Protection Authority's (EPA) identified Macdonaldtown Triangle (Eveleigh) as a contaminated site, however, as no ground disturbance is required at this location, potential exposure to contamination at this location is not anticipated.	20. An appropriate Unexpected Finds Protocol, considering asbestos containing materials and other potential contaminants, would be included in the CEMP. Procedures for handling asbestos containing materials, including licensed contractor involvement as required, record keeping, site personnel awareness and waste disposal to be undertaken in accordance with SafeWork NSW requirements. 21. All spoil and waste must be classified in accordance with the Waste Classification Guidelines (NSW) prior to disposal. 22. Waste to be tracked using a project Waste Tracking Register	☒	☐	
Noise and vibration	Construction across all phases of works would produce varying degrees of noise and vibration that would be reduced as reasonably practicable. Scheduling, or alternating plant or machinery would be considered to reduce noise emissions and potential impact to the community. Noise emissions for the Proposal are likely to be clearly audible to moderately intrusive to receivers at Burren Street, Erskineville and Leamington Avenue, Newtown. High noise impact works such as jack hammering or rail saw cutting may be highly intrusive, especially during the out of hours work (OOHW) periods. The nearest residential receivers for the Proposal are: 35-41 Burren Street, Erskineville – 30m to laydown area and 200m to work area. 43 Leamington Avenue, Newtown – 95m to work area	23. Noise and vibration mitigation measures would be applied in accordance with *Transport's Construction Noise and Vibration Guideline – Public Transport Infrastructure* (EMF-NV-GD-0060).Out-of-Hours works applications using the TfNSW OOHW application system. Noise assessments will be undertaken for works outside standard hours and community notification would be provided 7 days in advance of works. 24. High noise and vibration -generating activities shall be scheduled and undertaken with consideration of the community and nearest sensitive receivers to ensure minimal impact for the period of works. 25. Plant and equipment would be fitted with noise control and attenuation devices to minimise noise emissions (non-tonal reversing alarms) 26. Vehicles and plant shall be switched off when not in use and would not be left idling. 27. Relocatable noise barriers e.g., acoustic blankets hung from temporary construction fencing shall be utilised, where practicable.	☒	☐	

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
	The risk of vibration impact to properties and sensitive receivers outside the rail corridor is assessed as low.				
Aboriginal heritage	The potential for Aboriginal artefacts to be present in subsurface alluvial deposits has been assessed as low. The project area is not located near a recorded Aboriginal Site (AHIMS).	28. If unforeseen Aboriginal objects are uncovered during construction the procedures contained in the TfNSW *Unexpected Heritage Items Procedure* EMF-HE-PR-0076 would be followed and works near the find would cease immediately. The contractor would immediately notify the TfNSW Project Manager and TfNSW Senior Environment and Sustainability Officer so that they may assist in co-ordinating the next steps. 29. Stage 1 Transport for NSW assessment - Procedure for Aboriginal cultural heritage consultation and investigation (PACHCI) shall be completed prior to the commencement of work and any recommendations shall be adhered to.	☒	☐	
Non-Aboriginal heritage	A detailed heritage impact assessment is provided in Appendix F. The Statement of Heritage Impact, (Mountains Heritage, March 2024) concluded that the potential for relics or buried 'works' is low in the footprint of the proposed works. The report also notes the works would not result in a significant visual impact to the heritage complex of 'Eveleigh Railway Workshops' and that the potential for the proposed excavation to impact historical archaeological relics is low.	30. All works within the Eveleigh Railway Workshops area must be undertaken in accordance with the heritage approval issued under Section 60 of the *Heritage Act 1977* (Appendix G) and mitigation measures provided in the SoHI (Appendix F). 31. Site Protection – Significant built and landscape elements are to be protected during site preparation and the works from potential damage. Protection systems must ensure significant fabric, including landscape elements, are not damaged or removed. Reason: To ensure significant fabric including vegetation is protected during construction. 32. A photographic archival recording must be prepared prior to the commencement of works and after the completion of works. This recording must be in accordance with the Heritage NSW publication 'Photographic Recording of Heritage Items using Film or Digital Capture' (2006). The digital copy of the archival record must be provided to Heritage NSW. Reason: To capture the condition and appearance of	☒	☐	

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
		the place prior to, and during, modification of the site which impacts significant fabric. 33. The Applicant must ensure that if substantial intact archaeological deposits and/or State significant relics or any other buried fabric such as works not identified in Rail Infrastructure Upgrade, Eveleigh Railway Workshops Statement of Heritage Impact, prepared by Mountains Heritage, dated March 2024 are discovered, work must cease in the affected area(s) and the Heritage Council of NSW must be notified. Additional assessment and approval may be required prior to works continuing in the affected area(s) based on the nature of the discovery. Reason: All significant fabric within a State Heritage Register curtilage should be managed according to its significance. This is a standard condition to identify to the applicant how to proceed if historical archaeological relics, or other unexpected, buried discoveries such as works are identified during the approved project. 34. Should any Aboriginal objects be uncovered by the work which is not covered by a valid Aboriginal Heritage Impact Permit, excavation or disturbance of the area is to stop immediately and Heritage NSW is to be informed in accordance with the *National Parks and Wildlife Act 1974*. Works affecting Aboriginal objects on the site must not continue until Heritage NSW has been informed and the appropriate approvals are in place. Aboriginal objects must be managed in accordance with the *National Parks and Wildlife Act 1974*. Reason: This is a standard condition to identify to the applicant how to proceed if Aboriginal objects are unexpectedly identified during works. 35. If requested, the applicant and any nominated heritage consultant may be required to participate in audits of Heritage Council of NSW approvals to confirm compliance with conditions of consent. Reason: To ensure that the proposed works are completed as approved.			

Aspect	Nature and extent of impacts (negative and positive) during construction if control measures implemented	Control measures	Endorsed *(for Rail Development and Delivery E&S use only)*		
			Yes	No	Comments
Community and socioeconomic	During construction, noise, traffic and visual issues may have minor, temporary and indirect impacts on users of nearby social infrastructure. No direct impacts to social infrastructure are anticipated as works would be undertaken inside the rail corridor.	36. Contact details for a 24-hour construction response line, Project Infoline and email address would be provided for ongoing stakeholder contact throughout the construction phase of the project. 37. The community would be kept informed of construction progress, activities and impacts in accordance with the Community Liaison Management Plan (CLMP) and published within the CEMP.	☒	☐	
Traffic and parking	Construction of the proposal would result in minor temporary increase in traffic as a result of the following: - Delivery of construction materials - Delivery and removal of construction equipment and machinery - Spoil or waste removal - Movement of construction personnel The vehicle movements generated on the road network as a result of the construction works are expected to generally consist of light vehicles from construction works and heavy vehicle trips from deliveries and removal of spoil, materials, plant and equipment as required. Although the surrounding area is frequently occupied by light and heavy vehicles traveling to and from the surrounding industrial land uses, there would be an increase in the presence of these vehicles during construction works. All proposed works are within the rail corridor and parking would be provided in the project compounds. As a result, impacts are generally expected to be limited to vehicles entering and exiting the rail corridor and using the local road network.	38. Consultation with relevant roads authorities would be undertaken if required. 39. Communication would be provided to the community and local residents to inform them of any changes to parking, pedestrian access and/or traffic conditions including vehicle movements and anticipated effects on the local road network relating to site works. 40. Access for Sydney Trains personnel into the rail corridor via existing maintenance gates would be always maintained.	☒	☐	

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
	Proposed works would generally be undertaken during scheduled track possession periods and consequently are not expected to impact on daily train operations. Selected work undertaken outside of these periods would be completed under work site protection measures and is not anticipated to impact on train operations. Access and egress routes are presented in Figure 4.				
Waste and resource management	Waste likely to be generated during the construction of the Proposal would include spoil, concrete, steel and rail infrastructure and general waste. Waste management would be undertaken in accordance with the *Waste Avoidance and resource Recovery Act 2001* (WARR Act)	41. The CEMP would address waste management and would at a minimum: - Identify waste streams and outline methods of disposal. - Detail onsite management practices. - Specify controls and procedures for hazardous and asbestos waste. - Ensure all waste receipts are kept on file and made available to TfNSW for audit purposes. 42. An appropriate Unexpected Finds Protocol, considering asbestos containing materials and other potential contaminants, would be included in the CEMP. Procedures for handling asbestos containing materials, included licensed contractor involvement as required, record keeping, site personnel awareness and waste disposal to be undertaken in accordance with SafeWork NSW and EPA requirements. 43. All spoil to be removed from site would be tested to confirm the presence of any contamination. Any contaminated spoil would be disposed of at an appropriately licensed facility. 44. All spoil and waste must be classified in accordance with the Waste Classification Guidelines (NSW), prior to disposal. 45. Any concrete washout would be established and maintained in accordance with TfNSW's *Concrete Washout Guideline* (EMF-EM-GD-0145).	☒	☐	

Aspect	Nature and extent of impacts (negative and positive) during construction if control measures implemented	Control measures	Endorsed *(for Rail Development and Delivery E&S use only)*		
			Yes	No	Comments
Visual and urban design	Views to the proposed works from outside the rail corridor are screened by existing rail infrastructure, perimeter fencing and vegetation. During construction there may be some minor visual impacts from the presence of construction plant and machinery. Light spill from night work has the potential to affect the visual amenity of adjacent land uses. Safeguards and management measures would be implemented to manage the potential temporary visual impacts. The Proposal does not involve urban design aspects.	46. Light spill from the construction area into adjacent visually sensitive properties would be minimised by directing lighting into the construction areas to minimise light pollution.	☒	☐	
Hazard and risk	No additional risks have been identified.	N/A	☒	☐	
Climate change and sustainability	Due to the scale and temporary nature of the construction works, the Proposal would not result in any additional risk of climate change and sustainability impacts over and above the current risks if the appropriate control measures are implemented. While a sustainability rating has not been identified for this scope of work, applicable baseline sustainability targets have been identified. *Not all requirements may be relevant to the activity scope, justification may be provided if this is the case to be reviewed by the TfNSW Senior Manager Sustainability.	47. Baseline Sustainability Requirements for the Proposal include; - All mobile non-road diesel plant and equipment (with an engine greater than 19kW) conforms with relevant United States Environmental Protection Agency (US EPA), European Union (EU) or equivalent emissions standards including fitting of any exhaust after-treatment devices. - Vehicles, plant and equipment are not left idling when not in use; fitted with catalytic converters/diesel particulate filters or equivalent devices; well maintained and serviced in accordance with relevant equipment maintenance documentation to reduce emissions due to poor engine performance. - All paints, adhesives, sealants, carpets, and engineered wood products used in indoor areas that are continuously occupied or occupied for more than two hours, are low in Total Volatile Organic Compounds	☒	☐	

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
		(TVOC) as defined in the Green Star Buildings Rating Tool - Implement opportunities to incorporate reused, reclaimed, or recycled materials during construction. - Implement opportunities to minimise waste generation, maximise waste segregation, maximise waste reuse/recycling and improve landfill diversion. - Materials with a valid Environmental Product Declaration (EPD) or equivalent, are used. - All timber products used are sourced from reused/recycled timber, or from sustainably managed plantations that have obtained Forest Management Certification (FMC). Acceptable FMC schemes include the Program for the Endorsement of Forest Certification, Forest Stewardship Council and Australian Forest Certification Scheme or equivalent. - All polyvinyl chloride (PVC) is compliant with the Green Building Council of Australia (GBCA) 'Best Practice Guidelines for polyvinyl-chloride (PVC) in the built environment'. - All concrete is sourced from members of Cement Concrete & Aggregates Australia or similar association or organisation by agreement with TfNSW. - All paper used in project offices is made of post-consumer recycled content or carbon neutral certified (Climate Active) - "All steel is sourced from steelmakers with: - Commitments to decarbonise or achieve carbon neutrality by the year 2050 at minimum"			

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.	N/A	☒	☐	
Flora and fauna	No impacts to flora and fauna are anticipated during operation.	N/A	☒	☐	
Water and flooding	No operational impacts are anticipated.	N/A	☒	☐	
Air quality	No operational impacts are anticipated.	N/A	☒	☐	
Soils and contamination	No operational impacts are anticipated.	N/A	☒	☐	
Noise and vibration	No operational impacts are anticipated.	N/A	☒	☐	
Aboriginal heritage	No impacts on Aboriginal heritage are anticipated during the operation.	N/A	☒	☐	
Non-Aboriginal heritage	No impacts to non-Aboriginal heritage are anticipated during the operation.	N/A	☒	☐	
Community and socioeconomic	The impact of the additional maintenance access point would be positive due to increased efficiency in track maintenance for community train commuters.	N/A	☒	☐	
Traffic and parking	The impact of the hi-rail pad would be positive due to increased options for track access for maintenance, which may reduce traffic impacts in other areas during maintenance and construction periods.	N/A	☒	☐	
Waste and resource management	No operational impacts are anticipated.	N/A	☒	☐	

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 proposed infrastructure is consistent with the existing infrastructure in the rail corridor and is not likely to result in significant visual impacts.	N/A	☒	☐	
Hazard and risk	No operational risks have been identified.	N/A	☒	☐	
Climate change and sustainability	No operational impacts are anticipated.	N/A	☒	☐	

8. Certification

Considerations	Yes	No
Are you confident that the impacts of the activity are known and understood?	☒	☐
Are you confident that the impacts of the activity can be managed so as not to significantly affect the environment?	☒	☐

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
Jade Roughan	Author /Transport Senior Environment & Sustainability Officier		27 -03-2024
Franklyn Muorah	Transport Sustainability representative		12 -04-2024
Stevi Everson	Transport Community and Place Representative		12 -04-2024
John Quinlivan	Transport Project Manager		15-04-2024
Billy Lai	Transport A/Director Environment and Sustainability		15 -04-2024

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:
Section 60 under the Act- Approved by Hertiage NSW on 22 March 2024.

Is further assessment required?

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

9.3 Decision statement

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

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

1. Works are to be undertaken in accordance with the proposed control measures (including any Planning and Environment endorsement comments) identified in the impact assessment tables in this *Environmental impact assessment checklist.*
2. *Works are to be undertaken in accordance with the approved Section 60 Conditions.*

Name	Role	Signature	Date
Dan Coulton	*A/Director Cross City & Engagement Enablement- Greater Sydney*		16/04/2024

10. Abbreviations

Term	Meaning
AHIMS	Aboriginal Heritage Information Management System
AS	Australian Standard
APAS	Australian Paint Approval Scheme
ASS	Acid Sulfate Soils
BCA	Building Code of Australia
BC Act	*Biodiversity Conservation Act 2016* (NSW)
CEMP	Construction Environmental Management Plan
CLMP	Community Liaison Management Plan
DES	TfNSW Director Environment & Sustainability
DPE	NSW Department of Planning and Environment
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	*Environmental Planning and Assessment Act 1979* (NSW)
EP&A Regulation	Environmental Planning and Assessment Regulation 2021 (NSW)
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Cwlth)
EPL	Environment Protection Licence
Heritage Act	*Heritage Act 1977* (NSW)
SEPP (Transport and Infrastructure)	*State Environmental Planning Policy (Transport and Infrastructure) 2021* (NSW)
LEP	Local Environmental Plan
LGA	Local Government Area
NML	Noise Management Level
OEH	Former NSW Office of the Environment and Heritage
PoEO Act	*Protection of the Environment Operations Act 1997* (NSW)
SEPP	State Environmental Planning Policy
SHI	State Heritage Inventory

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	Within Rail Development and Delivery Projects this includes: • Environment and Sustainability Officer • Senior Environment and Sustainability Officer • Environment and Sustainability Manager • Senior Manager Environment and Sustainability .

Appendix A: Consideration of Section 171 Environmental Factors

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

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

ID	Factor	Comment	Impact
a	Any environmental impact on a community?	Some minor environmental impacts on the community may result during construction of the proposal due to temporary noise, traffic and visual amenity changes.	Minor, short term, negative
b	Any transformation of a locality?	There would be no transformation of locality. The infrastructure upgrade would be consistent with the current rail corridor.	Nil
c	Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality?	There would be no reduction of the aesthetic, recreational, scientific or environmental quality of the locality.	Nil
d	Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality?	There would be no reduction of the aesthetic, recreational, scientific or environmental quality of the locality.	Nil
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?	There would be no 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.	Nil
f	Any impact on the habitat of protected fauna (within the meaning of the *National Parks and Wildlife Act 1974*)?	There would be no impact to the habitat of protected fauna.	Nil
g	Any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air?	No species of animal, plant or other life form, whether living on land, water or air would be impacted.	Nil
h	Any long-term effects on the environment?	There are no long term impacts to the environment anticipated as a result of this proposal.	Nil
i	Any degradation of the quality of the environment?	No degradation to the quality of the environment is anticipated as a result of this proposal.	Nil
j	Any risk to the safety of the environment?	There is no risk to the safety of the environment as a result of the proposal.	Nil
k	Any reduction in the range of beneficial uses of the environment?	There would be no reduction in the range of beneficial uses of the environment due to this proposal.	Nil

ID	Factor	Comment	Impact
l	Any pollution of the environment?	No pollution to the environment would occur due to this proposal.	Nil
m	Any environmental problems associated with the disposal of waste?	No environmental issues are anticipated with the disposal of waste due to this proposal.	Nil
n	Any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply?	No increased demands on resources in short supply are anticipated due to this proposal.	Nil
o	Any cumulative environmental effect with other existing or likely future activities?	No cumulative environmental effects have been identified as a result of this proposal.	Nil
p	Any impact on coastal processes and coastal hazards, including those under projected climate change conditions?	The Proposal is not located near coastal areas as such no impacts to coastal processes or hazards, including climate change conditions are anticipated.	Nil
q	Applicable local strategic planning statements, regional strategic plans or district strategic plans made under the Act, Division 3.1.	The proposal aligns with the local, district and regional plans that apply to the location. The Greater Sydney Region Plan includes strategies to transform land use and transport patterns to boost liveability, productivity and sustainability. The South Eveleigh Precinct is located within the Eastern Harbour City and is identified within the Innovation Corridor, Harbour CBD and Eastern Economic Corridor. The proposal is consistent with objective 3 of the Region Plan, being "Infrastructure adapts to meet future needs". The South Eveleigh Precinct is located within the Eastern City District. The Eastern City District Plan supports implementation of the Greater Sydney Region Plan. The plan identifies the aims of the Eastern City District to encourage more innovative and globally competitive development and to improve the District's lifestyle and environmental assets. The proposal aligns with Priority E1, which is planning for a city supported by infrastructure. The proposal is consistent with the aim of the Transport Strategy 2056, to achieve greater capacity, improved accessibility to housing, jobs and services and continued innovation in the transport sector. City of Sydney's Local Strategic Planning Statement (City Plan 2036) sets out the land use planning context and 20-year vision for positively guided change towards the City's vision for a green, global and connected city. The proposal is located in the 'Redfern Street village' That the plan identifies as a creative, education, high technology and research industry cluster with historic residential areas interspersed by new high-density residential and retail developments.	Minor, positive, long term impacts

ID	Factor	Comment	Impact
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.	Minor, short term

Appendix B: Consideration of Commonwealth environmental factors

Table B-1: Matters of national environmental significance

Environmental factor	Comment	Impact
a) Any impact on a World Heritage property?	This proposal would not impact on a World Heritage Property.	Nil
b) Any impact on a National Heritage place?	This proposal would not impact on a National Heritage Place.	Nil
c) Any impact on a wetland of international importance (often called 'Ramsar' wetlands)?	This proposal would not impact on a wetland of international importance.	Nil
d) Any impact on nationally threatened species, ecological communities or migratory species?	The proposal would not impact on a nationally listed threatened species, ecological community or migratory species.	Nil
e) Any impact on a Commonwealth marine area?	The proposal would not impact on a Commonwealth marine area.	Nil
f) Does the proposal involve a nuclear action (including uranium mining)?	The proposal does not involve a nuclear action.	Nil
Additionally, any impact (direct or indirect) on the environment of Commonwealth land?	The proposal would not directly or indirectly impact the environment of Commonwealth land.	Nil

Appendix C: Design Drawings

MTMS3ASP2- STAR PHASE 2

ERSKINEVILLE

HI-RAIL ACCESS PAD

CIVIL

SYSTEM DEFINITION REVIEW

DRAWING INDEX

LOCALITY PLAN
SCALE N.T.S.

DRAWING No.		DESCRIPTION
GENERAL		
MTMS3ASP2-KBR-ERS-CV-DRG-002101	CV0872852	DRAWING INDEX & LOCALITY PLAN
MTMS3ASP2-KBR-ERS-CV-DRG-004101	CV0872853	GENERAL NOTES
CIVIL		
MTMS3ASP2-KBR-ERS-CV-DRG-005101	CV0872856	HI-RAIL ACCESS PAD & ACCESS RD PLAN
MTMS3ASP2-KBR-ERS-CV-DRG-007101	CV0872858	ACCESS ROAD LONGITUDINAL SECTION
MTMS3ASP2-KBR-ERS-CV-DRG-008101	CV0872859	TYPICAL CROSS SECTIONS
STRUCTURAL		
MTMS3ASP2-KBR-ERS-ST-DRG-004001	CV0872864	GENERAL NOTES
MTMS3ASP2-KBR-ERS-ST-DRG-005001	CV0872865	PLAN LAYOUT

DRAWING COLOUR CODED - PRINT ALL COPIES IN COLOUR

OFFICIAL

FOR REVIEW & COMMENT

REV	DESCRIPTION	DESIGNER INITIAL/DATE	VERIFIED INITIAL/DATE	APPROVED INITIAL/DATE
A	ISSUED FOR SYSTEM DESIGN REVIEW	N.P/07.03.24	D.T/08.03.24	T.J/08.03.24

COORDINATE SYSTEM: ISG66-56.1 | HEIGHT DATUM: AHD | SCALE: N.T.S.

NSW GOVERNMENT Transport for NSW

Transport for TOMORROW
TransforT

Kellogg Brown & Root Pty Ltd
ABN 91 007 660 317
Kellogg Brown & Root
CIVIL

DRAWN	DOMINIKA URNIAZ	29/02/24
DESIGNED	NISHMA PRADHAN	08/03/24
DRG CHECK	MELANIE WILSON	07/03/24
DESIGN CHECK	DAVID TABRETT	08/03/24
APPROVED	TONY JOHNSTONE	08/03/24

ERSKINEVILLE
ILLAWARRA LINE - 2.250KM TO 2.450KM
MTMS3ASP2-ERSKINEVILLE HIRAIL ACCESS PAD
CIVIL
DRAWING INDEX & LOCALITY PLAN

FILE No.		SHEET: 01 OF 01			A1
STATUS: SYSTEM DESIGN REVIEW					©
DRG No. MTMS3ASP2-KBR-ERS-CV-DRG-002101	REV A	VER	EDMS No. CV0872852	AMD No.	

GENERAL:

G1. ALL DIMENSIONS ARE SHOWN IN MILLIMETRES UNLESS SPECIFIED OTHERWISE.

G2. LEVELS ARE IN METRES, REFERENCED TO AUSTRALIAN HEIGHT DATUM (A.H.D.).

G3. CO-ORDINATES ARE IN ISG66-56.1.

G4. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP ARE IN ACCORDANCE WITH THE SPECIFICATIONS, TOGETHER WITH THE REQUIREMENTS OF ALL RELEVANT CODES OF PRACTICE REFERRED TO THEREIN AND THE REQUIREMENTS OF ALL STATUTORY AUTHORITIES WHERE APPLICABLE.

G5. ALL LOCATIONS, ORIENTATIONS AND LEVELS ARE TO BE VERIFIED ON SITE BEFORE COMMENCING ANY WORK.

G6. PREPARE AND IMPLEMENT A SEDIMENT CONTROL PLAN AND TEMPORARY DRAINAGE DIVERSION FOR EACH STAGE OF CONSTRUCTION.

G7. PRIOR TO THE CONSTRUCTION, THE FOUNDING CONDITIONS ARE TO BE VERIFIED BY THE DESIGNERS SITE GEOTECHNICAL REPRESENTATIVE TO ENSURE THAT THE FOUNDING MATERIAL STRENGTHS MEET OR EXCEED THE DESIGN STRENGTH.

G8. ALL ASSETS, SUCH AS PAVEMENTS, FENCING, RETAINING WALLS, SIGNAGE, LIGHT POLES, FENCING, RAILWAY BALLAST ETC. THAT WERE DISTURBED OR BROKEN DURING CONSTRUCTION WERE REPLACED OR REINSTATED TO CURRENT STANDARDS.

G9. MAINTAIN THE INTEGRITY OF ALL STRUCTURES DURING CONSTRUCTION (BY CONTROLLED BACKFILLING, PROPPING OR OTHER METHODS).

G10. EXISTING LEVELS ARE INDICATIVELY SHOWN AND INTERPOLATED BETWEEN SURVEY POINTS. THE CONSTRUCTOR SHALL VERIFY THE EXISTING GROUND LEVELS AND REPORT ANY DISCREPANCIES TO THE CONSULTANT PRIOR TO CONSTRUCTION.

EXISTING SURVEY AND SERVICES:

ESS1. CONFIRM THE EXACT LOCATION AND EXTENT OF EXISTING SERVICES PRIOR TO CONSTRUCTION AND REPORT ANY ISSUES IMMEDIATELY TO THE DESIGNERS FOR RESOLUTION.

ESS2. EXISTING SERVICES HAVE BEEN PLOTTED FROM SUPPLIED DSS DATA, AS SUCH, THEIR ACCURACY CANNOT BE GUARENTEED.

ESS3. COMPLETE A 'DIAL BEFORE YOU DIG' AND UNDERTAKE SERVICES INVESTIGATIONS TO ESTABLISH THE LOCATION AND LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE DESIGNER. CLEARANCES SHALL BE OBTAINED FROM THE RELEVANT SERVICE AUTHORITY. SEARCH RESULTS ARE TO BE KEPT ON SITE AT ALL TIMES.

ESS4. DO NOT ASSUME DEPTHS OR ALIGNMENTS OF CABLES OR PLANT AS THESE MAY VARY SIGNIFICANTLY.

TfNSW SPECIFICATIONS:

ALL WORK WAS CARRIED OUT IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS AND DESIGN STANDARDS WITH AMENDMENTS AS DETAILED IN THESE NOTES.

1. R44 - EARTHWORKS
2. R71 - CONSTRUCTION OF UNBOUND AND MODIFIED PAVEMENT COURSE
3. R117 - LIGHT DUTY DENSE GRADED ASPHALT
4. R126 - HIGH MODULUS ASPHALT (EME2)
5. R3051 - GRANULAR BASE AND SUB-BASE MATERIALS FOR SURFACED ROAD PAVEMENTS
6. R3253 - BITUMEN FOR PAVEMENTS
7. R3261 - CUTBACK BITUMEN

ASA STANDARDS:

ALL WORK WAS CARRIED OUT IN ACCORDANCE WITH THE FOLLOWING ASA STANDARDS WITH AMENDMENTS AS DETAILED IN THESE NOTES.

1. T HR CI 12200 ST - ACCESS ROADS
2. T HR CI 12110 CT - EARTHWORKS AND FORMATION
3. T HR CI 12111 SP - EARTHWORK MATERIALS

EARTHWORKS:

E1. REFER TO GEOTECHNICAL INVESTIGATION REPORT PREPARED BY STANTEC FOR INFORMATION REGARDING EXISTING GROUND CONDITIONS, GROUND WATER LEVELS, SITE TREATMENT AND SUPERVISION.

E2. PRIOR TO EARTHWORKS OPERATIONS, THE NATURAL GROUND SURFACE SHALL BE CLEARED OF ALL TREES, STUMPS, ROOTS AND UNDERGROWTH, BUILDINGS, FENCES, POLES AND DEBRIS, SUCH AS OLD FOUNDATIONS, BURIED PIPELINES AND THE LIKE, IN THE NOMINATED AREAS WITHIN THE CONSTRUCTION AREA.

E3. BEFORE GENERAL EXCAVATION COMMENCES, THE GROUND SURFACE ON WHICH FILL IS TO BE PLACED AND THE AREA FROM WHICH CUT IS TO BE REMOVED, SHALL BE STRIPPED OF ANY EXISTING TOPSOIL. THE STRIP DEPTH SHALL BE A MINIMUM OF 200mm.

E4. ENSURE THAT THE SURFACE OF THE STOCKPILED TOPSOIL SHALL HAVE A 90% MINIMUM COVERING OF GRASS AND GRASS ROOTS, ESTABLISHED FROM A SUITABLE SEED MIX IN ORDER MINIMISE EROSION OF THE STOCKPILE.

E5. SURFACES SHALL BE COMPLETELY FREE OF DEPRESSIONS, POTHOLES AND LOOSE MATERIALS IN READINESS FOR STRUCTURE OR PAVEMENT CONSTRUCTION.

E6. SET UP THE STOCKPILES IN A MANNER THAT MINIMISES DAMAGE TO NATURAL VEGETATION, MAINTAINS THE EXISTING SURFACE DRAINAGE AND STOCKPILED MATERIAL TO REMAIN ACCESSIBLE.

E7. UNLESS NOTED OTHERWISE, DO NOT IMPORT MATERIAL INTO THE WORKS UNTIL ALL MATERIAL OF SUITABLE QUALITY FROM THE CUT WITHIN THE SITE HAS BEEN PLACED, OR HAS BEEN ALLOCATED FOR PLACEMENT.

E8. CARRY OUT ALL THE EARTHWORKS IN ACCORDANCE WITH THE REQUIREMENTS AND CONDITIONS IN THE CEMP.

EARTHWORKS SAFETY:

ES1. CARRY OUT ALL EXCAVATION IN ACCORDANCE WITH THE REQUIREMENTS OF 'NSW WORKCOVER CODE OF PRACTICE - EXCAVATION' (JANUARY 2020)

ES2. PRIOR TO COMMENCING EXCAVATION, IDENTIFY THE HAZARDS, ASSESS THE RISKS AND IMPLEMENT CONTROL MEASURES.

ACCESS ROAD PAVEMENT:

PT1. ALL PAVEMENT WORKS AND MATERIALS ARE IN ACCORDANCE WITH THE RELEVANT SPECIFICATIONS.

PT2. EARTHWORKS FOR ACCESS ROADS ARE IN ACCORDANCE WITH TfNSW SPECIFICATION R44

SUSTAINABILITY:

SU1. WHERE DEEMED TO BE 100% COMPATIBLE AND USABLE, ALL EXCAVATED SPOIL SHALL BE REUSED, RECYLED OR REPURPOSED.

SU2. WHERE DEEMED TO BE 100% COMPATIBLE AND CLEAN, CONCRETE STRUCTURES THAT HAVE BEEN REMOVED SHALL BE REUSED, RECYCLED OR REPURPOSED.

SU3. CONCRETE TO BE SOURCED FROM MEMBERS OF CEMENT & AGGREGATES AUSTRALIA OR SIMILIAR ASSOCIATION OR ORGANISATION BY AGREEMENT WITH TfNSW

SU4. STEEL TO BE SOURCES FROM MEMBERS OF THE AUSTRALIA STEEL INSTITUE OR SIMILAIR ASSOCIATION BY AGREEMENT WITH TfNSW

SU5. TIMBER WILL BE USED FOR FORMWORK. 95% BY COST OF ALL TIMBER PRODUCTS ARE EITHER REUSED TIMBER, POST-CONSUMER RECYCLED TIMBER OR FOREST STEWARDSHIP COUNCIL (FSC) OR PROGRAM FOR THE ENDORSEMENT OF FOREST CERTIFICATION (PEFC) CERTIFIED AS PER SDG CR 12 T.1.

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FOR REVIEW & COMMENT

REV	DESCRIPTION	DESIGNER INITIAL/DATE	VERIFIED INITIAL/DATE	APPROVED INITIAL/DATE
A	ISSUED FOR SYSTEM DESIGN REVIEW	N.P/07.03.24	D.T/08.03.24	T.J/08.03.24

COORDINATE SYSTEM: ISG66-56.1 | HEIGHT DATUM: AHD | SCALE: N.T.S.

NSW GOVERNMENT Transport for NSW

Transport for TOMORROW
TransforT

KBR
Kellogg Brown & Root Pty Ltd
ABN 91 007 660 317
Kellogg Brown & Root
CIVIL

DRAWN	JAMES MCMILLAN	26/02/24
DESIGNED	NISHMA PRADHAN	08/03/24
DRG CHECK	MELANIE WILSON	07/03/24
DESIGN CHECK	DAVID TABRETT	08/03/24
APPROVED	TONY JOHNSTONE	08/03/24

ERSKINEVILLE

ILLAWARRA LINE - 2.250KM TO 2.450KM

MTMS3ASP2-ERSKINEVILLE HIRAIL ACCESS PAD

CIVIL

GENERAL NOTES

FILE No. | SHEET: 01 OF 01 | A1

STATUS: SYSTEM DESIGN REVIEW ©

DRG No.	REV	VER	EDMS No.	AMD No.
MTMS3ASP2-KBR-ERS-CV-DRG-004101	A		CV0872853	

GENERAL LEGEND

- EXISTING OVERHEAD WIRING STRUCTURE
- PROPOSED BOLLARD
- PROPOSED REMOVABLE BOLLARD
- EARTHWORKS - BATTER TICK
- EARTHWORKS - BATTER
- TRACK - REALIGNED TRACK WITH SLEEPER EDGE
- TRACK - PROPOSED TRACK WITH SLEEPER EDGE
- EXISTING FENCE
- PROPOSED TRENCH DRAIN AS PART OF MAIN WORKS PACKAGE
- PROPOSED COMPRESSED AIRLINE AS PART OF MAIN WORKS PACKAGE
- EXISTING LIGHTING

REFERENCES:

DSS FILE .... SW2+187 F2013__14185__FINAL__20.02.2024
TOPOGRAPHICAL SURVEY FILE .... 2400038-FS-001-B__FROMSURVEYOR__2024-02-13
TERRESTRIAL SCAN FILE MTMS3ASP2-KBR-ERS-SU-M3D-030002

CONCESSIONS:

- OHWS SW 2+321 PROTECTION BOLLARD ON DOWN ILLAWARRA LOCAL .... CN TBA
- OHWS SW 2+321 PROTECTION BOLLARD ON UP ILLWARRA LOCAL .... CN TBA

NOTES:

1. FOR GENERAL NOTES REFER TO DRG CV0872853
2. FOR TRACK ALIGNMENT AND SET OUT REFER TO DRG 0872877 IN EARLY WORKS PACKAGE

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COORDINATE SYSTEM: ISG66-56.1 | HEIGHT DATUM: AHD | SCALE: 1:100

NSW GOVERNMENT Transport for NSW

Transport for TOMORROW TransforT

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Kellogg Brown & Root CIVIL

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ERSKINEVILLE

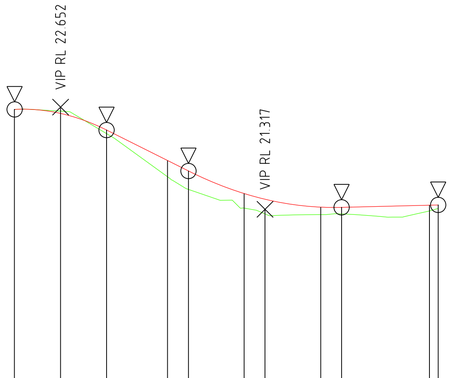
ILLAWARRA LINE - 2.250KM TO 2.450KM
MTMS3ASP2-ERSKINEVILLE HIRAIL ACCESS PAD
CIVIL
HI-RAIL ACCESS PAD & ACCESS RD PLAN

FILE No. | SHEET: 01 OF 01 | A1
STATUS: SYSTEM DESIGN REVIEW | ©
DRG No. MTMS3ASP2-KBR-ERS-CV-DRG-005101 | REV A | VER | EDMS No. CV0872856 | AMD No.

1:100 FULL SIZE A1

NOTES:

1. FOR GENERAL NOTES REFER TO DRG CV0872853
2. FOR GENERAL ARRANGEMENT PLAN REFER TO DRG CV0872856



DATUM: 19.000

VERTICAL GEOMETRY	K -0.545 L 6.000	GRADE -10.00% L 5.349	K 0.952 L 10.000	GRADE -0.50% L 6.307
HORIZONTAL GEOMETRY	L 15.001		R = 8.500 L 12.097	L 0.573
DEPTH	0.000 0.029 -0.047 -0.212 -0.240 -0.190 -0.192 -0.097 -0.086 -0.075 -0.045			
DESIGN LEVELS	22.621 22.652 22.352 21.954 21.817 21.523 21.317 21.345 21.342 21.371 21.374			
EXISTING LEVELS	22.621 22.599 22.305 21.742 21.577 21.333 21.257 21.248 21.257 21.296 21.329			
STATION	0.000 3.015 6.015 10.000 11.364 15.001 16.364 20.000 21.364 27.098 27.671			

ACCESS ROAD - LONGITUDINAL SECTION

SCALE: H 1:100

1 0 1 2 3m
1 : 100 FULL SIZE A1

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COORDINATE SYSTEM: ISG66-56.1 | HEIGHT DATUM: AHD | SCALE: 1:100

NSW GOVERNMENT Transport for NSW

Transport for TOMORROW
TransforT

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Kellogg Brown & Root Pty Ltd
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ERSKINEVILLE

ILLAWARRA LINE - 2.250KM TO 2.450KM

MTMS3ASP2-ERSKINEVILLE HIRAIL ACCESS PAD

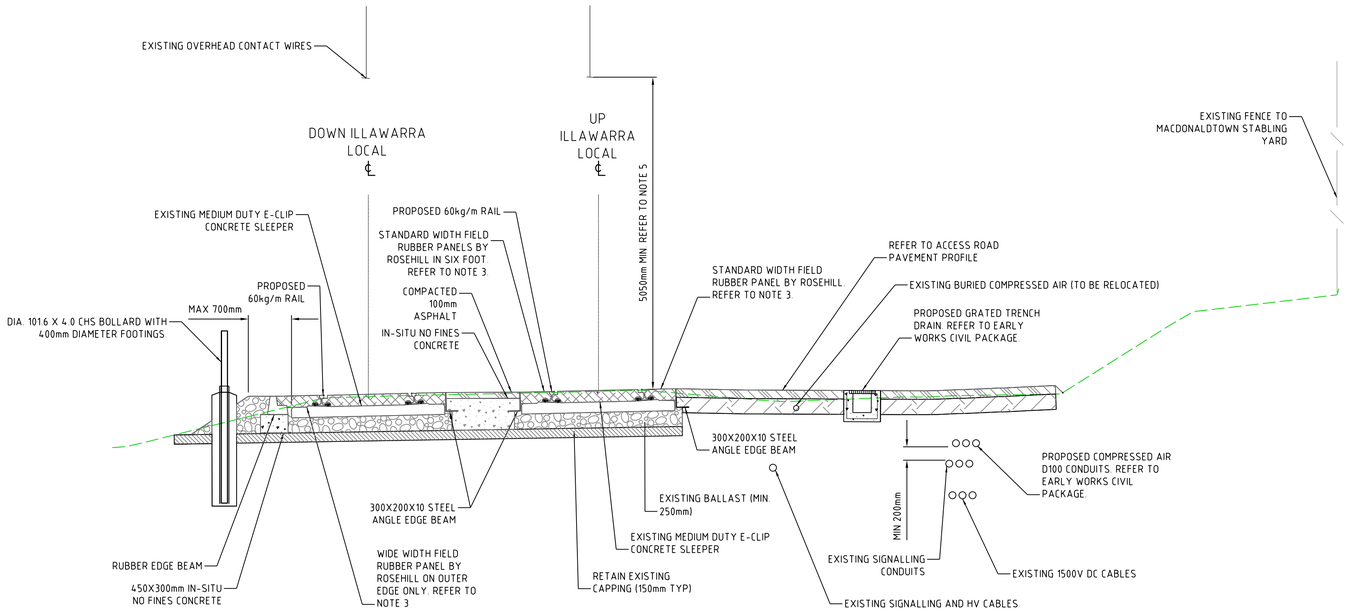
CIVIL

ACCESS ROAD LONGITUDAL SECTION

FILE No. | SHEET: 01 OF 01 | A1

STATUS: SYSTEM DESIGN REVIEW ©

DRG No.	REV	VER	EDMS No.	AMD No.
MTMS3ASP2-KBR-ERS-CV-DRG-007101	A		CV0872858	

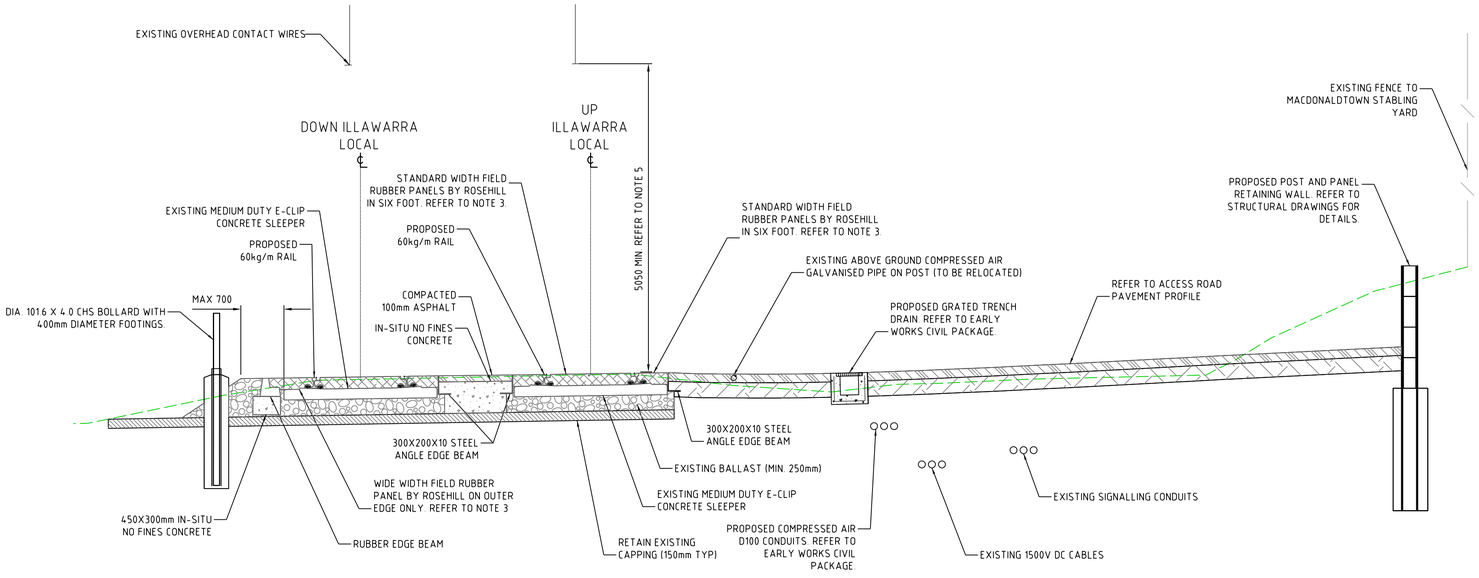


TYPICAL SECTION ~ CHAINAGE 2KM 315

SCALE 1:50

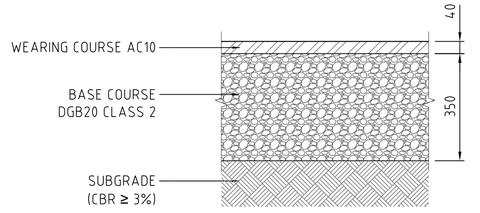
NOTES

1. ALL DIMENSION ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. ENTIRETY OF BOLLARD AND FOOTING TO BE MINIMUM 2150mm FROM TRACK CL AS PER ESC 215 TRANSIT SPACE.
3. RUBBER PAD SYSTEM TO BE INSTALLED ACCORDING TO MANUFACTURERS INSTALLATION GUIDE.
4. REFER TO CV0872853 FOR GENERAL NOTES AND CV0872856 FOR GENERAL ARRANGEMENT PLAN.
5. CLEARANCE OF MIN. 5050mm FROM DESIGN HIGH RAIL TO THE LOWEST POINT OF SURVEYED OVERHEAD WIRING.
6. DEPTH OF EXISTING SERVICES ARE BASED ON DSS DEPTH DATA. DEPTHS ARE TO BE CONFIRMED VIA NON-DESTRUCTIVE DIGGING PRIOR TO CONSTRUCTION.
7. REFER TO CV0872877 FOR TRACK ALIGNMENT & SETTING OUT DETAIL.



TYPICAL SECTION ~ CHAINAGE 2KM 330

SCALE 1:50



ACCESS RAMP PAVEMENT PROFILE

SCALE 1:10

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0.1 0 0.1 0.2 0.3
1 : 10 FULL SIZE A1

0.5 0 0.5 1 1.5
1 : 50 FULL SIZE A1

REV	DESCRIPTION	DESIGNER INITIAL/DATE	VERIFIED INITIAL/DATE	APPROVED INITIAL/DATE
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COORDINATE SYSTEM: ISG66-56.1 | HEIGHT DATUM: AHD | SCALE: 1:50,1:10

NSW GOVERNMENT Transport for NSW

Transport for TOMORROW
TransforT

KBR
Kellogg Brown & Root Pty Ltd
ABN 91 007 660 317
Kellogg Brown & Root CIVIL

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DESIGNED	NISHMA PRADHAN	08/03/24
DRG CHECK	MELANIE WILSON	07/03/24
DESIGN CHECK	DAVID TABRETT	08/03/24
APPROVED	TONY JOHNSTONE	08/03/24

ERSKINEVILLE

ILLAWARRA LINE - 2.250KM TO 2.450KM

MTMS3ASP2-ERSKINEVILLE HIRAIL ACCESS PAD

CIVIL

TYPICAL CROSS SECTIONS

FILE No. | SHEET: 01 OF 01 | A1

STATUS: SYSTEM DESIGN REVIEW ©

DRG No.	REV	VER	EDMS No.	AMD No.
MTMS3ASP2-KBR-ERS-CV-DRG-008101	A		CV0872859	

GENERAL

G1 ALL DIMENSIONS ARE SHOWN IN MILLIMETRES UNLESS SPECIFIED OTHERWISE.

G2 LEVELS ARE IN METRES. REFERENCED TO AUSTRALIAN HEIGHT DATUM (A.H.D)

G3 ALL WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH THE RELEVANT PROJECT SPECIFICATIONS.

G4 DRAWING SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED BY THE DESIGNER DURING THE COURSE OF CONSTRUCTION. WHERE THERE IS A DISCREPANCY, THIS SHALL BE RESOLVED BY THE DESIGNER. NOTES ON SPECIFIC DOCUMENTS SHALL TAKE PRECEDENCE OVER THESE GENERAL NOTES.

G5 ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS TOGETHER WITH THE REQUIREMENTS OF ALL RELEVANT CODES OF PRACTICE REFERRED TO THEREIN AND THE REQUIREMENTS OF ALL STATUTORY AUTHORITIES WHERE APPLICABLE.

G6 ALL WORK TO BE CARRIED OUT INLINE WITH TfNSW GUIDELINES FOLLOWED BY AUSTRALIAN STANDARDS.

G7 INSPECTION AND TEST PLANS (ITPS) AND INSPECTION AND TEST CHECKLISTS (ITCS) SHALL BE PREPARED PRIOR TO ISSUE OF AFC DOCUMENTATION.

G8 RETAINING WALL CONSTRUCTION IS TO BE IN ACCORDANCE WITH TS 01658.

DESIGN CRITERIA

D1 POST AND PANEL RETAINING WALL IS DESIGNED FOR A DESIGN LIFE OF 120 YEARS AS PER TS 01642.

D2 WIND OR EARTHQUAKE LOADING WAS CONSIDERED NOT APPLICABLE.

D3 SURCHARGE LOADING = 20 kPa.

D4 RETAINING WALL IS DESIGNED CONSIDERING MAXIMUM 100KG COMPACTOR PLATE INDUCED LOADS.

D5 REFER TO DESIGN REPORT FOR FURTHER INFORMATION ON DESIGN STANDARDS AND DESIGN FACTORS USED.

CONCRETE

C1 CONCRETE EXPOSURE CLASSIFICATION = B1.

C2 THE CONCRETE MIX DESIGN IS TO COMPLY WITH TS 01733.1 & TS 1733.2 (B80) REQUIREMENTS.

C2 MINIMUM 28 DAY COMPRESSIVE STRENGTH OF STRUCTURAL CONCRETE SHALL BE AS FOLLOWS:

ELEMENTS	COMPRESSIVE STRENGTH
PRECAST PANELS	50 MPa
PILE FOOTINGS	40 MPa

C3 EDGES SHALL BE CHAMFERED 20 X 20 AND RETRANT ANGLES FILLETED 20 X 20 UNLESS SPECIFIED OTHERWISE

C4 CONCRETE FINISHES SHALL BE AS FOLLOWS:

ELEMENTS	SURFACE FINISH
PRECAST PANNELS	CLASS 2

C5 FOR BOTH PRECAST AND CAST IN-SITU ELEMENTS CEMENT CONTENT AND WATER/CEMENT RATIO TO BE AS PER TfNSW TS 1733.2 (B80) TABLE B80.8

C6 FOR FURTHER PRECAST CONCRETE NOTES REFER TfNSW STANDARD DRAWING CV0212050

C7 ALL CONCRETE IS SOURCED FROM MEMBERS OF CEMENT CONCRETE & AGGREGATES AUSTRALIA OR SIMILAR ASSOCIATION OR ORGANISATION BY AGREEMENT WITH TRANSPORT.

C8 ALL CONCRETE DEEMED SAFE FOR REUSE IN ACCORDANCE WITH THE CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN (CEMP) MUST BE DIVERTED FROM WASTE TO BE REUSED, RECYCLED OR REPURPOSED.

REINFORCEMENT

R1 ALL REINFORCMENT BARS TO BE GRADE D500N TO AS/NZS 4671.

R2 ALL REINFORCMENT MESH TO BE D500L TO AS/NZS 4671.

R3 LAP AND DEVELOPMENT LENGTHS SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:

BAR SIZE	N12	N16	N20
HORIZONTAL BARS WITH > 300mm OF CONCRETE BELOW THE BAR	400	500	750
OTHER BARS	300	400	600

MESH SHALL BE LAPPED 2 TRANSVERSE WIRES PLUS 50mm.

R4 CLEAR COVER TO BE AS PER THE FOLLLWING TABLE:

ELEMENTS	COVER (mm)
PILE	80
PRECAST PANNELS	40

R5 WELDING OF REINFORCEMENT IS PROHIBITED UNLESS APPROVED BY THE ENGINEER.

STEELWORK

S1 ALL STRUCTURAL SHALL COMPLY WITH AS 4100.

S2 ALL ROLLED STEEL SECTIONS SHALL COMPLY WITH AS 3679 GRADE 300PLUS.

S3 ALL STEELWORK SHALL BE HOT DIP GALVANIZED TO AS/NZS 4690. AVERAGE COATING OF 600g/m^2 AND MIN 550g/m^2. THE ASSUMED LIFE OF GALVANIZED COATING IS 40 YEARS WITH AN ANNUAL RATE OF CORROSION OF 0.02mm/year THEREAFTER.

S4 STEELWORK CONSTRUCTION CATEGORY = CC1.

BACKFILL

B1 GAP BEHIND POST AND PANEL WALL TO BE FILLED WITH SELECT BACKFILL IN ACCORDANCE WITH TFNSW TS 01608.

B2 THE STABILITY OF EXCAVATIONS SHALL BE MAINTAINED AT ALL TIMES.

FOUNDATIONS

F1 DESIGN ASSUMES PILES ARE EMBEDDED INTO THE SOIL MATCHING WITH THE BH01 BOREHOLE LOG PROVIDED WITH THE GEOTECHNICAL REPORT IA071800-MEM-GT-001.

F2 SHOULD FOUNDATION MATERIAL ENCOUNTERED BE DIFFERENT TO THAT SPECIFIED ABOVE, REFER BACK TO THE DESIGN ENGINEER.

F3 FOUNDATION MATERIAL TO BE VERIFIED ON SITE BY A QUALIFIED GEOTECHNICAL ENGINEER.

F4 PILE DEPTHS DO NOT INCLUDE AN ALLOWANCE FOR UP TO 0.5m. TEMPORARY EXCAVATION IN FRONT OF THE PILE.

REFERENCE DOCUMENTS AND STANDARDS

STD1 GEOTECHNICAL REPORT USED IS 'IA071800-MEM-GT-001 LLAWARRA & ERSKINEVILLE DRAINAGE GIR_FINAL'

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A	ISSUED FOR SYSTEM DESIGN REVIEW	E.K/07.03.24	P.O/07.03.24	T.J/08.03.24

COORDINATE SYSTEM: ISG66-56.1 | HEIGHT DATUM: AHD | SCALE: N.T.S.

NSW GOVERNMENT Transport for NSW

Transport for TOMORROW
TransforT

Kellogg Brown & Root Pty Ltd
ABN 91 007 660 317
Kellogg Brown & Root
STRUCTURAL

DRAWN	GEORGE CILESIO	16/02/24
DESIGNED	ERDEM KILINC	08/03/24
DRG CHECK	MELANIE WILSON	08/03/24
DESIGN CHECK	PETER OCONNELL	08/03/24
APPROVED	TONY JOHNSTONE	08/03/24

ERSKINEVILLE

ILLAWARRA LINE - 2.250KM TO 2.450KM

MTMS3ASP2-ERSKINEVILLE HIRAIL ACCESS PAD

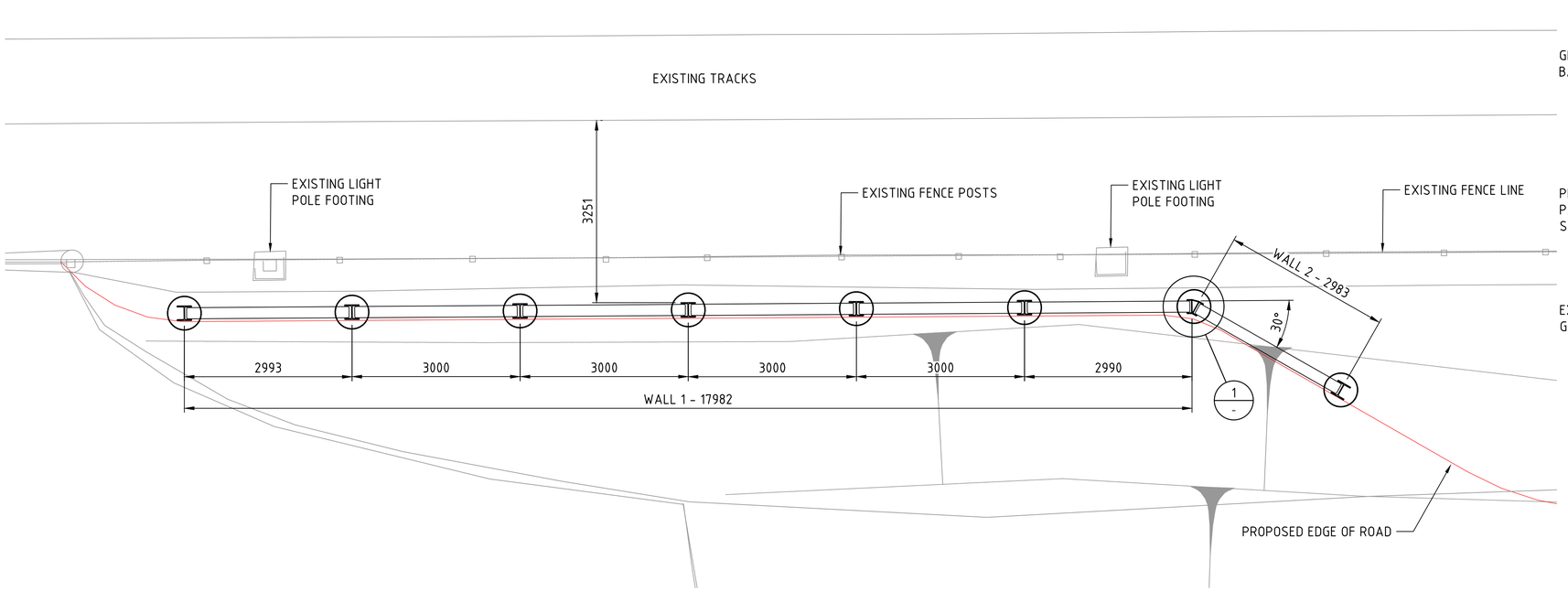
STRUCTURAL

GENERAL NOTES

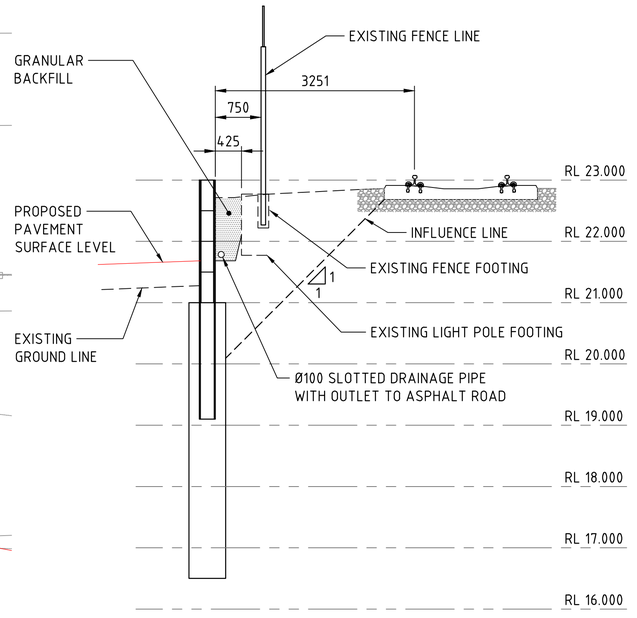
FILE No. | SHEET: 01 OF 01 | A1

STATUS: SYSTEM DESIGN REVIEW ©

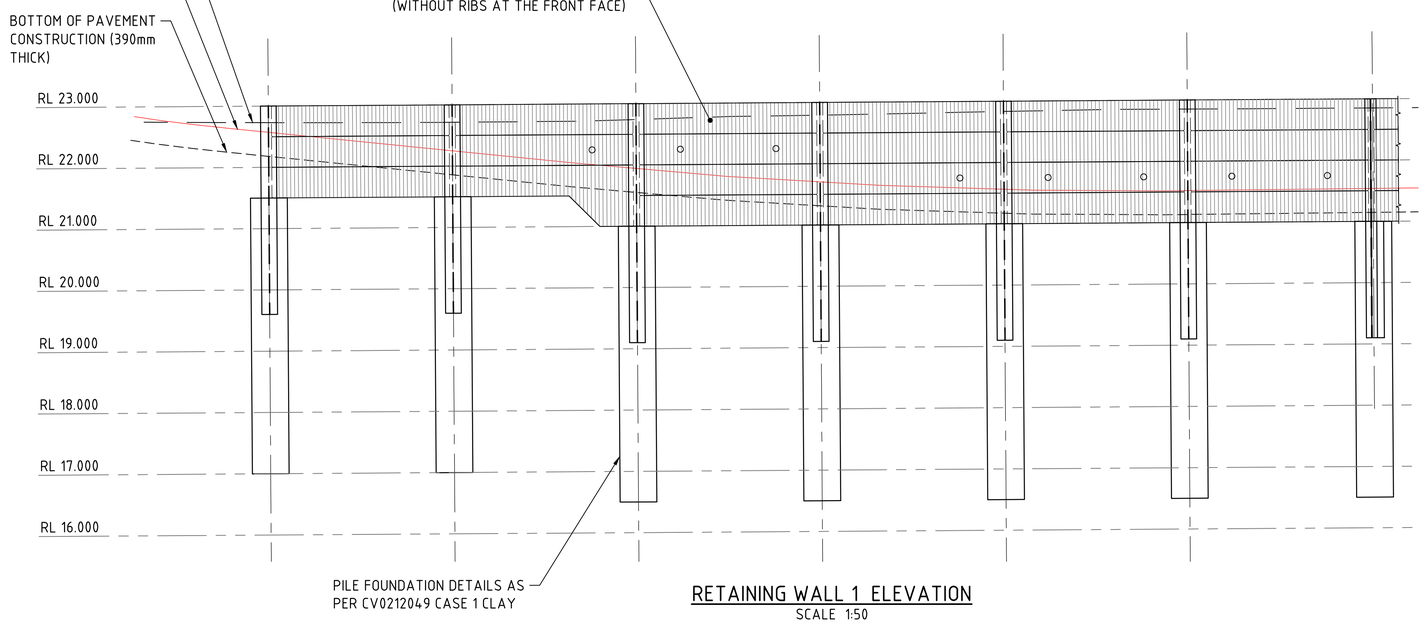
DRG No.	REV	VER	EDMS No.	AMD No.
MTMS3ASP2-KBR-ERS-ST-DRG-004001	A		CV0872864	



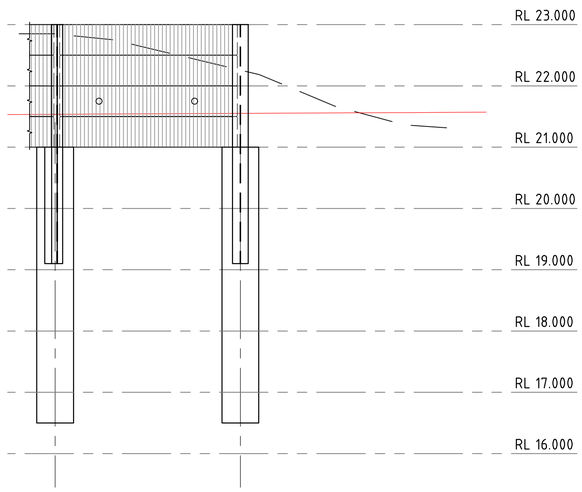
RETAINING WALL PLAN LAYOUT
SCALE 1:50



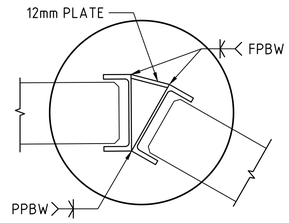
TYPICAL SECTION THROUGH RETAINING WALL
SCALE 1:50



RETAINING WALL 1 ELEVATION
SCALE 1:50



RETAINING WALL 2 ELEVATION
SCALE 1:50



DETAIL 1
NTS

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KBR
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ERSKINEVILLE
ILLAWARRA LINE - 2.250KM TO 2.450KM
MTMS3ASP2-ERSKINEVILLE HIRAIL ACCESS PAD
STRUCTURAL
PLAN LAYOUT

FILE No.		SHEET: 01	OF 01	A1
STATUS: SYSTEM DESIGN REVIEW				©
DRG No. MTMS3ASP2-KBR-ERS-ST-DRG-005001	REV A	VER	EDMS No. CV0872865	AMD No.

Appendix D: EPBC Act Protected Matters Report

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: 19-Mar-2024

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.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	8
Listed Threatened Species:	60
Listed Migratory Species:	24

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.

Commonwealth Lands:	16
Commonwealth Heritage Places:	None
Listed Marine Species:	33
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

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

State and Territory Reserves:	None
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	13
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	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
Castlereagh Scribbly Gum and Agnes Banks Woodlands of the Sydney Basin Bioregion	Endangered	Community may occur within area	In feature area
Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community	Endangered	Community may occur within area	In feature area
Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland	Endangered	Community may occur within area	In feature area
Coastal Upland Swamps in the Sydney Basin Bioregion	Endangered	Community may occur within area	In feature area
Cooks River/Castlereagh Ironbark Forest of the Sydney Basin Bioregion	Critically Endangered	Community may occur within area	In feature area
Eastern Suburbs Banksia Scrub of the Sydney Region	Critically Endangered	Community may occur within area	In feature area
River-flat eucalypt forest on coastal floodplains of southern New South Wales and eastern Victoria	Critically Endangered	Community likely to occur within area	In feature area
Western Sydney Dry Rainforest and Moist Woodland on Shale	Critically Endangered	Community may occur within area	In feature area

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			
Anthochaera phrygia			
Regent Honeyeater [82338]	Critically Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Callocephalon fimbriatum Gang-gang Cockatoo [768]	Endangered	Species or species habitat likely to occur within area	In feature area
Calyptorhynchus lathami lathami South-eastern Glossy Black-Cockatoo [67036]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Climacteris picumnus victoriae Brown Treecreeper (south-eastern) [67062]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Dasyornis brachypterus Eastern Bristlebird [533]	Endangered	Species or species habitat may occur within area	In feature area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat may occur within area	In buffer area only
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat may occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area	In feature area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Limosa lapponica baueri Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Endangered	Species or species habitat known to occur within area	In buffer area only
Melanodryas cucullata cucullata South-eastern Hooded Robin, Hooded Robin (south-eastern) [67093]	Endangered	Species or species habitat likely to occur within area	In feature area
Neophema chrysogaster Orange-bellied Parrot [747]	Critically Endangered	Species or species habitat may occur within area	In buffer area only
Neophema chrysostoma Blue-winged Parrot [726]	Vulnerable	Species or species habitat may occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Pycnoptilus floccosus Pilotbird [525]	Vulnerable	Species or species habitat may occur within area	In feature area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area	In feature area
Stagonopleura guttata Diamond Firetail [59398]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Thalassarche eremita Chatham Albatross [64457]	Endangered	Foraging, feeding or related behaviour may occur within area	In buffer area only
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area	In feature area
FISH			

Scientific Name	Threatened Category	Presence Text	Buffer Status
[Macquaria australasica](#) Macquarie Perch [66632]	Endangered	Species or species habitat may occur within area	In feature area
FROG			
[Heleioporus australiacus](#) Giant Burrowing Frog [1973]	Vulnerable	Species or species habitat likely to occur within area	In feature area
[Litoria aurea](#) Green and Golden Bell Frog [1870]	Vulnerable	Species or species habitat likely to occur within area	In feature area
MAMMAL			
[Chalinolobus dwyeri](#) Large-eared Pied Bat, Large Pied Bat [183]	Endangered	Species or species habitat known to occur within area	In feature area
[Dasyurus maculatus maculatus (SE mainland population)](#) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat likely to occur within area	In feature area
[Isoodon obesulus obesulus](#) Southern Brown Bandicoot (eastern), Southern Brown Bandicoot (south-eastern) [68050]	Endangered	Species or species habitat likely to occur within area	In feature area
[Notamacropus parma](#) Parma Wallaby [89289]	Vulnerable	Species or species habitat may occur within area	In buffer area only
[Petauroides volans](#) Greater Glider (southern and central) [254]	Endangered	Species or species habitat likely to occur within area	In feature area
[Petaurus australis australis](#) Yellow-bellied Glider (south-eastern) [87600]	Vulnerable	Species or species habitat likely to occur within area	In feature area
[Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)](#) 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
[Pseudomys novaehollandiae](#) New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
[Pteropus poliocephalus](#) Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
PLANT			
[Acacia pubescens](#) Downy Wattle, Hairy Stemmed Wattle [18800]	Vulnerable	Species or species habitat may occur within area	In feature area
[Acacia terminalis subsp. Eastern Sydney (G.P.Phillips 126) listed as Acacia terminalis subsp. terminalis MS](#) Sunshine Wattle (Sydney region) [91564]	Endangered	Species or species habitat likely to occur within area	In feature area
[Allocasuarina glareicola](#) [21932]	Endangered	Species or species habitat may occur within area	In feature area
[Caladenia tessellata](#) Thick-lipped Spider-orchid, Daddy Long-legs [2119]	Vulnerable	Species or species habitat likely to occur within area	In feature area
[Cryptostylis hunteriana](#) Leafless Tongue-orchid [19533]	Vulnerable	Species or species habitat likely to occur within area	In feature area
[Eucalyptus camfieldii](#) Camfield's Stringybark [15460]	Vulnerable	Species or species habitat likely to occur within area	In feature area
[Genoplesium baueri](#) Yellow Gnat-orchid, Bauer's Midge Orchid, Brittle Midge Orchid [7528]	Endangered	Species or species habitat likely to occur within area	In feature area
[Persicaria elatior](#) Knotweed, Tall Knotweed [5831]	Vulnerable	Species or species habitat may occur within area	In feature area
[Pimelea curviflora var. curviflora](#) [4182]	Vulnerable	Species or species habitat may occur within area	In feature area
[Pimelea spicata](#) Spiked Rice-flower [20834]	Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Prostanthera densa Villous Mintbush [12233]	Vulnerable	Species or species habitat may occur within area	In feature area
Rhodamnia rubescens Scrub Turpentine, Brown Malletwood [15763]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Rhodomyrtus psidioides Native Guava [19162]	Critically Endangered	Species or species habitat may occur within area	In feature area
Syzygium paniculatum 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
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat likely to occur within area	In feature area

Listed Migratory Species		[Resource Information]	
Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Species or species habitat may occur within area	In buffer area only
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Thalassarche eremita Chatham Albatross [64457]	Endangered	Foraging, feeding or related behaviour may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
[Thalassarche salvini](#) Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
[Thalassarche steadi](#) White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only
Migratory Terrestrial Species			
[Cuculus optatus](#) Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area	In feature area
[Hirundapus caudacutus](#) White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
[Monarcha melanopsis](#) Black-faced Monarch [609]		Species or species habitat known to occur within area	In feature area
[Motacilla flava](#) Yellow Wagtail [644]		Species or species habitat known to occur within area	In feature area
[Myiagra cyanoleuca](#) Satin Flycatcher [612]		Species or species habitat known to occur within area	In feature area
[Rhipidura rufifrons](#) Rufous Fantail [592]		Species or species habitat known to occur within area	In feature area
[Symposiachrus trivirgatus as Monarcha trivirgatus](#) Spectacled Monarch [83946]		Species or species habitat may occur within area	In feature area
Migratory Wetlands Species			
[Actitis hypoleucos](#) Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
[Calidris acuminata](#) Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area	In feature area
[Calidris canutus](#) Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area	In feature area
[Calidris ferruginea](#) Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
[Calidris melanotos](#) Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
[Charadrius leschenaultii](#) Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area	In feature area
[Gallinago hardwickii](#) Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area	In feature area
[Limosa lapponica](#) Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In buffer area only
[Numenius madagascariensis](#) Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
[Tringa nebularia](#) Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area	In feature area

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 Name	State	Buffer Status
Commonwealth Land - Australian Postal Commission [14348]	NSW	In buffer area only
Commonwealth Land - Australian Postal Commission [14384]	NSW	In buffer area only
Communications, Information Technology and the Arts - Telstra Corporation Limited		
Commonwealth Land - Australian Telecommunications Commission [14383]	NSW	In buffer area only
Commonwealth Land - Australian Telecommunications Commission [14388]	NSW	In buffer area only
Commonwealth Land - Telstra Corporation Limited [14340]	NSW	In buffer area only
Commonwealth Land - Telstra Corporation Limited [14385]	NSW	In buffer area only
Commonwealth Land - Telstra Corporation Limited [14341]	NSW	In buffer area only
Commonwealth Land - Telstra Corporation Limited [14339]	NSW	In buffer area only
Defence		
Defence - FOREST LODGE (SYDNEY) TRG DEP [10071]	NSW	In buffer area only
Defence - SYDNEY UNIVERSITY REGIMENT - DARLINGTON [11094]	NSW	In feature area
Defence - Defence Housing Authority		
Commonwealth Land - Defence Housing Authority [16048]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16045]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16046]	NSW	In buffer area only
Commonwealth Land - Defence Housing Authority [16047]	NSW	In buffer area only
Unknown		
Commonwealth Land - [14387]	NSW	In buffer area only
Commonwealth Land - [14386]	NSW	In buffer area only

Listed Marine Species			[Resource Information]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
Actitis hypoleucos			
Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Apus pacificus			
Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area overfly marine area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Species or species habitat may occur within area	In buffer area only
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Haliaeetus leucogaster 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
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In buffer area only
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area overfly marine area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat known to occur within area overfly marine area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area	In feature area
Neophema chrysogaster Orange-bellied Parrot [747]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In buffer area only
Neophema chrysostoma Blue-winged Parrot [726]	Vulnerable	Species or species habitat may occur within area overfly marine area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Pachyptila turtur Fairy Prion [1066]		Species or species habitat known to occur within area	In buffer area only
Pterodroma cervicalis White-necked Petrel [59642]		Species or species habitat may occur within area	In feature area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area overfly marine area	In feature area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Sterna striata White-fronted Tern [799]		Migration route may occur within area	In feature area
Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		Species or species habitat may occur within area overfly marine area	In feature area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Thalassarche eremita Chatham Albatross [64457]	Endangered	Foraging, feeding or related behaviour may occur within area	In buffer area only
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In buffer area only
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Tringa nebularia			
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area

Extra Information

EPBC Act Referrals			[Resource Information]	
Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Controlled action				
Construction and operation of the Westconnex New M5, Sydney, NSW	2015/7520	Controlled Action	Post-Approval	In buffer area only
Not controlled action				
Decommissioning of NMC and Camperdown Facility	2010/5645	Not Controlled Action	Completed	In buffer area only
Georges River Program 2	2003/999	Not Controlled Action	Completed	In buffer area only
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
INDIGO Central Submarine Telecommunications Cable	2017/8127	Not Controlled Action	Completed	In feature area
Noxious weed removal and controlled burn	2003/1272	Not Controlled Action	Completed	In feature area
Rabbit Control Anzac Rifle Range	2005/1940	Not Controlled Action	Completed	In feature area
Rehabilitation works of the Coogee Sewer Diversion Submain - Maxwell Avenue, Mar	2004/1683	Not Controlled Action	Completed	In feature area
Shipment of Spent Nuclear Fuel to USA	2007/3672	Not Controlled Action	Completed	In buffer area only
Sydney Desalination Plant	2005/2331	Not Controlled Action	Completed	In feature area
Sydney Metro Network Stage 2	2010/5307	Not Controlled Action	Completed	In buffer area only
Undertake a controlled burn of the Eastern Suburbs Banksia Scrub at Byrne Cresce	2004/1728	Not Controlled Action	Completed	In feature area

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Not controlled action Not controlled action (particular manner)				
INDIGO Marine Cable Route Survey (INDIGO)	2017/7996	Not Controlled Action (Particular Manner)	Post-Approval	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.

Department of Climate Change, Energy, the Environment and Water
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Canberra ACT 2601 Australia
+61 2 6274 1111

Appendix E: Aboriginal Heritage Information Management Systems (AHIMS) search

AHIMS Web Services (AWS)
Search Result

Your Ref/PO Number : A

Client Service ID : 874855

Transport for NSW - 7 Harvest Street Macquarie Park

Date: 19 March 2024

7 Harvest Street
Macquarie Park New South Wales 2113

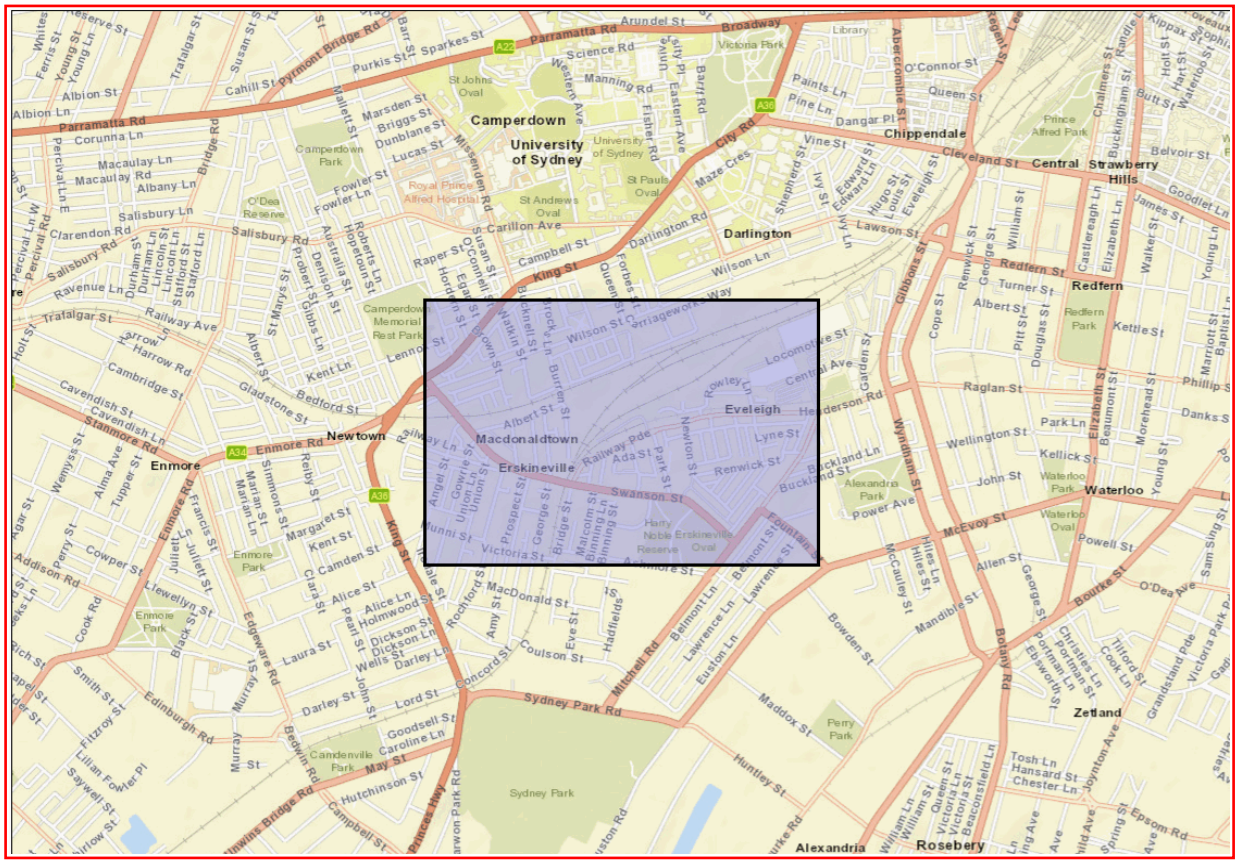
Attention: Jade Roughan

Email: jade.roughan@transport.nsw.gov.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lat, Long From : -33.9027, 151.18 - Lat, Long To : -33.8938, 151.1955, conducted by Jade Roughan on 19 March 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) 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.
- AHIMS records information about Aboriginal sites that have been provided to Heritage NSW and Aboriginal places that have been declared by the Minister;
- 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.

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Appendix F: Rail Infrastructure Upgrade, Eveleigh Railway Workshops, Statement of Heritage Impact, Mountains heritage, February 2024

Rail Infrastructure Upgrade, Eveleigh Railway Workshops:

Statement of Heritage Impact

Report prepared for Transport for Tomorrow

February 2024

MTS Heritage Pty Ltd, 92 Douglas Street, Springwood NSW 2777 ABN: 68 668 095 458

Project Name:	Eveleigh Rail Infrastructure Upgrade
Document Title:	Rail Infrastructure Upgrade, Eveleigh Railway Workshops: Statement of Heritage Impact
Revision:	Final
Date:	26 February 2024
Client Name:	Transport for Tomorrow for Transport for NSW
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Draft	19/02/2024	Draft SoHI	F. Leslie	C. Lewczak	23/02/2024
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Executive Summary

This report has been prepared by MTS Heritage Pty Ltd (Mountains Heritage) to assess the potential impact of a minor rail infrastructure upgrade on the heritage significance of the 'Eveleigh Railway Workshops'. Following the completion of new rail crossovers on the Illawarra Main Line for the More Trains More Services North Project, a new level crossing is needed to launch vehicles and ensure ongoing access to the operational rail corridor at Eveleigh. For this new crossing, Transport for Tomorrow, on behalf of Transport for NSW, requires the construction a new Hi-Rail Access Pad, an associated asphalt access road and turning bay, a new post and panel retaining wall and a new barrier along the vehicle approach.

The proposed upgrade works are located within the heritage curtilage of the 'Eveleigh Railway Workshops', a heritage complex recognised as one of Australia's finest industrial heritage items. The 'Eveleigh Railway Workshops' is listed on the NSW State Heritage Register and, as such, is protected under the provisions of the *Heritage Act, 1977*. The following report presents an assessment of the potential impact of the works on the heritage significance of the 'Eveleigh Railway Workshops' following NSW heritage guidelines.

Following a review of the 2017 Overarching Conservation Management Plan and previous heritage assessments and an overlay of historical maps and plans, it has been found that the works would not result in any direct impact on significant heritage elements or have a negative visual impact on the heritage complex. Historically, the subject site was situated on at least four (4) former rail lines used to transport material and goods from the Gas Works, built in 1892 south of the Carriage Shed, and to move carriages from the stabling shed to the suburban lines. The potential for the works to impact historical archaeological relics or buried 'works' has also been assessed to be extremely low. No former nineteenth century buildings or structures are shown in historical maps and plans in the proposed works area.

Based on the results of this assessment, it is recommended that Transport for NSW submit a copy of this report to Heritage NSW to support a S.60 Works Application. If any buried 'works' and/or relics are unexpectedly found during excavation, the *Transport Unexpected Heritage Finds Guideline* should be followed.

1. Introduction

1.1 Project background

MTS Heritage (Mountains Heritage) has been engaged by Transport for Tomorrow, on behalf of Transport for NSW, to prepare a Statement of Heritage Impact (SoHI) for a minor rail infrastructure upgrade proposed at Eveleigh, in Sydney, NSW. The works include the addition of a new Hi-Rail Access Pad within the operational rail corridor of the 'Eveleigh Railway Workshops', a heritage complex listed on the NSW State Heritage Register (SHR; No. 1140). The complex is recognised as a place of international significance, as one of Australia's finest industrial heritage items.

The rail infrastructure upgrade works are required following the completion of new rail crossovers on the Illawarra Main Line for the More Trains More Service North Project. Due to the new crossovers, a new level crossing is needed to launch vehicles and ensure access to the operational rail corridor at Eveleigh. For this new crossing, Transport for Tomorrow is proposing to construct a new Hi-Rail Access Pad, asphalt an existing ballasted portion of the rail corridor to create a new ramp and turning bay and erect a new post and panel retaining wall and a new barrier along the vehicle approach to the new Hi-Rail Access Pad.

The following report has been prepared to assess the potential impact of the proposed works on the heritage significance of the 'Eveleigh Railway Workshops'. It has been prepared to satisfy the requirements of the *Environmental Planning and Assessment Act 1979* and the *Heritage Act 1977* and follows the *Guidelines for preparing a statement of heritage impact* published by the Department of Planning and Environment in 2023.

1.2 Heritage status

The 'Eveleigh Railway Workshops' is listed as a heritage complex on the NSW State Heritage Register (SHR; No. 1140). A copy of its listing is included in Annexure A. As outlined by the State Heritage Register (SHR) listing:

> *The Eveleigh Railway Yards are some of the finest historic railway engineering workshops in the world and Eveleigh contains one of the most complete late 19th century and early 20th century forge installations, collection of cranes and power systems, in particular the hydraulic system. The place is of international significance and is one of Australia's finest industrial heritage items. The value of the place is increased by the fact that it is comprised of assemblages, collections and operational systems rather than individual items. Conversely, the significance has been reduced by its closure, relocation of some machinery and its disassociation from the operating rail network. (State Projects 1995: 109) (See - https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=5045103)*

1.3 Site location

The 'Eveleigh Railway Workshops' are situated in the suburb of Eveleigh, approximately 4km south of the Sydney Central Business District (CBD). The heritage curtilage for the complex is bounded by Wilson Street to the north west, Redfern Street to the north east, Cornwallis and Garden Street to the south east and Henderson Road to the south (see Figure 1.1).

The new Hi-Rail Access Pad and associated works (hereafter referred to as the 'proposed works' or 'subject site') is located in the active rail corridor, within the 'Eveleigh Railway Workshops' heritage curtilage at Eveleigh, NSW (see Figures 1.1 and 1.2).

1.4 Proposed works

The proposed works would include the following:

- An approximately 25 metre long hi-rail pad for 2 tracks on the up and down Illawarra locals.
  - New 25m wide Hi-Rail Access Pad positioned between approx. chainage 2.300 km and 2.342 km.
- A permanent asphalt ramp and turning bay. This would require:
  - Extension and widening of existing asphalted access road into the new hi-rail pad;
  - Realignment of existing curb nearby pre-build yard to facilitate vehicle turn paths;
  - New W-Beam barrier along access road and ramp;
  - New bollards or handrails between the Down Illawarra Local and Up Illawarra at the hi-rail pad location; and
  - New bollards to protect the down leg of over-head wiring structure.
- Protection and/or relocation of existing services and infrastructure.
  - New drainage culvert or grated drain along access road extension to maintain corridor drainage (parallel to track);
  - Relocation and burying of existing airline beneath access road, parallel to the Down Illawarra Local; and
  - Protection of existing buried 1500v negative cables beneath proposed access road extension.
- Track preparation works including rail adjustments, relocation of rail joints/welds (new closures). This would require the following:
  - Replacement of railway sleepers, rail and ballast tamping within the hi-rail pad footprint, as required.
- Retaining wall between turning bay in access road and Macdonaldtown yard.
  - New approximately 21 meter post and panel retaining wall against Macdonaldtown Yard boundary to enable the access road widening. The wall would be approximately 2meters heigh.

Further details on the proposed scope of work are provided in Section 7.

1.5 Aims and scope

The following report aims to assess the potential impact of the proposed works on the heritage significance of the 'Eveleigh Railway Workshops' and provide recommendation to avoid and/or minimise any impacts.

Preparation of the SoHI involved the following tasks:

- A detailed review of relevant heritage studies for the Eveleigh Railway Workshops and its heritage listing;
- The overlay of historical plans to ascertain the location of former buildings and rail infrastructure in relation to the works to determine the potential for relics;
- Review of construction drawings and liaison with Transport for Tomorrow to understand the level of impact associated with the works;
- Preparation of a draft SoHI report, including a detailed impact assessment; and
- Finalisation of the SoHI report following the receipt of comments from Transport for Tomorrow and Transport for NSW.

1.6 Report outline

The following report includes:

- legislative background (Section 2)
- a summary history of the Eveleigh Railway Workshops (Section 3);
- a desktop review of previous heritage studies, including relevant CMPs and an analysis of historical maps, plans and aerial imagery (Section 4);
- a description of the proposed works (Section 5);
- consideration of the significance of the Eveleigh Railway Workshops (Section 6);
- an assessment of the impact of the potential works on the heritage significance of the Eveleigh Railway Workshops (Section 7); and
- conclusions and recommendations (Section 8).

1.7 Authorship and acknowledgements

This report has been prepared by Fiona Leslie (Principal Archaeologist, Mountains Heritage) with review by Chris Lewczak (Principal Archaeologist, Mountains Heritage). We would like to acknowledge assistance provided by Hannah Barker (Environment Manager, Transport for Tomorrow, Nilesh Patel (Design Manager, Transport for Tomorrow) and Jess Mauger (Heritage Specialist, Transport for NSW).

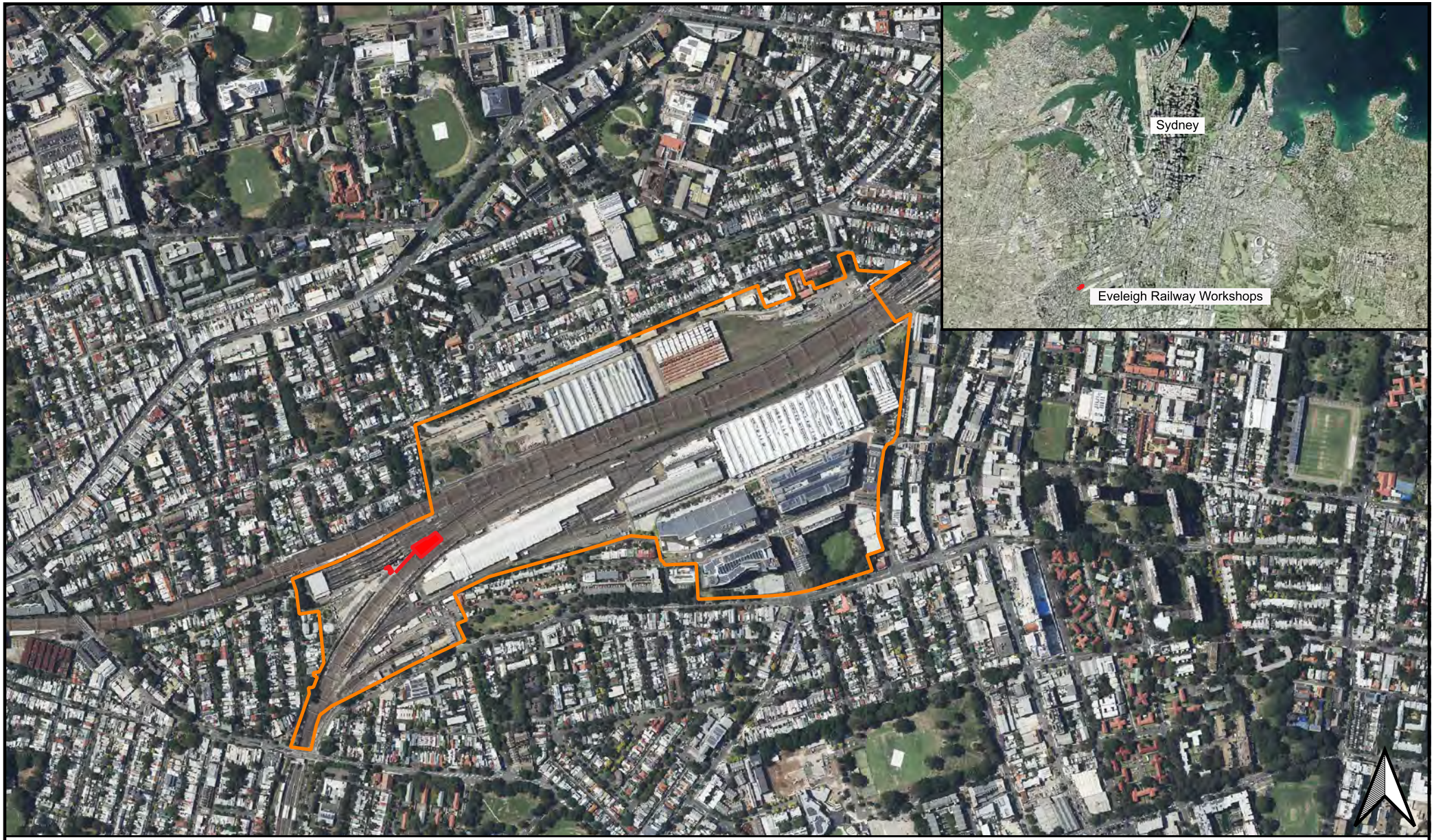

Figure 1.1: General Location of Eveleigh Railway Workshops

MOUNTAINS HERITAGE

Legend

- Subject Site
- Eveleigh Railway Workshops SHR Boundary

0 200 400 600 800 m

Map Source: NSW Six Maps (NSW Spatial Data)

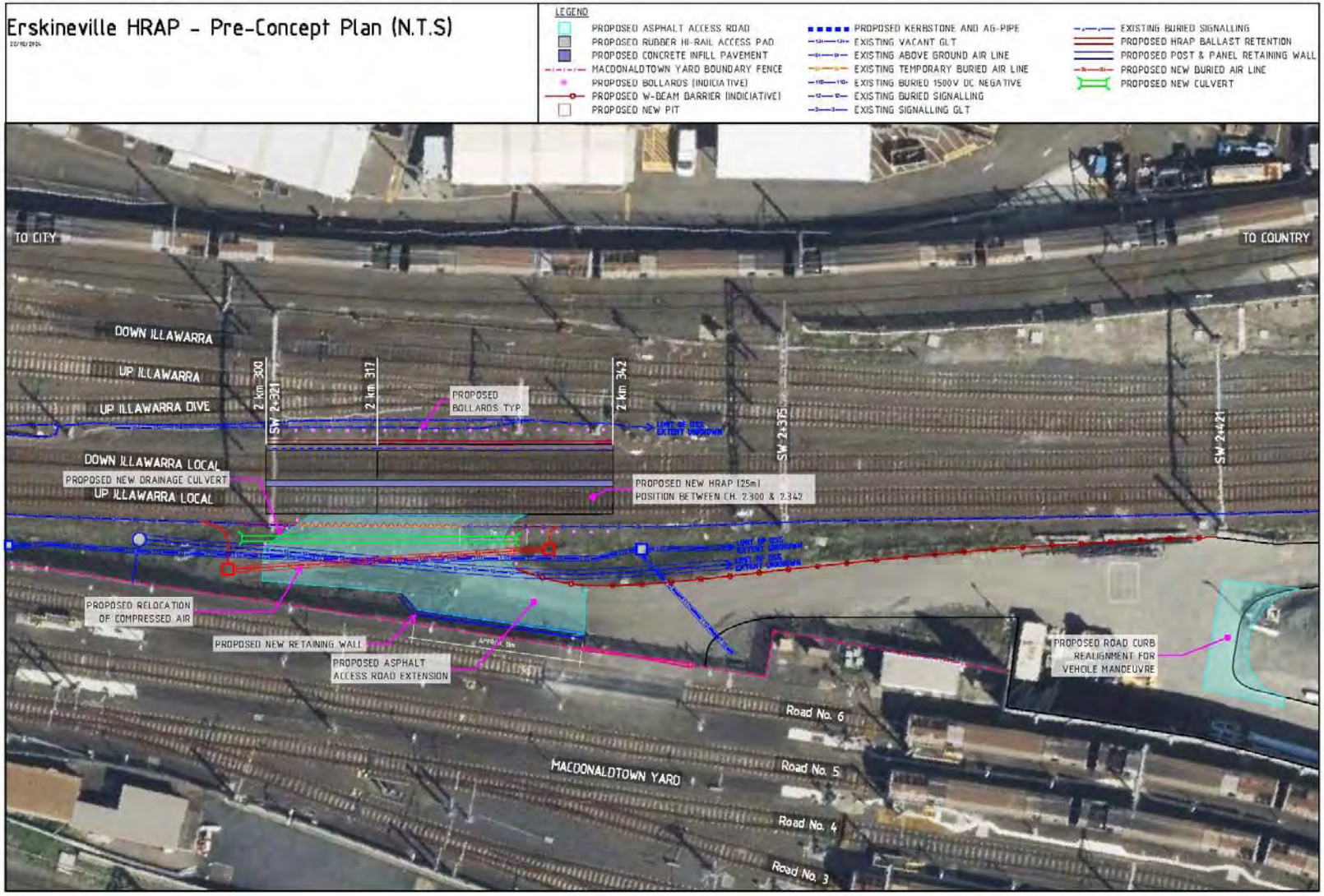

Figure 1.2. Location and extent of the proposed works (the subject site) within the Eveleigh Railway Workshops (Source: Transport for Tomorrow, 23 February 2024).

2. Legislative context

The following section provides a summary of environmental and heritage legislation relevant to the subject site.

2.1 Environmental Planning & Assessment Act 1979 (EP&A Act)

The *Environmental Planning and Assessment Act 1979* (EP&A Act) provides the framework for environmental planning and assessment in NSW. It includes a requirement for impacts, or likely impacts, upon historical heritage to be assessed as part of a project's environmental approval, and for Local Government Areas (LGAs) to prepare Local Environment Plans (LEPs) and Development Control Plans (DCPs) to provide guidance on the level of environmental assessment required.

Division 5.1 of the EP& A Act outlines the provisions for approval of activities and specifies the requirement for consideration of environmental impacts. Under Clause 5.5:

> *'(1) For the purpose of attaining the objects of this Act relating to the protection and enhancement of the environment, a determining authority in its consideration of an activity shall, notwithstanding any other provisions of this Act or the provisions of any other Act or of any instrument made under this or any other Act, examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of that activity.'*

The proposed works do not require development consent under Part 4 of the EP&A Act and is not classified as State Significant Infrastructure under Part 5.1. Therefore, the Project has been assessed under Part 5 of the EP&A Act.

Clause 228 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation) lists factors that must be taken into account when considering the likely impact of an activity on the environment. Both Aboriginal and non-Aboriginal heritage is included in this list of factors.

This report aims to determine if the proposed works are likely to have a significant impact on the environmental heritage (non-Aboriginal heritage) related to the Eveleigh Railway Workshops.

2.2 Heritage Act of New South Wales (NSW) 1977

The *Heritage Act 1977* (Heritage Act) is a statutory tool designed to conserve environmental heritage in NSW. It is used to regulate development impacts on the State's historical heritage assets. The Act defines a heritage item as '*a place, building, work, relic, moveable object or precinct*'.

To assist management of the State's heritage assets, the Act distinguishes between items of Local and State heritage significance.

> *'Local heritage significance', in relation to a place, building, work, relic, moveable object or precinct means significance to an area in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item'*
>
> *'State heritage significance', in relation to a place, building, work, relic, moveable object or precinct means significance to the State in relation to the historical scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item'.*

As outlined in the following subsections, different parts of the Heritage Act are designed to protect and conserve heritage items.

State Heritage Register

Under Part 3A of the Heritage Act, the NSW Heritage Council is required to maintain a State Heritage Register (SHR). This register lists items of State heritage significance, as determined by the Heritage Council and/or the Minister. To list an item on the SHR, the Heritage Council must consider that the item satisfies more than one of the heritage assessment criteria in Section 4A of the Act.

Listing on the SHR controls activities such as alteration, damage, demolition and development. When a place is listed on the SHR, the approval of the Heritage Council of NSW is required for any major work. Part 4, Section 57(1) of the Heritage Act identifies works for which Heritage Council approval is required. These include:

a) demolition of the building or work
b) damaging or despoiling the place, precinct or land, or any part of the place, precinct or land.
c) Moving, damaging or destroying the relic or moveable object.
d) Excavating of any land for the purpose of exposing or moving the relic.
e) Carrying out any development in relation to the land on which the building work or relic is situated, the land that comprises the place, or land within the precinct.
f) Altering the building, work, relic or moveable object.
g) Displaying any notice or advertisement on the place, building, work, relic, moveable object or land, or in the precinct.
h) Damaging or destroying any tree or other vegetation on or removing any tree or other vegetation from the place, precinct or land.

The 'Eveleigh Railway Workshops' is listed on the NSW State Heritage Register (SHR Listing No: 00993) and includes the subject site. As such, the subject site is protected and managed in accordance with the provisions of Part 4 Division 2 of the Heritage Act.

Section 170 Heritage and Conservation Registers

Government agencies have responsibilities to manage their heritage assets under Section 170 of the Heritage Act. Section 170 requires agencies to identify, conserve and manage heritage assets owned, occupied or managed by that agency. Section 170 requires government agencies to keep a Register of heritage items, which is called a Heritage and Conservation Register or more commonly, a s170 Register.

The Heritage Act obliges government agencies to maintain their assets with due diligence in accordance with State-Owned Heritage Management Principles approved by the Minister on the advice of the Heritage Council and notified by the Minister to government instrumentalities from time to time. Broad principles and guidelines for the management of State-owned heritage assets have been published by the NSW Heritage Office under s170 of the Act (NSW Heritage Office, 2004).

The proposed works are located within the 'Eveleigh Railway Workshops' listed on the Transport Asset Holding Entity (TAHE) Section 170 Heritage and Conservation Register. As such, any proposed changes must be approved by both the NSW Heritage Council and Transport for NSW.

2.3 Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) includes 'national heritage' as a matter of National Environmental Significance and protects listed places to the fullest extent under the Constitution. It also establishes the National Heritage List (NHL) and the Commonwealth Heritage List (CHL).

The following is a description of each of the heritage lists and the protection afforded places listed on them.

Commonwealth Heritage List

The CHL is established under the EPBC Act. The CHL is a list of properties owned by the Commonwealth that have been assessed as having significant heritage value. Any proposed actions on CHL places must be assessed for their impact on the heritage values of the place in accordance with *Actions on, or impacting upon, Commonwealth land, and actions by Commonwealth agencies (Significant Impact Guidelines 1.2)*. The guidelines require the proponent to carry out a self-assessment process to decide whether or not the action is likely to have a significant impact on the environment, including the heritage value of places. If an action is likely to have a significant impact an EPBC Act referral must be prepared and submitted to the Minister for approval.

National Heritage List

The NHL is a list of places with outstanding heritage value to Australia, including places overseas. Any proposed actions on NHL places must be assessed for their impact on the heritage values of the place in accordance with Management of National Environmental Significance (Significant Impact Guidelines 1.1). The guidelines require the proponent to carry out a self-assessment process to decide whether or not the action is likely to have a significant impact on a matter of National Environmental Significance, including the national heritage value of places. If an action is likely to have a significant impact an EPBC Act referral must be prepared and submitted to the Minister for approval.

Register of the National Estate

The Register of the National Estate (RNE) was formerly compiled as a record of Australia's cultural and Aboriginal heritage places worth keeping for the future. The RNE was frozen on 19 February 2007, which means that no new places have been added or removed since that time. From February 2012 all references to the RNE were removed from the EPBC Act. The RNE is maintained on a non-statutory basis as a publicly available archive.

2.4 Heritage Database Searches

Heritage items and places are recorded on statutory and non-statutory registers held at the federal, State and local level, depending on their level of significance. Federally managed heritage includes the National Heritage List (NHL) and the Commonwealth Heritage List (CHL), both administered by the EPBC Act. Items on the NHL and CHL, as well as World Heritage items in Australia, are recorded on the Australian Heritage Database, currently administered by the Federal Department of Environment and Energy.

State heritage places and items are registered on the SHR. The SHR is a searchable online database that records all State heritage items and places and their curtilages. Associated with the SHR is the State Heritage Inventory (SHI), an online database that records some local heritage items and items owned by State statutory authorities. Section 170 of the *Heritage Act 1977* requires all statutory authorities to advise OEH of their heritage assets for recording on the SHI. Items of local heritage significance are recorded in Local Environmental Plans (LEP) for the relevant LGA.

Table 2.1 overleaf summarises the results of heritage register searches conducted on 6 February 2024.

Table 2:1: Summary of Heritage Register Searches for the subject site

Heritage Register	*Heritage Items listed within / directly adjacent to the subject site? (Y / N)*	*Details of Heritage Items listed within / directly adjacent to the subject site*
Australian Heritage Database	Y	Greater Eveleigh Railway Precinct, Henderson Road, Eveleigh, NSW Australia. The nomination to the National Heritage List is currently ineligible but may be re-prioritised. Eveleigh Railway Workshops, Cornwallis Street, Eveleigh, NSW Australia. This item is registered on the Register of the National Estate (non-statutory archive).
NSW State Heritage Register	Y	Eveleigh Railway Workshops, Great Southern and Western Railway, Redfern NSW 2016 – SHR No 01140 (see Figure 2.1).
Transport Asset Holding Entity Section 170 Heritage and Conservation Register	Y	'Eveleigh Railway Workshops', Wilson Street, Redfern. SHI # 480 1102.

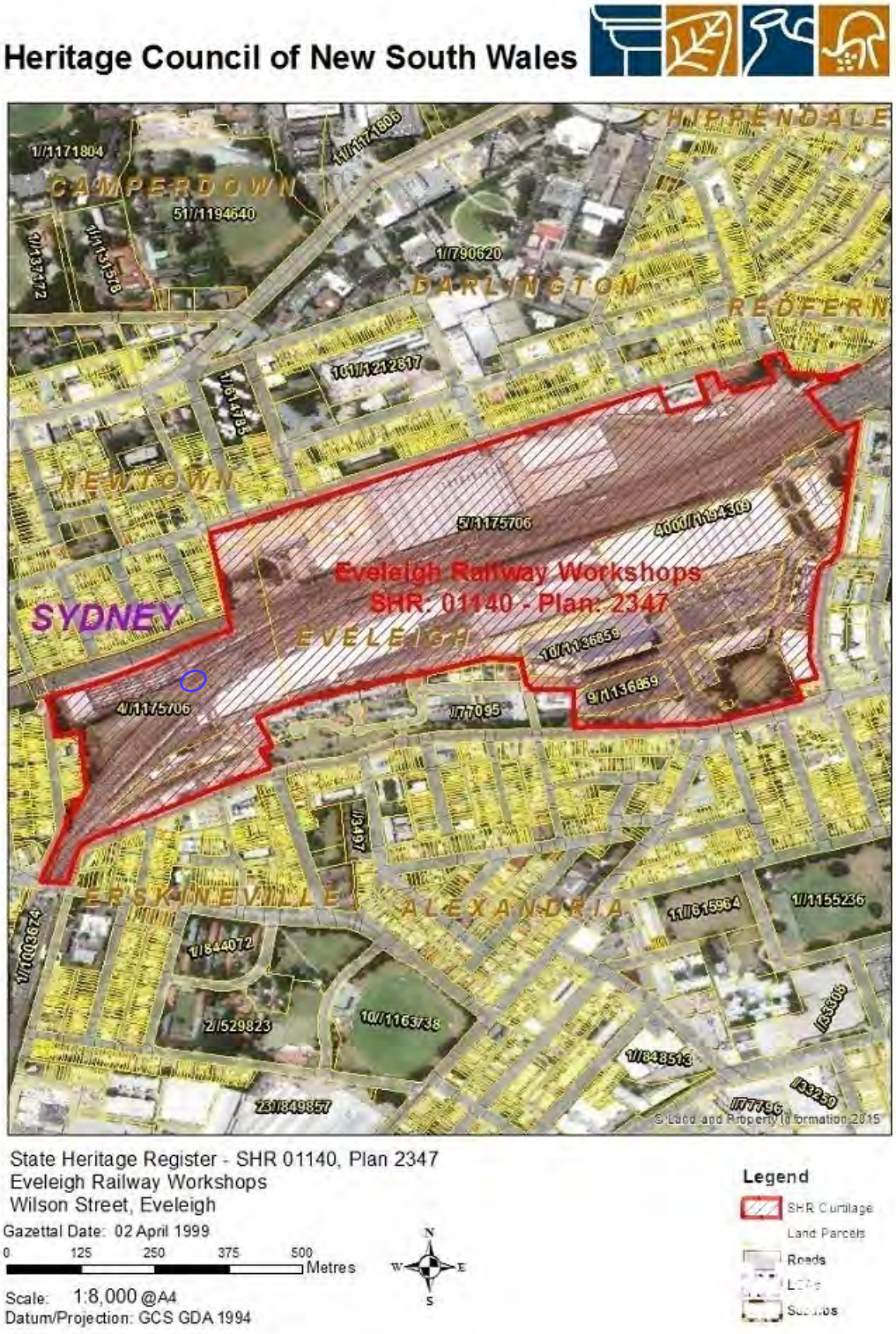

Figure 2.1 The heritage curtilage of the Eveleigh Railway Workshops as listed on NSW SHR. The general location of the subject site is circled blue

(Source: https://www.hms.heritage.nsw.gov.au/App/Item/ViewItem?itemId=5045103).

3. Summary Site History

3.1 Preamble

The history of the Eveleigh Railway Workshops is well documented in numerous heritage studies, including several Conservation Management Plans (CMPs). Following a review of relevant reports, three (3) main phases of historical land use are relevant to the subject site:

- Burrin Farm, which was granted to Nicholas Devine in 1794;
- Establishment and operation of the Eveleigh railway yards from 1878 to 1913; and
- Twentieth century railyard development from 1913 to the present day.

3.2 Burrin Farm (1794 - 1878)

European settlement of the subject site was associated with the first land grant to Nicholas Devine in 1794, which became known as *Burrin Farm*. Devine's 120-acre grant was located to the west of Chisholm's and King's grants (see Figure 3.1). Devine arrived in the colony with the Second Fleet in 1790. He built his home on the corner of George Street and Erskineville Road to the north west of the subject site. Over the next decade he expanded his estate, acquiring additional land in 1794 and 1799. By 1800 Devine had cleared 68 acres on *Burrin Farm* and his estate included an orchard, dairy and large gardens (Artefact, 2020: 7).

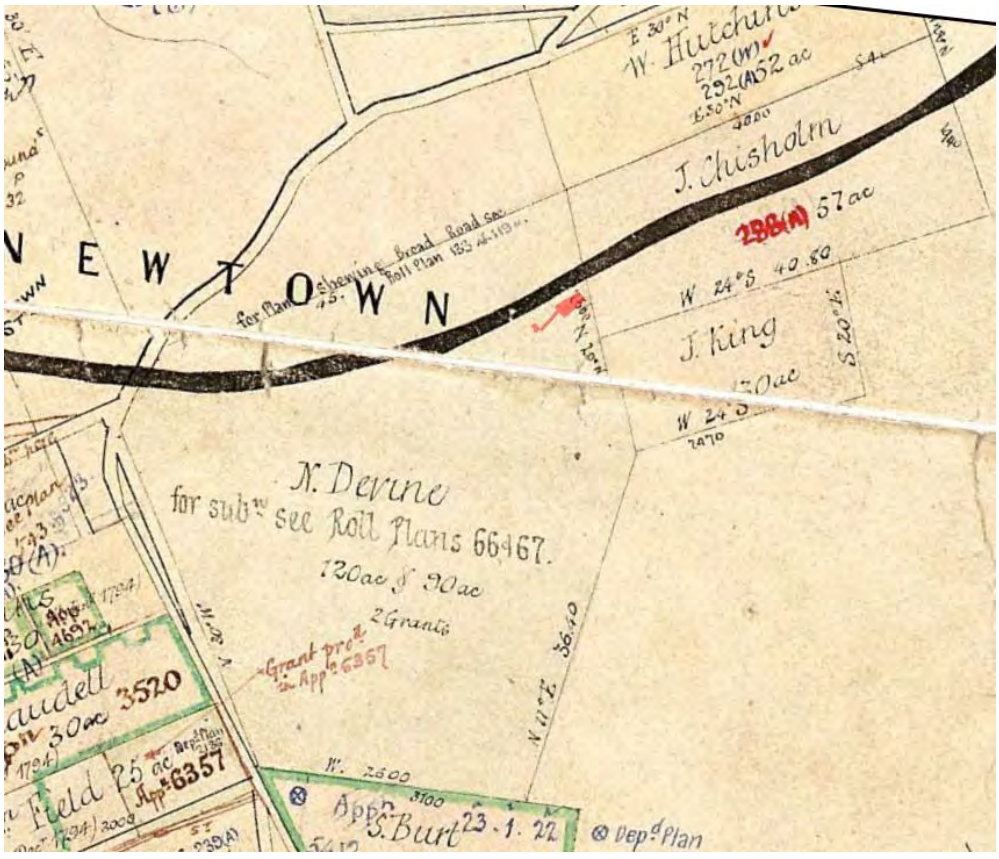

Figure 3.1: Undated parish map showing Devine's land grant, adjacent to King, Hutchinson and Chisholm, south of Grose Farm. The lack line shows the 1855 railway line and the subject site is shaded red (Source:, HLRV)

Following Devine's death in 1830 the land was subdivided and sold off by his heir, a convict servant named Bernard Rochford. Rochford's land sold to prominent figures in the colony including the Lord Mayor of Sydney, a number of influential barristers and solicitors and the editor of *The Sydney Morning Herald* (Artefact, 2020: 7).

In 1852 Sydney Terminus was opened on Devonshire Street, south of the current Central Station and this stimulated further subdivision and residential development to the south and east of the city. In 1855, Eveleigh Station (now Redfern Station) was completed and the Sydney to Parramatta line opened. At this time the landscape of the subject site and the surrounding Eveleigh area was sandhills and small farms, including *Burrin Farm* (Artefact, 2020: 8).

The original railway yards at Sydney Terminus, which were completed in 1860, soon became inadequate, as the railway system continued to expand. In 1878 *Burrin Farm* was resumed by the NSW Government for the 'Eveleigh Workshops and Railway Station'. 100, 000 pounds was paid for the entire 64.5 acres of land and it was cleared from 1880 onwards (Artefact, 2020: 8).

3.3 Eveleigh Railway Workshops (1878 – 1913)

Following the resumption of land for the Eveleigh Workshops and land clearing, a building program commenced with many of the buildings and infrastructure constructed during a single phase of development from 1880 to 1907. Construction dates for major elements of the Eveleigh Railway Workshops are listed below:

1884	Triple-domed Running Sheds completed
1887	Bays 1-4 of Locomotive Workshops completed
1888	Workshops in Bays 5-15 opened
1889	Northern Railway opened
1890s	Bays 16-25 of the Carriage Sheds, the Paint Shop, a General Store, and various smaller buildings, including associated turntables, traversers, and rail lines completed
1892	Gas Works constructed
1901	Workshops electrified thanks to completion of Ultimo Power Station
	Work commenced on the replacement of the steam engines at the south end of the workshops by powerful electric motors
	Work commenced on conversion of rope-driven cranes to electric motor drives
	Two new traversers installed at the western and eastern sides of the Workshops
1904	Royal Commission recommends locomotive construction at Eveleigh Railway Workshops
	Triple-domed Running Sheds completed
1907	New Locomotive Shops erected
	Carriage Works Blacksmith Shop erected

Following the completion of bays and workshops, Eveleigh Railway yards became one of the largest employers in NSW with the yards playing a vital role in the continued operation of the NSW railway system and economic development. As a result of the industry generated by the yards, Newtown, Redfern and Surry Hills became a hub for the working class, as new migrant communities moved into the area to take advantage of the employment opportunities (Artefact, 2020: 2).

In 1890, a carriage stabling shed was constructed to the south west of the main complex, adjacent to Macdonaldtown Station and west of the subject site. This shed was constructed of timber-framing clad in corrugated iron and houses twelve roads of track. It was used for the stabling of carriages used in the suburban and inter-urban passenger services. The she remained in use, until it was demolished in the early 1990s. A new replacement building was erected in its place in 2008 (FuturePast, 2015: 14).

Between 1891 and 1892, to the south west of the proposed works, the Macdonaldtown Gas Works (also known as Eveleigh Gas Works) were constructed for the Eveleigh Railway Workshops. Gas from the works was used for lighting in the carriages and for heating within the railway workshops themselves. Following the establishment of the Ultimo Power Station in 1901, electric power gradually replaced gas in the workshops. Gas production on site ceased in the 1950s and the Gas Works were demolished in 1958. Only one of the two original gas-holders is extant (OCP Architect, 2017: 30).

As can be seen in Figures 3.2, the subject site was situated outside the main Eveleigh Railway complex during the late nineteenth century. The engine running sheds completed in c1904 were located to the east of the subject site (see Plate 3.1). The carriage stabling shed built in 1890 and the former gas works built in 1891, were located west and south west of the subject site, as shown in a plan dating to 1924 (Figure 3.3).

Plate 3.1: The engine running sheds located to the east of the subject site. These sheds were later demolished and replaced by the EMC. (FuturePast, 2015: 15)

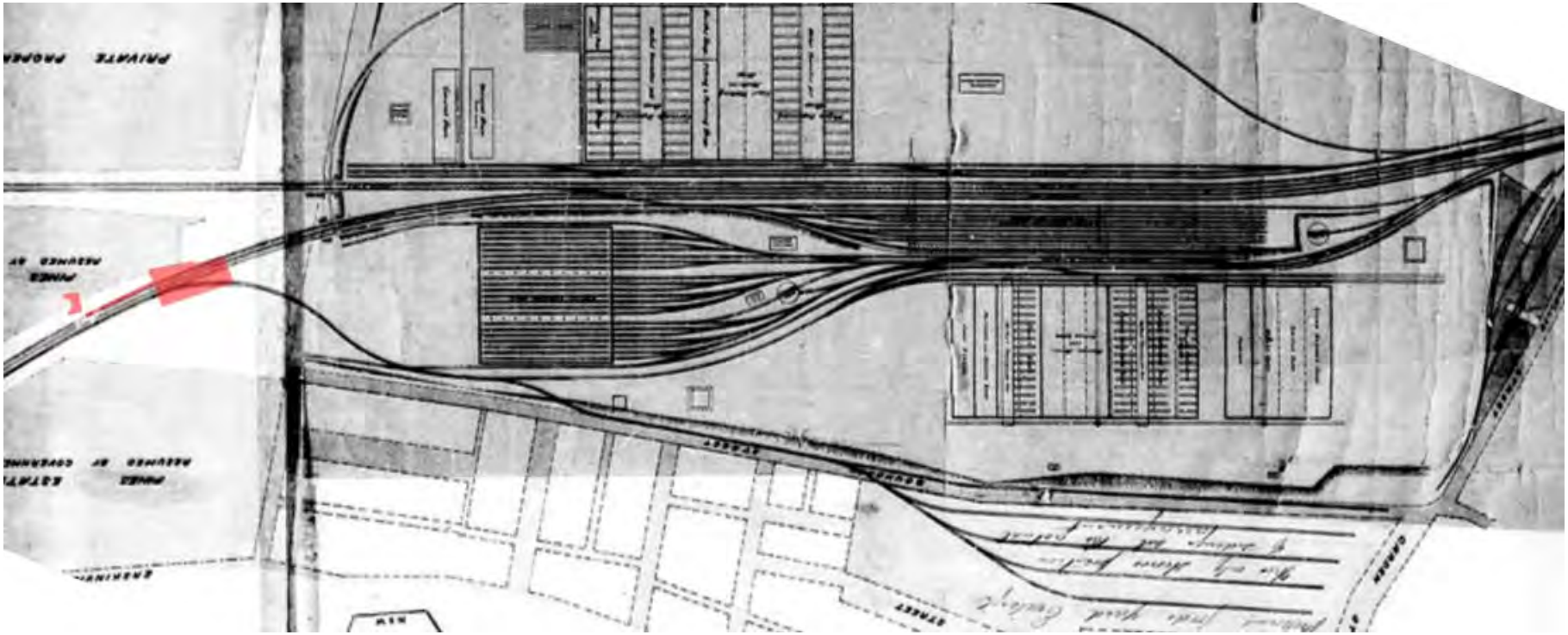

Figure 3.2: Plan showing the original land resumed for Eveleigh Workshops, possibly from 1889. The general location of the subject site is shaded red. (Source: Reproduced from GML, 2013: 28)

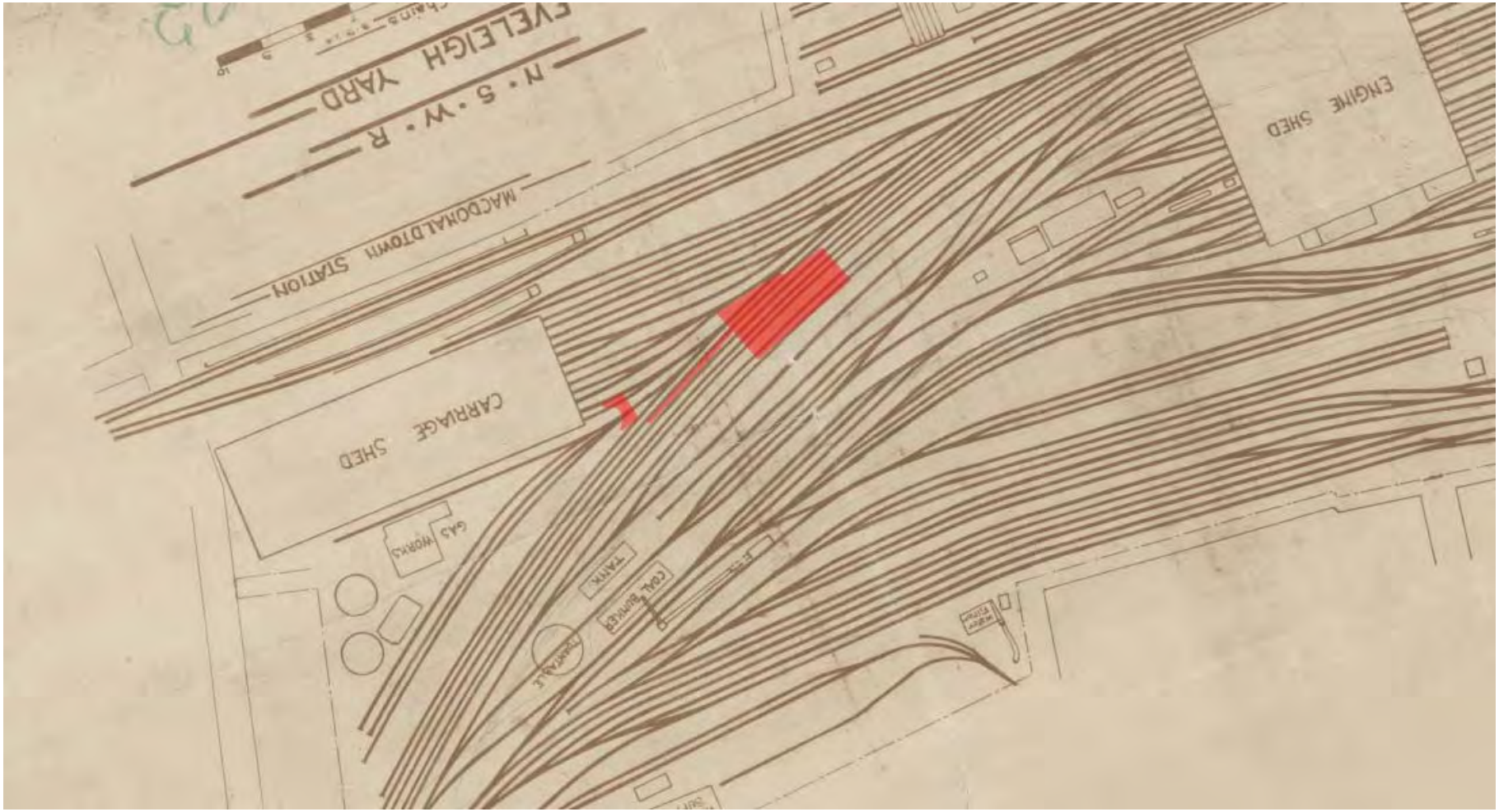

Figure 3.3: 1924 Erskineville Subdivision Plan. The subject site is shaded red. Note: the engine running sheds to the east of the subject site and the Carriage Shed and Gas Works to the west and south west. (Source: N.S.W.R. Eveleigh Yard, SNSW, Plan 003-z/SP/E12/3)

3.4 Twentieth century railyard development (1913 - present)

In 1907 a new Locomotive Shop was constructed at Eveleigh to allow steam locomotives to be manufactured on site. In 1917 the Alexandria Goods Yard was constructed and in 1925, the manufacture of steam locomotives ceased and the northern portion of the Running Shed was demolished to provide more space for rail and sidings. The remaining portion of the Running Shed was demolished in 1965 and replaced with the ACDEP shed, also later known as the Eveleigh Maintenance Centre (EMC) (FuturePast, 2015: 17).

Also in 1925, construction of a subway commenced under the main yard, connecting the Carriage Workshops with the Running Shed. The subway is located to the south of the Illawarra Dives, which were completed in July 1927 and are located to the east of the subject site. In the 1920, a coal stage and engine watering facility with a turntable was installed in the south west corner of the yards, directly north and east of the subject site (FuturePast, 2015:17). The coal stage was demolished in 1966 and 1967 and the turntable removed and reconstructed 60 metres to the north east (FuturePast, 2015: 18). A new sand bin was erected alongside the turntable.

Car sales and increased suburban development had a detrimental effect on the Eveleigh Railway Workshops, with productivity slowing to the point where it was no longer feasible to continue operating.

During the Second World War, the workshops played an active role in the war effort, with a series of air raid shelters constructed at the site. These were later used for storge purposes and some still survive to the present day.

In the 1970s the Alexandria Goods Yard was lease to private companies for freight storage and by 1985 the yard had closed, the trackwork removed and the buildings demolished. With the removal of the Goods Yard sidings, the footbridge across the tracks was no longer required and was dismantled (FuturePast, 2015: 18).

Following the closure of Eveleigh Workshops in 1989 the South Eveleigh Locomotive Workshops were used by Paddy's Markets until 1991 when the site was redeveloped as the Australian Technology Park (OCP Architect, 2017: 36). The Eveleigh yards were closed in 1988 and several buildings demolished including the Pattern Shed, Foundry, Smith's Shops and the Wheel Press Shop. North east of the subject site, the Carriage Workshops sat vacant until 2003 when they were made available to contemporary artists. In 2007 the workshops were officially reopened as the Carriageworks (Artefact, 2020: 11).

4. Historical Analysis

4.1 Preamble

The following section provides a review of relevant heritage studies, including the overarching Conservation Management Plan (CMP) prepared for the 'Eveleigh Railway Workshops' by OCP Architects in 2017 and the heritage assessment of the South Eveleigh Precinct prepared by FuturePast in 2017. The overlay of key historical maps and plans and an analysis of historical aerial imagery provides a context for the assessment of archaeological potential presented in Section 5.

4.2 Review of previous heritage assessments

Conservation Management Plan, 2017 (OCP Architects, 2017)

The most recent overarching Conservation Management Plan (CMP) prepared by OCP Architects in 2017 for the Eveleigh Railway Workshops identifies major elements of heritage significance at Eveleigh (see Figure 4.1). As seen in Figure 4.1, the subject site is not located near any of the elements of high or moderate heritage significance identified by the CMP.

The CMP divides the Eveleigh Railway Yards into several precincts based on their history and function. The subject site is located within the 'Operational Rail Precinct', which includes the six running lines (the Main Western Line, the Eastern Suburbs Line and the South Coast Line), some small hut structures and the Illawarra Dives. Also included in this precinct is the former Macdonaldtown Gas Works and Stabling Yards in the north west corner (OCP Architects, 2017: 58).

The following physical elements are listed within the Operation Rail Precinct in the CMP. Their level of significance (high, moderate, little), as assessed by OCP Architects, is also listed below:

- N27: Gasometre (18920 – High
- 6/No. Engine Dives and Vents - High
- Down Illawarra Dive (1927) -Moderate
- Up Illawarra Dive (1927) - Moderate
- Elstons Sidings and Buffers - Moderate
- Signalling Hut - Little
- Shunters Hut - Little
- Sectioning Hut (west) - Little
- Sectioning Hut (east) - Little
- Signalling Equipment Room - Little
- Former Signal Depot Office – Little.

As can be seen in historical plans included in Section 3, none of the former buildings or structures listed above are indicated in the location of the proposed works. The Illawarra Dives are located to the east of the subject site, as shown in Figure 4.2.

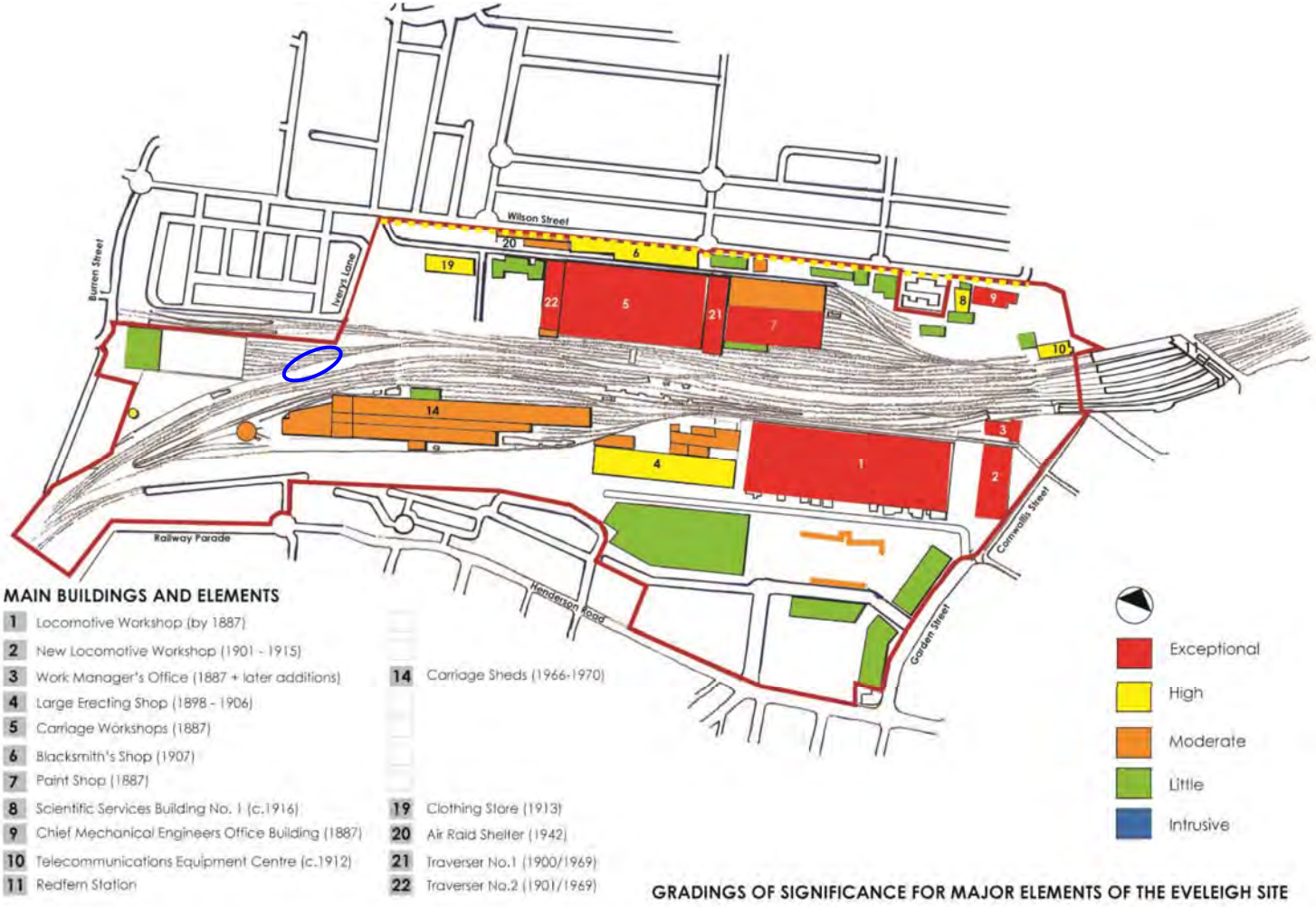

Figure 4.1: Plan showing the grading of significance of major elements of the Eveleigh Site. The general location of the subject site is outlined blue (Source: Reproduced from OCP Architects, 2017: 106).

MOUNTAINS HERITAGE

Legend

- Subject Site
- Eveleigh Railway Workshops SHR Curtilage
- Illawarra Dives

Figure 4.2: Plan showing the location of the Illawarra Dives in relation to the subject site

0 50 100 150 200 m

Map Source: NSW Six Maps (NSW Spatial Data)

The following overarching CMP policies presented in the 2017 CMP are relevant to the proposed works:

- *Overarching Policy 1 – Retention of Significance. The Statement of Significance for the Eveleigh Railway Workshops site contained in this overarching CMP should be adopted as the basis for its heritage management. All decisions should consider and seek to retain the values identified in this Statement of Significance.*
- *Overarching Policy 15. - Best Conservation Practice. Ensure that conservation, maintenance and new work within the Eveleigh Railway Workshops site is undertaken in accordance with current conservation and planning methodologies.*
- *Overarching Policy 18. – Recording of Maintenance and Change. Undertake detailed recording of the site components, spaces, fabric and features before, during and after any works including archival photographic records and measured drawings in accordance with NSW Heritage Division guidelines.*
- *Overarching Policy 20. – Archaeology. The historical archaeological (including Aboriginal or European) potential of parts of the Eveleigh Railway Workshops site should be managed and conserved in accordance with:*
  - *the archaeological provisions of the NSW Heritage Act 1977; and*
  - *policies and recommendations for archaeology contained within the individual precinct-specific CMPs and heritage assessment.*
- *Overarching Policy 22 – Future Work. The site should be considered holistically when planning future works, including open space areas, buildings, extant structures and site elements. Future work should be planned with demonstrated consideration for the significant heritage qualities of the whole Eveleigh Railway Workshops site, in addition to that of its individual components and the surrounding heritage conservation areas.*

South Eveleigh Precinct: Heritage Assessment (Futurepast Heritage Consulting Pty Ltd, 2017)

A detailed heritage assessment of the South Eveleigh Precinct was prepared by FuturePast in July 2015 and is referred to in the overarching 2017 CMP. Numerous buildings and structures were identified in the South Eveleigh Precinct and are shown in Figure 4.3. The closest structures to the subject site are the Eveleigh Maintenance Centre (No.20) and the Telecommunications building (No.22)

As noted by Future Past, the railway tracks, signals, points and other items within the South Eveleigh Precinct are critical infrastructure for the public transport network and are maintained replaced and/or upgraded on an operations basis. None of these elements are historic, as individual items, although some of the rail lines they serve have been in place for over a century (FuturePast, 2015: 43).

FuturePast assessed the potential for historical archaeology within the South Eveleigh Precinct as follows:

> *In general, the likelihood of railway track and building footings being buried is quite high and it is possible that all sorts of discarded material may have been included in fill material. This material, though, is likely to be of low significance, owing to its generic qualities, lack of stratification, its lack of research value and the high degree of documentary archival material available for the site. It is considered unlikely that any pre-railway archaeological materials survive on the site, given the extensive history of ground clearance and disturbance over 100+ years.*
>
> *The potential for archaeological evidence to present any constraints on future site management is consequently also low (FuturePast: 2015: 40).*

Figure 4.3: Plan showing the numbered buildings and structures identified in the 2015 South Eveleigh Precinct Heritage Assessment. The subject site is shaded red. (Source: FuturePast, 2015: 42)

Non-Aboriginal (Historic) Heritage Impact Assessment (HIA) for Geotechnical Site Investigations as part of the More Trains More Services Stage 2 Sydney Terminal Area Reconfiguration (STAR) (Artefact, 2018)

Artefact Heritage Pty Ltd (Artefact) prepared a HIA for proposed geotechnical investigations as part of the STAR project. The assessment looked at the placement of 26 geotechnical boreholes within the Eveleigh Railway workshops SHR curtilage to determine the subsurface conditions and locations of services to inform the future design of the project. Four of the geotechnical boreholes were located within Erskineville Junction (Artefact 2018: 24).

The assessment concluded the work would result in a negligible direct impact on the heritage item. The area was assessed as having nil potential to contain significant or intact archaeological relics associated with earlier phases of the Sydney to Parramatta railway line. Overall, the proposed works were found to not impact on the State significant heritage values of the precinct (Artefact 2018: 26).

The report recommended that the works were consistent with the with the activities identified in the Rail Specific Exemption 2 (Excavation) and therefore an exempt from the requirements to obtain an external heritage approval from NSW Heritage Division (now known as Heritage NSW) (Artefact 2018: 26).

Non-Aboriginal Heritage Impact Assessment for Geotechnical Site Investigations at Erskineville Junction (Artefact, 2020)

Artefact prepared a HIA for geotechnical investigations at Erskineville Junction for the MTMS North project. The works were located within the SHR curtilage of the Eveleigh Railway Sation Workshops and overlapped with the Pressure Tunnel and Shafts. The project area for the geotechnical assessment included the Erskineville Junction and extended southward to Erskineville Station.

The report identified that the earliest phases of historical occupation on the site, relating to Burrin Farm (1794-1878) were likely used for agricultural purposes only, and that there was not likely to be any potential for historical archaeological relics to have survived the initial and subsequent railway developments. Similarly, the potential for historical archaeological relics or buried works relating to the 1855 railway line and the first Erskineville Station were likely to have been removed from the site. Later duplication and construction of a new Erskineville Station in 1913 resulted in Erskineville Junction being maintained as part of the railway network, and only railway infrastructure and utilities constructed in the area. This includes rail beams, fills, utilities such as drains and culverts, sleepers or foundations for OHW structures and other infrastructure (Artefact 2020:17).

The report recommended that a stop works procedure should be enacted during the works as the only archaeological potential related to former rail infrastructure and utilities (Artefact 2020:43).

4.3 Analysis of historical aerial imagery

As shown in the 1943 aerial image, no buildings or structures were located within the proposed works area. A line of small trees or bushes appears to line the northern boundary of the rail corridor at that time (Figure 4.3). No substantive changes are seen in the 1951 and 1961 aerial images, with the subject site located within the active rail corridor (Figures 4.4 and 4.5).

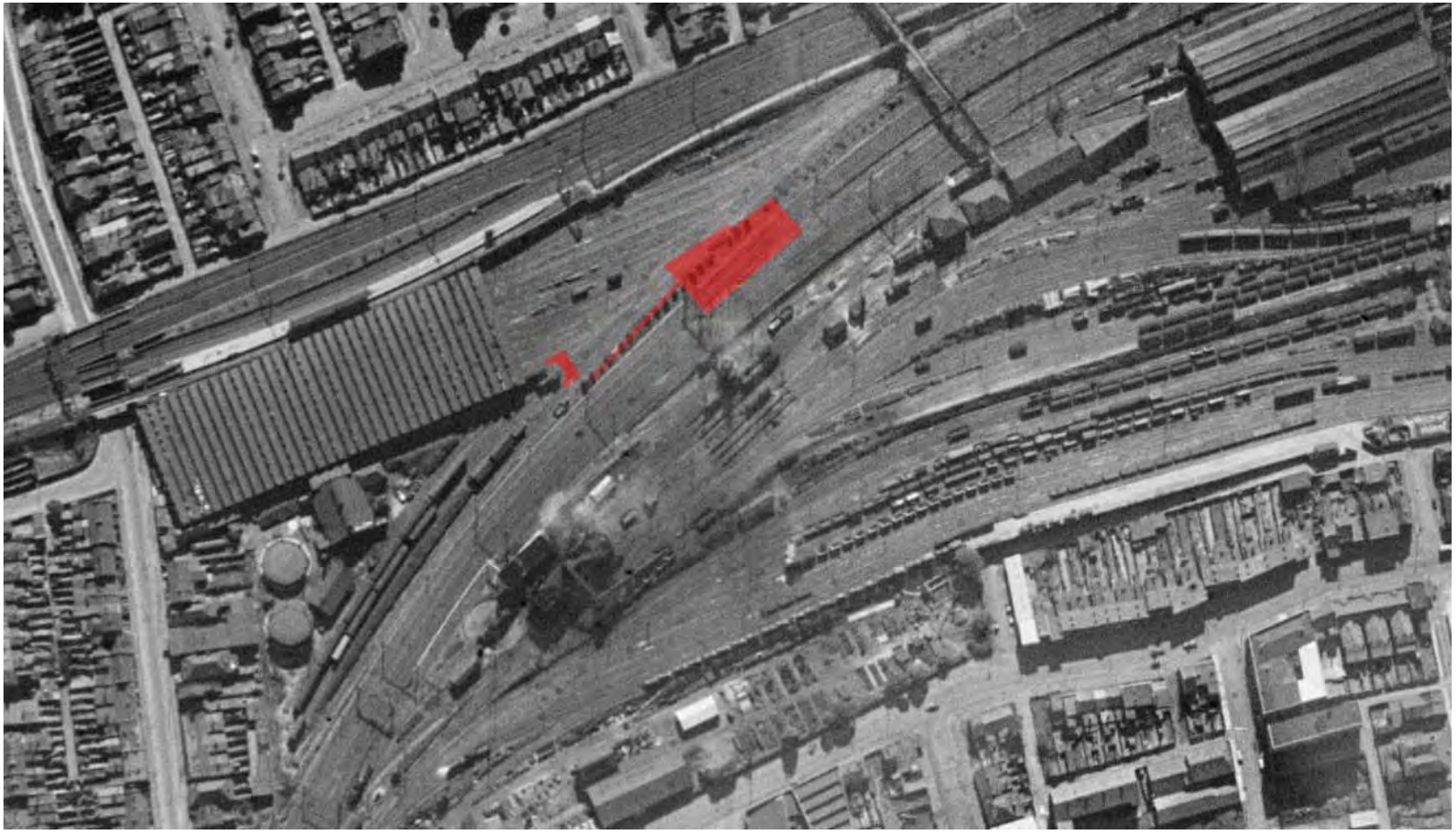

Figure 4.4: 1943 aerial image, showing the subject site shaded red. Note: the northern boundary of the railway corridor at this time was lined with small trees or bushes. (Source: NSW Spatial Information Exchange SIX Viewer)

Figure 4.5 1951 aerial image, showing the subject site shaded red. Note: the Locomotive Running Sheds to the east of the site and Carriage Stabling Shed to the west. (Source: NSW Spatial Services)

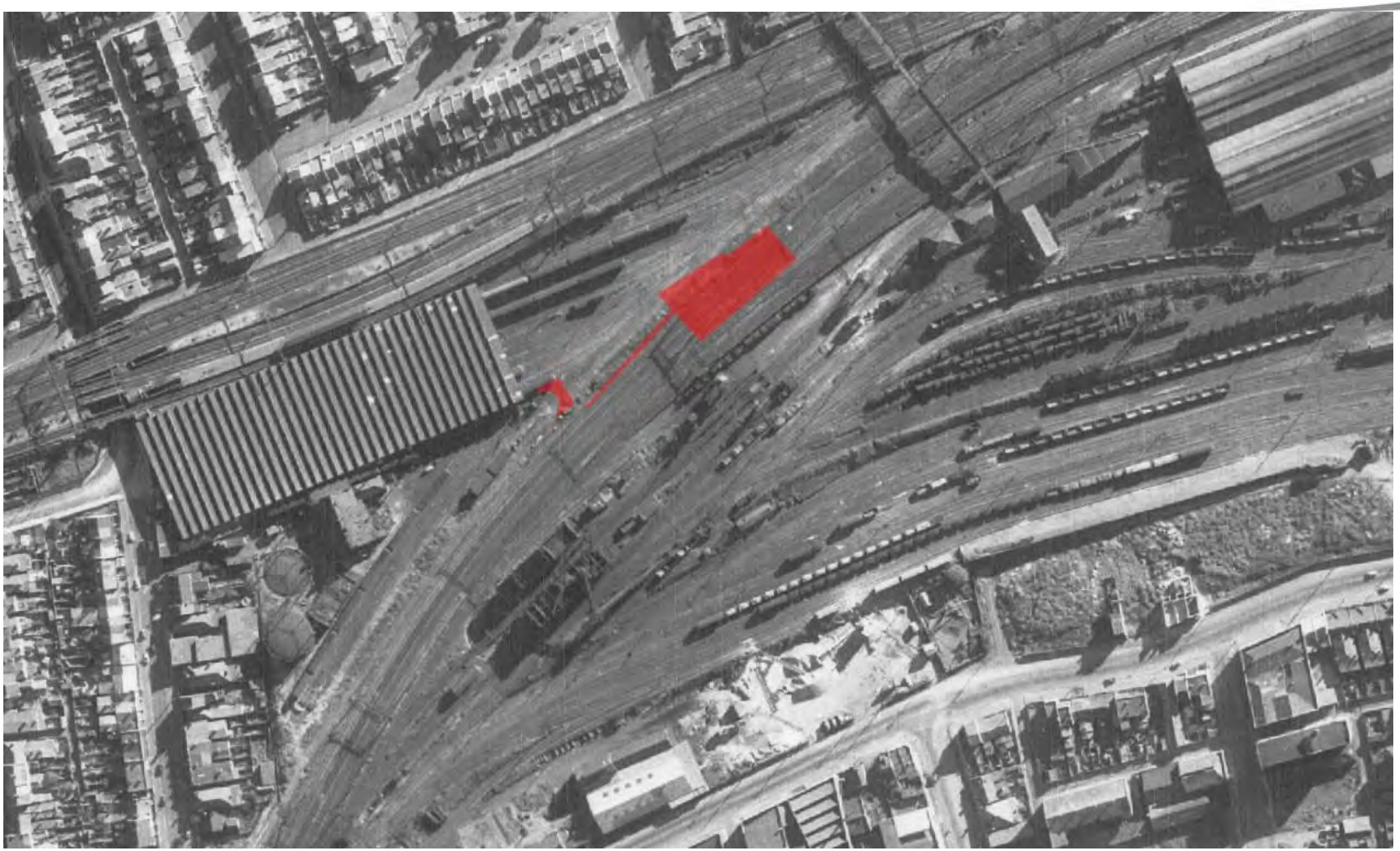

Figure 4.6 1961 aerial image, showing the subject site shaded red. (Source: NSW Spatial Services)

5. Physical Description

5.1 Proposed work area

Photographs of the proposed works area were kindly supplied by Transport for Tomorrow on the commencement of the assessment. These are included below. As can be seen in Plate 5.2, the Eveleigh Maintenance Centre (EMC) is visible from the subject site. However, there are no significant views from the EMC towards the subject site. The view to the north west is across the rail corridor.

Plate 5.1: Photograph of the new turning bay and proposed new retaining wall (red arrow), looking east, south-east. (Source: Transport for Tomorrow, 2024)

Plate 5.2: Photograph of the new Hi-Rail Pad location (red arrow), looking south east towards the Eveleigh Maintenance Centre (EMC.) (Source: Transport for Tomorrow, 2024)

5.2 Potential for historical archaeological relics or buried 'works'

Following a review of the 2017 CMP, South Eveleigh Precinct Heritage Assessment and the two geotechnical investigation reports by Artefact, it is apparent that the proposed works would not affect, or be near, any significant heritage elements or former structures within the Eveleigh Railway Workshops. From the aerial photographs, plans and histories presented in these reports it can be concluded that:

- Prior to 1889, when the land was resumed for the Eveleigh rail yards, the subject site was situated within 120-acres of land granted to Nicholas Devine in 1794. Devine established *Burrin Farm* and built his home on the corner of George Street and Erskineville Road to the north west of the subject site. Given its distance from the homestead, it is unlikely that any structures related to this phase were present at the subject site.
- Development of the Eveleigh Railway Workshops progressed in stages on both the north and south side of the tracks, with the major stage of building development happening between 1880 and 1907.
    - In 1890, the carriage stabling shed was constructed directly west of the subject site to house carriages used in the suburban and inter-urban passenger services. This shed remained in use until it was demolished in the early 1990s.
    - By 1892 the Macdonaldtown Gas Works was constructed to the south west of the subject site. Gas from the works was used for lighting in the carriages and in the railway workshops themselves. Gas production ceased in the 1950s and the Gas Works demolished in 1958. Only one of the two original gas-holders is extant. This element has been assessed to have high heritage significance.
    - During this period the subject site was sited on at least four (4) former rail lines used to transport material and goods from the Gas Works and to move carriages from the stabling shed to the suburban lines.
- In 1884, the Illawarra line between Redfern and Hurstville opened as a double track and the first Erskineville railway station was built to the south of the subject site, north of the Swanston Street overbridge.
- No later twentieth century buildings or works appear to have been located within the subject site, as evidenced by aerial imagery. The closest building, the Eveleigh Maintenance Centre, on the south side of the rail corridor was built as the Air-conditioned Cars Depot building in the 1960s, opening in 1966. It stands in the location of the former southern two bays of the Locomotive Running Sheds, erected in the 1880s.
- Given that the subject site formed part of the active rail corridor during the late nineteenth and early twentieth century, it is possible that some miscellaneous rail infrastructure, including former sleepers, fastenings and/or rails, could be buried below the ballast. These items would have limited research potential, due to their disturbance from subsequent rail upgrades and are unlikely to be significant at a local or State level. Disturbed items, such as this, would not be classified as 'works' under the Heritage Act.

6. Significance Assessment

This section presents the significance assessment for the Eveleigh Railway Workshops as presented in the most recently CMP prepared by OCT Architects in 2017, which was endorsed by the NSW Heritage Council on 26 May 2017. It is noted that this significance assessment differs from the current SHR Listing (see Annexure A).

6.1 Significance assessment criteria

The significance of heritage items listed on the NSW SHR is assessed against specific criteria specified in the Heritage Act. These are as follows:

Criterion (a) an item is important in the course, or pattern, of NSW's cultural or natural history (or the local area);

Criterion (b) an item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the local area);

Criterion (c) an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area);

Criterion (d) an item has strong or special association with a particular community or cultural group in NSW for social, cultural or spiritual reasons (or the local area);

Criterion (e) an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the local area);

Criterion (f) an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the local area); and

Criterion (g) an item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places or cultural or natural environments (or the local area).

6.2 Significance assessment

Criterion (a) - an item is important in the course, or pattern, of NSW's cultural or natural history (or the local area);

The large-scale infrastructure on the Eveleigh Railway Workshops site demonstrates Government confidence in establishing and expanding rail networks in the late nineteenth century. The establishment of railway infrastructure by Government differs from overseas railway development by private industry, as was the case in Britain and America.

Establishment of the Eveleigh Railway Workshops following the purchase of the Chisholm Estate in 1879 has historical significance for the influence that it had on the development of the surrounding residential areas, specifically working class residences built within the vicinity of industry. The Hutchinson Estate immediately north of Eveleigh was subdivided into the Golden Grove Estate from 1881, with the major building phase occurring between 1888 and 1893. Residential subdivision of King's grant to the south of Eveleigh had also commenced in the late 1870s. Subdivision into small lots was specifically intended to attract the 'working man'.

Planning for the Eveleigh Railway Workshops, which had commenced by 1879, and its subsequent construction is associated with the development and expansion of the railway system in Sydney and NSW, which required a growing number of vehicles for the NSW Government Railways fleet in addition to facilities for their maintenance.

The Eveleigh Railway Workshops has a strong historical association with union activities, with early unions winning many significant concessions for workers including Saturdays off and the provision of indoor washing and toilet facilities. Eveleigh is credited as being pivotal in the Australian Labour Movement, with the formation of the Amalgamated Railway and Tramway Service Association (ARTSA) in 1886. It has been noted that the major general strike of 1917 was one of the factors that influenced Aboriginal peoples' growing participation in political movements.

The Eveleigh Railway Workshops are historically significant for the retention of an extensive complex of buildings and linking tracks that provided for the manufacture and maintenance of the State's rolling stock for over 100 years.

The Locomotive Workshops played a significant role in war-time manufacturing, producing ammunition and tank parts for the Australian forces during World War II (GML 2013).

The Eveleigh Railway Workshops have historical significance as one of only a limited number of such facilities in the country, Australian states each having typically established a single major railway workshop facility.

Eveleigh Railway Workshops satisfies Criterion A at a STATE level.

(OCP Architects, 2017:91)

Criterion (b) - an item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the local area);

The Eveleigh Railway Workshops site is associated with the life and work of the early railway engineers John Whitton and George Cowdery, individuals whose life and work made significant contributions to the establishment, development and operation of railways in Australia and NSW. Whitton, Chief Engineer of the NSW Railways between 1856 and 1899, was responsible for the major restructuring of the rail system which resulted in the resumption of land at Eveleigh and the relocation of the old Redfern Workshops (Sydney's first railway yards) to Eveleigh. George Cowdery, Engineer for Existing Lines, executed the detailed design at Eveleigh.

Several significant political figures worked at Eveleigh, including James McGowan (who worked as a boilermaker) - the first Labor Premier of NSW, J.B. Chifley - Prime Minister of Australia during World War Two, Eddie Ward (who commenced work repairing tarpaulins) – member of the Australian Labor party and the Australian House of Representatives for 32 years and J.J. Cahill (who worked as a fitter) - who became Minister for Public Works in McKell's Government during World War Two and Premier of NSW in 1952.

Eveleigh Railway Workshops satisfies Criterion B at a STATE level.

(OCP Architects, 2017:91-92)

Criterion (c) - an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area);

The Eveleigh Railway Workshops have aesthetic significance as an industrial landscape formed by the complex of functional buildings and associated infrastructure.

The relationships and connections between the former workshops buildings demonstrate how the Eveleigh Railway Workshops operated. Rail lines to move machines, locomotives and carriages, turntables, roads / pathways and the dramatic level changes, including along Wilson Street and where the foundry used to be, all contribute to the understanding of how the workshops functioned.

The pinnacle of design and construction quality on the Eveleigh Railway Workshops site was centred on the Carriage and Wagon Workshops and the Locomotive Workshops, and also the Paint Shop.

These buildings not only demonstrated the most up-to-date iron and steel technology but were given brick facades of a high quality, both in aesthetic and technical terms.

The large-scale form of the Locomotive Workshops and Carriage Workshops, situated to each side of the main line, provide a significant gateway to the city viewed by thousands of train travellers every day.

The Machinery Collection, while still significant as a collection, has lost its original integrity as an integrated part of the operating workshops…Individual items of machinery remain significant as items of technical achievement. These range from the Davy Press, a unique machine in Australia and rare in a world context, to the Departmental Lathe, a precision machine built locally (GML 2013).

Eveleigh Railway Workshops satisfies Criterion C at a STATE level.

(OCP Architects, 2017:92)

Criterion (d) - an item has strong or special association with a particular community or cultural group in NSW for social, cultural or spiritual reasons (or the local area);

The Eveleigh Railway Workshops have social significance for former employees, the place having been a training ground for thousands of apprentices, tradesmen and engineers and one of the biggest employers in New South Wales. Workers of the Eveleigh Railway Workshops centred their social activities on the workplace and social events were organised by and for workers both on the site and beyond, many of which have been recorded in historic photographs. The impact that Eveleigh had on the lives of its workers is further evidenced in their recollections of the place.

Over its one hundred years of operation, members of the local community including Aboriginal people and post-WWII migrants and apprentices, worked at the Eveleigh Railway Workshop site. Many former workers have a strong identification and a sense of pride in the place and recollections are centred on the trades that were conducted there, in addition to social and political activities.

The history and significance of the Eveleigh Railway Workshops is central to many local community members' connection with the Redfern/Darlington area. As the former site of the Locomotive Workshops and Carriage Workshops, the place holds great significance as a social and historical landmark for the surrounding community. Contemporary community esteem is demonstrated by volunteer activities undertaken at the site and ongoing interest in the activities and future of the site.

Eveleigh Railway Workshops satisfies Criterion D at a LOCAL level.

(OCP Architects, 2017:92-3)

Criterion (e) - an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the local area);

The historical archaeological resource at the Eveleigh Railway Workshops site has the potential to demonstrate technical aspects of the functioning of the Eveleigh Carriage Workshops, Eveleigh Locomotive Workshops and Alexandria Goods Yard. This potential resource includes remnant railway infrastructure and fabric relating to the former buildings and rail stock across the site, such as railway sidings turntables and remnant building foundations. Whilst this fabric, where it may exist, is significant for its ability to be interpreted as part of the heritage fabric of the site, it is not technically considered to be 'relics' under the NSW Heritage Act 1977, because it forms part of the existing works and infrastructure of the site.

Generally, this type of remnant evidence is well-represented in the historical plans, photographs and extensive historic records for the site, which means, for the most part, there is little new 'research' information that could be gleaned from detailed archaeological investigation of such infrastructure,

when disturbed or uncovered. Instead, its value as a resource is in its ability to demonstrate former works at the site and to be re-interpreted as part of the site's significant heritage fabric.

There is moderate research potential relating to two former stables from the Chisholm Estate period that predated the Eveleigh Locomotive Workshops and Alexandria Goods Yard use of the site. This potential resource may include remains of timber stables and associated deposits (GML 2013).

The archaeological features, deposits and/or relics, including potential features, associated with structures relating to The Grange villa are of local associative and technical significance (AECOM 2012).

The individual workshops are significant for their technological innovation and use of advanced machinery during their time of operation. Technical achievement was also represented in the ability of the workshops to accommodate changing technologies over time, including from steam to electric and then to diesel trains. The Eveleigh Railway Workshops retain evidence of this development in the extant physical fabric.

The Machinery Collection has some value as a resource for skills development in traditional and mechanical trades, where these skills are disappearing in the community at large, and the equipment platforms for carrying out this form of work are rapidly becoming rare (GML 2013).

Eveleigh Railway Workshops satisfies Criterion E at a STATE level.

(OCP Architects, 2017:93-94)

Criterion (f) - an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the local area)

Individual states within Australia generally established a single major railway workshop facility for maintenance and also manufacture of rolling stock and engines. As such, the Eveleigh Railway Workshops complex is a rare example in NSW as the only such facility, other railway workshops in NSW being of much smaller scale (including Civic Railway Workshops at Newcastle and the Cardiff Railway Workshops at Glendale). It is also one of only a limited number of major railway workshop facilities within the country.

The Eveleigh Railway Workshops as a whole, including its component parts, provide a rare expression of an ambitious late nineteenth-century public endeavour of a scale and intensity not reflected elsewhere in NSW (GML 2013).

Many of the individual items in the Machinery Collection have no comparisons outside of large heavy engineering workshops associated with railways and shipyards, as they are specific to the manufacture of very large, complicated items. Although some similar machines may exist in traditional railway workshops in other Australian states, no detailed comparative analysis has been undertaken to determine the overall survival of such machines in Australia (GML 2013).

Eveleigh Railway Workshops satisfies Criterion F at a STATE level.

(OCP Architects, 2017:94)

Criterion (g) - an item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places or cultural or natural environments (or the local area).

The Eveleigh Railway Workshops, including the Locomotive Workshops, Carriage Workshops and all associated structures, represent one of the largest industrial enterprises in Australia and are a good surviving example of a combined nineteenth century railway workshops in Australia.

The Eveleigh Railway Workshops have representative significance for their ability to demonstrate the evolution of a large scale railway workshops site developed for manufacture and maintenance of NSW's rolling stock.

The Eveleigh Railway Workshops have representative significance for their ability to demonstrate a range of characteristics that are typical of major railway construction and maintenance workshops in Australia, including the range of building types providing similar functions, aesthetic qualities and comparable history in terms of growth and expansion, involvement in wartime production, subsequent decline and adaptive reuse.

The Machinery Collection is broadly representative of the equipment typically associated with a large steam railway workshops complex of the late nineteenth and early twentieth century, in its range, size and technology. Individual machines and assemblages are representative of their particular application, function or technology, such as the blacksmith's assemblages or various lathes or cranes (GML 2013).

Eveleigh Railway Workshops satisfies Criterion G at a STATE level.

(OCP Architects, 2017:94-95)

6.3 Statement of Significance

The Eveleigh Railway Workshops complex is of exceptional heritage significance to the state of NSW for its major contribution to the establishment, operation and growth of the NSW railways, which was essential to the growth and development of NSW from the late nineteenth century onwards. The operation of the railway workshops and stores at Eveleigh is associated with the phenomenon of railway networks that allowed the unprecedented development of Sydney suburbs and rural NSW at the end of the nineteenth century and the early twentieth century. The Workshops complex is significant as a rare remaining example of a relatively intact, large-scale nineteenth century railway workshops that retains unity of character as well as continued links to railway operations for over one hundred years to this day.

The complex is significant as one of only a limited number of such facilities within the country, with individual states within Australia generally having established a single major railway workshop facility for maintenance and also manufacture of rolling stock and engines, supplemented by smaller workshops. As such, the Eveleigh Railway Workshops represent one of the largest industrial enterprises in Australia and the large-scale infrastructure demonstrates Government confidence in establishing and expanding rail networks in the late nineteenth century. The site retains the ability to demonstrate a range of characteristics that are typical of major railway construction and maintenance workshops in Australia, including the range of building types providing similar functions, aesthetic qualities and comparable history in terms of growth and expansion, involvement in wartime production, subsequent decline and adaptive reuse. There are opportunities to undertake further detailed research to identify potential national values, particularly in the context of the integrity of former railway workshop sites in Australia. Similarly, there are opportunities for further investigation of international railway workshop facilities to clarify the potential significance of the Eveleigh Railway Workshops in an international context.

Historically the site is important for its links to an early phase of railway development in NSW, with onsite evidence remaining intact from as early as 1887. Though many structures and items have been removed, the remaining site evidence reads as a living interpretation of the technological, administrative, social and cultural developments in over 100 years of railway operations in NSW, including the major transition from steam to diesel and electric powered train operation. The layout of the extant site elements is also indicative of the functional and administrative arrangements during the period of the site's operation.

The Eveleigh Railway Workshops site is associated with the life and work of the early railway engineers John Whitton and George Cowdery, individuals whose life and work made significant contributions to the establishment, development and operation of railways in Australia and NSW. Whitton, Chief Engineer of the NSW Railways between 1856 and 1899, was responsible for the major restructuring of the rail system which resulted in the resumption of land at Eveleigh and the relocation of the old Lines, executed the detailed design at Eveleigh.

The Eveleigh Railway Workshops have considerable aesthetic significance as an industrial landscape formed by the complex of functional buildings and associated infrastructure. Aesthetic and technical significance is demonstrated in the high quality design and construction of the original buildings, which are substantially intact and display finely detailed polychrome brickwork and well-articulated facades that embody the pride of the late Victorian era. The simple, strong functional forms of the workshop buildings have landmark quality, not only as important townscape elements in the Redfern/Eveleigh area, but as part of the visual train journey of thousands of passing commuters. The combination of the southern locomotive sheds at the Australian Technology Park and the former Carriage and Wagon Workshops provide a distinctive landmark in the Sydney landscape and define views to and from the site.

The Workshops are of social value to generations of railway employees past and present as a workplace producing high quality craftsmanship utilising state-of-the-art technology. The place served as a training ground for thousands of apprentices, tradesmen and engineers and was one of the biggest employers in New South Wales. Workers of the Eveleigh Railway Workshops centred their social activities on the workplace and social events were organised by and for workers both on the site and beyond. The site also has social value as a heritage icon for current local communities, which is reinforced by ongoing community interest in the place.

The remaining tangible evidence and intangible site values reflect the technological, social and cultural development of the NSW railways, as well as broader important historical events. The Eveleigh Railway Workshops has a strong historical association with union activities and is credited as being pivotal in the Australian Labour Movement, with the formation of the Amalgamated Railway and Tramway Service Association (ARTSA) in 1886. Eveleigh was seminal in many major industrial strikes, the ramifications of which were felt throughout the nation. In addition, several significant figures in the labour movement worked at Eveleigh, including James McGowan, the first Labour Premier of NSW.

The Workshops represent significant research potential for their ability to inform through remaining physical, documentary and oral evidence the functions and operations of a large-scale nineteenth and twentieth century railway workshops. The site also retains an exceptional and rare collection of historically and technically significant heavy machinery, although many items have been removed in the process of modern site development.

(OCP Architects, 2017:95-96)

6.4 Gradings of Heritage Significance

Table 6.1 below summarises the level of heritage significance attributed to the element closest to the proposed works. This grading is taken from the 2017 CMP.

Table 6:1: Gradings of heritage significance for the individual element(s) at the Eveleigh Railway Workshops

Precinct	*Buildings/ Structures / Elements*	*Level of Significance*
South Eveleigh	S.20: Eveleigh Maintenance Centre (1962 – 1966)	Moderate

6.5 Significance of the proposed works area

The subject site is situated in the Operational Rail Precinct within the Eveleigh Railway Complex. Prior to its resumption for the Eveleigh rail yards, the site was used for agricultural purposes, situated in Nicholas Devine's 120-acre *Burrin Farm.* Following the establishment of the Eveleigh Railway Workshops, the site was situated to west of the main railway complex. It was not until 1890, when the carriage stabling shed was constructed directly west of the site, that it became part of the industrial complex. Sited on at least four (4) former rail lines, the subject site was used to transport material and goods from the Gas Works, built in 1892 south of the Carriage Shed, and to move carriages from the stabling shed to the suburban lines. No former buildings or structures appear to have been located within the subject site and, given disturbance from subsequent rail upgrades, the potential for relics or buried 'works' is low. Being part of the critical infrastructure for the Eveleigh Railway Workshops, the subject site contributes to the historical heritage value of the complex, but is not, in itself, of heritage significance. Minor changes to the rail alignments at the site demonstrate the evolution of the complex and its expansion and improvement over time.

7. Impact Assessment

7.1 Proposed works

The proposed works would include new infrastructure to support the new rail access. These works are outlined below.

Hi-Rail Access Pad

The Hi-Rail Access Pad would measure approximate 25 metre long to service 2 tracks on the Up and Down Illawarra locals from chainage 2.3000 km and 2.324 km. The Hi-Rail Access Pad would be constructed of grey rubber with a concrete infill pavement between the Up and Down Illawarra local lines. The pad would follow the standard Sydney Trains design. For the operation of the Hi-Rail Access Pad, a ramp and turning bay, ballast retention walls and barriers would be required. These ancillary works are outlined further below and shown in detail in Figure 7.1 overleaf.

Ramp and Turning Bay

For the operation of the Hi-Rail Access Pad, a permanent asphalt ramp and turning bay would be constructed on the north side of the rail corridor. This would require the extension and widening of the existing asphalted access road. The existing curb within the yard would need to be realigned to facilitate the turning of vehicles. New bollards or handrails between the Down Illawarra Local and Up Illawarra would be required at the hi-rail paid location and new bollards would be needed to protect the down leg of an OHW structure.

Protection and/or Relocation of Existing Service and Infrastructure

The extant air line on the north edge of the tracks would need to be buried below the ballast in this area prior to the commencement of works. Two pits would need to be excavated to relocate this service. A new drainage culvert or grated drain would be needed along the access road extension to maintain the drainage within the corridor. Existing 1500v negative cables beneath he proposed access road would also require protection. Signalling in the area is already buried and would not require relocation.

Track Preparation Works

Railway sleepers and rail may require replacement and the ballast tampered within the footprint of the hi-rail pad footprint, as required.

Retaining Walls

On the south side of the new Hi-Rail Access Pad, a HRAP ballast retention wall would be established to maintain the required levels. This wall would not extend above the height of the existing rail (Figure 7.1). On the north side of the new Hi-Rail Access Pad, a 21 m long post and panel retaining wall against the Macdonaldtown Yard boundary would be established to retain the ballast and enable the widening of the access road (Figure 7.2). This fence would be constructed of steel posts embedded at depth to support galvanised panels. The fence would be approximately 2 metres high to service the level change.

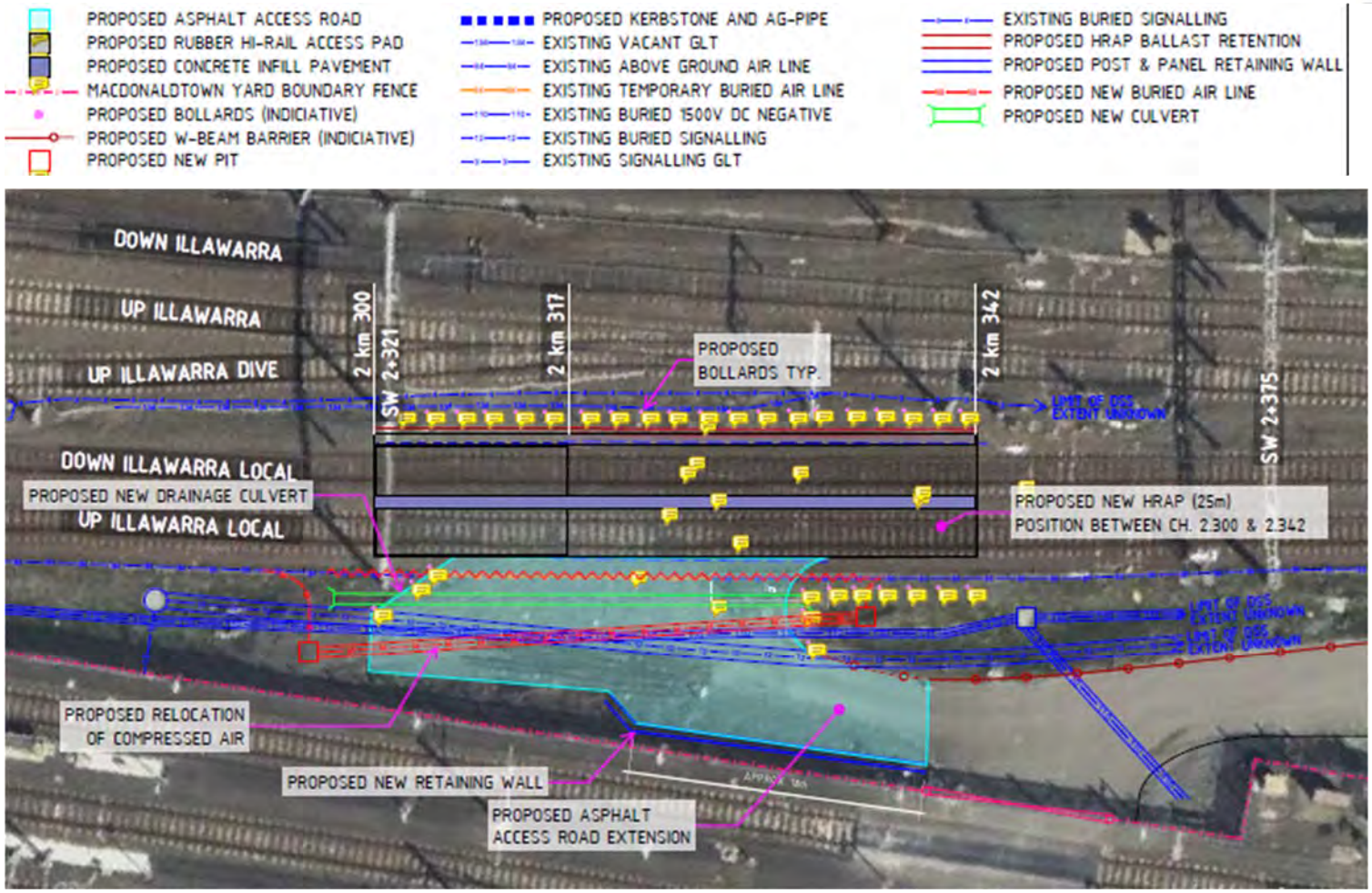

Figure 7.1: Detail of the proposed works, including the Hi-Rail Access Pad, asphalted area (blue shading), retaining wall (blue solid line) and W-beam barrier (red solid line). (Source: Transport for Tomorrow, 23 February 2024)

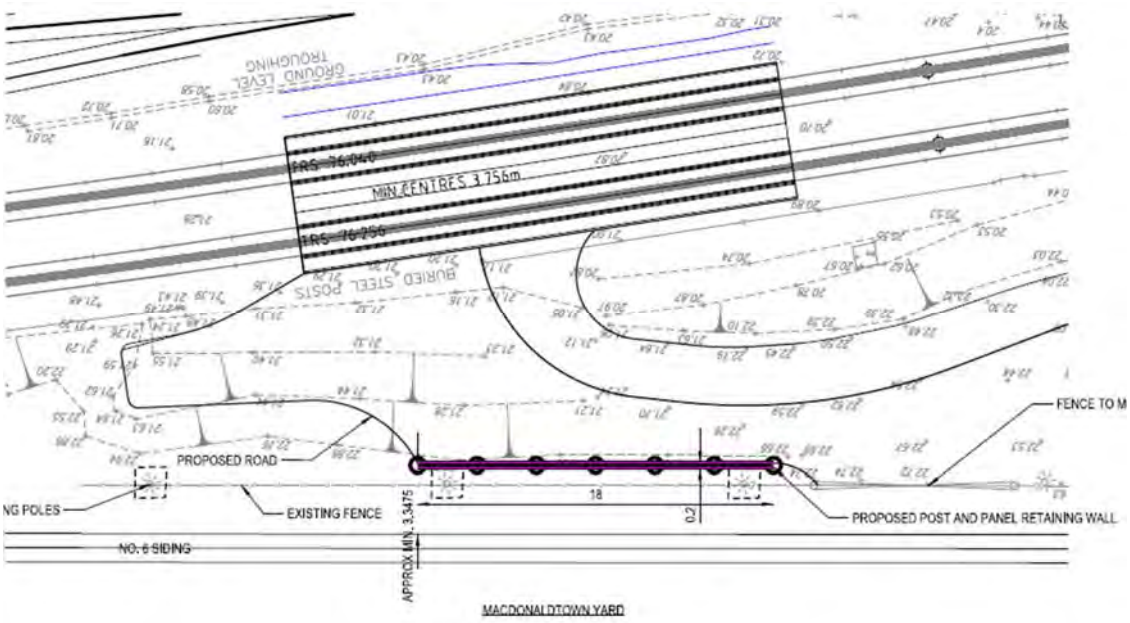

Figure 7.2: Preliminary sketch of the proposed post and panel retaining wall. (Source: Transport for Tomorrow, 2024

7.2 Potential impacts

Based on a review of the relevant CMPs, heritage listings, historical plans and imagery, the impact of the proposed works on individual heritage elements and the broader heritage significance of the Eveleigh Railway Workshop is considered to be negligible. The installation of the new Hi-Rail Access Pad, including ballast retaining wall, new asphalt access road, service relocation and new post and panel wall would be undertaken in an area where no former buildings or structures were located. Following establishment of the Eveleigh railway yards, the site was always located at the site of former trackwork. As such, there is some limited potential for former railway infrastructure to be present, such rail beams, fills, utilities such as drains and culverts, sleepers or foundations for OHW structures and other infrastructure. Such infrastructure, however, would have limited research value and is unlikely to be of heritage significance at a Local or State level.

With regards to the broader heritage significance of the Eveleigh Railway Workshops, the installation of the new Hi-Rail Access Pad and asphalt access road access from the Macdonaldtown Yard would not have an impact on the heritage significance of the heritage complex. When completed, these works would mostly be at rail level, with the ballast retention wall and bollards to the outside of the Down Illawarra Local contained within the existing ballasted rail network, and are unlikely to have a visual impact within the Eveleigh Railway Workshops precincts. The construction of the new post and panel wall along the boundary of the Macdonaldtown Yard would be approximately 2 m in height, and approximately 20 m long. Similar post and concrete panel walls have been built in the greater railway network, including nearby at Newtown. The presence of the wall would not look out of place within the rail corridor, and would not impact the heritage significance of the heritage site.

The rail lines within the Operational Rail Precinct are considered critical infrastructure for the public transport network and changes to the trackwork are often required to ensure continued operation. The installation of the Hi-Rail Access Pad would be considered a positive heritage outcome, providing direct access to the Local Illawarra lines for both essential and routine maintenance access purposes.

Response to Statement of Heritage Impact Guideline Considerations

Table 7.1 below provides a response to general and specific considerations posed by the Guidelines for statements of heritage impact (Department of Planning and Environment, 2023).

Table 7:1: Response to Questions posed by the Statements of Heritage Impact guideline

Relevant Matters for Consideration of Heritage Impact Guideline Questions	*Response*
General Considerations	
Do the proposed works include removal of unsympathetic alterations and additions? How does this benefit or impact the heritage item and its significance?	The works would not require the removal of unsympathetic alterations and additions within the Eveleigh Railway Workshops. The works are considered minor and would not directly impact on any heritage elements identified as being significant within the broader complex. The works would benefit the complex by ensuring the ongoing use and operation of the Operational Rail Precinct.
Do the proposed works affect the setting of the heritage item, including views and vistas to and from the heritage item and/or a cultural landscape in which it is sited? Can the impacts be avoided and/or mitigated?	The works would not impact the aesthetic values of the Eveleigh Railway Complex or significant views or vistas. The new Hi-Rail Access Pad would be discrete and recessive in colour and the new retaining wall would be similar in look and design to existing local examples used in the rail corridor. Given the negligible impact of the works on the heritage significance of the complex, no mitigations measures are required.
Are the proposed works part of a broader scope of works? Does this proposal relate to any previous or future works? If so, what cumulative impact (positive and/or adverse) will these works have on the heritage significance of the item?	Yes, the proposed works form part of the More Trains More Services North Project. They are essential for the operation of two new scissor crossovers established in the Sydney Yard. They will have a positive impact on the Eveleigh Railway Workshops, as they will support the continued use and operation of the active rail corridor.
Will the proposed works result in adverse heritage impact? If so, how will this be avoided, minimised or mitigated?	No, the proposed works would not result in an adverse heritage impact. The works are minor, will be visually recessive and there is no potential for the works to impact on any historical archaeological relics.
Specific Considerations for Alterations and Additions	
Do the proposed works comply with Article 22 of The Burra Charter, specifically Practice note article 22 — new work (Australia ICOMOS 2013b)?	The new works would be readily identifiable as such and would respect and have a minimal impact on the cultural significance of the Eveleigh Railway Workshops. Yes, the works comply with Article 22 of The Burra Charter.
Are the proposed alterations/additions sympathetic to the heritage item? In what way (e.g. form, proportion, scale, design, materials)?	Yes, the new Hi-Rail Access Pad would be visually recessive. The new post and panel retaining wall would follow similar examples used in the rail corridor in the local area. The new works would look out-of-place in the Operational Rail Precinct.
Will the proposed works impact on the significant fabric, design or layout, significant garden setting, landscape and trees or on the heritage item's setting or any significant views?	The new works would not impact any significant fabric associated with the Eveleigh Railway Workshops. The new works would also not impact the layout of the rail complex. The existing rail corridor would not be interrupted by the new works. No significant trees or landscape features would

	be impacted by the new works and they would not impact on any significant views.
How have the impact of the alterations/additions on the heritage item been minimised?	There is no requirement to alter the proposed works, as they would have a negligible impact on the heritage significance of the Eveleigh Railway Workshops.
Are the additions sited on any known or potentially significant archaeological relics? If yes, has specialist advice from archaeologists been sought? How will the impact be avoided or mitigated?	No potential, known or significant archaeological relics would be impacted by the works. The advice of a qualified archaeologist has been sought for this assessment.

8. Conclusions and Recommendations

8.1 Conclusions

- The subject site is situated within the Operational Rail Precinct and was not located near any significant heritage elements within the 'Eveleigh Railway Workshops'. Historically, the subject site was situated on at least four (4) former rail lines used to transport material and goods from the Gas Works, built in 1892 south of the Carriage Shed, and to move carriages from the stabling shed to the suburban lines. No former buildings or structures appear to have been located within the subject site and, given disturbance from subsequent rail upgrades, the potential for relics or buried 'works' is low. Whilst the site contributes to the broader historical heritage values of the complex it is not, in itself, of heritage significance.
- The proposed works will involve the construction of a low post and panel retaining wall and the addition of an asphalt Hi-Rail Access Pad and turning bay. The Hi-Rail Access Pad and turning bay will be dark in colour and visually recessive in the operational rail corridor. The post and panel retaining wall will be similar in design to other walls in the local rail corridor. The proposed works would not result in a significant visual impact to the heritage complex.
- Based on a detailed analysis of historical maps, plans and aerial imagery, the potential for the proposed excavation to impact historical archaeological relics is low. No former nineteenth century buildings or structures are shown in historical maps and plans in the proposed works areas. Ancillary buried 'works' not shown on historical plans may be found during excavation for the bund and drainage line but these would hold limited research value.

8.2 Recommendations

Based on the results of this assessment, it is recommended that:

- A copy of this report be provided to Transport for NSW for review. Once finalised, the report should be submitted with a S.60 Works Application to Heritage NSW for its consideration and approval.
- Following the issue of a S.60 Approval, all contractors and staff must attend a site induction that includes heritage, prior to the commencement of works. If there is a change of project staff or contractor during the length of the project, a further site briefing must be undertaken.
- Due care must be taken during the works in the vicinity of the Macdonaldtown Gas Works and Stabling Yards at the 'Eveleigh Railway Workshops'. No construction materials are to be stockpiled or stored against heritage items. Heavy plant and equipment must avoid movements in and around heritage structures and fabric.
- In the event that any historical archaeological relics or 'works' are unexpectedly found during excavation, the *Transport for NSW Unexpected Heritage Finds Guideline* (2015) should be followed.

References

Artefact Heritage Pty Ltd (2020), *Non-Aboriginal (Historic) Heritage Impact Assessment (HIA) for Geotechnical Site Investigations as part of the More Trains More Services (North) Erskineville Junctions Investigations*. Unpublished letter report to Transport for New South Wales.

Futurepast Heritage Consulting Pty Ltd (2015), *South Eveleigh Precinct Heritage Assessment.* Unpublished report to Sydney Trains.

Godden Mackay Logan Heritage Consultants (2013) *Australian Technology Park: Conservation Management Plan*, Sydney NSW. Unpublished report for Australian Technology Park Sydney.

OCP Architects. (2017). *Eveleigh Railway Workshops: Overarching Conservation Management Plan*. Sydney, NSW: Unpublished report for Urban Growth NSW.

Transport for NSW (July 2022), *Unexpected Heritage Items Procedure*.

Annexure A: Copy of the SHR Listing for the Eveleigh Railway Workshops

Item Details

Name

Eveleigh Railway Workshops

Other/Former Names

Eveleigh Railway Yards, Eveleigh Precinct, Australian Technology Park; Carriageworks; North Eveleigh; Macdonaldtown Gasworks; Macdonaldtown Triangle

Address

Great Southern and Western Railway REDFERN NSW 2016

Local Govt Area	Group Name
Sydney	

Item Classification

Item Type	Item Group	Item Category
Complex / Group	Transport - Rail	Railway Workshop

Statement Of Significance

The Eveleigh Railway Yards are some of the finest historic railway engineering workshops in the world and Eveleigh contains one of the most complete late 19th century and early 20th century forge installations, collection of cranes and power systems, in particular the hydraulic system. The place is of international significance and is one of Australia's finest industrial heritage items. The value of the place is increased by the fact that it is comprised of assemblages, collections and operational systems rather than individual items. Conversely, the significance has been reduced by its closure, relocation of some machinery and its disassociation from the operating rail network. (State Projects 1995: 109)

Assessed Significance Type	Endorsed Significance	Date Significance Updated
State	State	2/12/1999

Listings

Listing Name	Listing Date	Instrument Name	Instrument No.	Plan No.	Gazette Page	Gazette Number
Heritage Act - State Heritage Register	2/0/1999		01140	2347	1546	27
Heritage Act - s.170 NSW State agency heritage register						
National Trust of Australia register						
Register of the National Estate	26/0/1988				0002	115
State Environmental Planning Policy	17/0/1995					

Heritage Item ID

5045103

Source

Heritage NSW

Location

Addresses

Records Retrieved: 4

Street No	Street Name	Suburb/Town/Postcode	Local Govt. Area	LALC	Parish	County	Electorate	Address Type
	Burren Street	REDFERN/NSW/2016	Sydney	Unknown			HEFFRON	Alternate Address
	Eveleigh Street	REDFERN/NSW/2016	Sydney	Unknown			HEFFRON	Alternate Address
	Cornwallis Street	REDFERN/NSW/2016	Sydney	Unknown			HEFFRON	Alternate Address
	Great Southern and Western Railway	REDFERN/NSW/2016	Sydney	Metropolitan			NEWTOWN	Primary Address

Description

Designer	Builder/Maker	
George Cowdery	George Fishburn	
Construction Year Start & End	**Circa**	**Period**
1882 - 1897	YES	1851 to 1900

Physical Description **Updated**

The Eveleigh Precinct is located approximately four kilometres south of the Sydney GPO and is bounded by the inner city suburbs of Darlington, Redfern, Alexandria Park, Erskinville and Newtown. The total area of the precinct, which runs from Redfern Station in the northeast to Erskinville and MacDonaldtown Stations in the southwest, is approximately 51 hectares. It is located across the main railway corridor to Sydney Central Station.

Most of the southern portion of the overall site has been declared surplus to railway needs and much of this area has been cleared and was used as a parking area for Paddy's Markets while they were occupying the Locomotive Workshop. Other portions of the southern precinct have been redeveloped for public housing. Several former railway buildings stand vacant. (Schwager Brooks 1994:1)

THE LOCOMOTIVE WORKSHOP
- The external walls are of sandstock brickwork laid in English bond with arched window and door openings picked out in white bricks. The pediments have circular vents filled with louvres. The brickwork is modulated into bays forming piers which strengthen the walls.

Externally, brick walls feature sandstone cornices, parapets, sills and base courses. The stone generally extends the full depth of the wall. The top face of the parapets (and cornices) are splayed to fall to the outside to discharge water and they are joined on the top face by cast iron toggles, about one inch thick. On the pedimented areas roof flashings are recessed in a trench in the stone.

The walls and internal columns are supported on massed brick footings. In bays 1-4 there are brick arches between piers and each pier is supported on a timber platform and timber piles, 12 in each corner and 6 at each column.

Inside the building is a grid of round, hollow cast iron columns moulded in a classical style supported on footings. The columns support the crane girders and the roof.

The corrugated iron clad roof is supported by fine wrought iron trusses with diagonal wind bracing which fixes through the walls at each end. The purlins are wrought iron 'Z's . Timber purlins have been added in some places for ease of fixing replacement roofing. Monitor roofs run the length of the bays with a curved roof supported on curved wrought iron rafters.

Along the south side of the building are a series of annexes of varying dates of construction.

Along the south of the building are two sets of tracks and several associated turntables. To the east in the space between the Loco Shop and the new Loco Shed a track lays parallel to the building, sections of which are now exposed. (State Projects 1995: 60-65)

CARRIAGE WORKSHOPS
- The construction of these workshops are essentially the same as the Locomotive Workshops.

PAINT SHOP - A large single storey building containing 8 roads in the brick section and 5 roads in the adjacent metal clad section. Each road is separated by a single row of cast iron columns which support the saw tooth south light roof.

TURNTABLE & TRACKWORK - This is located west of the Large Erecting Shop.

AIR RAID SHELTERS - These are scattered along the existing rail corridor, generally located along embankments or cuttings.

There are numerous collections of machinery within the buildings on the site, including equipment adjacent to the Locomotive Workshops and machinery inside the buildings. (Schwager Brooks 1994: 20-21)

Physical Condition **Updated** 05/07/2014

Archaeological Potential - Medium-High
Physical Condition - Fair

Modifications And Dates

1899 - Large Erecting Shop added to the site.
1901 - By this year the new foundry and laundry had been constructed.
1902 - Most overhead cranes in workshops converted to electric drives.
- A new copper and tinsmiths shop erected.
1907 - The New Locomotive Shop designed and constructed.
- A new compressor house constructed.
1914 - Electrification of machinery in the workshops.
- New Locomotive Shop extended to the south.
1917 - Resumption of adjacent houses to the south for the Alexandria Goods Yard.
- Several new buildings completed, leading to a rearrangement of the workshops.
1925 - Northmost bay of Running Shed demolished.
1965 - Southern and middle bay of Running Shed demolished.
1970s - Workshops rearranged internally to update the works and the Spring Shop was removed.
(State Projects 1995:28 - 34)
c1980s - concrete Taj Mahal structure on south side of Eveleigh Rail Yards travelling west - removed at unknown date.

2008 - AIA Architecture Award for the adaptive reuse of CarriageWorks at Eveleigh: Tonkin Zulaikha Greer
... an exciting addition to the cultural life of Sydney and its artists. It provides an environment of unique creativity and innovation; a new home for physical theatre, spoken word, music, dance, visual and hybrid arts. The site is close to the city but difficult to access and being below road level not easy to identify. This has been resolved by the simple gesture of creating a small plaza at street level and celebrating it with a new public marker made of recycled trusses from the building. The project is essentially an exercise in adaptive reuse: the design reveals and celebrates the industrial heritage of the site. The strength of the design comes from the directness of its response to the old buildings, respecting their structural grid as an ordering device and inserting simple strong new forms as a counterpoint to the intricacies of the old. The foyer delivers a remarkable new public space, animated and activated by the revealed heritage items. Located in the Redfern-Waterloo precinct, CarriageWorks sets a precedent for the remaining development of the site, for heritage values to be respected and to inform the design of new interventions.(AIA, www.architecture.com.au/i-cms?page=11388)

AIA (Heritage) Greenway Award goven to CarriageWorks at Eveleigh: Tonkin Zulaikha Greer
The Eveleigh Carriage Workshops are of national cultural significance as part of the largest intact, high quality workshop site from the steam era in Australia. It has now been opened to the public in a creative new way. This landmark site has been given new life without forsaking the old - its 1888 industrial heritage clearly evident through the retention of nearly all the significant fabric and equipment extant at the time of adaptation. The carriages have gone, but not the cranes, the rails and the ability to read its form and former function. Existing elements retain their patina of age. This project, realised on a strict budget and even stricter timetable, provides flexible theatre spaces, administration offices, workshop spaces and amenities in discrete concrete boxes clearly articulated from the heritage fabric.
The success of the project stems from its simplicity and the quality of design and detailing in the new work. The spaces created by the new theatre boxes has enriched the interior rather than detracted from it. The complexity of the frame, the structure and the industrial artefacts are powerful. This is a confident design approach that does not diminish that significance.
While sections of the building have been altered, these are minor in terms of the scale of the overall conservation exercise and accessibility this project brings. The desire to successfully adapt buildings is often not matched by the design. Here at Eveleigh the evidence is concrete. (AIA, www.architecture.com.au/i-cms?page=11388)

Further Comments

History

Historical Notes or Provenance **Updated**

Redfern's natural landscape was defined by sand hills and swamps. The Carrahdigang, more widely known as the Cadigal people, valued the area for its abundant supply of food.

The "Eora people" was the name given to the coastal Aborigines around Sydney. Central Sydney is therefore often referred to as "Eora Country". Within the City of Sydney local government area, the traditional owners are the Cadigal and Wangal bands of the Eora. There is no written record of the name of the language spoken and currently there are debates as whether the coastal peoples spoke a separate language "Eora" or whether this was actually a dialect of the Dharug language. Remnant bushland in places like Blackwattle Bay retain elements of traditional plant, bird and animal life, including fish and rock oysters. With the invasion of the Sydney region, the Cadigal and Wangal people were decimated but there are descendants still living in Sydney today. All cities include many immigrants in their population. Aboriginal people from across the state have been attracted to suburbs such as Pyrmont, Balmain, Rozelle, Glebe and Redfern since the 1930s. Changes in government legislation in the 1960s provided freedom of movement enabling more Aboriginal people to choose to live in Sydney (Anita Heiss, "Aboriginal People and Place", Barani: Indigenous History of Sydney City http://www.cityofsydney.nsw.gov.au/barani).

The name Redfern originates from an early land grant to William Redfern in 1817. It was previously known as Roberts Farm and Boxley's Swamp. (Murray, 2009, 5). William Redfern (1774?-1833) was a surgeon's mate in the Royal Navy and was aboard HMS Standard when its crew took part in the revolt in 1797 known as the Mutiny of the Nore. Because he had advised the men to be more united, he was included among leaders who were court-martialled. Although sentenced to death, he was reprieved because of his youth and in 1801 arrived in Sydney as a convict. He served on Norfolk Island as an assistant surgeon. In 1803 he was pardoned, but remained on the island until 1808, when he returned to Sydney and was appointed assistant surgeon after being examined in medicine and surgery by Surgeons Jamison, Harris and Bohan. In 1816 he took charge of the new Sydney Hospital, but maintained a private practice. In 1814 he reported on conditions on convict transport ships and his recommendation that all have a surgeon on board whose duties were to superintend the health of convicts was put into practice.

He resigned from Government service in 1819 when not appointed to succeed D'Arcy Wentworth as principal surgeon. Despite his valuable service, many were contemptuous of him as he was an emancipist, although he had the friendship of Governor Macquarie. In 1818 Redfern received a grant of 1300 acres in Airds (in today's Campbelltown area) and later received more land in the area and by his death in 1823 he owned, by grant and purchase, over 23,000 acres in NSW. In 1817 he had been granted 100 acres in the area of the present suburb of Redfern. The boundaries were approximately the present-day Cleveland, Regent, Redfern and Elizabeth Streets. The commodious home Redfern built on his land was considered to be a country house, surrounded by flower and kitchen gardens. His neighbours were John Baptist (at the 40 acre Darling Nursery in today's Chippendale) and Captain Cleveland, an officer of the 73rd regiment, remembered by today's street of that name, and before its demolition, by Cleveland House, his home (Pollen & Healy, 1988, 219-220).

The passing of the Sydney Slaughterhouses Act in 1849 brought other businesses to the district. This act banned abattoirs and noxious trades from the city. Tanners, wool scourers and wool-washers, fellmongers, boiling down works and abattoirs had 10 years to move their businesses outside city boundaries. Many of the trades moved to Redfern and Waterloo - attracted by the water. The sand hills still existed but by the late 1850s Redfern was a flourishing suburb housing 6500 people.

The Municipalities Act of 1858 gave districts the option of municipal incorporation. Public meetings were held and after a flurry of petitions Redfern Municipality was proclaimed on August 11, 1859, the fourth in Sydney to be formed under the Act. Redfern Town Hall opened in 1870 and the Albert Cricket Ground in 1864. Redfern Post Office came in 1882.

The majority of houses in Redfern in the 1850s were of timber. From the 1850s market gardeners congregated in Alexandria south of McEvoy Street, around Shea's Creek and Bourke Road (Murray, 2009, 5).

When Sydney's original railway terminus was built in the Cleveland Paddocks, which extended from Devonshire and Cleveland Streets to Chippendale, the station's name was chosen to honour William Redfern. The station was built of iron and the first stationmaster was a Mr Fielding. In 1874 the station was replaced by a brick and stone structure, covering two platforms. At that time the present Redfern station was known as Eveleigh, after a lovely old home standing on the western side of the railway line.

When Central Station was built, on the site of the Devonshire Street cemetery, the name of Eveleigh Station was changed to Redfern. The name Eveleigh was retained for the huge railway workshops, just beyond the station, on the site of the original Hutchinson Estate.

All that remains of the Cleveland Paddocks is Prince Alfred Park, where the exhibition building was erected in 1870 for an inter-colonial exhibition opened by Governor Belmore, after whom Belmore Park was named, on 30/8/1870.

Redfern was the scene of the maiden trip of the first double-decker tram in 1879. It travelled between the old Redfern station to the corner of Hunter and Elizabeth Streets in the city (Pollen & Healy, 1988, 220).

In 1885 the Sands Sydney Directory listed 54 market gardens. While many were worked by European-Australians, by the 1870s Chinese market gardeners had acquired leases in the district and a decade later were dominating the trade.

The Eveleigh complex in 1886 became one of the largest employers in the state. Redfern was an industrial working class suburb by the end of the 19th century. Reschs brewery and other factories attracted migrants. The Syrian/Lebanese community began settling around Redfern and Surry Hills by the 1880s (Murray, 2009, 5).

Redfern at the end of the 19th century was characterised by its many gardens, but at the turn of the century industry was taking over the area. At that time, many businessmen in the area were from Syria, such as George Dan, who established his business in 1890; Stanton and Aziz Melick, in 1888; and Anthony & Simon Coorey, in the 1890s. Like other inner-city suburbs, the area still has a high migrant population, including many now from Lebanon, as well as a large Aboriginal population. There is still industry in the area among the high density residential occupation (Pollen & Healy, 1988, 220).

In the 1940s 73 per cent of all industrial activity in Sydney was concentrated within a radius of 3.5 miles from Redfern Station.

Many of its services have disappeared or been substantially downgraded over the last couple of decades, even though Redfern is still a densely populated inner city suburb (Murray, 2009, 5).

Eveleigh Railway Workshops:
When John Whitton first conceived the idea of the Eveleigh Railway Workshops, they were to undertake the construction of the infrastructure of the railways including the safe working systems and some of the perway systems. However, their main tasks were the maintenance and repair of locomotives and railway stock and the manufacture of rolling stock such as wagons and passenger carriages. At the time there were no other facilities in NSW for the construction of locomotives.

The workshops were set up on both the north and the south sides of the main western and southern railway lines, which led to a duplication of some workshop functions, but the really heavy work such as forging and casting of ferrous and non-ferrous metal, was to be carried out on the locomotive side. When the workshops were established most of the rolling stock had a wooden chassis, so the separation of services was not a major impediment to production.

The site for the Eveleigh railway yards was chosen in 1875, resumed in 1878 and the compensation price settled in 1880. Approximately 100 000 pounds was paid for 64.5 acres of land. Clearance began two years later. Much work went into the design and construction of the buildings because of the sandy nature of the soil. In the meantime, Eveleigh Station had been opened in 1878. In 1906 it was renamed Redfern Station. The former Redfern Station was renamed Sydney Terminal (Central).

The Engine Running Shed, now demolished, was the first building completed. Cowdery was criticised for the extravagance of this building. It comprised three segmental arched bays, each covering seven 'roads' without intervening columns.

George Fishburn was awarded the contract for bays 1-4 of the Locomotive Workshops in 1884 and work was commenced soon after. They were officially opened in 1887. Workshops 5-15 were opened later in the year. This initial building phase also included the construction of bays 16-25 of the Carriage Sheds, the Paint Shop, a General Store and various smaller buildings and the associated turntables, traversers and rail lines. Development continued into the 1890s. The workshops were open every day of the week until 1892 when union negotiations led to the workshops being closed on Saturdays.

The residential development of the area proceeded in the 1870s and 1880s around the railway workshop and was stimulated by the need for housing generated by the workshops. The names of many early settlers are continued in the street names in the area, including Eveleigh, and many of the property boundaries and former watercourses are reflected in street patterns. At the time of the development of the railway workshops, Darlington School was also built, as were other municiple buildings since demolished for the university.

For some time Eveleigh had its own gas works which were located near MacDonaldtown Station. However, in 1901 with the establishment of Ultimo Power Station which belonged to the Rail and Tramway Department, electric power was made available to the workshops. Shortly after work commenced on the conversion of the rope-driven cranes to electric motor drives. Work also commenced on the replacement of the steam engines at the south end of the workshops by powerful electric motors. This, however, was not completed until 1914.

In 1907 the Commissioners for Railways decided to begin the manufacture of new locomotives at Eveleigh and the New Locomotive Shop was designed and constructed for this purpose.

A Public Works Annual Report in 1915 concluded that the Eveleigh Works were too congested and recommended the establishment of a new locomotive and repairing works. Adding to this situation, strained conditions led to eight strikes at Eveleigh between July 1915 and July 1917. In 1916 James Fraser, Acting Chief Commissioner, addressed workers at Eveleigh on the introduction of the Taylor card system. The introduction of this system on 2 August 1917 led to an 82 day general strike. It began when 1100 men struck at Randwick Tramway Depot and 3000 at Eveleigh. Volunteers kept trains running including boys from Newington and S.C.E.G.S. (Shaw) private schools at Eveleigh.

This all took place during the First World War which brought worse conditions and declining wages.

The rail yards continued to develop. Additional land was resumed to the south-west and 230 houses were demolished to allow for the construction of the Alexandria Goods Yard sometime around 1917.

During 1925 the manufacture of new locomotives ceased.

As a result of World War 2 (1939-45), bays 5-6 were cleared of machinery in 1940 and plans drawn up for the installation of equipment supplied by the Department of Defence for the manufacture of 25lb field gun-shells. A mezzanine floor was added to Bay 5 in 1941 and the machinery for shell manufacture installed by February. Bay 8 was altered for an ammunitions annex. By 1943 Bay 8 had been abandoned by the Department of Defence as it had organised its own factories. Production of the shells ceased in 1945 and the construction of new locomotives was reintroduced. This post-war locomotive manufacturing lasted until 1952 when Eveleigh once again became a repair and maintenance facility. The decision to abandon steam locomotives in 1963 meant that Eveleigh, which was dedicated to steam locomotive maintenance and repair, entered its final phase.

The yards continued to grow and expand, and functions were continually changing. In later years workshops at Chullora in 1937 and later Clyde took over aspects of work formerly performed at Eveleigh and functions were rearranged accordingly.

Re-organisation and attempts at modernisation in the 1970s came too late. Too much of the machinery was suited only to the steam locomotive era. Buildings containing old equipment, machinery which had become progressively inappropriate to a modern transport era, and a changing work culture, has seen the yards decline gradually in the late 20th century until its closure in 1988. After closure, bays 5-15 were used by Paddy's Markets while other buildings on the site were demolished over an extended period. These included the Pattern Shed, Foundry, Smith's Shops and the Wheelpress Shop. In 1991 the NSW Government announced the creation of a technology park at Eveleigh in association with the University of NSW, the University of Sydney and the University of Technology. Decontamination works were carried out to cleared areas of the site progressively.

In 1994 Paddy's Markets returned to Haymarket. City West Development Corporation took ownership of the Locomotive Workshops, bays 1-15, in addition to the New Locomotive Shed and the Manager's Office.

In 1995 philanthropist and conservationist Caroline Simpson (nee Fairfax) OAM funded publication of an account of Sydney's Eveleigh Railway Workshops (McGuiness, 2003).

Today the functions fomerly carried out at Eveleigh are no longer carried out by government enterprises or no longer carried out in Australia (State Projects 1995:19-22, 27-33, 43-51).

In 2017 the volunteer group 3801 Limited, which takes its name from the 3801 locomotive steam train, who have for a 30 year period used the Limited Large Erecting Shed at Eveleigh to restore and maintain heritage diesel carriages and locomotives that take tourists and enthusiasts on rail adventures, was locked out of its workshop. Transport for NSW took over the shed after a review determined the 3801 group must clear out to share the space with other heritage operators. A Transport for NSW spokesman said the department had offered assistance to find an alternative site for 3801 Limited (Graham, 2017, 5).

In 2020 a group of philanthropists has given Sydney's heritage arts and cultural hub Carriageworks a multimillion-dollar lifeline, allowing the venue to remain open. The donors include major art collector Geoff Ainsworth and his wife Johanna Featherstone, Kerr Neilson, Michael Gonski and the Packer Family Foundation. The group has pledged to ensure the survival of the Eveleigh-based industrial chic facility after its board announced in May it had entered voluntary administration amid the COVID-19 pandemic. NSW Arts Minister Don Harwin on Friday announced the philanthropists had given the venue a "multimillion-dollar lifeline" (Sanda, 2020).

Historic Themes

Records Retrieved: 50

National Theme	State Theme	Local Theme
Developing cultural institutions and ways of life	Pastoralism	Visiting heritage places
Developing cultural institutions and ways of life	Pastoralism	Developing collections of items
Developing cultural institutions and ways of life	Defence	Technological innovation and design solutions
Developing cultural institutions and ways of life	Defence	Landscaping - Federation period
Developing cultural institutions and ways of life	Defence	Landscaping - 20th century interwar
Developing cultural institutions and ways of life	Defence	Interior design styles and periods - Victorian
Developing cultural institutions and ways of life	Defence	Interior design styles and periods - Edwardian
Developing cultural institutions and ways of life	Defence	Industrial buildings

Developing cultural institutions and ways of life	Defence	Developing cultural institutions and ways of life
Developing cultural institutions and ways of life	Defence	Architectural styles and periods - Victorian (late)
Developing cultural institutions and ways of life	Defence	Architectural styles and periods - Federation Arts and Crafts
Governing	Land tenure	State government
Governing	Land tenure	Developing roles for government - conserving cultural and natural heritage
Governing	Land tenure	Developing roles for government - building and operating public infrastructure
Governing	Land tenure	Developing roles for government - building and operating public infrastructure
Governing	Land tenure	Developing roles for government - building and administering rail networks
Governing	Land tenure	Developing roles for government - building and administering rail networks
Governing	Land tenure	Developing roles for government - administration of land
Working	Migration	Working on public infrastructure projects
Working	Migration	Working in factories
Working	Migration	Working for the defence services
Working	Migration	Working complex machinery and technologies
Working	Migration	Railway work culture
Working	Migration	Celebrating union-initiated reforms
Working	Migration	Being a part of a trades guild
Building settlements, towns and cities	Welfare	Shaping inland settlements
Building settlements, towns and cities	Welfare	Role of Transport in Settlement
Building settlements, towns and cities	Welfare	Living in the City
Building settlements, towns and cities	Welfare	Impact of railways on suburban development
Building settlements, towns and cities	Welfare	Evolution of railway towns
Building settlements, towns and cities	Welfare	20th Century infrastructure
Building settlements, towns and cities	Mining	Changing land uses - from rural to suburban

Building settlements, towns and cities	Mining	Suburban Centres
Building settlements, towns and cities	Mining	Early land grants
Building settlements, towns and cities	Agriculture	Housing (regional city)
Building settlements, towns and cities	Agriculture	Marine villa
Building settlements, towns and cities	Agriculture	Worker's Dwellings
Building settlements, towns and cities	Agriculture	Building settlements, towns and cities
Building settlements, towns and cities	Agriculture	Accommodating workers in workers' housing
Developing local, regional and national economies	Aboriginal pre-contact	Maintaining the public rail transport system
Developing local, regional and national economies	Aboriginal pre-contact	Engineering the public railway system
Developing local, regional and national economies	Aboriginal pre-contact	Development in response to railway lines
Developing local, regional and national economies	Aboriginal pre-contact	Building the railway network
Developing local, regional and national economies	Aboriginal pre-contact	Building and maintaining the public railway system
Developing local, regional and national economies	Aboriginal pre-contact	Administering the public railway system
Developing local, regional and national economies	Utilities	Technologies of industrial manufacturing
Developing local, regional and national economies	Leisure	Managing industrial relations
Developing local, regional and national economies	Government and Administration	Developing local landmarks
Tracing the evolution of a continent's special environments	Exploration	Other open space
Tracing the evolution of a continent's special environments	Exploration	Changing the environment

Assessment

Criteria a)

Historical Significance	**Include**	**Exclude**

*The workshops were an important part of the NSW rail network which was instrumental in the development of the state during the 19th and 20th century.
*The construction of the workshops influenced the development of the local area (which was developed for worker's housing) both by providing employment and by its bulk and presence, starting bells and sirens.
*The yards were associated with developments in working conditions now crucial to the Australian cultural identity, eg) the weekend. The yards had an important association with the labour movement. The place was seen initially as a positive instrument of state socialism and in later periods as the site of important labour actions and of restrictive work practices.
*They were conceived by Whitton, the 'father' of the NSW railways, and were an integral part of his NSW rail system, and were executed in detail by Cowdery
(State Projects 1995:109)

Criteria b)

Historical Association Significance	**Include**	**Exclude**

Criteria c)

Aesthetic/Technical Significance	**Include**	**Exclude**

*The entire complex has a strong industrial character generated by the rail network itself, by the large horizontal scale of the buildings, the consistent use of brick and corrugated iron, the repetitive shapes of roof elements and of details such as doors and windows and because of the uniform grey colours.
*The simple, strong functional forms of the buildings have landmark quality, not only as important townscape elements in the Redfern/Eveleigh area, but as part of the visual train journey of thousands of commuters, marking arrival in the city centre.
*The major buildings from the original 19th century development of the site are well designed, detailed and built exhibiting a high degree of unity of design, detailing and materials.
(State Projects 1995:109)

Criteria d)

Social/Cultural Significance	**Include**	**Exclude**

*The Workshops were one of the largest employers in Sydney at the turn of the century, declining only in the latter half of the 20th century. It was and is an important source of pride and in demonstrating the capacity of Australian industry and workers and a high level of craft skills.
*The place is significant to railway workers, former railway workers and railway unions and is associated with the stories of many, including workers and locals, which are important to cultural identity.
*Although no longer operating as a workshop, the place maintains symbolic value for the community as a former workplace and a place that provided economic input into the local area.
*It has strong symbolic ties with existing trade unions. (State Projects 1995: 106-111)

Criteria e)

Research Potential	**Include**	**Exclude**

*The Eveleigh railway workshops have considerable research potential for understanding the operation of railway workshops. This potential is enhanced by the extent of archival material available and because the relatively recent closure means that there are many former workshop workers who are still alive and who know how the place operated.
*They have unique educational value enhanced by the highly valuable location and the relationship with the ATP and the three universities. They contain the potential to achieve an understanding of the work practices of today through an understanding of the cultural continuity between 19th century technology and 21st century technology.
*There is potential for further research to yield information about the labour movement, labour relations and the nature of work practices in the 19th and 20th centuries.
*Archaeological remains have the potential to reveal further information about the operation of the Yards. (State projects 1995: 109)

Criteria f)

Rarity	**Include**	**Exclude**
The size and quality of the site is rare. (State Projects 1995: 107)		

Criteria g)

Representative	**Include**	**Exclude**

Integrity/Intactness **Updated** 02/15/1999

*The Eveleigh Locomotive Workshops are the largest surviving, intact railway workshops dating from the steam era in Australia, and possibly the world. (State Projects 1995: 110)

References

References

Records Retrieved: 9

Title	Author	Year	Link	Type
Lifeline for Sydney's Carriageworks	Sanda, Dominica	2020	https://www.greatlakesadvocate.com.au/story/6828647/lifeline-for-sydneys-carriageworks/	Written
'Out of Puff: Heritage tours on old trains put on hold as volunteers' workshop taken over'	Graham, Ben	2017		Written
Redfern: a hive of industry	Murray, Dr.Lisa	2009		Written
Rail workshop to become platform for inner city hub (SMH 26/7/03)	Claire O'Rourke	2003		Written
Sparks still fly over rail's long-silent workshops (SMH 2/12/03)	Geraldine O'Brien	2003		Written
'Simpson, Caroline (1930–2003)'	McGuiness, Mark	2003	http://oa.anu.edu.au/obituary/simpson-caroline-13885/text24757	Written
Eveleigh Rail Yards Locomotive Workshops Conservation Management Plan	Heritage Group, State Projects.	1995		Management Plan
Eveleigh Precinct Sydney Conservation Policy	Schwager Brooks and Partners Pty Ltd	1994		Written
Paper file: Eveleigh Railway Workshops - S90/3367	Heritage Division, OEH	1990		Written

Heritage Studies

Records Retrieved: 0

Title	Year	Item Number	Author	Inspected By	Guidelines Used
No Results Found					

Procedures / Workflows / Notes

Records Retrieved: 2

Application ID / Procedure ID	Section of Act	Description	Title	Officer	Date Received	Status	Outcome
32048	57(2)	Exemption to allow work	Standard Exemptions	Minister Cowied	11/09/2020		
54892	57(2)	Exemption to allow work	Heritage Act - Site Specific Exemptions	Minister hamptol	01/27/2017		

Management

Management

Records Retrieved: 0

Management Category	Management Name	Date Updated
No Results Found		

Management Summary

Conservation management should be pursued as an active, day-to-day responsibility. (State Projects 1995: 133)

Caption: The Eveleigh Locomotive Workshops are the largest surviving, intact railway workshops dating from the steam era in Australia, and possibly the world.

Photographer: L Gould

Copyright Owner: No Credit

Date: 9/18/1990 12:00:00 AM

Caption: SHR Plan 2347

Photographer: Heritage Division

Copyright Owner: No Credit

Date: 4/2/1999 12:00:00 AM

Caption: The site for the Eveleigh railway yards was chosen in 1875. When John Whitton first conceived the idea of the Eveleigh Railway Workshops, they were to undertake the construction of the infrastructure of the railways including the safe working systems.

Photographer: L Gould

Copyright Owner: No Credit

Date: 9/18/1990 12:00:00 AM

Appendix G: Section 60 (Approval ID 5988, received 22/03/2024)

HMS Application ID: 5988

Mr Daniel Roche
TAHE - Sydney Trains
7 HARVEST ST
MACQUARIE PARK NSW 2113

By email: jessica.mauger@transport.nsw.gov.au

Dear Mr Roche

APPLICATION UNDER SECTION 60 OF THE *HERITAGE ACT 1977*

Eveleigh Railway Workshops
State Heritage Register No. 01140

Address:	Great Southern and Western Railway, REDFERN NSW 2016
Proposal:	Construction of a hi-rail pad and associated infrastructure including asphalt ramp and turning bay, track adjustments, installation of a post and panel retaining wall, relocation of existing services.
Section 60 application no:	HMS ID 5988, received 12/03/2024

As delegate of the Heritage Council of NSW (the Heritage Council), I have considered the above Section 60 application. Pursuant to section 63 of the *Heritage Act 1977*, approval is granted subject to the following conditions:

APPROVED DEVELOPMENT

1. All work shall comply with the information contained within:
   a) Engineering drawings, prepared by Kellogg, Brown & Root Pty Ltd as listed below:

Dwg No	Dwg Title	Date	Rev
Project Name: MTMS3ASP2 - STAR PHASE 2 - Erskineville Hi-Rail Access Pad			
MTMS3ASP2-KBR-ERS-CV-DRG-002101	Drawing Index & Locality Plan	08.03.24	A
MTMS3ASP2-KBR-ERS-CV-DRG-004101	General Notes	08.03.24	A
MTMS3ASP2-KBR-ERS-CV-DRG-005101	Hi-Rail access Pad & Access Plan	08.03.24	A
MTMS3ASP2-KBR-ERS-CV-DRG-007101	Access Road Longitudinal Section	08.03.24	A
MTMS3ASP2-KBR-ERS-CV-DRG-008101	Typical Cross Sections	08.03.24	A
MTMS3ASP2-KBR-ERS-ST-DRG-004001	General Notes	08.03.24	A

MTMS3ASP2-KBR-ERS-ST-DRG-005001	Plan Layout	08.03.24	A

b) Rail Infrastructure Upgrade, Eveleigh Railway Workshops Statement of Heritage Impact, prepared by Mountains Heritage, dated March 2024

EXCEPT AS AMENDED by the conditions of this approval:

SITE PROTECTION

2. Significant built and landscape elements are to be protected during site preparation and the works from potential damage. Protection systems must ensure significant fabric, including landscape elements, is not damaged or removed.

   Reason: To ensure significant fabric including vegetation is protected during construction.

PHOTOGRAPHIC ARCHIVAL RECORDING

3. A photographic archival recording must be prepared prior to the commencement of works and after the completion of works. This recording must be in accordance with the Heritage NSW publication '*Photographic Recording of Heritage Items using Film or Digital* Capture' (2006). The digital copy of the archival record must be provided to Heritage NSW.

   Reason: To capture the condition and appearance of the place prior to, and during, modification of the site which impacts significant fabric.

UNEXPECTED FINDS

4. The Applicant must ensure that if substantial intact archaeological deposits and/or State significant relics or any other buried fabric such as works not identified in Rail Infrastructure Upgrade, Eveleigh Railway Workshops Statement of Heritage Impact, prepared by Mountains Heritage, dated March 2024 are discovered, work must cease in the affected area(s) and the Heritage Council of NSW must be notified. Additional assessment and approval may be required prior to works continuing in the affected area(s) based on the nature of the discovery.

   Reason: All significant fabric within a State Heritage Register curtilage should be managed according to its significance. This *is a standard condition to identify to the applicant how to proceed if historical archaeological relics, or other unexpected, buried discoveries such as works are identified during the approved project.*

ABORIGINAL OBJECTS

5. Should any Aboriginal objects be uncovered by the work which is not covered by a valid Aboriginal Heritage Impact Permit, excavation or disturbance of the area is to stop immediately and Heritage NSW is to be informed in accordance with the *National Parks and Wildlife Act 1974*. Works affecting Aboriginal objects on the site must not continue until Heritage NSW has been informed and the appropriate approvals are in place. Aboriginal objects must be managed in accordance with the *National Parks and Wildlife Act 1974*.

   Reason: This is a standard condition to identify to the applicant how to proceed if Aboriginal objects are unexpectedly identified during works.

COMPLIANCE

6. If requested, the applicant and any nominated heritage consultant may be required to participate in audits of Heritage Council of NSW approvals to confirm compliance with conditions of consent.

   Reason: To ensure that the proposed works are completed as approved.

DURATION OF APPROVAL

7. This approval will lapse five years from the date of the consent unless the building works associated with the approval have physically commenced.

   Reason: To ensure the timely completion of works

Advice

Section 148 of the *Heritage Act 1977* (the Act), allows people authorised by the Minister to enter and inspect, for the purposes of the Act, with respect to buildings, works, relics, moveable objects, places or items that is or contains an item of environmental heritage. Reasonable notice must be given for the inspection.

Right of appeal

If you are dissatisfied with this determination appeal may be made to the Minister under section 70 of the Act.

It should be noted that an approval under the Act is additional to that which may be required from other Local Government and State Government Authorities in order to undertake works.

Stamped documents

Any stamped documents (e.g. approved plans) for this application are available for the Applicant to download from the Heritage Management System at https://hms.heritage.nsw.gov.au under 'My Completed Applications.'

If you have any questions about this correspondence, please contact Katrina Stankowski, Manager at Heritage NSW on (02) 9873 8500 or heritagemailbox@environment.nsw.gov.au

Yours sincerely

Rochelle Johnston

Rochelle Johnston
Senior Manager, Major Projects
Heritage NSW
Department of Climate Change, Energy, the Environment and Water
As Delegate of the Heritage Council of NSW
22 March 2024
cc: Sydney Council