

JHCPB Joint Venture

Non-Aboriginal Heritage Management Sub Plan

RIC-JHC-MPL-00-PL-260-001

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- Annexure A CoA and REMMs relevant to non-Aboriginal heritage management
- Annexure B Roads and Maritime Standard Management Procedure: Unexpected Heritage Items
- Annexure C Contact List

Glossary/Abbreviations

Abbreviations	Expanded Text
ACHMP	Aboriginal Cultural Heritage Management Sub-Plan
AECOM	AECOM Australia Pty Ltd
CS	Communication Strategy
CEMP	Construction Environmental Management Plan
CoA	Conditions of Approval
CNVG	Construction Noise and Vibration Guideline (Roads and Maritime 2016)
CSSI	Critical State Significant Infrastructure
DPE	Department of Planning and Environment
EIS	WestConnex M4-M5 Link Environmental Impact Statement
Environmental heritage/ Non-Aboriginal heritage	Places, buildings, works, relics, movable objects and precincts, of State or local heritage significance as outline in Section 4 of the <i>Heritage Act 1997</i>
ER	Environmental Representative
EWMS	Environmental Work Method Statements
HAMU	Historical Archaeological Management Unit
HARD	Historical Archaeological Research Design
HARDEM	Historical Archaeological Research Design and Excavation Methodology
HARSR	Heritage Archival Recording and Salvage Report
HCA	Heritage Conservation Area
Heritage Act	<i>Heritage Act 1997</i>
Heritage Division of OEH	Heritage Division of the Office of Environment and Heritage
Heritage item	Identified heritage items include heritage-listed buildings, structures, bridges, tunnels, parks, trees and plantings
Heritage study area	A study area, as defined in the EIS, includes the proposed Project footprint (study area) plus an appropriate buffer around the footprint in some cases; to ensure that the assessment includes heritage items, potential heritage items and HCAs adjacent to the Project footprint that may be subject to visual or indirect impacts (visual setting, vibration or settlement). Each one has been determined on a case by case basis when undertaking site inspections of the areas.
HIA	Heritage Impact Assessment
JHCPB	John Holland CPB Contractors Joint Venture
LEP	Local Environmental Plan
LGA	Local government area
M4-M5 Link Project	A component of the WestConnex program of works, which includes the construction and operation of Stage 1: M4-M5 Link Mainline Tunnels and Stage 2: Rozelle Interchange.
NAHMP	Non-Aboriginal Heritage Management Sub-plan
NSW Heritage Council	Heritage Council of NSW
NVMP	Noise and Vibration Management Plan
OEH	Office of Environment and Heritage
PAD	Potential Archaeological Deposit
Port Authority	Port Authority of NSW
Potential heritage items	Items with heritage value that are not listed and may be directly or indirectly impacted by the Project
Project, the	M4-M5 Link Rozelle Interchange Project
REMMs	Revised Environmental Management Measures
Roads and Maritime	Roads and Maritime Services
S170	State Agency 170 Heritage and Conservation Register
SAP(s)	Sensitive Area Plan(s)
Secretary	Secretary of the NSW Department of Planning and Environment (or delegate)

SEMP	Site Establishment Management Plan
SHR	State Heritage Register
SPIR	WestConnex M4-M5 Link Submissions and Preferred Infrastructure Report
Study area	The Project footprint and a buffer determined by the character and visual corridors surrounding the Project footprint. The study area is separated into six areas that would be subject to surface disturbance as part of the Project and the area above the mainline tunnel alignment.
Sydney Water	Sydney Water Corporation
UDLP	Urban Design and Landscape Plan
UDRP	Urban Design Review Panel
WestConnex program of works	A program of works that includes the M4 Widening, King Georges Road Interchange Upgrade, M4 East, New M5 and WestConnex M4-M5 Link Projects

1. Introduction

1.1. Context

This Non-Aboriginal Heritage Management Sub-plan (NAHMP or Plan) forms part of the Construction Environmental Management Plan (CEMP) for the M4-M5 Link Rozelle Interchange Project (the Project).

This NAHMP has been prepared to address the requirements of the Minister's Conditions of Approval (CoA) as modified on 25 February 2019, the WestConnex M4-M5 Link Environmental Impact Statement (EIS) and Mainline Tunnel Modification Report, the revised environmental management measures (REMM) listed in the M4-M5 Link Submissions and Preferred Infrastructure Report (SPIR) and the Modification Submissions Report, and applicable legislation.

1.2. Background and project description

The WestConnex M4-M5 Link Project EIS (AECOM, 2017) assessed the impacts of construction and operation of the Project on Non-Aboriginal heritage. The project description is outlined in Section 1.3 of the CEMP.

The EIS identified potential direct and indirect impacts on a number of Non-Aboriginal heritage items listed in Table 5 of this Plan.

As part of the EIS development, a detailed heritage impact assessment was prepared to address the Environmental Assessment Requirements issued by the Department of Planning and Environment (DPE). The Non-Aboriginal heritage assessment was included in the EIS, within Chapter 20 and the Non-Aboriginal Heritage Technical Working Paper (Appendix U of the EIS). The EIS concluded that the design and construction of the project would be managed to ensure that the identified potential heritage and archaeological impacts are minimised and / or avoided as far as practical, through the implementation of mitigation and management measures described in this NAHMP.

1.3. Scope of the Sub-plan

The scope of this Plan is to describe how John Holland CPB Contractors Joint Venture (JHCPB) proposes to manage and protect Non-Aboriginal heritage during construction of the Project. Operational Non-Aboriginal heritage measures do not fall within the scope of this Plan and therefore are not included within the process contained within this Plan.

The management and protection of Aboriginal cultural heritage during construction is addressed in the Aboriginal Cultural Heritage Management Sub-plan (ACHMP).

1.4. Environmental management systems overview

The environmental management system overview is described in section 1.5 of the CEMP.

2. Purpose and objectives

2.1. Purpose

The purpose of this Plan is to describe how JHCPB will minimise identified potential impacts to heritage items and heritage conservation areas during construction of the Project.

2.2. Objectives

The key objective of the NAHMP is to ensure that identified potential impacts to non-Aboriginal heritage are minimised and within the scope permitted by the Instrument of Approval. To achieve this objective, the following will be undertaken:

- Provide staff with the opportunity to increase the level of understanding and awareness of heritage management issues and meet statutory requirements to control impacts on non-Aboriginal heritage.
- Identify potential impacts to non-Aboriginal heritage as a result of the construction of the Project.
- Identify appropriate measures to avoid or minimise adverse potential impact to non-Aboriginal heritage and to address the environmental performance outcomes, safeguards and conditions prescribed by:
 - The EIS prepared for the WestConnex M4-M5 Link Project,
 - The SPIR prepared for the WestConnex M4-M5 Link Project,
 - Conditions of Approval granted to the M4-M5 Link Project on 17 April 2018 as modified on 25 February 2019,
 - Roads and Maritime Services (Roads and Maritime) specifications G36, and
 - Relevant legislation and other requirements describe in Section 3.1 of this NAHMP.

2.3. Environmental performance outcomes

The desired environmental performance outcome for Non-Aboriginal heritage, as outlined and addressed in the EIS, is that the design, construction and operation of the Project facilitates, to the greatest extent possible, the long-term protection, conservation and management of the heritage significance of items of Non-Indigenous heritage and Aboriginal objects and places.

To achieve these outcomes, JHCPB will undertake the following presented in

Table 1. No additional performance outcomes for Non-Aboriginal heritage management were identified in the SPIR.

Table 1: Performance outcomes for Non-Aboriginal heritage management

No.	Performance outcome	How Addressed	Records	Source
1	Establish archival recording of items of heritage significance that will be demolished	Undertake archival recording for items of heritage significance to be demolished during the Project (refer to Table 5 and Section 7.3.2).	Archival recording and salvage reports	EIS, Appendix A
2	Salvage features and fabric of heritage significance for reuse within the project in the first instance	Prepare and implement salvage strategies for items of heritage significance to be demolished during the Project (refer to Table 5 and Section 7.3.2). Undertake salvage of any archaeological heritage items in accordance with the Project HARDEM (refer to Section 7.3.3).	Archival recording and salvage reports ULDP HIP	EIS, Appendix A
3	Minimise impacts on heritage items during construction	Implement the management and mitigation measures identified in Table 5 and Table 9.	Inspection records Monitoring records	EIS, Appendix A
4	Incorporate key heritage values and stories into the final urban design and landscaping outcome	Prepare a Heritage Interpretation Plan (HIP) in accordance with CoA E167 and NAH02 which identifies and interprets the key heritage values and stories of the heritage areas affected by the Project and informs the development of the Urban Design and Landscape Plan (UDLP) for the Project.	ULDP HIP	EIS, Appendix A
5	Minimise damage to features of heritage conservation significance from vibration	Implement safe working distances (refer to Section 7.1.2 and Table 5 of this NAHMP and Section 5.5.3 of the NVMP). Undertake pre-construction and post-construction condition surveys as required (refer to Table 5 and Section 7.3.1).	Monitoring records Pre-construction and post-construction reports	EIS, Appendix A
6	Ensure full compliance with the relevant legislative requirements, CoA and REMM.	Implement the management and mitigation measures identified in Section 7. Undertake training, monitoring and inspections, auditing and recording (refer to Section 8).	Weekly Environmental Inspection Checklist (internal document) Inspection records Monitoring records Audit reports	CoA A1
7	Ensure training is provided in the form of inductions to relevant	Implement the measures identified in Section 8.2 and Table 9 NAH09, NAH13 and NAH15.	Training register	CEMP Section 3.5

	Project personnel on heritage protection measures and the <i>Roads and Maritime Standard Management Procedure Unexpected Heritage Items</i> (November 2015) (Unexpected Heritage Items Procedure), provided in Annexure B, before they begin work on site.			
8	Minimise identified impacts to heritage items and heritage conservation areas (HCAs) throughout detailed design and construction.	Implement the management and mitigation measures identified in Table 5 and Table 9.	Inspection records	CoA E156

3. Environmental Requirements

3.1. Relevant legislation and guidelines

3.1.1. Legislation

Legislation relevant to Non-Aboriginal heritage management for this Project includes the NSW *Heritage Act 1977*. Relevant provisions of the *Heritage Act 1977* are explained in the legal and compliance tracking register included in Annexure A of the CEMP.

3.1.2. Guidelines

The main guidelines, specifications and policy documents relevant to this Plan include:

- Assessing Heritage Significance for Historical Archaeological Sites and 'Relics' (Heritage Branch of NSW Department of Planning 2009),
- Historical Archaeology Code of Practice (NSW Heritage Office 2006),
- Skeletal Remains: Guidelines for Management of Human Remains (NSW Heritage Office 1998),
- Criteria for the assessment of excavation directors (NSW Heritage Council 2011),
- NSW Heritage Manual (Heritage Office and Department of Urban Affairs and Planning 1994),
- How to Prepare Archival Records of Heritage Items (NSW Heritage Office 2003),
- Guide to photo monitoring of Heritage Projects (NSW OEH 2018),
- Heritage Council of NSW, 2002. 'Assessing Heritage Significance', a NSW Heritage Manual update, Sydney,
- Assessing Heritage Significance (NSW Heritage Council 2002),
- Statement of Heritage Impact (NSW Heritage Council 2002),
- Archaeological Assessments: Archaeological Assessment Guidelines (NSW Heritage Office and NSW Department of Urban Affairs and Planning 1996),
- Historical Archaeological Sites: Investigation and Conservation Guidelines (NSW Heritage Council 1993),
- The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance 2013 (the Burra Charter),
- Roads and Maritime Specification G36 – Environmental Protection (Management System),
- Roads and Maritime Cultural Heritage Guidelines (November 2015),
- Roads and Maritime Standard Management Procedure: Unexpected Heritage Items (refer Annexure B), and
- Historical Archaeological Sites: Investigation and Conservation Guidelines (Heritage Council of NSW 1993).

3.2. Minister's Conditions of Approval

The CoA relevant to this Plan are listed in Table 2 below. A cross reference is also included to indicate where the condition is addressed in this Plan or other project management documents. Specific CoA relevant to Non-Aboriginal heritage management for the Project are included within Annexure A.

Table 2: Conditions of Approval relevant to the NAHMP

CoA No	Condition Requirements	Document Reference	How Addressed			
C4	The following CEMP Sub-plans must be prepared in consultation with the relevant authorities identified for each CEMP Sub-plan and be consistent with the CEMP referred to in the EIS.	This Plan Table 3	A summary of the consultation undertaken during the preparation of this NAHMP is provided in Section 4.1. This includes consultation with: <ul style="list-style-type: none"> Heritage Council of NSW; Heritage Division of OEH; Inner West Council; and City of Sydney Council. 			
	<table border="1"> <thead> <tr> <th></th> <th>Required CEMP Sub-plan</th> <th>Relevant authority(s) and council(s) to be consulted for each CEMP Sub-plan</th> </tr> </thead> <tbody> <tr> <td>(g)</td> <td>Non-Aboriginal Heritage</td> <td>Heritage Council of NSW Heritage Division of OEH Relevant council(s)</td> </tr> </tbody> </table>				Required CEMP Sub-plan	Relevant authority(s) and council(s) to be consulted for each CEMP Sub-plan
	Required CEMP Sub-plan	Relevant authority(s) and council(s) to be consulted for each CEMP Sub-plan				
(g)	Non-Aboriginal Heritage	Heritage Council of NSW Heritage Division of OEH Relevant council(s)				
C5	The CEMP Sub-plans must state how					
	(a) the environmental performance outcomes identified in the EIS and SPIR as modified by these conditions will be achieved	Section 2.3 Table 1	This Plan was prepared in accordance with the environmental performance outcomes identified in the EIS and is evidenced primarily in Section 2.3 and Table 1. No additional performance outcomes for Non-Aboriginal heritage management were identified in the SPIR.			
	(b) the mitigation measures identified in the EIS and SPIR as modified by these conditions will be implemented.	Section 7 Table 5 Table 6 Table 9 Annexure A	The implementation of Non-Aboriginal heritage mitigation and management measures identified in the EIS and the SPIR are listed in Section 7, Table 5, Table 6 and Table 9.			
	(c) the relevant terms of this approval will be complied with, and	This table Annexure A	Details regarding how JHCPB propose to comply with the relevant terms of approval are listed in this table and Annexure A.			
	(d) issues requiring management during construction (including cumulative impacts), as identified through ongoing environmental risk analysis, will be managed.	Section 6 Table 5 Table 6 Table 9	Non-Aboriginal heritage issues requiring management during construction of the Project have been identified through the EIS and SPIR and Environmental Risk Assessment Workshop (refer to Section 3.2.1 and Annexure B of the CEMP).			

		Section 3.2.1, Section 3.12 and Annexure B of the CEMP	Environmental risk analysis will be ongoing and regularly reviewed in accordance with Section 3.12 of the CEMP to ensure effective management of Non-Aboriginal heritage impacts. These issues, including cumulative impacts, have been detailed in Section 6 of this NAHMP. Non-Aboriginal heritage management is discussed in Section 7 and mitigation and management measures for identified issues are listed in Table 9.
C6	The CEMP Sub-plans must be endorsed by the ER and then submitted to the Secretary for approval no later than one (1) month prior to the commencement of the construction activities to which they apply.	Section 2.2 of the CEMP	The NAHMP will be endorsed by the ER. The NAHMP has been submitted to DPE for approval no later than one month prior to the commencement of the construction activities.
C7	Any of the CEMP Sub-plans may be submitted to the Secretary along with, or subsequent to, the submission of the CEMP.	Section 2.2 of the CEMP	This Sub-plan has been submitted for approval to DPE subsequent to the submission of the CEMP for DPE approval.
C8	Construction must not commence until the CEMP and all CEMP Sub-plans have been approved by the Secretary. The CEMP and CEMP Sub-plans, as approved by the Secretary, including any minor amendments approved by the ER, must be implemented for the duration of construction. Where the CSSI is being staged, construction of that stage is not to commence until the relevant CEMP and CEMP Sub-plans have been endorsed by the ER and approved by the Secretary.	Section 2.2 of the CEMP	Construction will not commence until the CEMP and all CEMP Sub-plans have been approved by DPE. The CEMP and CEMP Sub-plans will be implemented for the duration of construction.

3.3. Revised Environmental Management Measures

Refer to Annexure A for all REMMs relevant to the development of this NAHMP.

4. Consultation

4.1. Consultation for preparation

In accordance with CoA C4(g), this NAHMP was provided to the Heritage Council of NSW (NSW Heritage Council), Heritage Division of the Office of Environment and Heritage (OEH), Inner West Council and City of Sydney Council for review and comment as summarised in Table 3.

Table 3: Summary of consultation undertaken for the preparation of this NAHMP

Agency	Contact with agency	Response received	Key issues	Where addressed
OEH (Heritage Division, and as delegate for the NSW Heritage Council)	<p>Via email from the Project:</p> <ul style="list-style-type: none"> ▪ 04/04/2019 ▪ 05/04/2019 ▪ 17/04/2019 ▪ 23/04/2019 ▪ 29/04/2019 ▪ 04/06/2019 ▪ 23/01/2020 ▪ 05/02/2020 <p>Via phone call from the Project:</p> <ul style="list-style-type: none"> ▪ 04/06/2019 ▪ 12/06/2019 ▪ 21/06/2019 ▪ 28/06/2019 <p>Meeting between Project and OEH:</p> <ul style="list-style-type: none"> ▪ 05/02/2020 	<p>Via email from the Project:</p> <ul style="list-style-type: none"> ▪ 24/04/2019- OEH advised consultation not required for CoA E159 or NAHMP with the Communities and Greater Sydney Division of OEH ▪ 12/06/2019- OEH advise NAHMP is being reviewed ▪ 05/02/2020 – confirmed that Heritage NSW is satisfied with the documentation submitted by the Project and compliance with CoA E159. <p>Via telephone:</p> <ul style="list-style-type: none"> ▪ 04/06/2019- OEH provide appropriate contacts for consultation ▪ 12/06/2019- Project requests update from OEH on review progress ▪ 21/06/2019- OEH advise comments on NAHMP to be received as soon as possible. ▪ 28/06/2019 – OEH advise review s complete and report is with Heritage Council for review. <p>Via emailed Letter 3/7/2019 Heritage Council of NSW:</p> <ul style="list-style-type: none"> • the NAHMP sufficiently addresses the requirements of Condition C4(g) in 	<p>The NAHMP sufficiently addresses the requirements of Condition C4(g) in relation to sites of State significance.</p> <p>Additional documentation submitted to Heritage NSW in accordance with Minister's Condition of Approval (CoA) E159. In a meeting and email correspondence dated 05/02/2020, Heritage NSW confirmed the Project had satisfied this condition.</p>	<p>Ongoing consultation is addressed in Section 4.2</p>

Agency	Contact with agency	Response received	Key issues	Where addressed
		<p>relation to sites of State significance.</p> <p>Via email 8/7/2019 NSW Heritage Division:</p> <ul style="list-style-type: none"> Confirmation that Heritage Council letter also covers Heritage Division review 		
Inner West Council (IWC)	<p>Via email from the Project:</p> <ul style="list-style-type: none"> 04/04/2019 05/04/2019 17/04/2019 23/04/2019 <p>Meeting between Project and IWC:</p> <ul style="list-style-type: none"> 20/06/2019 	<p>Via email:</p> <ul style="list-style-type: none"> 08/04/2019 10/05/2019- comments on NAHMP provided by IWC. <p>Meeting between Project and IWC:</p> <ul style="list-style-type: none"> 20/06/2019- NAHMP was raised. Project confirmed IWC comments were being considered in updated NAHMP. 	<p>Provide further detail on:</p> <ul style="list-style-type: none"> Buildings in HCAs which require dilapidation surveys. Mitigation measures for specific heritage items. Exclusion zones and safe working distances. Archival recording and salvage requirements. 	<ul style="list-style-type: none"> Section 7.3.1 (Dilapidation surveys) Table 5 (Mitigation measures) Table 5 and Section 7.1 (exclusion zones and safe working distances) Section 7.3.2 (archival recording and salvage)
City of Sydney Council (CoS)	<p>Via email from the Project:</p> <ul style="list-style-type: none"> 04/04/2019 05/04/2019 17/04/2019 23/04/2019 <p>Via phone call from the Project:</p> <ul style="list-style-type: none"> 12/06/2019 	<p>Via telephone and email to the Project:</p> <ul style="list-style-type: none"> 12/06/2019- CoS confirmed they had no comment on the NAHMP. 	N/A	N/A
Port Authority of NSW	<p>Via email from the Project:</p> <ul style="list-style-type: none"> 05/04/2019 	<p>Via email:</p> <ul style="list-style-type: none"> 10/04/2019- Port Authority submitted comments on the NAHMP. 	<ul style="list-style-type: none"> Confirm impacts to the Glebe Island Dyke Exposure Provide further detail on mitigation measures for potential vibration impacts to Glebe Island Silos Provide further detail on mitigation measures for potential vibration impacts to Glebe Island Silos 	<ul style="list-style-type: none"> Table 5 (impacts and mitigation measures for Glebe Island Dyke Exposure and Silos)
Sydney Water	<p>Via email from the Project:</p> <ul style="list-style-type: none"> 05/04/2019- NAHMP provided for information purposes 	<p>Via email:</p> <ul style="list-style-type: none"> 06/05/2019- Sydney Water advise they had no comments on the NAHMP. 	N/A	N/A

Refer to Section 4.2 for a more detailed outline of consultation and ongoing consultation related to Non-Aboriginal heritage management during the construction of the Project.

4.2. Ongoing consultation

Ongoing consultation / provision of information will be undertaken throughout the construction of the Project in accordance with the relevant legislative requirements and CoA. Where necessary, consultation will include, but will not be limited to, the relevant Non-Aboriginal heritage items and HCAs listed in Table 5.

Community feedback and complaints relating to Non-Aboriginal heritage will be dealt with in accordance with the CS and the Complaints Management System.

Consultation and the provision of information relevant to specific non-Aboriginal heritage management tools is outlined in Table 4 below. Contact details for the relevant stakeholders are listed in Annexure C.

Table 4: Non-Aboriginal heritage consultation/ provision of information requirements

Source	Heritage management tool	Regulatory Agency / Stakeholder	Consultation / provision of information
CoA E159	Exclusion zone around the Southern Penstock (White Bay Power Station)	Heritage Division of OEH	<p>A suitable exclusion zone around the Southern Penstock is to be determined in consultation with the Heritage Division of OEH.</p> <p>A 3 m exclusion zone (radius) around the penstock has been identified in this NAHMP (Table 5), based on the structural assessment conducted in accordance with NAH12.</p> <p>The consultation process in accordance with CoA E159 will involve:</p> <ul style="list-style-type: none"> • Undertaking a condition assessment of the southern penstock (and its associated water channels). The assessment will be undertaken by a suitably qualified heritage specialist and a structural engineer prior to any works in the vicinity with the potential impact upon the item. This assessment will be provided to OEH Heritage Division for review. ▪ Consultation with OEH Heritage Division is required to determine a suitable exclusion zone for long-term construction management, with consideration of the outcomes of the condition survey. ▪ All reasonable efforts shall be made (telephone, email and meetings) to discuss the exclusion zone with Heritage Council (or delegate).
CoA E161	Works on Whites Creek Stormwater Channel No.95	Sydney Water	<p>Works on Whites Creek Stormwater Channel No. 95 will be undertaken in consultation with Sydney Water and a suitably qualified and experienced heritage consultant.</p> <p>The consultation process will involve:</p> <ul style="list-style-type: none"> • Engaging a suitably qualified and experienced heritage consultant to review the concept design for works to the Channel and provide preliminary advice to designers to ensure the lateral extent and degree of impact to canal fabric is minimised as far as possible. • Once the concept design has been confirmed and reviewed by the heritage consultant, it shall be provided to Sydney Water to review. Heritage advice/comments on the design shall also be provided to Sydney Water for information purposes.

			<ul style="list-style-type: none"> All reasonable efforts shall be made (telephone, email and meetings) to discuss the design with Sydney Water and confirm the final design and location of works.
CoA E163	Heritage Archival Recording and Salvage Report	NSW Heritage Council (or its delegates) for State listed heritage items DPE Local library Local historical society in the relevant local government area (LGA)	Refer Section 7.3.2 for details on the Heritage Archival Recording and Salvage Report. Within 12 months of completing the archival recording, the Proponent must submit the Heritage Archival Recording and Salvage Report to the Secretary, relevant council(s), relevant local libraries and local historical societies in the respective local government area(s)."
CoA E165	Suitable repository locations for salvaged elements	Relevant local Council(s)	<p>In accordance with CoA E165, where salvage supports good outcomes the material is to be collected and stored in a suitable repository location established in consultation with relevant council(s).</p> <p>The consultation process will involve</p> <ul style="list-style-type: none"> Identification of potential repository options and provision of options to the relevant council for review and comment. All reasonable efforts shall be made (telephone, email, offer of meetings) with the relevant council (Inner West or City of Sydney) to determine a suitable repository location for the salvaged elements.
CoA E165	Salvage of materials from any State-listed items or elements	Heritage Division of OEH	<p>In accordance with CoA E165, salvage from any State-listed items or elements must be determined in consultation with Heritage Division.</p> <ul style="list-style-type: none"> If any State-listed items or elements are determined by the Excavation Director to have State significance and a high degree of integrity that supports salvage, the Heritage Division shall be consulted. If required, the consultation process will include: Identification of elements to be salvaged and provision of information to the Heritage Division (including photos and a description of the element and it's condition). Undertake salvage in accordance with the HARDEM, or as otherwise agreed with Heritage Division of OEH. All reasonable efforts shall be made (telephone, email, offer of meetings) to determine a suitable use for the salvaged elements with the Heritage Division of OEH.
CoA E165	The process of making any residual items and materials salvaged by the Project available to landowners	Relevant council(s)	In accordance with CoA E165, the process to make any residual items and materials salvaged by the Project available to

			<p>landowners within the locality from where the material originated, is to be developed in consultation with the relevant council(s).</p> <p>The consultation process will include:</p> <ul style="list-style-type: none"> ▪ Identification of residual items and preparation of a draft process for how these residual items could be made available to landowners to be provided to the relevant councils for review and comment. ▪ All reasonable efforts shall be made (telephone, email, offer of meetings) to finalise the process with the relevant councils.
CoA E168 CoA E169	Historical Archaeological Research Design and Excavation Methodology (HARDEM)	NSW Heritage Council (or its delegates)	<p>Refer Section 7.3.3 for details on the HARDEM.</p> <p>A HARDEM prepared by Extent Heritage (2019) was submitted to OEH Heritage Division via email (as delegate of the NSW Heritage Council) on 03 May 2019 for review and comment.</p> <p>On 07 June 2019, OEH Heritage Division provided email confirmation that the HARDEM was acceptable.</p>
CoA E172	Archaeological Excavation Report	DPE NSW Heritage Council Local library Local historical society in the relevant LGA	<p>Refer Section 7.3.5 for details on the Archaeological Excavation Report.</p> <p>As required by CoA E172, within 12 months of completing all archaeological investigations, the report will be submitted to the mentioned agencies and stakeholders for their information.</p> <p>This Archaeological Excavation Report will be provided by the Project via email.</p>
S140 of the Heritage Act 1977	Relic findings	NSW Heritage Council	<p>Under S146 of the <i>Heritage Act 1977</i> there is a requirement that if any unexpected relics of local or State significance are discovered the NSW Heritage Council must be notified.</p> <p>Notification under s146 shall be in accordance with the RMS Standard Management Procedure: Unexpected Heritage Finds (refer to Annexure B, which includes a process for notification and template notification letter</p>

5. Existing Environment

Appendix U (Technical working paper: Non-Aboriginal heritage (GML Heritage Pty Ltd 2017) of the EIS (Non-Aboriginal heritage technical working paper) was prepared to assess the Non-Aboriginal heritage impacts for the Project.

Appendix U of the EIS (the Non-Aboriginal heritage technical working paper prepared by GML Heritage Pty Ltd 2017) and the SPIR identified a number of HCAs, heritage items, potential heritage items and Historical Archaeology Management Units (HAMUs) within the Project footprint (M4-M5 Link Rozelle Interchange), and the type of impact that can be anticipated for each of these.

Additional heritage items were identified during the preparation of this report and are included in Table 5.

Places, buildings, structures, bridges, tunnels, parks and trees registered as having Non-Aboriginal heritage significance are all referred to as heritage items in this plan. Items with heritage value that are not listed under the State, local or other Non-Aboriginal heritage registers, which were identified as having potential heritage value during the EIS, are referred to as potential heritage items. Precincts and areas recognised and valued for their historical and aesthetic character are referred to as Heritage Conservation Areas (HCAs). Historical Archaeological Management Unit (HAMUs) are areas identified according to their anticipated significance of historical archaeology.

5.1. Key reference documents

The key reference documents are:

- Chapter 20 of the EIS,
- Non-Aboriginal heritage technical working paper (Appendix U of the EIS),
- SPIR,
- Appendix S of the *M4 East Environmental Impact Statement – Non-Aboriginal Heritage Impact Assessment*. Prepared for Roads and Maritime (GML Pty Ltd 2015),
- *M4-M5 Link – Rozelle Rail Yards – Site Management Works Review of Environmental Factors, Heritage Impact Assessment*. Prepared for Roads and Maritime (GML Pty Ltd 2016),
- WestConnex M4-M5 Link Rozelle Interchange Early Utility Works – Iron Cove and Rozelle Historical Archaeological Research Design HAMUs 3-9 and 12, prepared for AECOM, August 2018 and
- Relevant guidelines, specifications and policy documents (refer to Section 3.1.2).

5.2. Regional context

The Project is generally located within the Inner West and City of Sydney LGAs. The Project crosses the suburbs of Rozelle, Lilyfield, Leichhardt and Annandale.

Existing land use and development within and around the Project footprint contains a mix of residential, commercial and industrial with pockets of open space (refer to Section 12.2.1 of Chapter 12 of the EIS).

The largest water bodies located close to the heritage study area are Iron Cove, White Bay and Rozelle Bay.

5.3. Heritage and archaeological assessments

The Non-Aboriginal heritage technical working paper assessed potential impacts to heritage items, HCAs and HAMUs for the Project. The Non-Aboriginal heritage technical working paper included a heritage impact assessment (HIA), structured around six study areas that would be subject to surface impacts along the Project corridor, and the area above the tunnel. Study Area 3 – Rozelle and Lilyfield and Study Area 4 - Iron Cove are relevant to Project works. The HIA also consisted of the following assessments and study areas:

- The built heritage and landscape assessment, surface and sub-surface, was structured on a broader study area applied to each of the above-mentioned six areas. The broader study area

comprised a buffer surrounding the Project footprint to ensure indirect impacts are appropriately assessed (i.e. potential visual setting, vibration and settlement impacts). This was referred to as the heritage study area,

- Historical archaeology was assessed across the Project footprint, allocating Historical Archaeology Management Units (HAMU) to each heritage area according to historical phases, archaeological potential, past construction activities, proposed impacts and management requirements. The following HAMUs in Area 3 Rozelle, Lilyfield and Annandale (HAMU3 – HAMU7) and Area 4 Iron Cove (HAMU8 -HAMU9) are relevant to the Project.

Heritage items and HCAs that fall within the discussed heritage study areas and HAMUs relevant to the Project are specified in Table 5.

Details regarding the historical development of the heritage study area and HAMUs can be found in the Non-Aboriginal heritage technical working paper and Chapter 20 of the EIS.

Appendix F of the EIS (the Utilities Management Strategy) also identified environmental constraints (including heritage) for utility works likely to occur outside the project footprint within 'areas of interest'. Additional heritage items identified during utility detailed design have been included in Table 5.

5.4. Non-Aboriginal heritage

Non-Aboriginal heritage items and HCAs within the heritage study area and construction utility work areas are listed in Table 5 and shown in Figure 1, Figure 2, Figure 3 and Figure 4.

Non-Aboriginal Heritage Historical Archaeological Management Units (HAMUs) are listed in Table 6 and shown in Figure 5 and Figure 6.

6. Environmental aspects and impacts

Environmental aspects and risks associated with construction, as related to Non-Aboriginal heritage, were identified and assessed in the Non-Aboriginal heritage technical working paper prepared for the EIS (refer to Section 5.3 of this Plan for a brief overview of assessment approach/methodology).

The Non-Aboriginal heritage technical working paper assessed heritage items and HCAs within each of the study areas, HAMUs and heritage study areas. Key assessment findings of the Non-Aboriginal heritage technical working paper are summarised in the following:

- Table 5 provides a summary of potential impacts (type and ranking) to listed heritage items and HCAs, and potential heritage items, within the study areas, and
- Table 6 provides an assessment of historical archaeology (by assessing each HAMU separately).

The majority of the Project footprint (and therefore works) would be underground. However, surface works would be required to support tunnelling activities and the construction compounds and to construct surface infrastructure such as interchanges, tunnel portals, ventilation facilities, ancillary operations buildings and facilities.

Sensitive Area Plans (SAPs) are provided in Annexure F of the CEMP. In both Area 3 and Area 4 there are substantial surface works and utilities works that may be deeper than capping fills present over much of the development footprint. These works have the potential to have an impact on Non-Aboriginal sub-surface structures or archaeological remains.

6.1. Construction activities

Key aspects of the Project that could result in adverse impacts to Non-Aboriginal heritage include:

- Planned salvage of Non-Aboriginal heritage items,
- Initial clearing and removal of vegetation,
- Topsoil stripping,
- Change in heritage conservation area values, such as construction of new elements within HCAs (setting),
- Construction of new road infrastructure and ancillary facilities (setting),
- Tunnelling (vibration, settlement and groundwater drawdown),
- Earthworks (vibration),
- Piling (vibration),
- Acquisition and associated demolition of two properties that have heritage value,
- At-property acoustic treatment of heritage listed buildings,
- Temporary access roads during construction,
- Utilities works, including trenching,
- Pavement works, and
- Finishing works.

As a consequence of the identified construction aspects above, the potential direct heritage impacts could include:

- Partial and full demolition of heritage items of local significance
- Demolition of non-listed buildings assessed as having heritage values (i.e. potential heritage items),
- Removal of heritage vegetation, and
- Inadvertent damage to heritage trees/roots.

Potential indirect impacts could include:

- Impacts to heritage curtilage or visual setting of heritage items or HCAs,
- Vibration impacts from earthworks, piling and tunnelling activities, and
- Settlement and groundwater drawdown from tunnelling activities.

The EIS identified that the overall cumulative impact on Non-Aboriginal heritage when considered in conjunction with other WestConnex projects and other relevant projects (such as Rozelle Rail Yards site management works) was considered to be 'major'. Notwithstanding, the Project will:

- Reuse and incorporate heritage elements in the Urban Design and Landscape Plan (UDLP) prepared in accordance with CoA E133, where feasible (refer to Section 7.3.4).
- Minimise impacts on items of heritage significance through design and construction through the implementation of the mitigation measures identified in Table 9.

6.2. Non-Aboriginal Heritage impacts

A summary of the type of impacts anticipated to occur from the construction of the Project as identified in the EIS and SPIR, and the specific management measures associated with each of the listed heritage items and HCAs located within or adjacent to the Project footprint are presented in Table 5. Further details about the planned management and mitigation measures are provided in Section 7.

It is detailed in Chapter 20 of the EIS that potential indirect impacts (neutral, minor, or adverse) may occur to the heritage items listed in Table 5.

Table 5: Summary of known Non-Aboriginal Heritage, potential heritage items and HCAs within the heritage study area and construction utility work areas - impacts and mitigation

Name	Location	Registered Listing	Significance	Study Area Heritage Study Area HAMU	Impacts	Mitigation
White Bay Power Station	Victoria Road and Robert Street, Rozelle (refer to Figure 2).	State Heritage Register (SHR) (Item No.01015) SREP 26 (Schedule 4, Part 3, Item No.11) Ausgrid S170 Register (Item No. 74)	State	SA: 3 HSA:3 HAMU: 7	Minor adverse - Minor encroachment on curtilage and setting	<ul style="list-style-type: none"> ▪ Consideration of the heritage item in the following documentation: <ul style="list-style-type: none"> ▸ SAPs (refer to Annexure F of the CEMP) ▸ Project HARDEM. ▪ Establishment of safe working distances in accordance with the NVMP (CoA E84 and REMM NAH06) (refer to Section 7.1.2).In accordance with REMM NAH03, photographic archival recording will be undertaken of any infrastructure (as determined by the heritage specialist) associated with the White Bay Power Station site that could be affected by the Project. ▪ In accordance with REMM NAH11, the potential for impacts to the railway cutting on the eastern side of Victoria Road, associated with the White Bay Power Station, will be considered during the development of the detailed design for the realigned Victoria Road and associated bridge. ▪ The final design will seek to avoid impact to the railway cutting and maintain the visual relationship between the cutting and the White Bay Power Station site. Landscaping sympathetic to the relationship, developed in consultation with a suitably qualified heritage specialist, will be included in the UDLP for the project. ▪ Reasonable and feasible mitigation measures, confirmed through detailed design process, based on the non-Aboriginal heritage assessment in the EIS and subsequent updates in the SPIR (refer to Table 9 and Section 7.1).
White Bay Power Station	Rozelle - Located in the northern part of the White	State Heritage Register (SHR) (Item No. 01015)	State	SA: 3 HSA:3 HAMU: 7	Neutral	<ul style="list-style-type: none"> ▪ Consideration of the heritage item in the following documentation: <ul style="list-style-type: none"> ▸ SAPs (refer to Annexure F of the CEMP) ▸ Project HARDEM.

Northern penstock	Bay Power Station heritage curtilage and identified as being of high significance as an element of the cooling system for the White Bay Power Station, that is still substantially intact. (refer to Figure 2).	SREP 26 (Schedule 4, Part 3, Item No. 11)				<ul style="list-style-type: none"> ▪ In accordance with REMM NAH16, a condition assessment of the northern penstock will also be carried out by a suitably qualified heritage specialist and a structural engineer prior to any vibratory works in the vicinity that have the potential to impact the item. ▪ The condition assessment will inform additional management measures to protect the northern penstock, if required. These management measures would be implemented throughout construction. ▪ If the condition survey identifies that conservation works to limit potential impacts on deteriorated fabric (loose bricks, corroded steel) are required, these works would be implemented prior to commencement of the relevant vibratory works in the vicinity (REMM NAH16). ▪ Establishment of safe working distances in accordance with the NVMP (CoA E84 and REMM NAH06) (refer to Section 7.1.2). ▪ Reasonable and feasible mitigation measures confirmed through the detailed design process based on the non-Aboriginal heritage assessment in the EIS and subsequent updates in the SPIR (refer to Table 9 and Section 7.1).
White Bay Power Station Southern penstock	Rozelle - Located outside the White Bay Power Station heritage curtilage, and identified as being of high significance as an element of the cooling system for the White Bay (refer to Figure 2).	Identified as 'potential heritage item' in EIS	State	SA: 3 HSA:3 HAMU: 7	Minor adverse - Minor encroachment on curtilage, vibration and setting	<ul style="list-style-type: none"> ▪ Consideration of the heritage item in Project SAPs (refer to Annexure F of the CEMP) ▪ In accordance with Condition E159 and REMM NAH12, a condition assessment of the southern penstock (and its associated water channels) was carried out by a suitably qualified and experienced heritage specialist and a structural engineer prior to works occurring in the vicinity with the potential impact upon the item. This assessment was provided to OEH Heritage Division for review during consultation (refer Section 4.1) on a suitable exclusion zone. ▪ A 3 m exclusion zone (in a radius around the item) has been established around the penstock in consultation with a suitably qualified heritage consultant, vibration consultant and structural engineer. <p>In accordance with Condition E159, consultation with OEH Heritage Division has occurred (refer Section 4.1) to determine a suitable exclusion zone for long-</p>

						<p>term construction management, with consideration of the outcomes of the condition survey. The proposed consultation process is outlined in</p> <p>Table 4.</p> <ul style="list-style-type: none"> ▪ If the condition survey identifies that conservation works to limit potential impacts on deteriorated fabric (loose bricks, corroded steel) are required, these works would be implemented prior to construction (REMM NAH12). ▪ In accordance with REMM NAH13, the southern penstock and its associated water channels (location and extent unknown) will be protected during works associated with the reconstruction of the Victoria Road bridge. ▪ Preparation of an EWMS in accordance with RMS G36 prior to work directly adjacent to the southern penstock. The exclusion zone shall be clearly delineated and signposted to ensure works do not occur within this area. ▪ Reasonable and feasible mitigation measures confirmed through detailed design process, based on the non-Aboriginal heritage assessment in the EIS and subsequent updates in the SPIR (refer to Table 9 and Section 7.1)
Brennan's Estate Heritage Conservation Area	Rozelle (refer to Figure 3).	Leichhardt LEP 2013 (Item no. C16)	Local	SA: 3 HSA:3	Minor adverse - Setting, vibration and settlement	<ul style="list-style-type: none"> ▪ Settlement and ground movement will be managed in accordance with the relevant measures identified in the Settlement Monitoring Program (REMM NAH07). The requirements of the Settlement Monitoring Program are detailed in Section 7.2. ▪ Consideration of HCA in Project's SAPs (refer to Annexure F of the CEMP). ▪ Establishment of safe working distances in accordance with the NVMP and CoA E84 (refer to Section 7.1.2). Where required, pre-dilapidation surveys will be offered for heritage items. If the offer is accepted, the pre-dilapidation survey shall be completed on the item before the relevant works occur (refer to Section 7.3.1). ▪ Where a pre-dilapidation survey has been undertaken on the item, a post-dilapidation assessment will also be carried out following completion of construction. ▪ Reasonable and feasible mitigation measures confirmed through detailed design process, based on the non-

						Aboriginal heritage assessment in the EIS and subsequent updates in the SPIR (refer to Table 9 and Section 7.1).
Easton Park Heritage Conservation Area	Rozelle (refer to Figure 3).	Leichhardt LEP 2013 (Item no. C18)	Local	SA: 3 HSA:3	Minor adverse - Setting, vibration and settlement	<ul style="list-style-type: none"> ▪ Potential settlement and ground movement impacts will be managed in accordance with the relevant measures identified in the Settlement Monitoring Program (REMM NAH07). The requirements of the Settlement Monitoring Program are detailed in Section 7.2 Consideration of HCA in Project's SAPs (refer to Annexure F of the CEMP). ▪ Establishment of safe working distances in accordance with the NVMP (CoA E84 and REMM NAH06) (refer to Section 7.1.2). ▪ Where required, pre-dilapidation surveys will be offered for heritage items. If the offer is accepted, the pre-dilapidation survey shall be completed on the item before the relevant works occur (refer to Section 7.3.1). ▪ Where a pre-dilapidation survey has been undertaken on the item, a post-dilapidation assessment will also be carried out following completion of construction. ▪ Reasonable and feasible mitigation measures confirmed through detailed design process, based on the non-Aboriginal heritage assessment in the EIS and subsequent updates in the SPIR (refer to Table 9 and Section 7.1).
Easton Park	Denison Street, Rozelle (refer to Figure 3).	Leichhardt LEP 2013 (Item no. I752)	Local	SA: 3 HSA:3	Minor adverse -Vibration and settlement, temporary visual, potential tree root impacts	<ul style="list-style-type: none"> ▪ Settlement and ground movement will be managed in accordance with the relevant measures identified in the Settlement Monitoring Program (REMM NAH07). The requirements of the Settlement Monitoring Program are detailed in Section 7.2 ▪ Consideration of item in Project's SAPs (refer to Annexure F of the CEMP) ▪ Establishment of safe working distances in accordance with the NVMP (CoA E84 and REMM NAH06) (refer to Section 7.1.2). ▪ Where required, pre-dilapidation surveys will be offered for heritage items. If the offer is accepted, the pre-dilapidation survey shall be completed on the item before the relevant works occur (refer to Section 7.3.1). ▪ Where a pre-dilapidation survey has been undertaken on the item, a post-dilapidation assessment will also be carried out following completion of construction.

						<ul style="list-style-type: none"> Reasonable and feasible mitigation measures confirmed through detailed design process, based on the non-Aboriginal heritage assessment in the EIS and subsequent updates in the SPIR (refer to Table 9 and Section 7.1).
Hornsey Street Heritage Conservation Area	Rozelle (refer to Figure 3).	Leichhardt LEP 2013 (Item no. C19)	Local	SA: 3 HAS: 3 HAMU: 4 (part)	Minor adverse - Demolition of a non-contributory building, minor encroachment on curtilage, setting, vibration and settlement	<ul style="list-style-type: none"> Settlement and ground movement will be managed in accordance with the relevant measures identified in the Settlement Monitoring Program (REMM NAH07). The requirements of the Settlement Monitoring Program are detailed in Section 7.2. During demolition of the commercial property at 32 Victoria Road (Rozelle Rugs Centre), care must be taken to avoid impacts to 5 Lilyfield Road which is 'attached' to the building by a common wall. The construction methodology for the demolition work shall consider the type of equipment used and demolition process to reduce potential impacts on the adjacent property, including measures for any structural reinforcement, if required. Sandstone kerbing in the vicinity of 32 and 34 Victoria Road, Rozelle that will be removed to facilitate the project will be salvaged and provided to Inner West Council in accordance with REMM NAH10. Consideration of HCA in Project's SAPs (refer to Annexure F of the CEMP) Establishment of safe working distances in accordance with the NVMP(CoA E84 and REMM NAH06) (refer to Section 7.1.2). Where required, pre-dilapidation surveys will be offered for heritage items. If the offer is accepted, the pre-dilapidation survey shall be completed on the item before the relevant works occur (refer to Section 7.3.1). Where a pre-dilapidation survey has been undertaken on the item, a post-dilapidation assessment will also be carried out following completion of construction. Reasonable and feasible mitigation measures confirmed through detailed design process, based on the non-Aboriginal heritage assessment in the EIS and subsequent updates in the SPIR (refer to Table 9 and Section 7.1).
Sewage Pumping Station No.6	168 Lilyfield Road, Rozelle	Sydney Water S170 Register (Item No. 4571704)	Local	SA: 3 HSA: 3	Minor adverse - Vibration and settlement,	<ul style="list-style-type: none"> Settlement and ground movement will be managed in accordance with the relevant measures identified in the Settlement Monitoring Program (REMM NAH07). The

	(refer to Figure 3).				temporary visual	<p>requirements of the Settlement Monitoring Program are detailed in Section 7.2.</p> <ul style="list-style-type: none"> ▪ Consideration of item in Project's SAPs (refer to Annexure F of the CEMP). ▪ Establishment of safe working distances where required in accordance with the NVMP and CoA E84 (refer to Section 7.1.2). ▪ Where required, pre-dilapidation surveys will be offered for heritage items. If the offer is accepted, the pre-dilapidation survey shall be completed on the item before the relevant works occur (refer to Section 7.3.1). ▪ Where a pre-dilapidation survey has been undertaken on the item, a post-dilapidation assessment will also be carried out following completion of construction. ▪ Reasonable and feasible mitigation measures confirmed through detailed design process, based on the non-Aboriginal heritage assessment in the EIS and subsequent updates in the SPIR (refer to Table 9 and Section 7.1).
Whites Creek Stormwater Channel No 95	Railway Parade to Parramatta Road, Annandale (refer to Figure 3).	Sydney Water S170 (Item No. 457034 3)	Local	SA: 3 HSA: 3 HAMU: 4 (part)	Potential moderate adverse - Partial demolition resulting from 'naturalisation' and reshaping of the channel. Setting, vibration	<ul style="list-style-type: none"> ▪ Consideration of item in Project's SAPs (refer to Annexure F of the CEMP). ▪ In accordance with CoA E163 and REMM NAH03, photographic archival recording will be undertaken of the area of the channel to be impacted, prior to demolition works on the channel commencing. ▪ A suitably qualified and experienced heritage consultant would be engaged to review the concept design for works to the channel and provide preliminary advice to designers to ensure the lateral extent and degree of impact to canal fabric is minimised as far as possible. ▪ Once the concept design has been confirmed and reviewed by the heritage specialist, it shall be provided to Sydney Water to review. Heritage advice/comments on the design shall also be provided to Sydney Water for information purposes. ▪ Consultation with Sydney Water to confirm the final design and location of works. ▪ Where required, pre-dilapidation surveys will be offered for heritage items. If the offer is accepted, the pre-

						<p>dilapidation survey shall be completed on the item before the relevant works occur (refer to Section 7.3.1).</p> <ul style="list-style-type: none"> Where a pre-dilapidation survey has been undertaken on the item, a post-dilapidation assessment will also be carried out following completion of construction. Reasonable and feasible mitigation measures confirmed through detailed design process and consultation with Sydney Water, based on the non-Aboriginal heritage assessment in the EIS and subsequent updates in the SPIR. In accordance with REMM NAH14, the new bridge over Whites Creek Stormwater Channel must not impact the extant significant heritage fabric of the channel and should be a solely independent structure.
Street trees – row of Palms on Railway Parade	Railway Parade, Annandale (refer to Figure 3).	Leichhardt LEP 2013 (Item no. 178)	Local	SA: 3 HSA: 3	Neutral-Setting, vibration	<ul style="list-style-type: none"> Consideration of item in Project's SAPs (refer to Annexure F of the CEMP). Reasonable and feasible mitigation measures confirmed through detailed design process, based on the non-Aboriginal heritage assessment in the EIS and subsequent updates in the SPIR. This includes tree protection, establishment of vehicle exclusion zones, and no pruning or removal without Local Government consent.
Avenue of <i>Phoenix canariensis</i> on Railway Parade	Railway Parade, Annandale (refer to Figure 3).	Leichhardt LEP 2013 (Item no. 179)	Local	SA: 3 HSA: 3	Neutral-Setting, vibration	<ul style="list-style-type: none"> Consideration of item in Project's SAPs (refer to Annexure F of the CEMP). Establishment of safe working distances ,where required, in accordance with the NVMP and CoA E84 (refer to Section 7.1.2). Reasonable and feasible mitigation measures confirmed through detailed design process, based on the non-Aboriginal heritage assessment in the EIS and subsequent updates in the SPIR. This includes tree protection, establishment of vehicle exclusion zones, and no pruning or removal without Local Government consent.

Street trees-Brush Box ¹	Bayview Crescent, Annandale (refer to Figure 3).	Leichhardt LEP 2013 (Item No. 110)	Local	SA: 3 HSA: 3	Neutral	<ul style="list-style-type: none"> ▪ Consideration of item in Project's SAPs (refer to Annexure F of the CEMP). ▪ Reasonable and feasible mitigation measures confirmed through detailed design process. This includes tree protection, establishment of vehicle exclusion zones, and no pruning or removal without Local Government consent.
Iron/sandstone palisade fence ¹	Bayview Crescent, Annandale (refer to Figure 3).	Leichhardt LEP 2013 (Item No. 111)	Local	SA: 3 HSA: 3	Neutral	<ul style="list-style-type: none"> ▪ Consideration of item in Project's SAPs (refer to Annexure F of the CEMP). ▪ Establishment of safe working distances in accordance with the NVMP (CoA E84 and REMM NAH06). ▪ Reasonable and feasible mitigation measures confirmed through detailed design (refer to Table 9 and Section 7.1).
Annandale (Railway Parade) Railway Bridge	Railway Parade, Annandale	SREP 26 (Schedule 4, Part 3, Item No. 7) RailCorp S170 (Item No. 4803231)	Local	SA: 3 HSA: 3	Minor adverse - Vibration and setting	<ul style="list-style-type: none"> ▪ Consideration of item in Project's SAPs (refer to Annexure F of the CEMP). ▪ Establishment of safe working distances in accordance with the NVMP (CoA E84 and REMM NAH06). ▪ Where required, pre-dilapidation surveys will be offered for heritage items. If the offer is accepted, the pre-dilapidation survey shall be completed on the item before the relevant works occur (refer to Section 7.3.1). ▪ Where a pre-dilapidation survey has been undertaken on the item, a post-dilapidation assessment will also be carried out following completion of construction. ▪ Reasonable and feasible mitigation measures based on the Non-Aboriginal heritage assessment in the EIS and subsequent updates in the SPIR (refer to Table 9 and Section 7.1).
Arched Bridge (at Whites Creek)	Railway Parade, Annandale	SREP 26 (Schedule 4, Part 3, Item No. 8)	Local	SA: 3 HSA: 3 HAMU: 4	Neutral	<ul style="list-style-type: none"> ▪ Consideration of item in Project's SAPs (refer to Annexure F of the CEMP). ▪ Establishment of safe working distances or exclusion zones in accordance with the NVMP (CoA E84 and REMM NAH06). ▪ Where required, pre-dilapidation surveys will be offered for heritage items. If the offer is accepted, the pre-dilapidation survey shall be completed on the item before the relevant works occur (refer to Section 7.3.1). ▪ Where a pre-dilapidation survey has been undertaken on the item, a post-dilapidation assessment will also be carried out following completion of construction.

						Reasonable and feasible mitigation measures based on the Non-Aboriginal heritage assessment in the EIS and subsequent updates in the SPIR (refer to Table 9 and Section 7.1).
Annandale (Johnston Street) Underbridge	Johnston Street, Annandale	SREP 26 (Schedule 4, Part 3, Item No.9) RailCorp S170 (Item No. 4803229)	Local	SA: 3 HSA: 3 HAMU: 4	Neutral	<ul style="list-style-type: none"> ▪ Consideration of item in Project's SAPs (refer to Annexure F of the CEMP). ▪ Establishment of safe working distances in accordance with the NVMP (CoA E84 and REMM NAH06). ▪ Where required, pre-dilapidation surveys will be offered for heritage items. If the offer is accepted, the pre-dilapidation survey shall be completed on the item before the relevant works occur (refer to Section 7.3.1). ▪ Where a pre-dilapidation survey has been undertaken on the item, a post-dilapidation assessment will also be carried out following completion of construction. <p>Reasonable and feasible mitigation measures based on the Non-Aboriginal heritage assessment in the EIS and subsequent updates in the SPIR (refer to Table 9 and Section 7.1).</p>
Stormwater Canal	Lilyfield Road, Rozelle (refer to Figure 3).	SREP 26 (Schedule 4, Part 3, Item No.6)	Local	SA: 3 HSA: 3 HAMU: 3	Major adverse – full demolition of a section of the channel	<ul style="list-style-type: none"> ▪ In accordance with CoA E163 and REMM NAH03, archival recording will be undertaken prior to demolition works commencing. ▪ Salvage / sympathetic reuse will be considered in accordance with CoA E165. Refer to Section 7.3.2 for further detail on the salvage methodology.
'Cadden Le Messurier'	84 Lilyfield Road, Rozelle (refer to Figure 3).	SREP 26 (Schedule 4, Part 3, Item No. 3)	Local	SA: 3 HSA: 3 HAMU: 3	Potential major adverse – full demolition	<p>The feasibility of retaining the property (in accordance with Condition E160) will be considered during detailed design. A summary of the options considered during design, the feasibility of each option and justification of the final option selected will be recorded. Feasibility shall also be informed by the design teams (e.g. temporary works designers, urban designers, utility designers and permanent works designers). This will be completed prior to demolition of the building, if demolition is required.</p> <p>In the event that retaining the property is not considered feasible, the property will be demolished, as identified in the EIS.</p> <p>Prior to any demolition, archival recording as required by Condition E164 and REMM NAH03, will be undertaken. Preparation of a Heritage Salvage Strategy as required</p>

						under CoA E165 and REMM NAH09 will be prepared. The Salvage Strategy will identify potential options for sympathetic reuse (if available), and a consultation process for the dissemination of salvaged materials. Further detail on the archival recording and salvage process is provided in Section 7.3.2.
Former Hotel	78 Lilyfield Road, Rozelle (refer to Figure 3).	SREP 26 (Schedule 4, Part 3, Item No.2)	Local	SA: 3 HSA: 3 HAMU: 3	Potential major adverse – full demolition	<p>The feasibility of retaining the property (in accordance with Condition E160) will be considered during detailed design. A summary of the options considered during design, the feasibility of each option and justification of the final option selected will be recorded. Feasibility shall also be informed by the design teams (e.g. temporary works designers, urban designers, utility designers and permanent works designers). This will be completed prior to demolition of the building, if demolition is required.</p> <p>In the event that retaining the property is not considered feasible, the property will be demolished, as identified in the EIS.</p> <p>Prior to any demolition, archival recording as required by Condition E164 and REMM NAH03, will be undertaken. Preparation of a Heritage Salvage Strategy as required under CoA E165 and REMM NAH09 will be prepared. The Salvage Strategy will identify potential options for sympathetic reuse (if available), and a consultation process for the dissemination of salvaged materials. Further detail on the archival recording and salvage process is provided in Section 7.3.2.</p>
White Bay Power Station (Inlet) Canal ¹	Robert Street, Rozelle (refer to Figure 2).	Port Authority S170 register (Item No. 4560062)	State	N/A	Neutral	Outside development footprint.
White Bay Power Station (Outlet) Canal ¹	James Craig Road, Rozelle (refer to Figure 2).	Port Authority S170 register (Item No. 4560026)	State	SA: 3 HSA: 3 HAMU: 4	Minor (vibration)	<p>In accordance with REMM NAH13, the water channels (location and extent unknown) will be protected during works associated with the reconstruction of the Victoria Road bridge.</p> <p>Vehicles and other machinery producing strong vibration levels will be excluded from this area where possible, in accordance with the NVMP.</p> <p>For all other vibratory equipment used adjacent to the item, safe working distances and/or vibration monitoring will be</p>

						established in accordance with the process identified in the NVMP (CoA E84 and REMM NAH06) (refer to Section 7.1).
Glebe Island Bridge approach ¹	Adjacent to Anzac Bridge	Port Authority S170 register (Item No. 4560015)	Local	HSA: 3	Neutral	<ul style="list-style-type: none"> Consideration of item in Project's SAPs (refer to Annexure F of the CEMP). Establishment of safe working distances in accordance with the NVMP (CoA E84 and REMM NAH06) (refer to Section 7.1.2).
Glebe Island Dyke Exposures ¹	Near Victoria Road (refer to Figure 2)	Port Authority S170 register (Item No. 4560056)	Local	SA: 3 HSA: 3 HAMU: 4	Possible minor adverse impacts	<ul style="list-style-type: none"> Consideration of item in Project's SAPs (refer to Annexure F of the CEMP). The surviving exposure will be protected through the establishment of Safe Working Distances to be determined and managed in accordance with the NVMP until a management strategy can be determined. Revision of the Plan once a management strategy is determined.
Glebe Island Plaque-Opening of Container Terminal ¹	Sommerville Road, Rozelle (refer to Figure 2)	Port Authority S170 register (Item No. 4560013)	Local	N/A	Neutral	Outside development footprint
Glebe Island Sandstone Quarry Sample ¹	Sommerville Road, Rozelle (refer to Figure 2)	Port Authority S170 register (Item No. 4560014)	Local	N/A	Neutral	Outside development footprint
Glebe Island Silos ¹	Sommerville Road, Rozelle (refer to Figure 2)	SREP 26 (Schedule 4, Part 3, Item No. 1) Port Authority S170 register (Item No. 4560016)	State	HSA: 3	Potential vibration	<ul style="list-style-type: none"> Consideration of item in Project's SAPs (refer to Annexure F of the CEMP). Establishment of safe working distances in accordance with the NVMP (CoA E84 and REMM NAH06) (refer to Section 7.1.2)..
Anzac Bridge	Victoria Road, Pyrmont (refer to Figure 2)	SHR (Schedule 4, Part 3, Item No. 4305018) RMS s170 register (Item No. 4305018)	State	HSA: 3	Possible minor adverse impacts	<ul style="list-style-type: none"> Consideration of item in Project's SAPs (refer to Annexure F of the CEMP). Establishment of safe working distances in accordance with the NVMP (CoA E84 and REMM NAH06) (refer to Section 7.1.2).. Consideration of temporary screening to minimise visual impacts, if necessary. Reasonable and feasible mitigation measures based on the Non-Aboriginal heritage assessment in the EIS and

						subsequent updates in the SPIR (refer to Table 9 and Section 7.1)
Victoria Road bridge	Victoria Road, Rozelle (refer to Figure 2)	Identified as 'potential heritage item' in EIS	Local	SA: 3 HSA: 3	Major adverse – full demolition	<ul style="list-style-type: none"> In accordance with REMM NAH03, photographic archival recording will be undertaken prior to demolition of the item and will include the identification of appropriate stakeholders to receive copies of the documentation. A Heritage Salvage Strategy will be prepared to identify the salvage potential of the fabric and features from potential heritage items that will be demolished to facilitate the project, in accordance with REMM NAH09 (refer to Section 7.3.2).
Sandstone cutting within Rozelle Railyards	Near Lilyfield Road, Lilyfield and Rozelle (refer to Figure 2 and Figure 3)	Identified as 'potential heritage item' in EIS	Local	SA: 3 HSA: 3	Moderate adverse – partial demolition	<ul style="list-style-type: none"> In accordance with REMM NAH03, photographic archival recording will be undertaken prior to any demolition of the item and will include the identification of appropriate stakeholders to receive copies of the documentation. A Heritage Salvage Strategy will be prepared to identify the salvage potential of the fabric and features from heritage items that will be demolished to facilitate the project, in accordance with REMM NAH09 (refer to Section 7.3.2).
Former White Bay Hotel site foundations (plinth and archaeology)	Rozelle (refer to Figure 2)	Identified as 'potential heritage item' in EIS	Local	SA: 3 HSA: 3 HAMU: 4	Potential major adverse – full demolition	<ul style="list-style-type: none"> Any items of potential heritage conservation significance or human remains discovered during construction will be managed in accordance with an Unexpected Heritage Finds and Humans Remains Procedure. (REMM NAH08 and CoA E157). Consideration in the Project HARDEM.
Iron Cove Bridge (aka RTA Bridge No. 65)	Victoria Road, Drummoyne (refer to Figure 1)	SREP (Sydney Harbour Catchment) 2005 (Item No. 17) RMS s170 Register (Item No. 65)	State	HSA: 4	Possible minor adverse impacts – setting, vibration.	<ul style="list-style-type: none"> Consideration of item in Project's SAPs (refer to Annexure F of the CEMP). Establishment of Safe Working Distances in accordance with the NVMP (CoA E84 and REMM NAH06) (refer to Section 7.1.2). Consideration of temporary screening to reduce visual impacts during construction, if necessary. Reasonable and feasible mitigation measures based on the Non-Aboriginal heritage assessment in the EIS and subsequent updates in the SPIR (refer to Table 9 and Section 7.1).

Iron Cove Heritage Conservation Area	North of Victoria Road, Lilyfield (refer to Figure 1)	Leichhardt LEP 2013 (Item No. C6)	Local	HSA: 4	Potential settlement and vibration	<ul style="list-style-type: none"> Settlement and ground movement will be managed in accordance with the relevant measures identified in the Settlement Monitoring Program (REMM NAH07). The requirements of the Settlement Monitoring Program are detailed in Section 7.2 Consideration of HCA in Project's SAPs (refer to Annexure F of the CEMP). Establishment of Safe Working Distances in accordance with the NVMP (CoA E84 and REMM NAH06) (refer to Section 7.1.2). Where required, pre-dilapidation surveys will be offered for heritage items. If the offer is accepted, the pre-dilapidation survey shall be completed on the item before the relevant works occur (refer to Section 7.3.1). Reasonable and feasible mitigation measures based on the Non-Aboriginal heritage assessment in the EIS and subsequent updates in the SPIR (refer to Table 9 and Section 7.1).
Property 260 Victoria Road	260 Victoria Road (refer to Figure 1)	Identified as 'potential heritage item' in EIS	Local	SA: 4 HSA: 4	Major adverse – full demolition	<ul style="list-style-type: none"> In accordance with REMM NAH03, photographic archival recording will be undertaken prior to demolition of the property and will include the identification of appropriate stakeholders to receive copies of the documentation. A Heritage Salvage Strategy will be prepared to identify the salvage potential of the fabric and features from heritage items that will be demolished to facilitate the project, in accordance with REMM NAH09 (refer to Section 7.3.2). The elements identified for salvage in the Salvage Strategy will be salvaged prior to demolition of the building.
Property 262 Victoria Road	262 Victoria Road (refer to Figure 1)	Identified as 'potential heritage item' in EIS	Local	SA: 4 HSA: 4	Major adverse – full demolition	<ul style="list-style-type: none"> In accordance with REMM NAH03, photographic archival recording will be undertaken prior to demolition of the property and will include the identification of appropriate stakeholders to receive copies of the documentation. A Heritage Salvage Strategy will be prepared to identify the salvage potential of the fabric and features from heritage items that will be demolished to facilitate the project, in accordance with REMM NAH09 (refer to Section 7.3.2).

						<ul style="list-style-type: none"> ▪ The elements identified for salvage in the Salvage Strategy will be salvaged prior to demolition of the building.
Property 264 Victoria Road	264 Victoria Road (refer to Figure 1)	Identified as 'potential heritage item' in EIS	Local	SA: 4 HSA: 4	Major adverse – full demolition	<ul style="list-style-type: none"> ▪ In accordance with REMM NAH03, photographic archival recording will be undertaken prior to demolition of the property and will include the identification of appropriate stakeholders to receive copies of the documentation. ▪ A Heritage Salvage Strategy will be prepared to identify the salvage potential of the fabric and features from heritage items that will be demolished to facilitate the project, in accordance with REMM NAH09 (refer to Section 7.3.2). ▪ The elements identified for salvage in the Salvage Strategy will be salvaged prior to demolition of the building.
Property 266 Victoria Road	266 Victoria Road (refer to Figure 1)	Identified as 'potential heritage item' in EIS	Local	SA: 4 HSA: 4	Major adverse – full demolition	<ul style="list-style-type: none"> ▪ In accordance with REMM NAH03, photographic archival recording will be undertaken prior to demolition of the property and will include the identification of appropriate stakeholders to receive copies of the documentation. ▪ A Heritage Salvage Strategy will be prepared to identify the salvage potential of the fabric and features from heritage items that will be demolished to facilitate the project, in accordance with REMM NAH09 (refer to Section 7.3.2). ▪ The elements identified for salvage in the Salvage Strategy will be salvaged prior to demolition of the building.

Property 248 Victoria Road	248 Victoria Road (refer to Figure 1)	Identified as 'potential heritage item' in EIS	Local	SA: 4 HSA: 4	Major adverse – full demolition	<ul style="list-style-type: none"> In accordance with REMM NAH03, photographic archival recording will be undertaken prior to demolition of the property and will include the identification of appropriate stakeholders to receive copies of the documentation. A Heritage Salvage Strategy will be prepared to identify the salvage potential of the fabric and features from heritage items that will be demolished to facilitate the project, in accordance with REMM NAH09 (refer to Section 7.3.2). The elements identified for salvage in the Salvage Strategy will be salvaged prior to demolition of the building.
Terraces 250 Victoria Road	250 Victoria Road (refer to Figure 1)	Identified as 'potential heritage item' in EIS	Local	SA: 4 HSA: 4	Major adverse – full demolition	<ul style="list-style-type: none"> In accordance with REMM NAH03, photographic archival recording will be undertaken prior to demolition of the terraces and will include the identification of appropriate stakeholders to receive copies of the documentation. A Heritage Salvage Strategy will be prepared to identify the salvage potential of the fabric and features from heritage items that will be demolished to facilitate the project, in accordance with REMM NAH09 (refer to Section 7.3.2). The elements identified for salvage in the Salvage Strategy will be salvaged prior to demolition of the buildings.
Single storey interwar brick house	8 Callan Street (refer to Figure 1)	Identified as 'potential heritage item' in EIS	Local	SA: 4 HSA: 4	Minor adverse - Vibration and setting	<ul style="list-style-type: none"> Consideration of item in Project's SAPs (refer to Annexure F of the CEMP). Establishment of safe working distances in accordance with the NVMP (CoA E84 and REMM NAH06) (refer to Section 7.1.2).
Leichhardt Street/ Stanley Street HCA	Balmain Road (refer to Figure 4)	Leichhardt LEP 2013 (Item no .C11)	Local	N/A	Minor adverse - Vibration, temporary visual	<ul style="list-style-type: none"> Consideration of HCA in Project's SAPs (refer to Annexure F of the CEMP). Establishment of Safe Working Distances in accordance with the NVMP (CoA E84 and REMM NAH06) (refer to Section 7.1.2). Where required, pre-dilapidation surveys will be offered for heritage items. Should the pre-dilapidation surveys be undertaken, a post-dilapidation assessment will be carried out for the same heritage items once construction works have finished (refer to CoA E105 and E106).

						<ul style="list-style-type: none"> ▪ Retain sandstone kerbs and gutter wherever possible. Where unavoidable careful removal of the impacted sections of the kerb and gutter would occur and include labelling the removed sections appropriately and returning the section back to its existing place after the completion of the works ▪ Avoid impacts to street plantings (that make up the significant characteristic of the HCA). Branches to be tied back rather than trimmed. ▪ Non-destructive excavation and trenching techniques would be used so the works would not cause adverse impacts upon the root systems of street plantings (that make up the significant characteristic of the HCA).
Wetherill Estate HCA	Short Street, Arthur Street and Allen Street (refer to Figure 4)	Leichhardt LEP 2013 (Item no .C14)	Local	N/A	Minor adverse - Vibration, temporary visual	<ul style="list-style-type: none"> ▪ Consideration of HCA in Project's SAPs (refer to Annexure F of the CEMP). ▪ Establishment of Safe Working Distances in accordance with the NVMP (CoA E84 and REMM NAH06) (refer to Section 7.1.2). ▪ Retain sandstone kerbs and gutter wherever possible. Where unavoidable careful removal of the impacted sections of the kerb and gutter would occur and include labelling the removed sections appropriately and returning the section back to its existing place after the completion of the works ▪ Avoid impacts to street plantings (that make up the significant characteristic of the HCA). Branches to be tied back rather than trimmed. ▪ Non-destructive excavation and trenching techniques would be used so the works would not cause adverse impacts upon the root systems of street plantings (that make up the significant characteristic of the HCA).
Leichhardt Hotel, including interiors	Balmain Road and Short Street (refer to Figure 4)	Leichhardt LEP 2013 (Item no. I688)	Local	N/A	Minor adverse - Vibration	<ul style="list-style-type: none"> ▪ Consideration of item in Project's SAPs (refer to Annexure F of the CEMP). ▪ Establishment of Safe Working Distances in accordance with the NVMP (CoA E84 and REMM NAH06) (refer to Section 7.1.2).

Pioneers Memorial Park	Allen Street, Norton Street and William Street (refer to Figure 4)	Leichhardt LEP 2013 (Item no. I683)	Local	N/A	Neutral	<ul style="list-style-type: none"> ▪ Consideration of item in Project's SAPs (refer to Annexure F of the CEMP). ▪ Establishment of Safe Working Distances in accordance with the NVMP (CoA E84 and REMM NAH06) (refer to Section 7.1.2). ▪ No plant of equipment permitted to enter or be stored in park.
Street trees-row of Brush Box and 1 <i>Ficus hillii</i>	Henry Street (refer to Figure 4)	Leichhardt LEP 2013 (Item no. I656)	Local	N/A	Neutral	<ul style="list-style-type: none"> ▪ Consideration of item in Project's SAPs (refer to Annexure F of the CEMP). ▪ Reasonable and feasible mitigation measures confirmed through detailed design process. This includes tree protection, establishment of vehicle exclusion zones, and no pruning or removal without relevant consent. ▪ Prior to the commencement of excavations in this area, trees contributing to the heritage significance of the listing would be identified by an appropriately trained ecologist. ▪ Non-destructive digging techniques would be used in the vicinity of identified significant trees so the works would not cause adverse impacts upon the root systems
Street trees, avenue of Brush Box and 1 <i>Brachychiton</i> ¹	Lilyfield Road (refer to Figure 4)	Leichhardt LEP 2013 (Item no. 1719)	Local	N/A	Neutral	<ul style="list-style-type: none"> ▪ Consideration of item in Project's SAPs (refer to Annexure F of the CEMP). ▪ Reasonable and feasible mitigation measures confirmed through detailed design process. This includes tree protection, establishment of vehicle exclusion zones, and no pruning or removal without relevant consent. ▪ Prior to the commencement of excavations in this area, trees contributing to the heritage significance of the listing would be identified by an appropriately trained ecologist. ▪ Non-destructive digging techniques would be used in the vicinity of identified significant trees so the works would not cause adverse impacts upon the root systems
Street trees-avenue of Brush Box and 1 <i>Brachychiton</i> ¹	Rayner Street (refer to Figure 4)	Leichhardt LEP 2013 (Item no. 1721)	Local	N/A	Neutral	<ul style="list-style-type: none"> ▪ Consideration of item in Project's SAPs (refer to Annexure F of the CEMP). ▪ Reasonable and feasible mitigation measures confirmed through detailed design process. This includes tree protection, establishment of vehicle exclusion zones, and no pruning or removal without relevant consent. ▪ Prior to the commencement of excavations in this area, trees contributing to the heritage significance of the listing would be identified by an appropriately trained ecologist.

						<ul style="list-style-type: none"> Non-destructive digging techniques would be used in the vicinity of identified significant trees so the works would not cause adverse impacts upon the root systems
Lilyfield (Catherine St) Overbridge	Catherine Street (refer to Figure 4)	RailCorp S170 #4800245 SREP 26 (Schedule 4, Part 3, Item No.12)	Local	N/A	Neutral	<ul style="list-style-type: none"> Consideration of item in Project's SAPs (refer to Annexure F of the CEMP). Establishment of safe working distances in accordance with the NVMP (CoA E84 and REMM NAH06). Establishment of Safe Working Distances in accordance with the NVMP (CoA E84 and REMM NAH06) (refer to Section 7.1.2).

Note 1: Not listed in EIS.

Figure 1 Heritage Items- Iron Cove

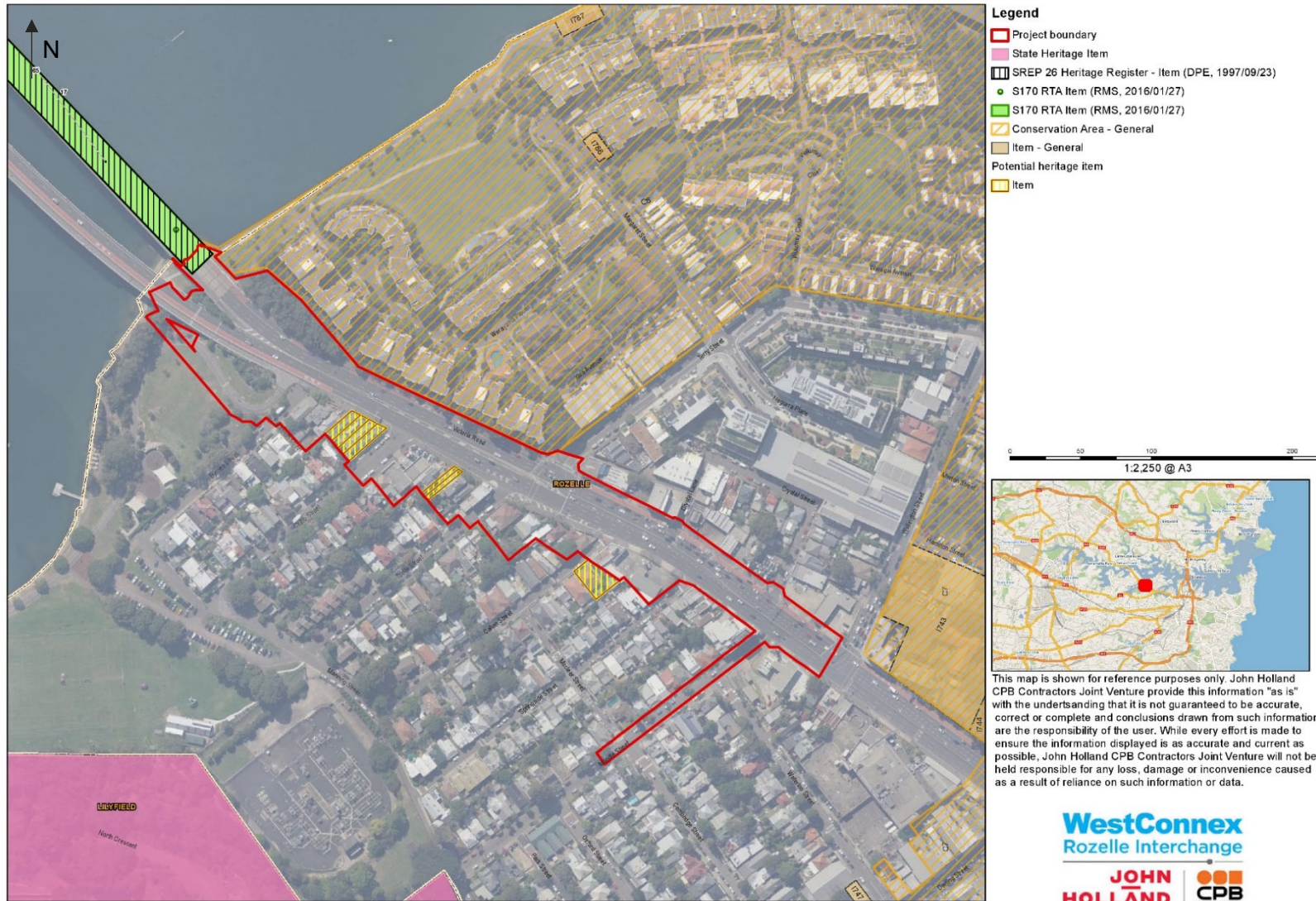


Figure 2 Heritage Items- Rozelle Railyards East

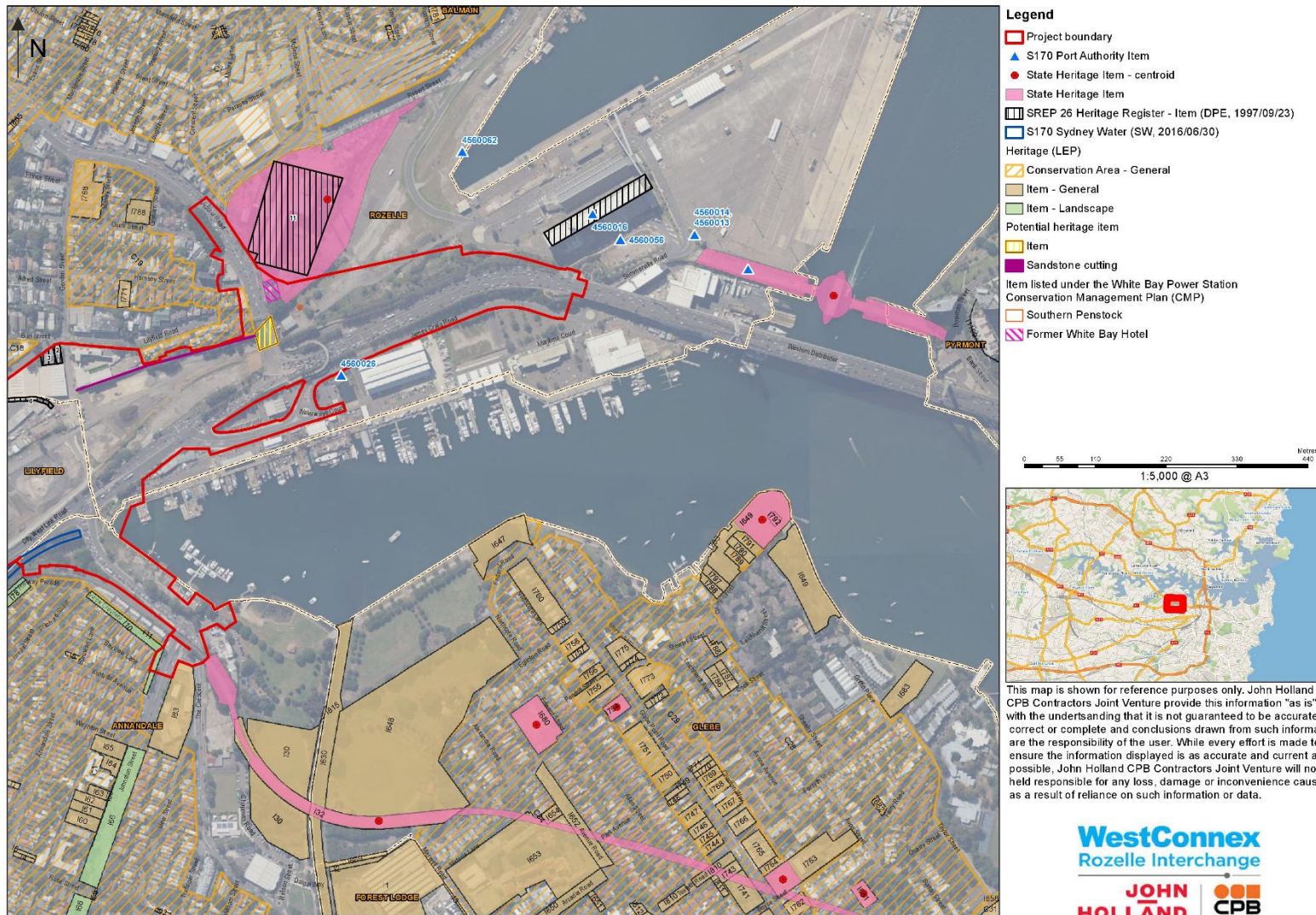


Figure 3 Heritage Items- Rozelle Railyards West

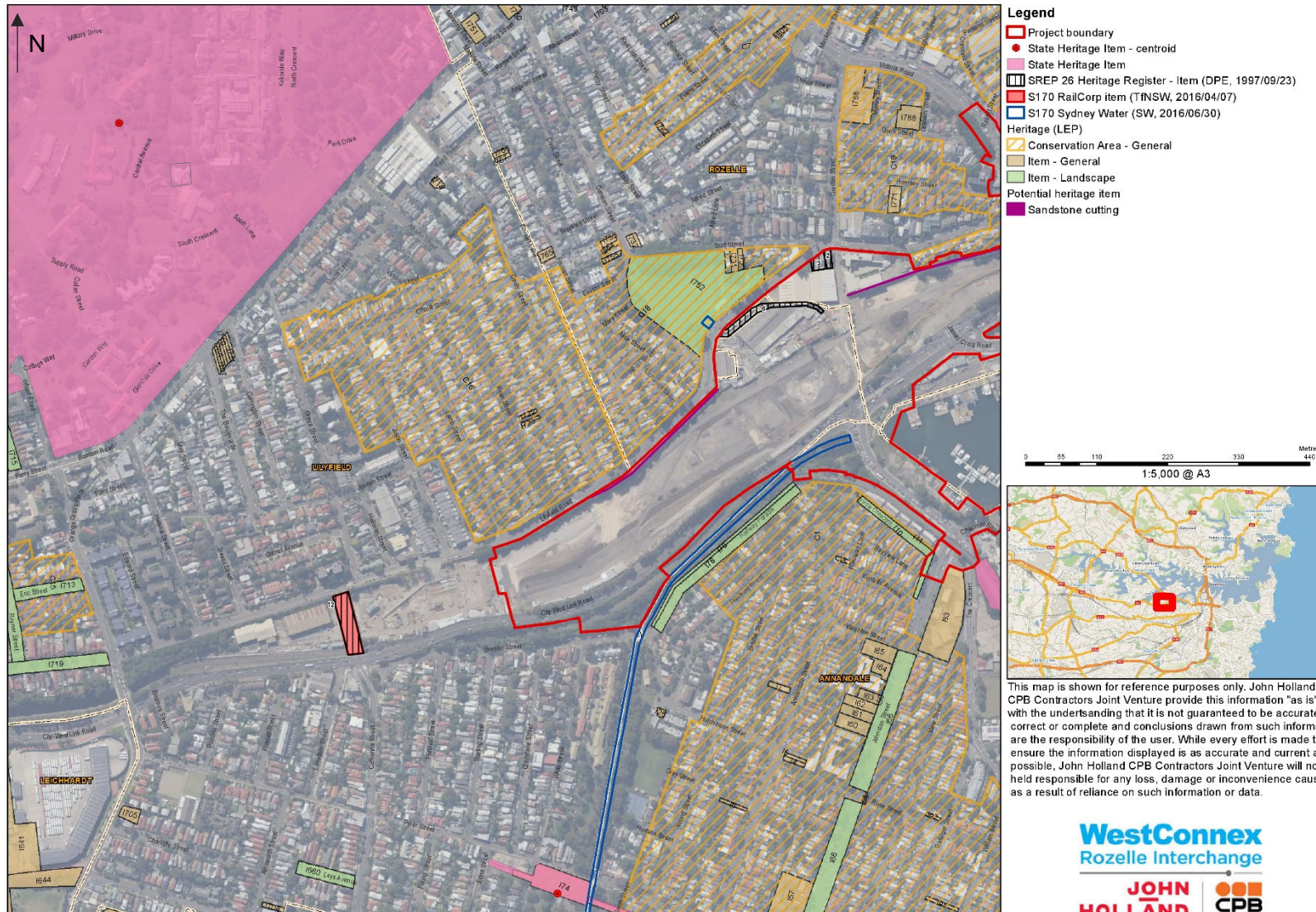
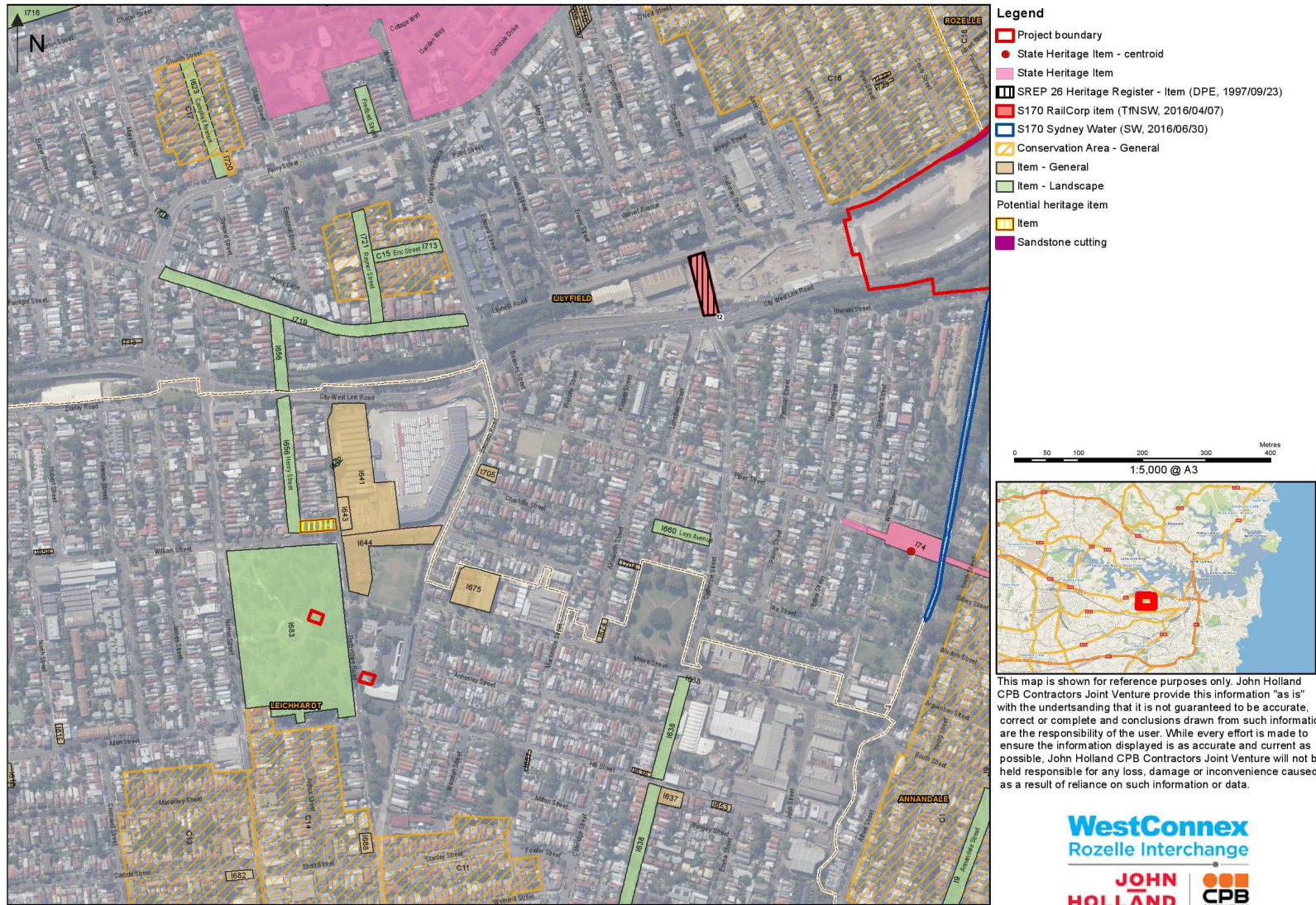


Figure 4 Heritage Items- Tunnel Stubs/Utility Works



The management of impacts or potential impacts on the archaeological resource would be informed in the first instance by reference to procedures outlined in the appropriate HARDEM. Refinement of methods would be informed by site conditions, proposed strategy and Roads and Maritime Standard Management Procedure: Unexpected Heritage Items (refer to Annexure B). Table 6 provides an overview of the protocols for managing the potential archaeological resources in each area within the Project footprint.

Table 6: Non-Aboriginal Heritage Historical Archaeological Management Units (HAMU) - impacts and mitigation

HAMU name	Archaeological significance	Archaeological potential	Impacts	Mitigation
HAMU 3 – Lilyfield Road and Gordon Street (Area 3) (refer to Figure 5)	Local	<p>Moderate potential for evidence associated with the following</p> <ul style="list-style-type: none"> ▪ Early residential occupation on Gordon Street (circa 1860–1915) such as structural remains and artefact deposits ▪ Previous phases of industrial activity at the site, including associated artefact deposits or structural remains. <p>High potential for evidence associated with:</p> <ul style="list-style-type: none"> ▪ Reclamation activities of the Rozelle foreshore prior to 1890. <p>Most sites or features in this HAMU are likely to have been disturbed by the quarrying of the sandstone bedrock along the property boundary with Lilyfield Road, with the exception of the driveway areas of the industrial developments at 92–94 Lilyfield Road and 80–84 Lilyfield Road.:</p>	<p>Proposed works within the Lilyfield Road and Gordon Street HAMU include:</p> <ul style="list-style-type: none"> ▪ Site establishment and enabling works ▪ Tunnelling ▪ Surface earthworks and structures ▪ Drainage ▪ Pavement ▪ Operational Ancillary facilities ▪ Finishing works. <p>Much of the works in this HAMU may require deep excavation in areas where archaeological deposits are likely to be present, and in the location of the known stormwater drain. Extensive ground disturbance of this kind will have a major adverse impact on any archaeological remains which may be present.</p> <p>Activities associated with surface earthworks, drainage, and finishing works (such as service installation, installation of bridge foundations and landscaping) would have more localised impacts on the historical archaeological resource. These works are likely to have a minor to moderate adverse impact on the potential historical archaeological resource, depending on the location, extent and nature of the proposed works.</p>	<p>Mitigation measures for locally significant historical archaeology would apply including:</p> <ul style="list-style-type: none"> ▪ Implementing the mitigation measures included in the Historical Archaeological Research Design and Excavation Methodology (HARDEM), including: <ul style="list-style-type: none"> ○ Inspecting under-floor spaces and roof spaces for the presence of deposits and artefacts of the former Easton Park Hotel and the Cadden Le Messurier building, if these buildings are demolished. ▪ Undertaking an archaeological excavation program including salvage, if required (such as where archaeological remains of high research value, high integrity and complexity are exposed by the foregoing procedures). ▪ Implementing the Roads and Maritime Standard Management Procedure: Unexpected Heritage Items (Annexure B) in case of archaeological finds.
HAMU 4 – Victoria Road/City	Local	<p>Low potential for evidence associated with:</p>	<p>Proposed works within the Victoria Road, City West Link HAMU include:</p> <ul style="list-style-type: none"> ▪ Site establishment and enabling works 	<p>Mitigation measures for locally significant historical archaeology would apply, including:</p>

<p>West Link (Area 3) (refer to Figure 5)</p>		<ul style="list-style-type: none"> ▪ Early residential occupation on Weston Road and Abattoir Road (c1860–1915) such as structural remains and associated artefact scatters ▪ Early road alignments of Weston Road and Barnes Street predating the 1960s upgrades to Victoria Road, and alignment of Abattoir Road prior to construction of Rozelle Rail Yards and White Bay Power Station ▪ Evidence of reclamation and modifications of the Rozelle Bay foreshore <p>Moderate potential for evidence associated with:</p> <ul style="list-style-type: none"> ▪ Reclamation activities of the Rozelle foreshore prior to 1890, including early stages of bridging Glebe Island, and channelization of Whites Creek, reclamation fills, and structures such as revetments or slips. 	<ul style="list-style-type: none"> ▪ Surface earthworks and structures ▪ Bridge works ▪ Drainage ▪ Pavement ▪ Finishing works. <p>However, this HAMU is considered to have a low potential for archaeological remains, and any surviving remains are likely to have been highly disturbed and would not meet the threshold for local significance, or would not provide information that is not available from existing sources. Therefore, the works proposed in this HAMU are considered to have no impact on significant archaeological remains.</p>	<ul style="list-style-type: none"> • Implementing the mitigation measures included in the Historical Archaeological Research Design and Excavation Methodology (HARDEM) • Consult with the Excavation Director prior to deep excavation in the vicinity of the Glebe Island causeway to determine whether test excavation is required. • Monitoring of machine clearance may occur for this specific location (Glebe Island causeway) in accordance with the HARDEM. • Implementing the Roads and Maritime Standard Management Procedure: Unexpected Heritage Items (Annexure B) in case of archaeological finds.
<p>HAMU 5 - Former Rozelle Rail Yards (West) (Area 3) (refer to Figure 5)</p>	<p>Local</p>	<p>Low potential for evidence associated with:</p> <ul style="list-style-type: none"> ▪ Early road alignments of Abattoir Road prior to construction of the Rozelle Rail Yards. <p>High potential for evidence associated with:</p> <ul style="list-style-type: none"> ▪ Reclamation activities of the Rozelle foreshore during the nineteenth and twentieth centuries ▪ Nineteenth-century drainage infrastructure associated with channelising the creek, and early twentieth century drainage 	<p>Proposed works within the Former Rozelle Rail Yards (West) HAMU include:</p> <ul style="list-style-type: none"> ▪ Site establishment and enabling works ▪ Tunnelling ▪ Surface earthworks and structures ▪ Drainage ▪ Pavement ▪ Operational ancillary facilities ▪ Finishing works. <p>This HAMU is considered to have a low potential for archaeological remains, and any surviving remains are likely to have been highly disturbed and would not meet the threshold for local significance.</p>	<p>No further archaeological investigation required.</p> <p>Uncovering infrastructure such as railway infrastructure and twentieth century services and utilities would not trigger the unexpected finds procedure as they are unlikely to be of archaeological significance.</p> <p>The Roads and Maritime Standard Management Procedure: Unexpected Heritage Items (Annexure B) would be implemented where non-rail infrastructure or artefacts are identified.</p> <p>Monitoring may occur in accordance with any requirements of the HARDEM.</p>

		<p>infrastructure associated with the stormwater canal</p> <ul style="list-style-type: none"> ▪ Elements and infrastructure related to the operation of the Rozelle Rail Yards including rail tracks, sleepers and infrastructure. 	<p>Therefore, the works proposed in this HAMU are considered to have no impact on significant archaeological remains.</p>	
<p>HAMU 6 – Former Rozelle Rail Yards (East) (Area 3) (refer to Figure 5)</p>	<p>Local</p>	<p>Low potential for evidence associated with:</p> <ul style="list-style-type: none"> ▪ Early industrial occupation on Lilyfield Road (c1860–1915), such as structural remains and associated artefact deposits in areas which have been quarried for the construction of the rail yards <p>Moderate potential for evidence associated with the following:</p> <ul style="list-style-type: none"> ▪ Early industrial occupation on Lilyfield Road (c1860–1915), such as structural remains and associated artefact deposits in areas which have been quarried for the construction of the rail yards. <p>High potential associated with the following:</p> <ul style="list-style-type: none"> ▪ Reclamation activities of the Rozelle foreshore during the nineteenth and twentieth centuries ▪ Elements and infrastructure related to the operation of the Rozelle Rail Yards including rail tracks, sleepers and infrastructure. 	<p>Proposed works within the Former Rozelle Rail Yards (East) include:</p> <ul style="list-style-type: none"> ▪ Site establishment and enabling works ▪ Tunnelling ▪ Earthworks and associated structures ▪ Drainage ▪ Pavement ▪ Finishing works. <p>Parts of these works will require deep excavation in areas where archaeological deposits may be present. Extensive ground disturbance of this kind will have a major adverse impact on any significant archaeological remains which may be present. Activities requiring minor excavation or levelling may not impact the zone where potential archaeological deposits are located and are therefore likely to have a minor adverse impact on the potential historical resource. Service installation works, installation of bridge foundations and landscaping would have more localised impacts on the historical archaeological resource. These works are likely to have a moderate adverse impact on the potential historical archaeological resource, depending on the location, extent and nature of the proposed works.</p>	<p>Mitigation measures for locally significant historical archaeology would apply including:</p> <ul style="list-style-type: none"> ▪ Consultation with the Excavation Director prior to commencing excavation works in the vicinity of the HAMU in accordance with the requirements of E170. This shall include identifying whether testing in advance of deep works may be appropriate for portions of this HAMU in the location of the nineteenth century industrial buildings and the constructed foreshore. ▪ Implementing the mitigation measures included in the Historical Archaeological Research Design and Excavation Methodology (HARDEM). ▪ Undertaking an archaeological excavation program including salvage, if required (such as where archaeological remains of high research value, high integrity and complexity are exposed by the foregoing procedures).

<p>HAMU 7 White Bay Power Station (Area 3) (refer to Figure 5)</p>	<p>Nil</p>	<p>There are extant elements of built-heritage that have been regarded by the existing studies as archaeological elements associated with the White Bay Power Station, including the water channels associated with the northern penstock.</p>	<p>Proposed works within the White Bay Power Station HAMU includes a minor encroachment during the construction phase of the project as a result of the alignment of the temporary Victoria Road bridge that would cross over the southern penstock of the power station complex. The extent of excavation in this area is unknown at this stage; however, physical and indirect impacts to this heritage element should be avoided.</p>	<p>Implementing the mitigation measures included in the Historical Archaeological Research Design and Excavation Methodology (HARDEM). In addition to what was included in Table 5 and Table 9, management should include:</p> <ul style="list-style-type: none"> ▸ The Roads and Maritime Standard Management Procedure: Unexpected Heritage Items (Annexure B) should be implemented in case of archaeological finds.
<p>HAMU 8 Iron Cove (Area 4) (refer to Figure 6)</p>	<p>Local</p>	<p>Low potential for evidence associated with:</p> <ul style="list-style-type: none"> ▪ Remains of a quarry may have extended into the project footprint within King George Park adjacent to Byrne Street, ▪ Remains of zigzag air raid trenches visible on the 1943 aerial, ▪ Truncated footings and artefact scatters from 1890s houses at 212–218 and 224 Victoria Road, and ▪ Earlier road surfaces, drainage features and services within Victoria Road and side streets including Byrnes, Clubb, Toelle, and Callan Street. 	<p>Proposed works within the Iron Cove HAMU would likely include:</p> <ul style="list-style-type: none"> ▪ Site establishment and enabling works, ▪ Tunnelling ▪ Earthworks and associated structures ▪ Pavement ▪ Operational ancillary facilities ▪ Finishing works. <p>These works are predominantly located within the footprint of Victoria Road and would likely require localised areas of deep excavations associated with the proposed earthworks, tunnelling and bridge works resulting in a major adverse impact. Along the southern edge of the HAMU ancillary works (such as utility relocation, road works, and finishing works) would likely result in minor to moderate adverse impacts.</p>	<p>No further archaeological investigation required.</p> <p>The Roads and Maritime Standard Management Procedure: Unexpected Heritage Items (Annexure B) should be implemented in case of archaeological finds.</p>
<p>HAMU 9 Manning Street bioretention facility (Area 4)</p>	<p>Local</p>	<p>There is moderate potential for archaeological evidence to be present associated with the following:</p> <ul style="list-style-type: none"> ▪ Truncated footings and deposits associated with c1890s houses. <p>Although localised service excavation will have resulted in areas of disturbance, the introduction of fill to create the parkland may have buried</p>	<p>Proposed works within the Manning Street bioretention facility HAMU may include:</p> <ul style="list-style-type: none"> ▪ A new gross pollutant trap (or similar) and upgrades to the existing car park at Manning, Street at Rozelle, next to King George Park, to treat stormwater runoff generated by the surface road works associated with the Iron Cove Link 	<p>Mitigation measures for locally significant historical archaeology would apply including:</p> <ul style="list-style-type: none"> ▪ Further developing mitigation methodologies for the management of impacts on known and potential locally significant historical archaeological resources ▪ Consultation with the Excavation Director prior to commencing excavation works in

		<p>earlier remains that potentially survive intact beneath the modern ground surface.</p>	<ul style="list-style-type: none"> ▪ These works will require excavation in the area of archaeological potential, and a likely to result in a major adverse impact to archaeological remains of local significance. 	<p>the vicinity of the HAMU in accordance with the requirements of E170.</p> <ul style="list-style-type: none"> ▪ Preparing a HARDEM prior to works that will have a direct material impact on the HAMU, in accordance with the requirements of CoA E168-E172. <p>If determined by the HARDEM develop a methodology and scope for a program of test excavation and/or a program that may include salvage excavation.</p>
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Figure 5 Area 3- Archaeological potential

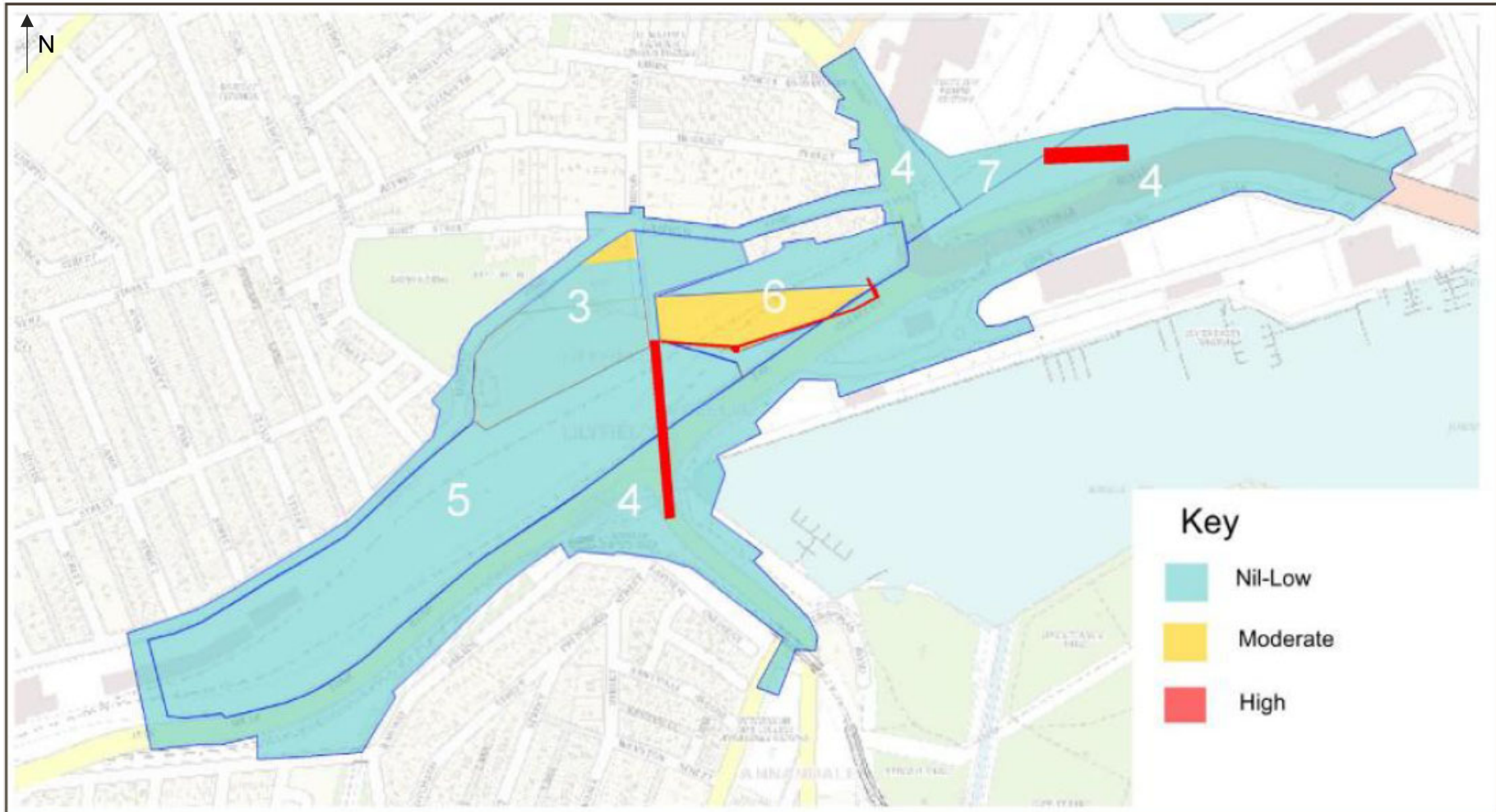
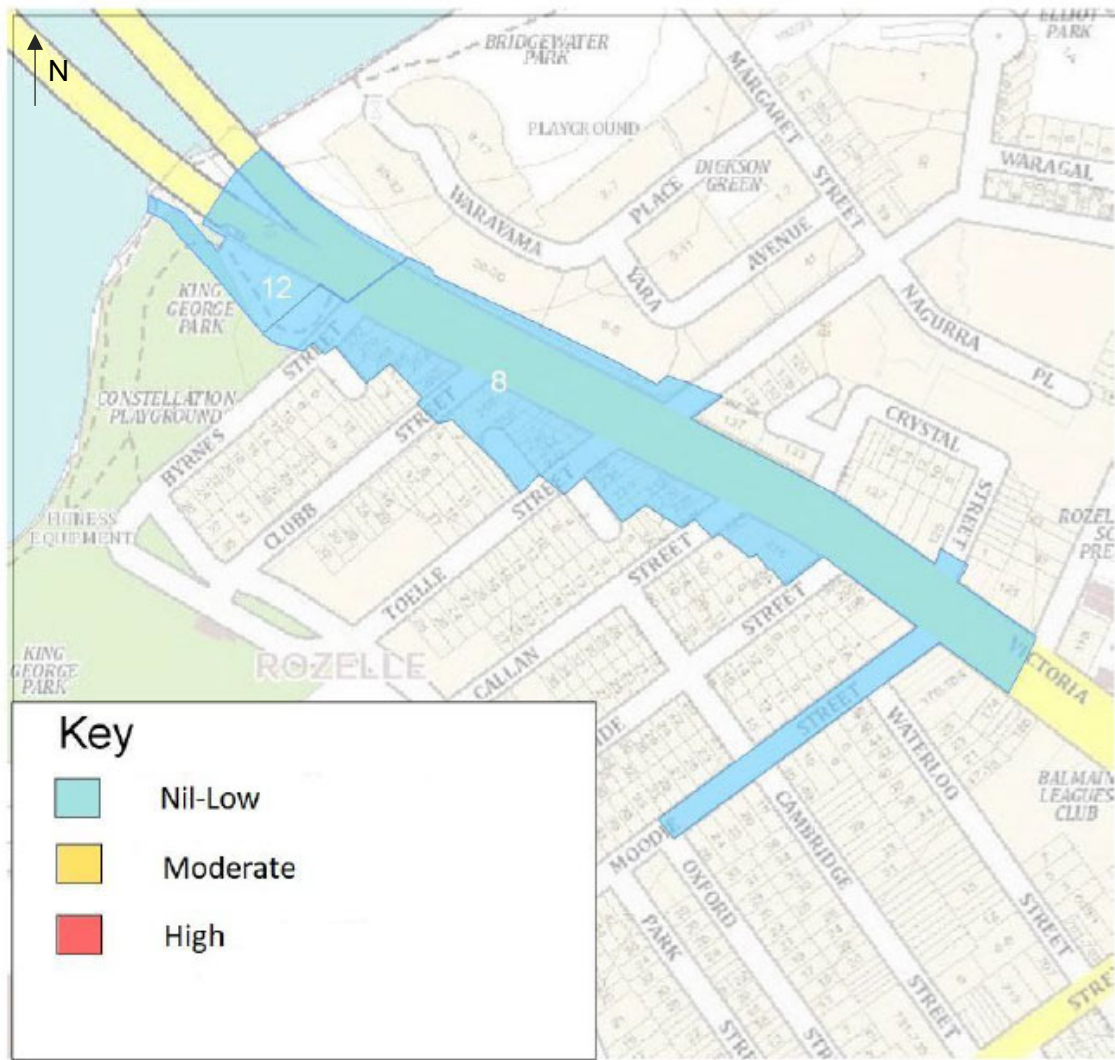


Figure 6 Area 4- Archaeological potential



7. Environmental mitigation and management measures

Specific management measures and requirements to address contract specifications, CoA and REMM in relation to Non-Aboriginal heritage are outlined in the following sections including Table 9.

7.1. Vibration Management Measures

Some heritage items and HCAs along the Project route may be subject to vibration impacts as a result of vibration intensive construction activities and equipment. The potential impacts to heritage items and HCAs due to construction vibration would be confirmed during detailed design (refer to the NVMP for more detail). Where required, mitigation and management measures to minimise potential impacts will be investigated prior to, and implemented during, construction of the Project (refer to management measures in Table 9).

7.1.1. Vibration criteria and impact assessment

In accordance with CoA E84, vibration monitoring will be conducted before and during vibration generating activities that have the potential to impact on heritage items, to identify minimum working distances to prevent cosmetic damage (refer to Section 7.1.2 for further discussion on minimum safe working distances). In the event that the vibration monitoring shows that the preferred values for vibration are likely to be exceeded, the construction methodology will be reviewed and, if necessary, additional mitigation measures implemented.

The NVMP identifies vibration criteria and an approach to mitigating impacts at sensitive receivers, including heritage items. Safe vibration levels are provided in Table 7.

The approach to managing potential vibration impacts on heritage structures is outlined in Section 5.5 of the NVMP, and includes:

1. Identify heritage items where the 2.5 mm/s peak component particle velocity objective may be exceeded during specific construction activities, and
2. Structural engineering report to be undertaken on identified heritage items, to confirm structural integrity of the building and confirm if item is 'structurally sound', and
3. If item confirmed as 'structurally sound', the screening criteria in Section 5.5.2 of the NVMP (as applicable) shall be adopted, or
4. If item confirmed as 'structurally unsound', the more conservative cosmetic damage objectives of 2.5 mm/s peak component particle velocity would be adopted.

A summary of heritage listed items and HCAs that are located within safe working distances of the Project and may experience vibration impacts are identified in Table 5. Properties predicted to exceed cosmetic damage as identified in the Project vibration screening criteria drawings (presented in Annexure F of the NVMP) are identified in Table 5.

Table 7: DIN 4150 structural damage – safe limits for short-term building vibration

Group	Type of Structure	Peak Particle velocity (mm/s)			
		At foundation			Plane of floor of uppermost storey
		1 Hz to 10 Hz	10Hz to 50Hz	50 Hz to 100Hz	All Frequencies
1	Buildings used for commercial purposes, industrial buildings and buildings of similar design	20	20 at 10 Hz increasing to 40 at 50 Hz	40 at 50 Hz increasing to 50 at 100 Hz	40
2	Dwellings and buildings of similar design and/or use	5	5 at 10 Hz increasing to 15 at 50 Hz	15 at 50 Hz increasing to 20 at 100 Hz	15

3	Structures that because of their particular sensitivity to vibration (structurally unsound), do not correspond to those listed in Lines 1 or 2.	3	3 at 10 Hz increasing to 8 at 50 Hz	8 at 50 Hz increasing to 10 at 100 Hz	8
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Note: 1. For frequencies above 100 Hertz the upper value in this column should be used
Source: Table 4-7, Appendix J of the EIS - Technical working paper: Noise and vibration

7.1.2. Safe working distances

Some of the plant and equipment used on site during construction activities generates vibration which has the potential to cause cosmetic damage to buildings and structures.

These potential impacts can be managed through the implementation of minimum safe working distances when using these types of plant and equipment near buildings and structures, including heritage items. The minimum safe working distances for types of equipment and plant to be used onsite are contained within the NVMP.

Site specific minimum working distances for vibration significant plant must be measured onsite where plant and equipment is likely to operate close to or within the recommended minimum safe working distances (refer to the NVMP).

Where plant is required to operate within the site specific minimum working distances, vibration monitoring is recommended in accordance with CoA E84 to verify that vibration levels achieve compliance with the structural damage objectives identified in Table 7. Any required vibration monitoring would be carried out in accordance with the Noise and Vibration Monitoring Program.

7.1.3. Vibration monitoring and acoustic treatment of heritage items

The process for the identification and monitoring of potential vibration effects on sensitive heritage items is addressed in the NVMP and Section 6 of the Noise and Vibration Monitoring Program.

It is a requirement of CoA E79 that a CNVIS be prepared for construction ancillary facilities before any works that result in noise and vibration impacts commence and include specific mitigation measures identified through consultation with affected sensitive receivers.

Furthermore, in accordance with CoA E162, where acoustic treatment is required at any heritage item identified in the documents listed in CoA A1, the advice of a suitably qualified and experienced built heritage expert will be obtained and implemented to ensure any such work minimises any adverse impacts on the heritage significance of the item or the HCA. For further detail refer to Section 8.1 and Annexure F of the NVMP.

General inspection and monitoring requirements are summarised in Section 8.3.

7.2. Ground movement

Some heritage items and HCAs along the Project route may be subject to settlement impacts as a result of tunnelling construction activities and equipment. The potential impacts to heritage items and HCAs due to settlement would be confirmed during detailed design.

The M4-M5 Link Environmental Impact Statement Appendix U- Technical working paper: Non-Aboriginal heritage (November 2017) noted that the area's most likely to be affected by settlement are usually where tunnelling is closest to the ground surface, around tunnel portals and entry and exit ramps, and where soils are more likely to be compressible.

As required by CoA E103 and REMMs NAH07 and PL6, potential heritage impacts due to settlement and ground movement caused by the Project will be managed in accordance with the following:

- The relevant management measures identified in Table 9 (MMNAH 7, MMNAH 8, MMNAH 9),
- Settlement criteria identified in Table 8, and
- Settlement Monitoring Program outlined below and in Table 11.

It is a requirement of CoA E103 and REMM PL6 that ground settlement will be managed to comply with the criteria set out in Table 8.

Table 8: Settlement criteria as per CoA E103 and REMM PL 6

Surface and Sub Surface Structures	Maximum Settlement	Maximum Angular Distortion	Limited Tensile Strain (percent)
Buildings – Low or non-sensitive properties (i.e. ≤ 2 levels and car parks.	30 mm	1 in 350	0.1
Buildings and pools – High or sensitive properties (i.e. ≥ 3 levels and heritage items)	20 mm	1 in 500	0.1
Roads and parking areas	40 mm	1 in 250	N/A
Parks	50 mm	1 in 250	N/A

A Settlement Monitoring Program for the Project will be prepared prior to the commencement of tunnelling and implemented through to until all settlement has stabilised following the end of construction (refer to Table 11). The Settlement Monitoring Program will provide details on:

- Settlement criteria and predictions,
- Location of monitoring points,
- Duration of monitoring,
- Data collection (type and method),
- Comparison of actual settlement with predictions, and
- Triggers and corrective actions that will be implemented if, based on monitoring results, actual settlement is likely to exceed predictions or the relevant criteria, with the aim of complying with the criteria.

7.3. Heritage and archaeological reports, procedures and plans

The following surveys, reports, protocols and plans will be developed prior to or during construction activities, as specified in the CoA and REMMs. Refer to

Table 4 and Table 11 for consultation and reporting requirements in relation to the below.

7.3.1. Pre-construction and post-construction condition surveys

Pre-construction condition surveys (also called dilapidation surveys) will be offered for heritage items, where required and in accordance with CoA E105. Pre-construction condition surveys will be offered for properties within 50 metres of the Rozelle Interchange tunnel alignment and construction sites, any additional properties, services and utilities identified as being at risk from settlement or vibration by geotechnical investigations, and/or in accordance with any additional requirements identified by RMS.

Once detailed design and investigations have confirmed the properties that may be potentially impacted, a program will be developed for contacting landowners to offer the surveys in accordance with the Project Communication Strategy.

The pre-construction condition surveys (if the offer is accepted), would be carried out prior to the relevant work commencing.

Should the pre-construction condition surveys be undertaken, a post-construction assessment will be carried out for the same heritage item(s) once construction works have finished, as required by CoA E106. Inspection reports for both pre- and post-construction condition surveys will be provided to the owners of the item surveyed.

In accordance with CoA E107, the results of the surveys will be documented in a Condition Survey Report for each surface and sub-surface structure surveyed. Copies of the Condition Survey Reports will be provided to the owner(s) of the structure surveyed within three (3) weeks of completing the surveys and no later than four (4) months following completion of construction.

RMS will establish an Independent Property Impact Assessment Panel, comprising geotechnical and engineering experts independent of JHCPB and its designer team. The panel will be responsible for independently reviewing Condition Survey Reports and resolving property damage disputes.

Either the property owner or the Project may refer unresolved disputes arising from potential and/or actual property impacts to the Panel for resolution.

Section 9.1 of the CS outlines the engagement/consultation process with each of the heritage item owners, as well as the damage rectification process.

7.3.2. Heritage Archival Recording and Salvage Report

The CoA and REMMs for the Project identify requirements to undertake archival recording and salvage for heritage items and potential heritage items to be demolished. The process for addressing these requirements during design and construction is identified below.

Archival recording

As required by CoA E163, archival recording will be undertaken in accordance with the NSW Heritage Office's How to Prepare Archival Records of Heritage Items (1998) and Photographic Recording of Heritage Items Using Film or Digital Capture (2006) for those heritage items that have been identified for demolition. The archival recording would be undertaken by a suitably qualified heritage consultant.

Photographic archival recording of the items listed in REMM NAH03 and heritage items which will be partly or wholly demolished will occur prior to any works that have the potential to impact upon those items and will include the identification of appropriate stakeholders to receive copies of the documentation. Archival recording is being undertaken for the following:

- Infrastructure associated with the White Bay Power Station site that could be affected by the project.
- Whites Creek Stormwater Channel (in the area to be impacted).
- Stormwater Canal off Lilyfield Road.
- 'Cadden Le Messurier' at 84 Lilyfield Road.
- Former Hotel at 78 Lilyfield Road.
- Victoria Road overbridge.
- Each house at 260-266 Victoria Road.
- Each house at 248-250 Victoria Road.
- Sandstone cutting at Rozelle.

Identification of elements for salvage:

During the archival recording process, and/or a separate inspection, the heritage consultant will identify salvageable elements and materials which support good conservation outcomes to be collected from the heritage items to be demolished as part of the Project. An important consideration in determining what elements and materials should be salvaged is the viable use for the salvaged elements, and the feasibility of salvaging particular elements (i.e. condition of the element). The identification process would primarily focus on the following:

- Less readily available elements e.g. windows, doors, fireplaces with mantelpieces.
- Items in good condition that may be suitable for re-use by other residential end-users or within the permanent works of the Project.
- Assemblage or collection of elements rather than isolated elements.
- Consideration of the architectural integrity of the building/structure.

Salvage process

The salvage process would be implemented generally as follows:

- The heritage consultant will undertake an inspection and archival recording of the property and identify elements and materials to be salvaged.
- Initial discussions with the JHCPB Design Team (e.g. temporary works designers, permanent works designers, urban designers, landscape architects.) would occur to determine the feasibility of salvage and potential options for sympathetic reuse in permanent works. This shall also include consideration of sympathetic reuse (including integrated heritage displays and interpretation) for the Easton Park Hotel and the Cadden Le Messurier building, if they are to be demolished.
- The elements identified for salvage shall be salvaged prior to demolition works, if feasible (it is noted that in some instances although efforts may be taken to identify items in good condition, the actual condition of these elements may be too poor to successfully salvage). These elements shall be collectively identified as 'salvaged elements' and photographed, tagged and catalogued and stored in suitable repository locations established in consultation with relevant council(s).
- Salvaged elements identified by the urban design and landscape architects to be capable and appropriate for reuse would be reused within permanent works (e.g. sandstone blocks and bricks).
- Salvaged elements that relate to State-listed heritage items shall be determined in consultation with OEH Heritage Division.
- Consultation shall be undertaken with relevant council(s) to establish a process to make residual salvaged elements to landowners within the locality from which the material originated from.

Heritage Archival Recording and Salvage Report

Within 12 months of completing the archival recording undertaken in accordance with CoA E163, a Heritage Archival Recording and Salvage Report (HARSR) will be submitted to the agencies listed in Table 4 and stakeholders for their information.

7.3.3. Historical Archaeological Research Design and Excavation Methodology

In accordance with CoAs E168, E169, REMM NAH04 and NAH05, prior to works that have a direct material impact on a HAMU a suitably qualified archaeologist whose experience complies with the Heritage Council of NSW's Criteria for Assessment of Excavation Directors (July 2011) (referred to as the Excavation Director) will be engaged to oversee and advise on matters associated with historical archaeology and to prepare a HARDEM.

A HARDEM has been prepared for the Project and was submitted to the OEH Heritage Division, as delegate for the Heritage Council of NSW for review and comment (refer to Table 4). The HARDEM was prepared by a suitably qualified archaeologist who has previously held approvals under the *Heritage Act 1977* to act as Excavation Director for sites of local archaeological significance and been involved in managing archaeological activities involving testing and monitoring as well as salvage and excavation, as confirmed by the OEH Heritage Division (refer to Table 4).

The HARDEM:

- Is consistent with the NSW Heritage Council's Archaeological Assessment Guidelines (1996) or as updated,

- Provides descriptions of clear significance thresholds for possible archaeological items that may be uncovered during works,
- Provides for the detailed analysis of any heritage items discovered during the investigation,
- Includes a methodology and scope for a program of archaeological excavation, investigation and recording of any historical archaeological remains that will be impacted by the Project,
- Includes management options for discovered items, whether known or unexpected finds (including options for avoidance, salvage, relocation and display),
- For unexpected finds that are determined to be relics, set out the assessment process that will determine an appropriate archaeological response to managing their significance,
- Includes requirement for post-excavation reporting, including artefact analysis and additional historical research, where necessary, and long-term management of records,
- Includes procedures for notifying the NSW Heritage Council (or its delegate) and Secretary of any relic findings and associated reports, and
- If the findings of the investigation are significant, provides for the preparation and implementation of a Heritage Interpretation Plan in accordance with CoA E167.

7.3.4. Heritage Interpretation Plan

A Heritage Interpretation Plan will be prepared and implemented in accordance with CoAs E167 and E169(f). The Heritage Interpretation Plan will be prepared to identify and interpret the key heritage values and stories of heritage items and HCAs impacted by the Project. The Heritage Interpretation Plan will include, but will not be limited to:

- A discussion of the key interpretative themes, stories and messages proposed to interpret the history and significance of the affected heritage items and sections of heritage conservation areas,
- Themes, stories and initiatives proposed as part of other stages of WestConnex program of works to ensure a consistent approach to heritage interpretation for the Project,
- Identify how any salvaged items will be reused, and
- Identification of interpretive initiatives implemented to mitigate impacts to archaeological relics, heritage items and HCAs affected by the Project.

The Heritage Interpretation Plan will inform the development of the Urban Design and Landscape Plan (UDLP) for the Project, in accordance with Interpreting Heritage Places and Items Guideline (NSW Heritage Office 2005).

An Urban Design Review Panel will be established in accordance with REMM UD5 to provide advice and input into the development of the UDLP and associated sub-plans. Where the UDLP is required to address heritage matters, such as heritage interpretation, the panel will include an independent heritage architect to provide specialist advice.

7.3.5. Archaeological Excavation Report

An Archaeological Excavation Report will be prepared by a suitably qualified Excavation Director in the event that archaeological excavations are required over the course of the project. The report will be a consolidated document containing the findings of all excavations undertaken, including monitoring, test excavation and formal salvage excavation. The report will include an artefact analysis and the identification of a final repository of any finds. The report will be submitted to the Secretary within 12 months of completing the archaeological investigations. The Archaeological Excavation Report will also be submitted to the Heritage Council of NSW, the local library and the local Historical Society. The Archaeological Excavation Report will be retained with the relics at all times.

7.3.6. Unexpected Heritage Finds Procedure

In accordance with CoA E157, an Unexpected Heritage Finds Procedure prepared by Roads and Maritime will be implemented to manage unexpected heritage finds in accordance with relevant guidelines and standards prepared by the NSW Heritage Council and OEH. The Roads and

Maritime Standard Management Procedure: Unexpected Heritage Items has been included in Annexure B of this Plan.

Any items of potential heritage conservation significance or human remains discovered during construction will be managed in accordance with the Roads and Maritime Standard Management Procedure: Unexpected Heritage Items. The procedure details requirements regarding notification of relevant agencies and the NSW Police and will be implemented for the duration of construction.

7.4. Non-Aboriginal heritage management and mitigation measures

All reasonably practicable environmental control measures will be implemented to minimise impacts to items of Non-Aboriginal heritage significance and HCAs during the construction of the Project. The overarching measures and requirements to meet the objectives of this NAHMP and to address impacts Non-Aboriginal heritage are outlined in Table 9. Specific mitigation measures to be implemented to minimise impacts to non-Aboriginal heritage items or potential heritage items are identified in Table 5 and specific mitigation measures to be implemented to minimise impacts to HAMUs are identified in Table 6.

Table 9: Non-Aboriginal heritage management and mitigation measures

ID	Mitigation Measure/Requirement	Resources	When to Implement	Responsibility	Reference	Evidence
Planning / managing cumulative impacts						
MMNAH1	Ensure Non-Aboriginal heritage impacts and risks are considered as part of the development of detailed designs.	EIS and SPIR This Plan	Pre-construction	Engineers Designers	Best practice	SAPs Detailed designs
MMNAH2	All activities will be planned and carried out to avoid, where practicable, or minimise potential impacts to heritage items and HCAs. Prior to works commencing, areas of archaeological (Non-Aboriginal heritage) potential will be reviewed and identified. These will be assessed and documented during the planning stages of the Project and will be reviewed prior to physical works commencing within applicable areas.	This Plan Chapter 20 of the EIS Appendix U of the EIS SAPs	Construction	Engineers Foreman	Best practice	This Plan SAPs EWMS

Vibration						
MMNAH3	<p>A NVMP has been prepared for the Project to assist with the management of potential vibration impacts at surrounding buildings and structures (including heritage-listed items and HCAs).</p> <p>Potential vibration impacts to features of heritage significance will be managed in accordance with the NVMP prepared for the Project. The NVMP will:</p> <ul style="list-style-type: none"> Identify relevant performance criteria in relation to noise and vibration Identify noise and vibration sensitive receivers and features in the vicinity of the Project Include standard and additional mitigation measures from the CNVG and details about when each will be applied Describe the process(es) that will be adopted to carrying out location and activity specific noise and vibration impact assessment to assist with the selection of appropriate mitigation measures. 	<p>Construction Noise and Vibration Impact Statements (CNVIS)</p> <p>EIS</p> <p>SPiR</p>	Pre-construction Construction	<p>Project Manager</p> <p>Environment and Sustainability Manager</p> <p>Foreman</p>	REMM NAH06	NVMP
MMNAH4	<p>Advice will be sought of a suitably qualified and experienced heritage specialist on methods and locations for installing equipment used for vibration, movement and noise monitoring at heritage-listed structures. This is to ensure any such work minimises any adverse impacts on the heritage significance of the item.</p>	Noise and vibration monitoring equipment	Construction	<p>Project Manager</p> <p>Environment and Sustainability Manager</p>	CoAs E85 and E162	<p>Correspondence with heritage specialist</p> <p>Site visit with heritage specialist (if required)</p>
MMNAH5	<p>Vibration monitoring will be conducted before and during vibration generating activities that have the potential to impact on heritage items, and to identify minimum working distances to prevent cosmetic damage.</p> <p>In the event that the vibration monitoring shows that the preferred values for vibration are likely to be exceeded, the construction methodology will be reviewed and, if necessary, additional mitigation measures will be implemented.</p>	<p>Noise and vibration monitoring equipment</p> <p>Annexure B NVMP - Noise and Vibration Monitoring Program</p>	Construction	<p>Project Manager</p> <p>Environment and Sustainability Manager</p>	CoA E84	<p>Vibration testing records</p> <p>Training, toolbox and internal communication records</p>
MMNAH6	<p>Where required, a pre-construction and post-construction condition survey will be conducted. The inspections will include heritage-listed items identified as at risk from settlement or vibration by the</p>	SAPs	Pre-construction	Engineer	CoAs E104, E105 and E106 PL 10	Pre-construction and post-construction condition surveys reports

	<p>geotechnical model described in CoA E101 of the approval.</p> <p>Building condition surveys (i.e. pre- and post-dilapidation surveys) will be offered to property owners within the zone of influence of tunnel settlement (50 metres from the outer edge of the tunnels and within 50 metres of surface works) or as otherwise directed by the Independent Property Impact Assessment Panel.</p> <p>The surveys of properties will be carried out prior to the commencement of any Project works in the vicinity that have the potential to result in damage to the properties. The surveys will be carried out by a structural engineer.</p> <p>Appropriate mitigation measures will be implemented in consultation with the owner(s) of the relevant surface and sub-surface structures prior to excavation and tunnelling works, to ensure no exceedances of the relevant criteria</p>	<p>Settlement Monitoring Program NVMP CS</p>	<p>Post-construction</p>			
Ground movement (settlement and heave)						
MMNAH7	<p>Further assessment of potential settlement impacts, including numerical modelling, will be undertaken during detailed design.</p> <p>The following measures will be investigated and implemented (where feasible and reasonable) to ensure that predicted settlement is within the criteria for heritage items:</p> <ul style="list-style-type: none"> ▪ Review of the proposed tunnel design including: <ul style="list-style-type: none"> › The depth and alignment of tunnels › The proximity of multiple tunnels to each other › The proposed tunnel support system › The tunnel lining to manage groundwater inflows ▪ Review of the proposed construction methodology ▪ Consideration of ground movement options. 	<p>Detailed designs</p>	<p>Construction</p>	<p>Environment and Sustainability Manager Project Engineer</p>	<p>REMM PL 7</p>	<p>Settlement Monitoring Program</p>

MMNAH8	Where potential impacts to heritage items are identified and cannot be mitigated with the measures in NAH7, an assessment of the current engineering condition of heritage items would be undertaken and impact tolerances altered accordingly. In areas where ground movement in excess of settlement criteria is predicted an instrumentation and monitoring program to measure settlement, distortion or strain will be implemented.	Detailed designs Structural assessment (as required)	Construction	Environment and Sustainability Manager Project Engineer	CoA E104 REMM PL 7	Settlement Monitoring Program
Heritage and archaeological management (including unexpected finds)						
MMNAH9	Heritage items, including human remains, outside of the Project boundary will not be destroyed, modified, or otherwise physically affected.	Roads and Maritime Standard Management Procedure: Unexpected Heritage Items SAPs Identification of project boundary and no go areas.	Construction	Environment and Sustainability Manager Foreman All site personnel	CoA E154	Site observations, undertaken by all site personnel
MMNAH10	Prior to works that have a direct material impact on a HAMU, a suitably qualified archaeologist will be hired to oversee and advise on matters associated with historic (sic) archaeology and to prepare a HARDEM.	EIS and SPIR This Plan	Pre-construction	Project Manager Environment and Sustainability Manager	CoA E168	Correspondence with the Excavation Director Site visit with Excavation Director (if required) HARDEM
MMNAH11	The nominated Excavation Director for the Project will be consulted where excavation works are required in the vicinity of potential archaeological sites. The Excavation Director will advise on how the works are to be managed and any archaeological impact minimised. They must be given the authority to advise on the duration and extent of oversight required during excavation.	HARDEM	Construction	Project Manager Environment and Sustainability Manager Excavation Director	CoA E170	Correspondence with the Excavation Director Site visit with Excavation Director (if required) Archaeological Excavation Report
MMNAH12	Works within the vicinity of a find (items that may be of cultural or archaeological significance) will not recommence until the relevant requirements of the	HARDEM Roads and Maritime Standard	Construction	Project Manager Excavation Director	CoA E171	Correspondence with the Excavation Director

	HARDEM or advice on unexpected finds from the Excavation Director have been met. The site of the discovery will be demarcated and communicated to workers as a no go area.	Management Procedure: Unexpected Heritage Items				Site visit with Excavation Director (if required) Archaeological Excavation Report
MMNAH13	Any item of potential Aboriginal archaeological or cultural heritage conservation significance or human remains discovered during construction will be managed in accordance with the Unexpected Heritage Items Procedure developed for the Project. In the case of human remains finds, works may recommence at an agreed distance further along the Project corridor in agreement with client, the Police and regulatory representatives. The site of the discovery will be demarcated and communicated to workers as a no-go area.	Roads and Maritime Standard Management Procedure: Unexpected Heritage Items	Construction	Environment and Sustainability Manager Foreman	REMM AH1 Roads and Maritime Specifications G36 4.10	RMS Unexpected Heritage Finds Form (Annexure B)
MMNAH14	Human remains uncovered during the construction of the Project will not be harmed, modified, or otherwise impacted during the construction of the Project.	Induction training Roads and Maritime Standard Management Procedure: Unexpected Heritage Items	Construction	Environment and Sustainability Manager Foreman All site personnel	CoA E155	RMS Unexpected Heritage Finds Form (Annexure B)
Environmentally sensitive area (including heritage listed items and HCAs)						
MMNAH15	All known heritage items within immediate vicinity of the construction work zones will be identified on SAPs including in the CEMP. Preserved heritage items and places will be shown on relevant site plans and communicated to the relevant workforce. SAPs will be available to all personnel working on the site.	CEMP SAPs	Construction	Project Manager Environment and Sustainability Manager Foreman	Roads and Maritime Specifications G36 4.10	Annexure F of the CEMP
MMNAH16	An environmental work method statement (EWMS), for working in or near environmentally sensitive areas including heritage areas, will be prepared and implemented as required.	CEMP EWMS	Construction	Project Manager Environment and Sustainability Manager Foreman	Roads and Maritime Specifications G36 4.10 and 4.12	EWMS

MMNAH17	Locations and boundaries of all environmentally sensitive areas, including items of heritage, cultural and/or archaeological significance, will be clearly identified on an SAP and delineated and signposted. They should be protected in accordance with regulatory requirements	EWMS Signs and flagging tape, if required	Pre-construction Construction	Environment and Sustainability Manager Foreman	Roads and Maritime Specifications G36, 4.13	EWMS SAPs Site observations
MMNAH18	Retain sandstone kerbs and gutter wherever possible in heritage conservation areas. Where unavoidable, removal of the impacted sections of the kerb and gutter would occur carefully and include labelling the removed sections appropriately before returning the section back to its existing place after the completion of the works	EWMS	Construction	Environment and Sustainability Manager Foreman	Inner West Council controls and guidelines	EWMS SAPs
MMNAH19	Prior to the commencement of excavations in street with listed heritage street trees, the trees contributing to the heritage significance of the listing would be identified by an appropriately trained ecologist Non-destructive digging techniques would be used in the vicinity of identified significant trees so the works would not cause adverse impacts upon the root systems	EWMS	Construction	Environment and Sustainability Manager Foreman	Best practice	EWMS SAPs

8. Compliance Management

8.1. Roles and responsibilities

The JHCPB Project Team's organisational structure and overall roles and responsibilities are outlined in Section 3.3 of the CEMP. Specific responsibilities for the implementation of environmental controls are detailed in Table 9 of this NAHMP.

Additional roles, specific to the management of Non-Aboriginal heritage aspects of the Project are listed in Table 10.

Table 10: Roles and responsibilities relevant to Non-Aboriginal heritage management

Role	Responsibility
Environment and Sustainability Manager	<ul style="list-style-type: none"> ▪ Determine the location and nature of known or potential heritage sites/items, ▪ Consider the susceptibility of heritage items to construction impacts, and ▪ Determine and obtain if required any regulatory permits and licenses.
Excavation Director (qualified archaeologist)	<ul style="list-style-type: none"> ▪ Experience must comply with the NSW Heritage Council's Criteria for Assessment of Excavation Directors (July 2011), ▪ Oversee and advise on matters associated with historical archaeology, ▪ Prepare the following reports: <ul style="list-style-type: none"> ▸ HARDEM, ▸ HARSR, ▸ Archaeological Excavation Report, if required, and ▪ Advise on how the works are to be managed.

8.2. Training

All employees, contractors and utility staff working on site will undergo site induction training relating to Non-Aboriginal heritage management and issues by a suitably qualified person. The induction training will address elements related to Non-Aboriginal heritage management including:

- Requirements of this Plan,
- Applicable and relevant legislative requirements, including the *NSW Heritage Act 1997*,
- Roles and responsibilities for Non-Aboriginal heritage management,
- Location of identified heritage sites and conservation, protection and no-go areas,
- Proposed heritage management and protection measures,
- Procedures to follow in the event of an unexpected heritage item find or discovery of human remains during construction works (Roads and Maritime Standard Management Procedure: Unexpected Heritage Items, Annexure B), and
- Incident response procedure.

Targeted training in the form of toolbox talks or specific training will also be provided to personnel with a key role in Non-Aboriginal heritage management.

Further details about staff induction and training are outlined in Section 3.5 of the CEMP.

8.3. Monitoring and inspections

8.3.1. Regular monitoring and inspections

Regular monitoring and inspections will be carried out during construction in accordance with regulatory requirements, CoAs and REMMs.

. Monitoring and inspections will include, but are not limited to:

- Prior to commencement of construction:
 - The environmental team (or delegate) and the nominated Excavation Director will inspect specified areas to determine archival recording and salvage requirements,
 - Where required, a pre-construction condition survey will be carried out for heritage items identified as at risk from settlement or vibration. A post-construction condition survey for the

same items will be carried out at the end of construction. Refer to Section 7.3.1 for further details on the condition survey process.,

- Ongoing site observations to identify and action any Non-Aboriginal heritage issues, including:
 - Visual surveillance of no-go zone fencing and signage to make sure it is in place and undamaged,
 - Visual surveillance to make sure there is no unauthorised access to no-go zone,
- Weekly documented site inspections by the Foreman and environmental team while construction works are occurring. The aim of these inspections is to make sure all heritage management measures are in place and effective, and identify and action any non- Aboriginal heritage issues,
- Vibration monitoring, as per requirements set out in the NVMP, and
- Settlement monitoring carried out for the period in accordance with the Settlement Monitoring Program, starting prior to commencement of tunnel construction through to until all settlement has stabilised following completion of tunnel construction.

Additional requirements and responsibilities in relation to inspections are documented in Section 3.9.1 and Section 3.9.2 of the CEMP.

8.4. Auditing

Audits (both internal and external) will be undertaken to assess the effectiveness of environmental controls, compliance with this Plan, CoA and other relevant approvals, licences and guidelines.

Audit requirements are detailed in Section 3.9.3 of the CEMP

8.5. Reporting

Project reporting requirements relevant to the management of Non-Aboriginal heritage are identified in Table 11. Relevant contact details are included in Annexure C.

Table 11: Reporting requirements relevant to management of Non-Aboriginal heritage

Item	Frequency	Standards	External Reporting	Responsibility
Incidents	As required	As required by the CoA, Roads and Maritime Environmental Incident Classification and Reporting Procedure (September 2017) and Roads and Maritime Environmental incident report	Appropriate authority.	Environment and Sustainability Manager Foreman or delegate
Notification and reporting in the event that archaeological relics/heritage items are discovered	In accordance with the timeframe detailed in the HARDEM	S146 of the <i>Heritage Act 1977</i> Roads and Maritime Standard Management Procedure: Unexpected Heritage Items (Annexure B)	Notification of NSW Heritage Council and subsequent preparation of an Archaeological Relics Management Plan. Written notification to DPE and the outcome of NSW Heritage Council consultation	Environment and Sustainability Manager Foreman
HARDEM	Prior to works that have a direct material impact on a HAMU	CoAs E168 and E169	Must be submitted to the NSW Heritage Council (or its delegate) for review and comment prior to finalisation.	Environment and Sustainability Manager

Archival recording	Within 12 months of completing the archival recording	CoAs E163 and E164	Must be submitted to the Secretary, relevant council(s), relevant local libraries and local historical societies in the respective LGAs. The relevant council(s), local libraries and local historical societies which will receive the recording will be determined by the heritage specialist.	Environment and Sustainability Manager
Heritage Interpretation Plan	During Project delivery	CoA E167	None required	Environment and Sustainability Manager
Archaeological Excavation Report	Within 12 months of completing all archaeological investigations	CoA E172	Must be submitted to the Secretary within 12 months of completing all archaeological investigations. It will also be submitted to the NSW Heritage Council, the local library and the local Historical Society in the relevant LGAs	Environment and Sustainability Manager
Settlement Monitoring Program	Starting prior to commencement of tunnel construction through to until all settlement has stabilised following end of construction	REMMs NAH07 and PL8 The implementation and adequacy of the Settlement Monitoring Program will be monitored by the Independent Property Impact Assessment Panel	In accordance with Settlement Monitoring Program	Environment and Sustainability Manager

9. Review and improvement

9.1. Continuous improvement

Continuous improvement of this plan will be achieved by the ongoing evaluation of environmental management performance against environmental policies, objectives and targets for the purpose of identifying opportunities for improvement.

The continuous improvement process will be designed to:

- Identify areas of opportunity for improvement of environmental management and performance,
- Determine the cause or causes of non-conformances and deficiencies,
- Develop and implement a plan of corrective and preventative action to address any non-conformances and deficiencies,
- Verify the effectiveness of the corrective and preventative actions,
- Document any changes in procedures resulting from process improvement, and
- Make comparisons with the environmental objectives and targets identified in Section 3.2.3 of the CEMP

9.2. NAHMP update and amendment

The processes described in Section 3.9 to Section 3.13 of the CEMP may result in the need to update or revise this NAHMP as required:

- To take into account changes to the environment or generally accepted environmental management practices, new risks to non-Aboriginal heritage, or changes in law,
- Where reasonably requested or required by DPE or any other Authority,
- In response to an environmental incident,
- In response to internal or external audits or quarterly management reviews and a continuous improvement process,
- In response to Project changes that occur in accordance with Section 3.13.2 of the CEMP,
- Within three months of any of the above occurrences, and
- As part of a continuous improvement process.

Should the document review process identify any issues or items within the documents that are either redundant or in need of updating, it is the responsibility of the JHCPB Environment and Sustainability Manager (or delegate) to prepare the revised documents. Only the Environment and Sustainability Manager, or delegate, has the authority to change any of the environmental management documentation. The revised document will then be issued to the Environmental Representative for endorsement of the changes or approval of minor amendments to the this NAHMP.

Any reviews to the NAHMP will be in accordance with the process outlined in Section 3.13.1 of the CEMP. A copy of the updated plan and changes will be distributed to all relevant stakeholders in accordance with the approved document control procedure – refer to Section 3.11.2 of the CEMP.

Annexure A CoA and REMMs relevant to non-Aboriginal heritage management

Minister's Conditions of Approval

Table 12: Conditions of Approval relevant to Non-Aboriginal heritage management for the Project

CoA No	Condition Requirements	Document Reference
E84	The Proponent must conduct vibration testing before and during vibration generating activities that have the potential to impact on heritage items to identify minimum working distances to prevent cosmetic damage. In the event that the vibration testing and monitoring shows that the preferred values for vibration are likely to be exceeded, the Proponent must review the construction methodology and, if necessary, implement additional mitigation measures.	Section 7.1.1
E85	The Proponent must seek the advice of a heritage specialist on methods and locations for installing equipment used for vibration, movement and noise monitoring at heritage-listed structures.	Table 9 MMNAH 4
E154	The Proponent must not destroy, modify or otherwise physically affect any heritage items, including human remains, outside of the CSSI boundary, or undertake works in or on Alexandra Canal.	This Plan SAPs
E157	An Unexpected Heritage Finds Procedure must be prepared: <ul style="list-style-type: none"> to manage unexpected heritage finds in accordance with any guidelines and standards prepared by the Heritage Council of NSW or OEH; and by a suitably qualified and experienced heritage specialist. The Procedure must be included in the Construction Non- Aboriginal Heritage Management Sub-plan and Aboriginal Cultural Heritage Management Sub-plan required by Conditions C4 (g) and (h). Note: Human remains that are found unexpectedly during works are under the jurisdiction of the NSW State Coroner and must be reported to the NSW Police immediately.	Table 9 Annexure B
E160	The Proponent must investigate the feasibility of retaining Cadden Le Messurier (84 Lilyfield Road) and Former Hotel (78 Lilyfield Road)	Table 5, Section 7.3.2
E162	Prior to conducting acoustic treatment, any heritage item identified in the documents listed in Condition A1 the advice of a suitably qualified and experienced built heritage expert must be obtained and implemented to ensure any such work minimises any adverse impacts on the heritage significance of the item.	Section 7.1
E163	The Proponent must prepare a Heritage Archival Recording and Salvage Report, including photographic recording of heritage items which have been identified for demolition in the documents referred to in Condition A1 and outline how any salvage or recovery of material will be undertaken from these items.	Section 7.3
E163	Archival recording must be undertaken by a suitably qualified heritage specialist and prepared in accordance with NSW Heritage Office's How to Prepare Archival Records of Heritage Items (1998) and Photographic Recording of Heritage Items Using Film or Digital Capture (2006).	Section 7.3.2
E163	Within 12 months of completing the archival recording, the Proponent must submit the Heritage Archival Recording and Salvage Report to the Secretary, relevant council(s), relevant local libraries and local historical societies in the respective local government area(s).	Section 7.3.2
E164	Archival recording as required by Condition E163 must also be undertaken for the Cadden Le Messurier, former Hotel and the former Bank of NSW building (N/A), should these structures be demolished.	Section 7.3.2 Table 9

E165	<p>Following archival recording as required by Condition E163, and prior to demolition, the Proponent must assess options for sympathetic reuse (including integrated heritage displays and interpretation) on the Project or other options for conservation, including architectural salvage for re-use in comparable buildings and displays.</p> <p>Where salvage supports good conservation outcomes, the material is to be collected and stored in suitable repository locations established in consultation with relevant council(s). The salvage from any State-listed items or elements must be determined in consultation with the Heritage Division of OEH.</p> <p>Any residual items and materials are to be made available, through a process to be developed by the Proponent in consultation with the relevant council(s), to landowners within the locality from where the material originated.</p>	Section 7.3.2
E167	<p>The Proponent must prepare a Heritage Interpretation Plan, as committed to in the SPIR (NAH02) which identifies and interprets the key heritage values and stories of heritage items and heritage conservation areas impacted by the CSSI. The Heritage Interpretation Plan must include, but not be limited to:</p> <p>a) a discussion of the key interpretive themes, stories and messages proposed to interpret the history and significance of the affected heritage items and sections of heritage conservation areas; and</p> <p>(b) identification of interpretive initiatives implemented to mitigate impacts to archaeological relics, heritage items and conservation areas affected by the CSSI.</p>	Section 7.3.4
E168	<p>Prior to works that have a direct material impact on a Historical Archaeological Management Unit (HAMU), the Proponent must engage a suitably qualified archaeologist whose experience complies with the Heritage Council of NSW's Criteria for Assessment of Excavation Directors (July 2011) (referred to as the Excavation Director) to oversee and advise on matters associated with historic (sic) archaeology and to prepare an Historical Archaeological Research Design and Excavation Methodology.</p>	Section 7.3.5 Table 10
E169	<p>The Historical Archaeological Research Design and Excavation Methodology must to be submitted to the Heritage Council of NSW (or its delegate) for review and comment prior to finalisation. The Historical Archaeological Research Design and Excavation Methodology must:</p> <ul style="list-style-type: none"> ▪ be consistent with the NSW Heritage Council's Archaeological Assessments Guideline (1996) or as updated; ▪ provide for the detailed analysis of any heritage items discovered during the investigations; ▪ include management options for discovered heritage items, whether known or unexpected finds (including options for avoidance, salvage, relocation and display); ▪ for unexpected finds that are determined to be relics, set out the assessment process that will determine an appropriate archaeological response to managing their significance; ▪ include procedures for notifying the Heritage Council of NSW (or its delegate) and Secretary of any relic findings; and ▪ if the findings of the investigations are significant, provide for the preparation and implementation of a Heritage Interpretation Plan, as required under Condition E167. 	Section 7.3.3
E170	<p>Where excavation works are required in the vicinity of potential archaeological sites, the Excavation Director must be consulted to advise on how the works are to be managed and any archaeological impact minimised. The Excavation Director must be given the authority to advise on the duration and extent of oversight required during excavation.</p>	Table 10
E171	<p>Works within the vicinity of the find must not recommence until the relevant requirements of the Historical Archaeological Research Design and Excavation Methodology or advice on unexpected finds from the Excavation Director have been met.</p>	Table 9
E172	<p>The Proponent must prepare an Archaeological Excavation Report containing the findings of any excavations, including artefact analysis and the identification of a final repository of any finds. The report must be submitted to the Secretary within 12 months of completing all archaeological</p>	Section 7.3.5

	investigations. The Archaeological Excavation Report must also be submitted to the Heritage Council of NSW, the local library and the local Historical Society in the relevant local government area(s). A copy of the Archaeological Excavation Report must be retained with the relics at all times.	
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Revised Environmental Management Measures

Table 13: REMMS relevant to Non-Aboriginal heritage management for the Project

Impact	Ref #	Commitment	Timing	Document Reference																				
Ground settlement	PL6	Ground settlement will be managed to comply with the following criteria where possible:	Construction	Section 7.2																				
		<table border="1"> <thead> <tr> <th>Beneath structure/facility</th> <th>Maximum Settlement</th> <th>Maximum Angular Distortion</th> <th>Limited Tensile Strain (percent)*</th> </tr> </thead> <tbody> <tr> <td>Buildings – Low or non-sensitive properties (i.e. less than or equal to two levels and car parks)</td> <td>30 mm</td> <td>1 in 350</td> <td>0.1</td> </tr> <tr> <td>Buildings and pools – High or sensitive properties (i.e. greater than or equal to 3 levels and car parks)</td> <td>20 mm</td> <td>1 in 500</td> <td>0.1</td> </tr> <tr> <td>Roads and parking areas</td> <td>40 mm</td> <td>1 in 250</td> <td>N/A</td> </tr> <tr> <td>Parks</td> <td>50 mm</td> <td>1 in 250</td> <td>N/A</td> </tr> </tbody> </table>			Beneath structure/facility	Maximum Settlement	Maximum Angular Distortion	Limited Tensile Strain (percent)*	Buildings – Low or non-sensitive properties (i.e. less than or equal to two levels and car parks)	30 mm	1 in 350	0.1	Buildings and pools – High or sensitive properties (i.e. greater than or equal to 3 levels and car parks)	20 mm	1 in 500	0.1	Roads and parking areas	40 mm	1 in 250	N/A	Parks	50 mm	1 in 250	N/A
		Beneath structure/facility			Maximum Settlement	Maximum Angular Distortion	Limited Tensile Strain (percent)*																	
		Buildings – Low or non-sensitive properties (i.e. less than or equal to two levels and car parks)			30 mm	1 in 350	0.1																	
		Buildings and pools – High or sensitive properties (i.e. greater than or equal to 3 levels and car parks)			20 mm	1 in 500	0.1																	
	Roads and parking areas	40 mm	1 in 250	N/A																				
Parks	50 mm	1 in 250	N/A																					
* As defined in Burland et al. 'Building response to tunnelling – Case Studies from construction of the Jubilee Line Extension', London, Thomas Telfor (2001)																								
PL7	Further assessment of potential settlement impacts, including numerical modelling, will be undertaken during detailed design. In areas where ground movement in excess of settlement criteria is predicted, an instrumentation and monitoring program to measure settlement, distortion or strain will be implemented. Feasible and reasonable measures will be investigated and implemented to ensure where possible that the predicted settlement is within the criteria. Measures that will be considered may include (but are not limited to):	Pre-construction Construction	Table 9 MMNAH7																					

		<p>Review of the proposed tunnel design including:</p> <ul style="list-style-type: none"> ▪ The depth and alignment of tunnels ▪ The proximity of multiple tunnels to each other ▪ The proposed tunnel support system ▪ The tunnel lining to manage groundwater inflows ▪ Rationalising the layout of the proposed ventilation tunnels including the number, location and length of tunnels ▪ Review of the proposed construction methodology ▪ Consideration of ground movement options. 		
	PL8	<p>A Settlement Monitoring Program will be prepared that will provide details on:</p> <ul style="list-style-type: none"> ▪ Settlement criteria and predictions ▪ Location of monitoring points ▪ Duration of monitoring ▪ Data collection (type and method) ▪ Comparison of actual settlement with predictions <p>Triggers and corrective actions that will be implemented if, based on monitoring results, actual settlement is likely to exceed predictions or the relevant criteria, with the aim of complying with the criteria.</p> <p>The Settlement Monitoring Program will be endorsed by the Independent Property Impact Assessment Panel (see PL 11) prior to the commencement of any construction activities with the potential to result in settlement, as determined by the panel, unless otherwise agreed to by the Secretary.</p>	Pre-construction	Section 7.2
	PL10	<p>Building condition surveys will be offered to property owners within the zone of influence of tunnel settlement (50 metres from the outer edge of the tunnels and within 50 metres of surface works) or as otherwise directed by the Independent Property Impact Assessment Panel (see PL11). Building condition surveys of properties will be carried out prior to the commencement of any Project works in the vicinity that have the potential to result in damage to the properties, as identified by the contractor and confirmed by the Independent Property Impact Assessment Panel. Building condition surveys will be carried out by a structural engineer.</p>	Pre-construction Post-construction	Table 9 MMNAH6
General heritage impacts	NAH01	<p>Construction Heritage Management Plan (CHMP) will be prepared and implemented as part of the Construction Environmental Management Plan. The CHMP will include:</p>	Pre-construction	This Plan
		<ul style="list-style-type: none"> ▪ Measures that will be implemented to manage potential impacts to items of heritage significance 	Pre-construction Construction	Table 9
		<ul style="list-style-type: none"> ▪ Inclusion of heritage awareness and management training for relevant personnel involved in site works. 	Pre-construction Construction	Section 8.2

	<ul style="list-style-type: none"> ▪ Details regarding the conservation and curation of any historical artefacts recovered during works. 	Pre-construction Construction	Section 7.3
NAH02	<p>An Interpretation Strategy will be developed and implemented to identify and interpret the key heritage values and stories of the heritage areas affected by the Project and inform the development of the Urban Design and Landscape Plan (UDLP) for the Project, in accordance with Interpreting Heritage Places and Items Guideline (NSW Heritage Office 2005). The Interpretation Strategy will:</p> <ul style="list-style-type: none"> ▪ Build on themes, stories and initiatives proposed as part of other stages of WestConnex to ensure a consistent approach to heritage interpretation for the Project ▪ Include themes and stories including the Rozelle railways historic functions, trains and trams transport, industrialisation and The Rozelle-Darling Harbour Goods Line ▪ Identify how the rail related infrastructure salvaged from the Rozelle Rail Yards will be reused. 	Construction	Section 7.3.4
NAH03	<p>Photographic archival recording will be undertaken of:</p> <ul style="list-style-type: none"> ▪ Infrastructure associated with the White Bay Power Station site that could be affected by the project. ▪ Whites Creek Stormwater Channel (in the area to be impacted) ▪ Stormwater Canal off Lilyfield Road ▪ 'Cadden Le Messurier' at 84 Lilyfield Road ▪ Former Hotel at 78 Lilyfield Road ▪ Victoria Road overbridge ▪ Each house at 260–266 Victoria Road ▪ Each house at 248-250 Victoria Road. <p>This will be undertaken in accordance with the NSW Heritage Office guidelines Photographic Recording of Heritage Items Using Film or Digital Capture (2006).</p> <p>The photographic archival recording will occur prior to any works that have the potential to impact upon the items and will include the identification of appropriate stakeholders to receive copies of the documentation.</p>	Pre-construction & detailed design	Section 7.3.2 Table 5
NAH04	<p>As part of the CHMP, a Historical Archaeological Research Design (HARD) will be prepared before the start of proposed works within each of the following Historical Archaeological Management Units (HAMUs): HAMU 3, HAMU 6, HAMU 7 and HAMU 9. The HARD will be prepared by a qualified archaeologist in consultation with the NSW Heritage Council and will include:</p> <ul style="list-style-type: none"> ▪ Descriptions of clear significance thresholds for possible archaeological items that may be uncovered during works 	Pre-construction	Section 7.3.3

		<ul style="list-style-type: none"> ▪ A methodology and scope for a program of archaeological excavation, investigation, and recording of any historical archaeological remains that will be impacted by the Project ▪ Requirement for post-excavation reporting, including artefact analysis and additional historical research, where necessary, and long-term management of records ▪ Details of what will happen with any artefacts uncovered and associated reports 		
	NAH05	Before excavation of archaeological management sites, a suitably qualified Excavation Director who complies with Criteria for Assessment of Excavation Directors (Heritage Council of NSW 2011) will be engaged to advise on matters associated with historic (sic) archaeology. Where archaeological excavation is required, the Excavation Director will oversee excavation and advise on archaeological matters.	Pre-construction Construction	Table 10
Heritage impacts due to vibration	NAH06	Potential vibration impacts to features of heritage significance will be managed in accordance with the CNVMP prepared for the Project.	Pre-construction Construction	Table 9 MMNAH3
Heritage impacts due to settlement	NAH07	Potential heritage impacts due to settlement and ground movement caused by the Project will be managed in accordance with the relevant measures identified in the land use and property section of this table (refer to PL 6, PL 7, PL 8 and PL 10) and monitored in accordance with the Settlement Monitoring Program.	Construction	Section 7.2
Impacts to unexpected items of potential heritage conservation significance or human remains	NAH08	Any items of potential heritage conservation significance or human remains discovered during construction will be managed in accordance with an Unexpected Heritage Finds and Human Remains Procedure developed for the Project in accordance with relevant guidance provided by the Heritage Council of NSW, the NSW Heritage Division of OEH and the Standard Management Procedure Unexpected Archaeological Finds (Roads and Maritime 2015a). The procedure will detail requirements regarding notification of relevant agencies and the NSW Police and will be implemented for the duration of construction.	Construction	Section 7.3.6 Annexure B
Loss of heritage where items are required to be demolished	NAH09	A Heritage Salvage Strategy will be prepared to identify the salvage potential of the fabric and features from heritage items and potential heritage items that will be demolished to facilitate the Project. This could include timber joinery, fireplaces, stained glass, stairs, decorative tiles, bricks, steel truss structures, windows, etc. The strategy will also identify options and a process for dissemination of salvaged items to owners, community groups and interested parties.	Construction	Section 7.3.2
	NAH10	Sandstone kerbing in the vicinity of 32 and 34 Victoria Road, Rozelle that will be removed to facilitate the project will be salvaged and provided to Inner West Council.	Construction	Table 5
Potential impact to White Bay Power Station	NAH11	The potential for impacts to the railway cutting on the eastern side of Victoria Road, associated with the White Bay Power Station, will be considered during the development of the detailed design for the realigned Victoria Road and associated bridge. The final design will seek to avoid impact to the railway cutting and maintain the visual relationship between the cutting and the White Bay Power Station site. Landscaping sympathetic to the relationship, developed in consultation with a heritage specialist, will be included in the UDLP for the project.	Construction	Table 5
	NAH12	A condition assessment of the southern penstock (and its associated water channels) will be carried out by a heritage specialist and a structural engineer prior to any works in the vicinity with the potential	Construction	Table 5

		impact upon the item. If required any conservation works required to limit potential impacts on deteriorated fabric (loose bricks, corroded steel) will be identified and implemented prior to construction.		
	NAH13	The southern penstock and its associated water channels (location and extent unknown) will be protected during works associated with the reconstruction of the Victoria Road Bridge bridge.	Construction	Table 5
Potential impact to Whites Creek Stormwater Channel No 95	NAH14	The new bridge over the Whites Creek Stormwater Channel must not impact the extant significant heritage fabric of the channel and should be a solely independent structure.	Construction	Table 5
Potential impact to White Bay Power Station	NAH16	A condition assessment of the northern penstock will also be carried out by a heritage specialist and a structural engineer prior to any vibratory works in the vicinity that have the potential to impact on the item. The condition assessment will inform additional management measures to protect the northern penstock, if required. Any conservation works required to limit potential impacts on deteriorated fabric (loose bricks, corroded steel) will be identified and implemented prior to commencement of the relevant vibratory works in the vicinity.	Pre-construction	Table 5
Impacts on unexpected finds of Aboriginal objects	AH1	Any items of potential Aboriginal archaeological or cultural heritage conservation significance or human remains discovered during construction will be managed in accordance with the Unexpected Heritage Finds and Human Remains Procedure developed for the Project.	Construction	Section 7.3.6 Annexure B

**Annexure B Roads and Maritime Standard Management
Procedure: Unexpected Heritage Items**



Transport
Roads & Maritime
Services

STANDARD MANAGEMENT PROCEDURE

Unexpected Heritage Items

March 2015



About this release

RMS/ISBN numbers	RMS 12.003 ISBN 9781922040305
Title	Unexpected Heritage Items Procedure

Approval and authorisation		Name
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Final	1 November 2011	First Draft
Revised	23 July 2012	Amended to reflect that (a) unexpected finds do not include items covered by a relevant approval; (b) Aboriginal people must be consulted where an unexpected find is likely to be an Aboriginal object; (c) the Department of Planning and Environment must be notified in accordance with Step 5 of this procedure for Part 3A and Part 5.1 projects.
Revised	09 October 2013	Amended to clarify that the procedure applies to all types of unexpected heritage items, not just archaeological items. The procedure introduces the term 'Historic Items' to cover both 'archaeological relics' and 'other historic items' such as works, structures, buildings and movable objects. The title of the document has been amended to better reflect this clarification.
Revised	16 March 2015	The procedure was streamlined to address all project types including maintenance works. The separate maintenance procedure (formerly Appendix B) was removed. Names and titles updated throughout.

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Please note

This procedure applies to all development and activities concerning roads, road infrastructure and road related assets undertaken by Roads and Maritime.

For advice on how to manage unexpected heritage items as a result of activities related to maritime infrastructure projects, please contact the Senior Environmental Specialist (Heritage).

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Unexpected heritage items procedure

1. Purpose

This procedure has been developed to provide a consistent method for managing unexpected heritage items (both Aboriginal and non-Aboriginal) that are discovered during Roads and Maritime activities. This procedure includes Roads and Maritime's heritage notification obligations under the *Heritage Act 1977* (NSW), *National Parks and Wildlife Act 1974* (NSW), *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cth) and the *Coroner's Act 2009* (NSW).

This document provides relevant background information in Section 3, followed by the technical procedure in Sections 6 and 7. Associated guidance referred to in the procedure can be found in Appendices A-H.

2. Scope

This procedure assumes that an appropriate level of Aboriginal and non-Aboriginal heritage assessment has been undertaken prior to on site project work commencing. In some case, such as exempt development, detailed heritage assessment may not be required.

Despite appropriate and adequate investigation, unexpected heritage items may still be discovered during maintenance and construction works. When this happens, this procedure must be followed. This procedure provides direction on when to stop work, where to seek technical advice and how to notify the regulator, if required.

This procedure applies to all Road and Maritime construction and maintenance activities

This procedure **applies to**:

- The discovery of any unexpected heritage item (usually during construction), where Roads and Maritime does not have approval to disturb the item or where safeguards for managing the disturbance (apart from this procedure) are not contained in the environmental impact assessment.
- All Roads and Maritime projects that are approved or determined under Part 3A (including Transitional Part 3A Projects), Part 4, Part 5 or Part 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), or any development that is exempt under the Act.

This procedure must be followed by Roads and Maritime staff, alliance partners (including local council staff working under Road Maintenance Council Contracts, [RMCC]), developers under works authorisation deeds or any person undertaking Part 5 assessment for Roads and Maritime.

This procedure **does not apply** to:

- The legal discovery and disturbance of heritage items as a result of investigations being undertaken in accordance with OEH's *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW* (2010); an Aboriginal Heritage Impact Permit (AHIP) issued under the *National Parks and Wildlife Act*

1974; or an approval issued under the *Heritage Act 1977*¹.

- The legal discovery and disturbance of heritage items as a result of investigations (or other activities) that are required to be carried out for the purpose of complying with any environmental assessment requirements under Part 3A (including Transitional Part 3A Projects) or Part 5.1 of the EP&A Act.
- The legal discovery and disturbance of heritage items as a result of construction related activities, where the disturbance is permissible in accordance with an AHIP²; an approval issued under the *Heritage Act 1977*; the Minister for Planning's conditions of project approval; or safeguards (apart from this procedure) that are contained in the relevant environmental impact assessment.

All construction environment management plans (CEMPs) must make reference to and/or include this procedure (often included as a heritage sub-plan). Where approved CEMPs exist they must be followed in the first instance. Where there is a difference between approved CEMPs and this procedure, the approved CEMP must be followed. Where an approved CEMP does not provide sufficient detail on particular issues, this procedure should be used as additional guidance. When in doubt always seek environment and legal advice on varying approved CEMPs.

3. Types of unexpected heritage items and their legal protection

The roles of project, field and environmental staff are critical to the early identification and protection of unexpected heritage items. **Appendix A** illustrates the wide range of heritage discoveries found on Roads and Maritime projects and provides a useful photographic guide. Subsequent confirmation of heritage discoveries must then be identified and assessed by technical specialists (usually an archaeologist).

An 'unexpected heritage item' means any unanticipated discovery of an actual or potential heritage item, for which Roads and Maritime does not have approval to disturb³ or does not have a safeguard in place (apart from this procedure) to manage the disturbance.

These discoveries are categorised as either:

- (a) Aboriginal objects
- (b) Historic (non-Aboriginal) heritage items
- (c) Human skeletal remains.

The relevant legislation that applies to each of these categories is described below.

3.1 Aboriginal objects

The *National Park and Wildlife Act 1974* protects *Aboriginal objects* which are defined as:

¹ RMS' heritage obligations are incorporated into the conditions of heritage approvals.

² RMS *Procedure for Aboriginal cultural heritage consultation and investigation* (2011) recommends that Part 4 and Part 5 projects that are likely to impact Aboriginal objects during construction seek a whole-of-project AHIP. This type of AHIP generally allows a project to impact known and potential Aboriginal objects within the entire project area, without the need to stop works. It should be noted that an AHIP may exclude impact to certain objects and areas, such as burials or ceremonial sites. In such cases, the project must follow this procedure.

³ Disturbance is considered to be any physical interference with the item that results in it being destroyed, defaced, damaged, harmed, impacted or altered in any way (this includes archaeological investigation activities).

“any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non Aboriginal extraction, and includes Aboriginal remains”⁴.

Examples of Aboriginal objects include stone tool artefacts, shell middens, axe grinding grooves, pigment or engraved rock art, burials and scarred trees.

IMPORTANT!

All Aboriginal objects, regardless of significance, are protected under law.

If any impact is expected to an Aboriginal object, an Aboriginal Heritage Impact Permit (AHIP) is usually required from the Office of Environment and Heritage (OEH)⁵. Also, when a person becomes aware of an Aboriginal object they must notify the Director-General of OEH about its location⁶. Assistance on how to do this is provided in Section 7 (Step 5).

3.2 Historic heritage items

Historic (non-Aboriginal) heritage items may include:

- Archaeological ‘relics’
- Other historic items (i.e. works, structures, buildings or movable objects).

3.2.1 Archaeological relics

The *Heritage Act 1977* protects *relics* which are defined as:

“any deposit, artefact, object or material evidence that relates to the settlement of the area that comprises NSW, not being Aboriginal settlement; and is of State or local heritage significance”⁷.

Relics are archaeological items of local or state significance which may relate to past domestic, industrial or agricultural activities in NSW, and can include bottles, remnants of clothing, pottery, building materials and general refuse.

⁴ Section 5(1) *National Park and Wildlife Act 1974*.

⁵ Except when Part 3A, Division 4.1 of Part 4 or Part 5.1 of the *EP&A Act* applies.

⁶ This is required under s89(A) of the *National Park and Wildlife Act 1974* and applies to **all projects** assessed under Part 3A, Part 4, Part 5 and Part 5.1 of the *EP&A Act*, including exempt development.

⁷ Section 4(1) *Heritage Act 1977*.

IMPORTANT!

All relics are subject to statutory controls and protections.

If a relic is likely to be disturbed, a heritage approval is usually required from the NSW Heritage Council⁸. Also, when a person discovers a relic they must notify the NSW Heritage Council of its location⁹. Advice on how to do this is provided in Section 7 (Step 5).

3.2.2 Other historic items

Some historic heritage items are not considered to be 'relics'; but are instead referred to as works, buildings, structures or movable objects. Examples of these items that Roads and Maritime may encounter include culverts, historic road formations, historic pavements, buried roads, retaining walls, tramlines, cisterns, fences, sheds, buildings and conduits. Although an approval under the *Heritage Act 1977* may not be required to disturb these items, their discovery must be managed in accordance with this procedure.

As a general rule, an archaeological relic requires discovery or examination through the act of excavation. An archaeological excavation permit under Section 140 of the *Heritage Act 1977* is required to do this. In contrast, 'other historic items' either exist above the ground's surface (e.g. a shed), or they are designed to operate and exist beneath the ground's surface (e.g. a culvert).

Despite this difference, it should be remembered that relics can often be associated with 'other heritage items', such as archaeological deposits within cisterns and underfloor deposits under buildings.

3.3 Human skeletal remains

Human skeletal remains can be identified as either an Aboriginal object or non-Aboriginal relic depending on ancestry of the individual (Aboriginal or non-Aboriginal) and burial context (archaeological or non-archaeological). Remains are considered to be archaeological when the time elapsed since death is suspected of being 100 years or more. Depending on ancestry and context, different legislation applies.

As a simple example, a pre-contact archaeological Aboriginal burial would be protected under the *National Park and Wildlife Act 1974*, while a historic (non-Aboriginal) archaeological burial within a cemetery would be protected under the *Heritage Act 1977*. For these cases, the relevant heritage approval and notification requirements described in the above sections 3.1 and 3.2 would apply. In addition to the *National Park and Wildlife Act 1974*, finding Aboriginal human remains also triggers notification requirements to the Commonwealth Minister for the Environment under s20(1) of the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cth).

⁸ Except when Part 3A, Division 4.1 of Part 4 or Part 5.1 of the *EP&A Act* applies.

⁹ This is required under s146 of the *Heritage Act 1977* and applies to **all projects** assessed under Part 3A, Part 4, Part 5 and Part 5.1 of the *EP&A Act*, including exempt development.

 **IMPORTANT!**

All human skeletal remains are subject to statutory controls and protections.

All bones must be treated as potential human skeletal remains and work around them must stop while they are protected and investigated urgently.

However, where it is suspected that less than 100 years has elapsed since death, the human skeletal remains come under the jurisdiction of the State Coroner and the *Coroners Act 2009* (NSW). Such a case would be considered a 'reportable death' and under legal notification obligations set out in s35(2); a person must report the death to a police officer, a coroner or an assistant coroner as soon as possible. This applies to all human remains less than 100 years old¹⁰ regardless of ancestry (ie both Aboriginal and non-Aboriginal remains). Public health controls may also apply.

Guidance on what to do when suspected human remains are found is provided in **Appendix E**.

¹⁰ Under s19 of the *Coroners Act 2009*, the coroner has no jurisdiction to conduct an inquest into reportable death unless it appears to the coroner that (or that there is reasonable cause to suspect that) the death or suspected death occurred within the last 100 years.

4. Responsibilities

The following roles and responsibilities are relevant to this procedure.

Role	Definition/responsibility
Aboriginal Cultural Heritage Advisor (ACHA)	Provides Aboriginal cultural heritage advice to project teams. Acts as Aboriginal community liaison for projects on cultural heritage matters. Engages and consults with the Aboriginal community as per the Roads and Maritime <i>Procedure for Aboriginal Cultural Heritage Consultation and Investigation</i> .
Aboriginal Sites Officer (ASO)	Is an appropriately trained and skilled Aboriginal person whose role is to identify and assess Aboriginal objects and cultural values. For details on engaging Aboriginal Sites Officers, refer to Roads and Maritime <i>Procedure for Aboriginal Cultural Heritage Consultation and Investigation</i> .
Archaeologist (A)	Professional consultant, contracted on a case-by-case basis to provide heritage and archaeological advice and technical services (such as reports, heritage approval documentation etc). Major projects with complex heritage issues often have an on call Project archaeologist.
Project Manager (PM)	Ensures all aspects of this procedure are implemented. The PM can delegate specific tasks to a construction environment manager, Roads and Maritime site representatives or regional environment staff, where appropriate.
Regional Environment Staff (RES)	Provides advice on this procedure to project teams. Ensuring this procedure is implemented consistently by supporting the PM. Supporting project teams during the uncovering of unexpected finds. Reviewing archaeological management plans and liaising with heritage staff and archaeological consultants as needed.
Registered Aboriginal Parties (RAPs)	RAPs are Aboriginal people who have registered with Roads and Maritime to be consulted about a proposed Roads and Maritime project or activity in accordance with OEHS Aboriginal cultural heritage consultation requirements for proponents (2010).
Senior Environmental Specialist (Heritage) (SES(H))	Provides technical assistance on this procedure and archaeological technical matters, as required. Reviewing the archaeological management plans and facilitating heritage approval applications, where required. Assists with regulator engagement, where required.
Team Leader - Regional Maintenance Delivery (TL-RMD)	Ensures Regional Maintenance Delivery staff stop work in the vicinity of an unexpected heritage item. Completes Unexpected Heritage Item Recording Form 418 and notifies WS-RMD.
Technical Specialist	Professional consultant contracted to provide specific technical advice that relates to the specific type of

	unexpected heritage find (eg a forensic or physical anthropologist who can identify and analyse human skeletal remains).
Works Supervisor - Regional Maintenance Delivery (WS-RMD)	Ensures Regional Maintenance Delivery staff are aware of this procedure. Supports the Team Leader - Regional Maintenance Delivery during the implementation of this procedure and ensures reporting of unexpected heritage items through environment management systems.

5. Acronyms

The following acronyms are relevant to this procedure.

Acronym	Meaning
A	Archaeologist
ACHA	Aboriginal Cultural Heritage Advisor
AHIP	Aboriginal Heritage Impact Permit
ASO	Aboriginal Site Officer
CEMP	Construction Environment Management Plan
OEH	Office of Environment and Heritage.
PACHCI	Procedure for Aboriginal Cultural Heritage Consultation and Investigation
PM	Project Manager
RAP	Registered Aboriginal Parties
RES	Regional Environmental Staff
SES(H)	Senior Environmental Specialist (Heritage)
TL-RMD	Team Leader – Regional Maintenance Division
RMD	Regional Maintenance Delivery
RMS	Roads and Maritime
WS-RMD	Works Supervisor - Regional Maintenance Division

6. Overview of the procedure

On discovering something that could be an unexpected heritage item ('the item'), the following procedure must be followed. There are eight steps in the procedure. These steps are summarised in **Figure 1** below and explained in detail in Section 7.

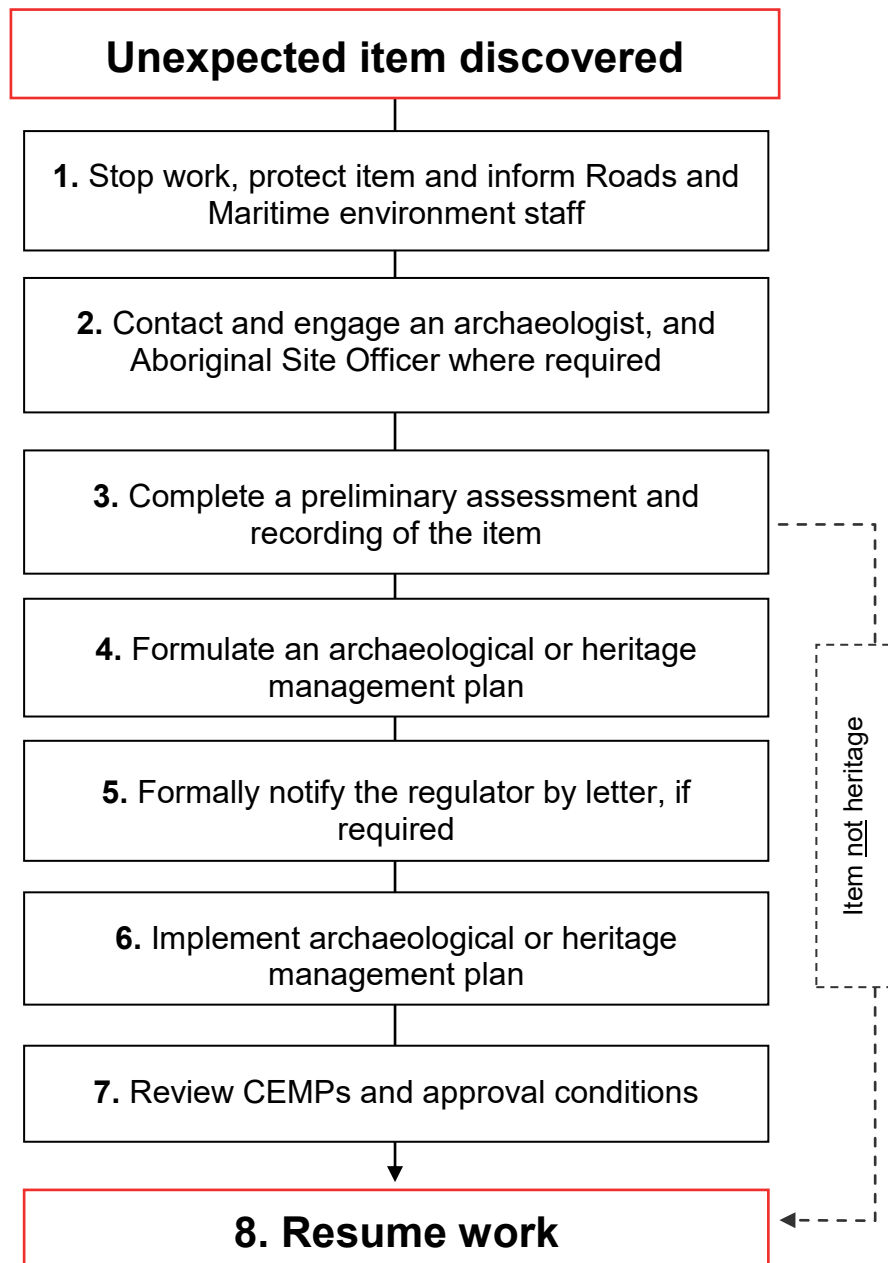


Figure 1: Overview of steps to be undertaken on the discovery of an unexpected heritage item.

IMPORTANT!

RMS may have approval or specific safeguards in place (apart from this procedure) to impact on certain heritage items during construction. If you discover a heritage item and you are unsure whether an approval or safeguard is in place, STOP works and follow this procedure.

7. Unexpected heritage items procedure

Table 1: Specific tasks to be implemented following the discovery of an unexpected heritage item.

Aboriginal Cultural Heritage Advisor (ACHA); Aboriginal Sites Officer (ASO); Archaeologist (A); Project Manager (PM); Regional Environment Staff (RES); Registered Aboriginal Parties (RAPs); Senior Environmental Specialist (Heritage) (SES(H)); Team leader – Roads and Maintenance Division (TL - RMD); Works supervisor – Roads and Maintenance Division (WS - RMD).

Step	Task	Responsibility	Guidance & Tools
1	Stop work, protect item and inform Roads and Maritime environment staff		
1.1	Stop all work in the immediate area of the item and notify the Project Manager or Team Leader-RMD. (For maintenance activities, the Team Leader is to also notify the Works Supervisor-RMD)	All	Appendix A (Identifying Unexpected Heritage items)
1.2	Establish a 'no-go zone' around the item. Use high visibility fencing, where practical.	PM or TL-RMD	
1.3	Inform all site personnel about the no-go zone. No further interference, including works, ground disturbance, touching or moving the item must occur within the no-go zone.	PM or TL-RMD	
1.4	Inspect, document and photograph the item using 'Unexpected Heritage Item Recording Form 418'.	PM or TL-RMD	Appendix B (Unexpected Heritage Item Recording Form 418) Appendix C (Photographing Unexpected Heritage items)

Step	Task	Responsibility	Guidance & Tools
1.5	<p>Is the item likely to be bone?</p> <p>If yes, follow the steps in Appendix E – ‘Uncovering bones’. Where it is obvious that the bones are human remains, you must notify the local police by telephone immediately. They may take command of all or part of the site.</p> <p>If no, proceed to next step.</p>	PM or WS-RMD	Appendix E (Uncovering Bones)
1.6	<p>Is the item likely to be:</p> <p>a) A relic? (A relic is evidence of past human activity which has local or state heritage significance. It may include items such as bottles, utensils, remnants of clothing, crockery, personal effects, tools, machinery and domestic or industrial refuse) and/or</p> <p>b) An Aboriginal object? (An Aboriginal object may include a shell midden, stone tools, bones, rock art or a scarred tree).</p> <p>If yes, proceed directly to Step 1.8</p> <p>If no, proceed to next step.</p>	PM or WS-RMD	Appendix A (Identifying heritage items)
1.7	<p>Is the item likely to be a “work”, building or standing structure? (This may include tram tracks, kerbing, historic road pavement, fences, sheds or building foundations).</p> <p>If yes, can works avoid further disturbance to the item? (E.g. if historic road base/tram tracks have been exposed, can they be left in place?) If yes, works may proceed without further disturbance to the item. Complete Step 1.8 within 24 hours.</p> <p>If works cannot avoid further disturbance to the item, works must not recommence at this time. Complete the remaining steps in this procedure.</p>	PM or WS-RMD	Appendix A (Identifying heritage items)

Step	Task	Responsibility	Guidance & Tools
1.8	Inform relevant Roads and Maritime Regional Environmental Staff of item by providing them with the completed 'Form 418'.	PM or WS-RMD (RES)	Appendix D (Key Environmental Contacts)
1.9	<p>Regional Environmental Staff to advise Project Manager or Works Supervisor whether RMS has an approval or safeguard in place (apart from this procedure) to impact on the 'item'. (An approval may include an approval under the <i>Heritage Act</i>, the <i>National Parks and Wildlife Act</i> or the <i>Planning and Assessment Act</i>).</p> <p>Does RMS have an approval, permit or appropriate safeguard in place to impact on the item?</p> <p>If yes, work may recommence in accordance with the approval, permit or safeguard. There is no further requirement to follow this procedure.</p> <p>If no, continue to next step.</p>		
1.10	Liaise with Traffic Management Centre where the delay is likely to affect traffic flow.	PM or WS-RMD	
1.11	Report the item as a 'Reportable Event' in accordance with the Roads and Maritime <i>Environmental Incident Classification and Reporting Procedure</i> . Implement any additional reporting requirements related to the project's approval and CEMP, where relevant.	PM or WS-RMD	RMS Environmental Incident Classification and Reporting Procedure
2	Contact and engage an archaeologist and, where required, an Aboriginal site officer		
2.1	<p>Contact the Project (on-call) Archaeologist to discuss the location and extent of the item and to arrange a site inspection, if required. The project CEMP may contain contact details of the Project Archaeologist.</p> <p>OR</p>	PM or WS-RMD (A; RES; SES(H))	Also see Appendix D (Key Environmental Contacts)

Step	Task	Responsibility	Guidance & Tools
	Where there is no project archaeologist engaged for the works, engage a suitably qualified and experienced archaeological consultant to assess the find. A list of heritage consultants is available on the RMS contractor panels on the Buyways homepage. Regional environment staff and Roads and Maritime heritage staff can also advise on appropriate consultants.		<u>Buyways</u>
2.2	Where the item is likely to be an Aboriginal object, speak with your Aboriginal Cultural Heritage Advisor to arrange for an Aboriginal Sites Officer to assess the find. Generally, an Aboriginal Sites Officer would be from the relevant local Aboriginal land council. If an alternative contact person (ie a RAP) has been nominated as a result of previous consultation, then that person is to be contacted.	PM or WS-RMD (ACHA; ASO)	
2.3	If requested, provide photographs of the item taken at Step 1.4 to the archaeologist, and Aboriginal Sites Officer if relevant.	PM or WS-RMD (RES)	Appendix C (Photographing Unexpected Heritage items)
3	Preliminary assessment and recording of the find		
3.1	In a minority of cases, the archaeologist (and Aboriginal Sites Officer, if relevant) may determine from the photographs that no site inspection is required because no archaeological constraint exists for the project (<i>eg the item is not a 'relic', a 'heritage item' or an 'Aboriginal object'</i>). Any such advice should be provided in writing (eg via email) and confirmed by the Project Manager or Works Supervisor - RMD.	A/PM/ASO/ WS-RMD	Proceed to Step 8
3.2	Arrange site access for the archaeologist (and Aboriginal Sites Officer, if relevant) to inspect the item as soon as practicable. In the majority of cases a site inspection is required to conduct a preliminary assessment.	PM or WS-RMD	
3.3	Subject to the archaeologist's assessment (and the Aboriginal Sites Officer's assessment, if relevant), work may recommence at a set distance from the item. This is to protect any other archaeological material that may exist in the vicinity, which has not yet been uncovered. Existing protective fencing established in Step 1.2 may need to be adjusted to	A/PM/ASO/ WS-RMD	

Step	Task	Responsibility	Guidance & Tools
	reflect the extent of the newly assessed protective area. No works are to take place within this area once established.		
3.4	The archaeologist (and Aboriginal Sites Officer, if relevant) may provide advice after the site inspection and preliminary assessment that no archaeological constraint exists for the project (<i>eg the item is not a 'relic', a 'heritage item' or an 'Aboriginal object'</i>). Any such advice should be provided in writing (eg via email) and confirmed by the Project Manager or Works Supervisor - RMD.	A/PM/ASO/ WS-RMD	Proceed to Step 8
3.5	Where required, seek additional specialist technical advice (such as a forensic or physical anthropologist to identify skeletal remains). Regional environment staff and/or Roads and Maritime heritage staff can provide contacts for such specialist consultants.	RES/SES(H)	Appendix D (Key Environmental Contacts)
3.6	Where the item has been identified as a 'relic', 'heritage item' or an 'Aboriginal object' the archaeologist should formally record the item.	A	
3.7	The regulator can be notified informally by telephone at this stage by the archaeologist, Project Manager (or delegate) or Works Supervisor - RMD. Any verbal conversations with regulators must be noted on the project file for future reference.	PM/A/WS-RMD	
4	Prepare an archaeological or heritage management plan		
4.1	The archaeologist must prepare an archaeological or heritage management plan (with input from the Aboriginal Sites Officer, where relevant) shortly after the site inspection. This plan is a brief overview of the following: (a) description of the feature, (b) historic context, if data is easily accessible, (c) likely significance, (d) heritage approval and regulatory notification requirements, (e) heritage reporting requirements, (f) stakeholder consultation requirements, (g) relevance to other project approvals and management plans etc.	A/ASO	Appendix F (Archaeological/ Heritage Advice Checklist)
4.2	In preparing the plan, the archaeologist with the assistance of regional environment staff must review the CEMP, any heritage sub-plans, any conditions of heritage approvals, conditions of project approval (and or Minister's Conditions of Approval) and heritage assessment documentation (eg Aboriginal Cultural Heritage Assessment Report). This will outline if the unexpected item is consistent with previous heritage/project approval(s)	A/RES/PM	Appendix F (Archaeological/ Heritage Advice Checklist)

Step	Task	Responsibility	Guidance & Tools
	and/or previously agreed management strategies. The Project Manager and regional environment staff must provide all relevant documents to the archaeologist to assist with this. Discussions should occur with design engineers to consider if re-design options exist and are appropriate.		
4.3	The archaeologist must submit this plan as a letter, brief report or email to the Project Manager outlining all relevant archaeological or heritage issues. This plan should be submitted to the Project Manager as soon as practicable. Given that the archaeological management plan is an overview of all the necessary requirements (and the urgency of the situation), it should take no longer than two working days to submit to the Project Manager.	A	
4.4	The Project Manager or Works Supervisor must review the archaeological or heritage management plan to ensure all requirements can reasonably be implemented. Seek additional advice from regional environment staff and Roads and Maritime heritage staff, if required.	PM/RES/SES(H)/ WS-RMD	
5	Notify the regulator, if required.		
5.1	Review the archaeological or heritage management plan to confirm if regulator notification is required. Is notification required? If no , proceed directly to Step 6 If yes , proceed to next step.	PM/RES/SES(H)/ WS-RMD	
5.2	If notification is required, complete the template notification letter.	PM or WS-RMD	Appendix G (Template Notification Letter)
5.3	Forward the draft notification letter, archaeological or heritage management plan and the site recording form to regional environment staff and Senior Environmental Specialist (Heritage) for review, and consider any suggested amendments.	PM/RES/SES(H)/ WS-RMD	

Step	Task	Responsibility	Guidance & Tools
5.4	Forward the signed notification letter to the relevant regulator (ie notification of relics must be given to the Heritage Division, Office of Environment and Heritage (OEH), while notification for Aboriginal objects must be given to the relevant Aboriginal section of OEH). Informal notification (via a phone call or email) to the regulator prior to sending the letter is appropriate. The archaeological management plan and the completed site recording form must be submitted with the notification letter. For Part 3A and Part 5.1 projects, the Department of Planning and Environment must also be notified.	PM or WS-RMD	Appendix D (Key Environmental Contacts)
5.5	A copy of the final signed notification letter, archaeological or heritage management plan and the site recording form should be kept on file by the Project Manager or Works Supervisor- RMD and a copy sent to the Senior Environmental Specialist (Heritage).	PM or WS-RMD	
6	Implement archaeological or heritage management plan		
6.1	Modify the archaeological or heritage management plan to take into account any additional advice resulting from notification and discussions with the regulator.	A/PM or WS-RMD (RES)	
6.2	Implement the archaeological or heritage management plan. Where impact is expected, this would include such things as a formal assessment of significance and heritage impact assessment, preparation of excavation or recording methodologies, consultation with registered Aboriginal parties, obtaining heritage approvals etc, if required.	PM or WS-RMD (RAPs and RES)	PACHCI Stage 3
6.3	Where heritage approval is required contact regional environment staff for further advice and support material. Please note time constraints associated with heritage approval preparation and processing. Project scheduling may need to be revised where extensive delays are expected.	PM/RES/WS-RMD	
6.4	For Part 3A/Part 5.1 projects, assess whether heritage impact is consistent with the project approval or if project approval modification is required from the Department of Planning and Environment. Seek advice from regional environment staff and Environment Branch specialist staff if unsure.	PM/RES	

Step	Task	Responsibility	Guidance & Tools
6.5	Where statutory approvals (or project approval modification) are required, impact upon relics and/or Aboriginal objects must not occur until heritage approvals are issued by the appropriate regulator.	PM or WS-RMD	
6.6	Where statutory approval (or Part 3A/Part 5.1 project modification) is not required and where recording is recommended by the archaeologist, sufficient time must be allowed for this to occur.	PM or WS-RMD	
6.7	Ensure short term and permanent storage locations are identified for archaeological material or other heritage material is removed from site, where required. Interested third parties (eg museums or local councils) should be consulted on this issue. Contact regional environment staff and Senior Environmental Specialist (Heritage) for advice on this matter, if required.	PM or WS-RMD	
7	Review CEMPs and approval conditions		
7.1	Check whether written notification is required to be sent to the regulator before re-commencing work. Where this is not explicit in heritage approval conditions, expectations should be clarified directly with the regulator.	PM	
7.2	Update the CEMP, site mapping and project delivery program as appropriate with any project changes resulting from final heritage management (eg retention of heritage item, salvage of item). Updated CEMPs must incorporate additional conditions arising from any heritage approvals, and Aboriginal community consultation if relevant. Include any changes to CEMP in site induction material and update site workers during toolbox talks.	PM	
8	Resume work		
8.1	Seek written clearance to resume project work from regional environment staff and the archaeologist (and regulator, if required). Clearance would only be given once all archaeological excavation and/or heritage recommendations (where required) are complete. Resumption of project work must be in accordance with the all relevant project/heritage approvals/determinations.	RES/A/PM/WS-RMD	
8.2	If required, ensure archaeological excavation/heritage reporting and other heritage	PM/AWS-RMD	

Step	Task	Responsibility	Guidance & Tools
	approval conditions are completed in the required timeframes. This includes artefact retention repositories, conservation and/or disposal strategies.		
8.3	Forward all heritage/archaeological assessments, heritage location data and its ownership status to the Senior Environmental Specialist (Heritage). They will ensure all heritage items in Roads and Maritime ownership and/or control are considered for the Roads and Maritime S170 Heritage and Conservation Register.	PM/SES(H)/ WS-RMD	
8.4	If additional unexpected items are discovered this procedure must begin again from Step 1.	PM/TL-RMD	

8. Seeking advice

Advice on this procedure should be sought from Roads and Maritime regional environment staff in the first instance. Contractors and alliance partners should ensure their own project environment managers are aware of and understand this procedure. Regional environment staff can assist non-Roads and Maritime project environment managers with enquires concerning this procedure.

IMPORTANT!

Roads and Maritime Services staff and contractors are not to seek advice on this procedure directly from the Office of Environment and Heritage without first seeking advice from regional environment staff and heritage policy staff.

Technical archaeological or heritage advice regarding an unexpected heritage item should be sought from the contracted archaeologist. Technical specialist advice can also be sought from heritage policy staff within Environment Branch to assist with the preliminary archaeological identification and technical reviews of heritage/archaeological reports.

9. Related information

Contact details: Senior Environmental Specialist (Heritage), Environment Branch, 02 8588 5754

Effective date: 01 February 2015

Review date: 01 February 2016

This procedure should be read in conjunction with:

- Roads and Maritimes' *Heritage Guidelines 2015*.
- Roads and Maritime Services *Environmental Incident Classification and Reporting Procedure*
- Roads and Maritime's *Procedure for Aboriginal Cultural Heritage Consultation and Investigation*
- RTA *Environmental Impact Assessment Guidelines*.

This procedure replaces:

- Procedure 5.5 ("*unexpected discovery of an archaeological relic or Aboriginal object*") outlined in the RTA's *Heritage Guidelines 2004*.

Other relevant reading material:

- NSW Heritage Office (1998), *Skeletal remains: guidelines for the management of human skeletal remains*.
- Department of Environment and Conservation NSW (2006), *Manual for the identification of Aboriginal remains*.
- Department of Health (April 2008), *Policy Directive: Burials - exhumation of human remains*¹¹.

¹¹ http://www.health.nsw.gov.au/policies/pd/2008/pdf/PD2008_022.pdf

10. List of appendices

The following appendices are included to support this procedure.

Appendix A	Identifying Unexpected Heritage items
Appendix B	Unexpected Heritage Item Recording Form 418
Appendix C	Photographing Unexpected Heritage Items
Appendix D	Key Environment Contacts
Appendix E	Uncovering Bones
Appendix F	Archaeological Advice Checklist
Appendix G	Template Notification Letter

Appendix A

Identifying unexpected heritage items

The following images can be used to assist in the preliminary identification of potential unexpected items (both Aboriginal and non-Aboriginal) during construction and maintenance works. Please note this is not a comprehensive typology.



Top left hand picture continuing clockwise: Stock camp remnants (Hume Highway Bypass at Tarcutta); Linear archaeological feature with post holes (Hume Highway Duplication), Animal bones (Hume Highway Bypass at Woomargama); Cut wooden stake; Glass jars, bottles, spoon and fork recovered from refuse pit associated with a Newcastle Hotel (Pacific Highway, Adamstown Heights, Newcastle area).



Wood stave water pipe



Tram tracks



Retaining wall



Cistern

Top left hand picture continuing clockwise: Woodstave water pipe with tar and wire sealing (Horsley Drive); Tram tracks (Sydney); Brick lined cistern (Clyde); Retaining wall (Great Western Highway, Leura).



Top left hand picture continuing clockwise: Road pavement (Great Western Highway, Lawson); Sandstone kerbing and guttering (Parramatta Road, Mays Hill); Telford road (sandstone road base, Great Western Highway, Leura); Ceramic conduit and sandstone culvert headwall (Blue Mountains, NSW); Corduroy road (timber road base, Entrance Road, Wamberai).



Alignment pin



Survey tree



Alignment stone



Survey tree



Milestone



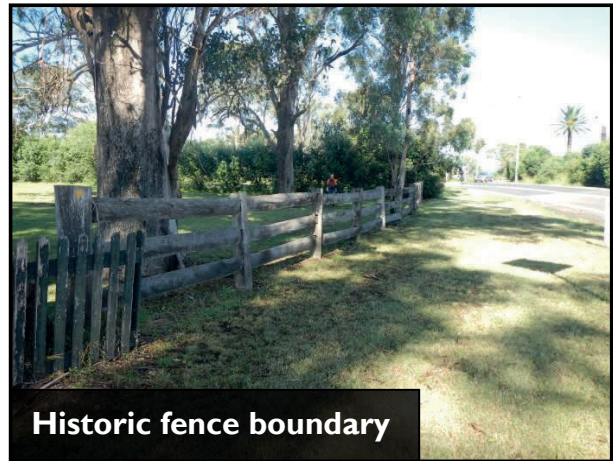
Top left hand corner continuing clockwise: Alignment Pin (Great Western Highway, Wentworth Falls); Survey tree (MR7, Albury); Survey tree (Kidman Way, Darlington Point, Murrumbidgee); Survey tree (Cobb Highway, Deniliquin); Milestone (Great Western Highway, Kingswood, Penrith); Alignment Stone (near Guntawong Road, Riverstone). Please note survey marks may have additional statutory protection under the *Surveying and Spatial Information Act 2002*.



Remnant Bridge Piers



Mine Shaft



Historic fence boundary



Dairy shed

Top left hand corner continuing clockwise: Remnant bridge piers (Putty Road, Bulga); Wooden boundary fence (Campbelltown Road, Denham Court); Dairy shed (Ballina); Golden Arrow Mine Shaft.



Top left hand corner: Culturally modified stone discovered on Main Road 92, about two kilometres west of Sassafras. The remaining images show a selection of stone artefacts retrieved from test and salvage archaeological excavations during the Hume Highway Duplication and Bypass projects from 2006-2010.

Appendix B

Unexpected heritage item recording form 418

This form is to be filled in by a project manager (or their delegate) or a team leader – Road and Maintenance Division, on the discovery of an unexpected heritage item during construction or maintenance works.

Date:		Recorded by: (Include name and position)	
Project name:			
Description of works being undertaken (eg Removal of failed pavement by excavation and pouring concrete slabs in 1m x 1m replacement sections).			
Description of exact location of item (eg Within the road formation on Parramatta Road, east bound lane, at the corner of Johnston Street, Annandale, Sydney).			
Description of item found (What type of item is it likely to be? Tick the relevant boxes).			
A. A relic	<input type="checkbox"/>	A 'relic' is evidence of a past human activity relating to the settlement of NSW with local or state heritage significance. A relic might include bottles, utensils, plates, cups, household items, tools, implements, and similar items.	
B. A 'work, building or structure'	<input type="checkbox"/>	A 'work' can generally be defined as a form infrastructure such as tram tracks, a culvert, road base, a bridge pier, kerbing, and similar items.	
C. An Aboriginal object	<input type="checkbox"/>	An 'Aboriginal object' may include stone tools, stone flakes, shell middens, rock art, scarred trees and human bones.	
D. Bone	<input type="checkbox"/>	Bones can either be human or animal remains. Remember that you must contact the local police immediately by telephone if you are <u>certain</u> that the bone(s) are <u>human remains</u>.	
E. Other	<input type="checkbox"/>		

<p>Provide short description of item (eg Metal tram tracks running parallel to road alignment. Good condition. Tracks set in concrete, approximately 10cms (100 mm) below the current ground surface).</p>	
<p>Sketch (Provide a sketch of the item's general location in relation to other road features so its approximate location can be mapped without having to re-excavate it. In addition, please include details of the location and direction of any photographs of the item taken).</p>	
<p>Action taken (Tick either A or B)</p>	
<p>A. Unexpected item would not be further impacted on by works <input type="checkbox"/></p>	
<p>Describe how works would avoid impact on the item. (eg The tram tracks will be left <i>in situ</i>, and recovered with road paving).</p>	
<p>B. Unexpected item would be further impacted on by works <input type="checkbox"/></p>	
<p>Describe how works would impact on the item. (eg Milling is required to be continued to 200 mm depth to ensure road pavement requirements are met. Tram tracks will need to be removed).</p>	
<p>Important: It is a statutory offence to disturb Aboriginal objects and historic relics (including human remains) without an approval. All works affecting objects and relics must cease until an approval is sought. Approvals may also be required to impact on certain works. Contact your regional environment staff for guidance.</p>	
<p>Project manager / works supervisor signature</p>	

Appendix C

Photographing unexpected heritage items

✋ Removal of the item from its context (e.g. excavating from the ground) for photographic purposes is not permitted.

Photographs of unexpected items in their current context (*in situ*) may assist heritage staff and archaeologists to better identify the heritage values of the item. Emailing good quality photographs to specialists can allow for better quality and faster heritage advice. The key elements that must be captured in photographs of the item include its position, the item itself and any distinguishing features. All photographs must have a scale (ruler, scale bar, mobile phone, coin) and a note describing the direction of the photograph.

Context and detailed photographs

It is important to take a general photograph (Figure 1) to convey the location and setting of the item. This will add much value to the subsequent detailed photographs also required (Figure 2).

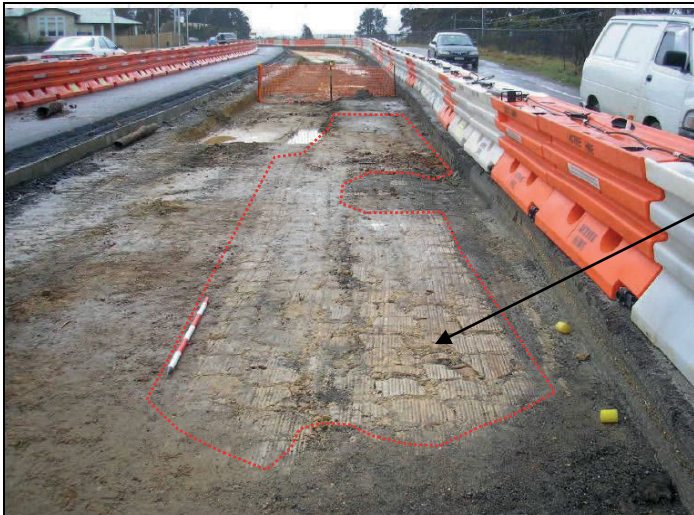


Figure 2: Close up detail of the sandstone surface showing material type, formation and construction detail. This is essential for establishing date of the feature.

Figure 1: Telford road uncovered on the Great Western Highway (Leura) in 2008.

Photographing distinguishing features

Where unexpected items have a distinguishing feature, close up detailed photographs must be taken of this, where practicable. In the case of a building or bridge, this may include diagnostic details architectural or technical features. See Figures 3 and 4 for examples.



Figure 3: Ceramic bottle artefact with stamp.

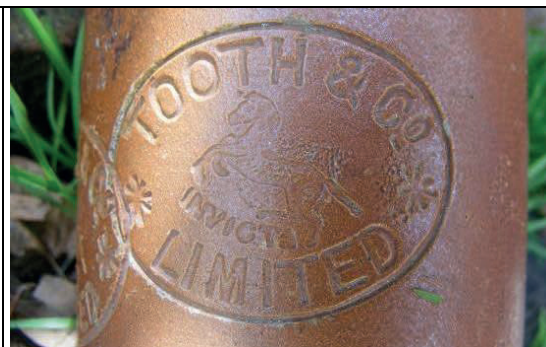


Figure 4: Detail of the stamp allows 'Tooth & Co Limited' to be made out. This is helpful to a specialist in gauging the artefact's origin, manufacturing date and likely significance.

Photographing bones

The majority of bones found on site will those of be recently deceased animal bones often requiring no further assessment (unless they are in archaeological context). However, if bones are human, Roads and Maritime must contact the police immediately (see Appendix F for detailed guidance). Taking quality photographs of the bones can often resolve this issue quickly. Heritage staff in Environment Branch can confirm if bones are human or non-human if provided with appropriate photographs. Ensure that photographs of bones are not concealed by foliage (Figure 5) as this makes it difficult to identify. Minor hand removal of foliage can be undertaken as long as disturbance of the bone does not occur. Excavation of the ground to remove bone(s) should not occur, nor should they be pulled out of the ground if partially exposed. Where sediment (adhering to a bone found on the ground surface) conceals portions of a bone (Figure 6) ensure the photograph is taken of the bone (if any) that is not concealed by sediment.



Figure 5: Bone concealed by foliage.



Figure 6: Bone covered in sediment

Ensure that all close up photographs include the whole bone and then specific details of the bone (especially the ends of long bones, the *epiphysis*, which is critical for species identification). Figures 7 and 8 are examples of good photographs of bones that can easily be identified from the photograph alone. They show sufficient detail of the complete bone and the epiphysis.



Figure 7: Photograph showing complete bone.



Figure 8: Close up of a long bone's epiphysis.

Appendix D

Key environmental contacts

Hunter region	Environmental Manager (Hunter)	4924 0440
	Aboriginal Cultural Heritage Advisor	4924 0383
Northern region	Environment Manager (North)	6640 1072
	Aboriginal Cultural Heritage Advisor	6604 9305
Southern region	Environmental Manager (South)	6492 9515
	Aboriginal Cultural Heritage Advisor	4221 2767
South West region	Environment Manager (South West)	6937 1634
	Aboriginal Cultural Heritage Advisor	6937 1647
Sydney region	Environment Manager (Sydney)	8849 2516
	Aboriginal Cultural Heritage Advisor	8849 2583
Western region	Environment Manager (West)	6861 1628
	Aboriginal Cultural Heritage Advisor	6861 1658
Pacific Highway Office	Environment Manager	6640 1375
Regional Maintenance Delivery	Environment Manager	9598 7721
Environment Branch	Senior Environmental Specialist (Heritage)	8588 5754

Heritage Regulators

Heritage Division Office of Environment and Heritage Locked Bag 5020 Parramatta NSW 2124 Phone: (02) 9873 8500	Department of the Environment (Clth) GPO Box 787 Canberra ACT 2601 Phone: (02) 6274 1111
Office of Environment and Heritage (Sydney Metropolitan) Planning and Aboriginal Heritage Section PO Box 668 Parramatta NSW 2124 Phone: (02) 9995 5000	Office of Environment and Heritage (North Eastern NSW) Planning and Aboriginal Heritage Section Locked Bag 914 Coffs Harbour NSW 2450 Phone: (02) 6651 5946
Office of Environment and Heritage (North Western NSW) Environment and Conservation Programs PO Box 2111 Dubbo NSW 2830 Phone: (02) 6883 5330	Office of Environment and Heritage (Southern NSW) Landscape and Aboriginal Heritage Protection Section PO Box 733 Queanbeyan NSW 2620 Phone: (02) 6229 7188

Project-Specific Contacts

Position	Name	Phone Number
Project Manager		
Site/Alliance Environment Manager		
Regional Environmental Officer		
Aboriginal Cultural Heritage Advisor		
Consultant Archaeologist		
Local Police Station		
OEH: Environment Line		131 555

Appendix E

Uncovering bones

Hand icon All matters relating to uncovering bones and RMS' human remains notification obligations should involve RMS regional environment and heritage staff. They will guide Project Managers through occurrences of uncovering bones.

This appendix provides Project Managers with advice (1) on what to do on first uncovering bones (2) the range of human skeletal notification pathways and (3) additional considerations and requirements when managing the discovery of human remains.

1. First uncovering bones

Stop all work in the vicinity of the find. All bones uncovered during project works should be **treated with care and urgency** as they have the potential to be human remains. Therefore they must be identified as either human or non-human as soon as possible by a qualified forensic or physical anthropologist. These specialist consultants can be sought by contacting regional environment staff and/or heritage staff at Environment Branch.

On the very rare occasion where it is *instantly obvious* from the remains that they are human, the Project Manager (or a delegate) should **inform the police by telephone** prior to seeking specialist advice. It will be obvious that it is human skeletal remains where there is no doubt, as demonstrated by the example in Figure 1. Often skeletal elements in isolation (such as a skull) can also clearly be identified as human. Note it may also be obvious that human remains have been uncovered when soft tissue and clothing are present.

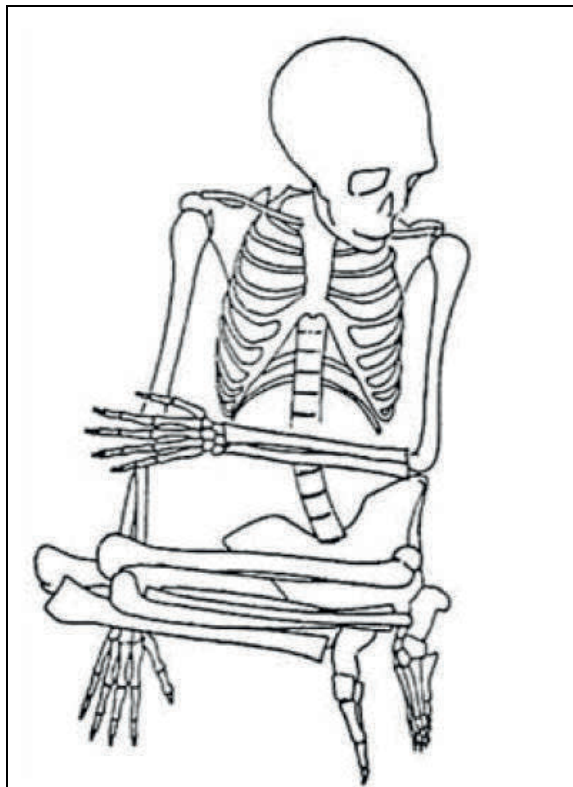


Figure 1: Schematic of a complete skeleton that is 'obviously' human¹².



Figure 2: Disarticulated bones that require assessment to determine species.

¹² After Department of Environment and Conservation NSW (2006), *Manual for the identification of Aboriginal Remains*: 17.

This preliminary phone call is to let the police know that Roads and Maritime is undertaking a specialist skeletal assessment to determine the approximate date of death which will inform legal jurisdiction. The police may wish to take control of the site at this stage. If not, a forensic or physical anthropologist must be requested to make an on-site assessment of the skeletal remains.

Where it is not 'obvious' that the bones are human (in the majority of cases, illustrated by Figure 2), specialist assessment is required to establish the species of the bones. Photographs of the bones can assist this assessment if they are clear and taken in accordance with guidance provided in Appendix C. Good photographs often result in the bones being identified by a specialist without requiring a site visit; noting they are nearly always non-human. In these cases, non-human skeletal remains must be treated like any other unexpected archaeological find.

If the bones are identified as human (either by photographs or an on-site inspection) a technical specialist must determine the likely ancestry (Aboriginal or non-Aboriginal) and burial context (archaeological or forensic). This assessment is required to identify the legal regulator of the human remains so **urgent notification** (as below) can occur. Preliminary telephone or verbal notification by the Project Manager or regional environment staff is considered appropriate. This must be followed up later by Roads and Maritime's formal letter notification as per Appendix G when a management plan has been developed and agreed to by the relevant parties.

2. Range of human skeletal notification pathways

The following is a summary of the different notification pathways required for human skeletal remains depending on the preliminary skeletal assessment of ancestry and burial context.

A. Human bones are from a recently deceased person (*less than 100 years old*).

Action

A police officer must be notified immediately as per the obligations to report a death or suspected death under s35 of the *Coroners Act 2009* (NSW). It should be assumed the police will then take command of the site until otherwise directed.

B. Human bones are archaeological in nature (*more than 100 years old*) and are likely to be **Aboriginal** remains.

Action

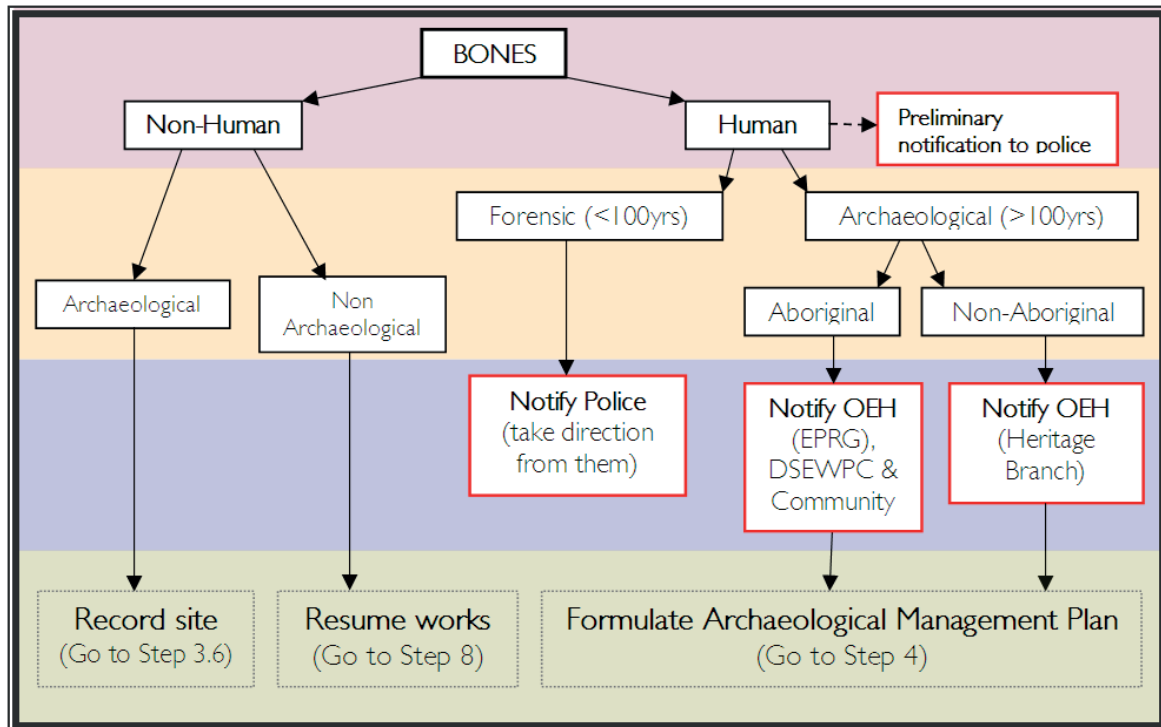
The OEH and the RMS Aboriginal Cultural Heritage Advisor (ACHA) must be notified immediately. The ACHA must contact and inform the relevant Aboriginal community stakeholders who may request to be present on site. Relevant stakeholders are determined by the RTA's *Procedure for Aboriginal Cultural Heritage Consultation and Investigation*.

C. Human bones are archaeological in nature (*more than 100 years old*) and likely to be **non-Aboriginal** remains.

Action

The OEH (Heritage Branch, Conservation Team) must be notified immediately.

The simple diagram below summarises the notification pathways on finding bones.



After the appropriate verbal notifications (as described in B and C), the Project Manager must proceed through the *Unexpected Heritage Items Procedure* to formulate an archaeological management plan (Step 4). Note no archaeological management plan is required for forensic cases (A), as all future management is a police matter. Non-human skeletal remains must be treated like any other unexpected archaeological find and so must proceed to recording the find as per Step 3.6.

3. Additional considerations and requirements

Uncovering archaeological human remains must be managed intensively and needs to consider a number of additional specific issues. These issues might include facilitating culturally appropriate processes when dealing with Aboriginal remains (such as repatriation and cultural ceremonies). Roads and Maritime's ACHA can provide advice on this and how to engage with the relevant Aboriginal community. Project Managers, more generally, may also need to consider overnight site security of any exposed remains and may need to manage the onsite attendance of a number of different external stakeholders during assessment and/or investigation of remains. Project Managers may also be advised to liaise with local church/religious groups and the media to manage community issues arising from the find. Additional investigations may be required to identify living descendants, particularly if the remains are to be removed and relocated.

If exhumation of the remains (from a formal burial or a vault) is required, Project Managers should also be aware of additional approval requirements under the *Public Health Act 1991* (NSW). Specifically, Roads and Maritime is required to apply to the Director General of NSW Department of Health for approval to exhume human remains as per Clause 26 of the *Public Health (Disposal of Bodies) Regulation 2002* (NSW)¹³. Further, the exhumation of such remains needs to consider health risks such as infectious disease control, exhumation procedures and reburial approval and registration. Further guidance on this matter can be found at the NSW Department of Health [website](#).

In addition, due to the potential significant statutory and common law controls and prohibitions associated with interfering with a public cemetery, project teams are

¹³ This requirement is in addition to heritage approvals under the *Heritage Act 1977*.

advised, when works uncover human remains adjacent to cemeteries, to confirm the cemetery's exact boundaries.

Appendix F

Archaeological/heritage advice checklist

The archaeologist must advise the Project Manager of an appropriate archaeological or heritage management plan as soon as possible after site inspection (see Step 4). An archaeological or heritage management plan can include a range of activities and processes, which differ depending on the find and its significance. In discussions with the archaeologist the following checklist can be used by the Project Manager and the archaeologist as a prompt to ensure all relevant archaeological issues are considered when developing this plan. This will allow the project team to receive clear and full advice to move forward quickly and in the right direction. Archaeological and/or heritage advice on how to proceed can be received in a letter or email outlining all relevant archaeological and/or heritage issues.

	Required	Outcome/notes
Assessment and investigation		
• Assessment of significance	Yes/No	
• Assessment of heritage impact	Yes/No	
• Archaeological excavation	Yes/No	
• Archival photographic recording	Yes/No	
Heritage approvals and notifications		
• AHIPs, Section 140, S139 exceptions etc	Yes/No	
• Regulator relics/objects notification	Yes/No	
• Roads and Maritime's S170 Heritage and Conservation Register listing requirements	Yes/No	
• Compliance with CEMP or other project heritage approvals	Yes/No	
Stakeholder consultation		
• Aboriginal stakeholder consultation requirements and how it relates to RTA <i>Procedure for Aboriginal Cultural Heritage Consultation and Investigation (PACHCI)</i> .	Yes/No	
• Advice from regional environmental staff, Aboriginal Cultural Heritage Advisor, Roads and Maritime heritage team.	Yes/No	
Artefact/ heritage item management		
• Retention or conservation strategy (eg items may be subject to long conservation and interpretation) • Disposal strategy (eg former road pavement) • Short term and permanent storage locations (interested third parties should be	Yes/No	

Roads & Maritime Services

consulted on this issue).		
• Control Agreement for Aboriginal objects.	Yes/No	
Program and budget		
• Time estimate associated with archaeological or heritage conservation work.		
• Total cost of archaeological/heritage work.		

Appendix G

Template notification letter

[Select and type date]

[Select and type reference number]

[Select and type file number]

[Insert recipient's name and address, see **Appendix D**]

[Select and type salutation and name],

Re: Unexpected heritage item discovered during Roads and Maritime Services project works.

I write to inform you of an unexpected [select: relic, heritage item or Aboriginal object] found during Roads and Maritime Services construction works at [insert location] on [insert date]. [Where the regulator has been informally notified at an earlier date by telephone, this should be referred to here].

This letter is in accordance with the notification requirement under [select: Section 146 of the *Heritage Act 1977* (NSW) or Section 89(A) of the *National Parks and Wildlife Act 1974* (NSW)] **NB:** There may be not be statutory requirement to notify of the discovery of a 'heritage Item that is not a relic or Aboriginal object].

NB: On finding Aboriginal human skeletal remains this letter must also be sent to the Commonwealth Minister for Sustainability, Environment, Water, Populations and Communities (SEWPC) in accordance with notification requirements under Section 20(1) of the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cth).

[Provide a brief overview of the project background and project area. Provide a summary of the description and location of the item, including a map and image where possible. Also include how the project was assessed under the *Environmental Planning and Assessment Act 1979* (NSW) (eg Part 5). Also include any project approval number, if available].

Roads and Maritime Services [or contractor] has sought professional archaeological advice regarding the item. A preliminary assessment indicates [provide a summary description and likely significance of the item]. Please find additional information on the site recording form attached.

Resulting from these preliminary findings, Roads and Maritime Services [or contractor] is proposing [provide a summary of the proposed archaeological/heritage approach (eg develop archaeological research design (where relevant), seek heritage approvals, undertake archaeological investigation or conservation/interpretation strategy). Also include preliminary justification of such heritage impact with regard to project design constraints and delivery program].

The proposed approach will be further developed in consultation with a nominated Office of Environment and Heritage staff member.

Please contact me if you have any input on this approach or if you require any further information.

Yours sincerely

[Sender name and position]

[Attach the archaeological/heritage management plan and site recording form].

Annexure C Contact List

Contact List

Position	Name	Phone
External Contacts		
Sydney Water	N/A	1300 143 734
Office of Environment and Heritage (Heritage Division and Heritage Council NSW)	N/A	02 9873 8500
Local Police Station	Balmain Police Station	02 9556 0624
Port Authority NSW	N/A	02 9296 4999
City of Sydney Council	N/A	02 9265 9333
Inner West Council	N/A	02 9392 5000