

[REDACTED]

Hannah D'eau  
Senior Environment and Sustainability Officer  
Eastern Harbour and Central Rivers  
Transport for NSW

21 February 2023

Dear Hannah

**RE: Kamay Ferry Wharves – Heritage Management Plan (Rev 0) ER Endorsement**

I have reviewed the following document.

Document Title	Document Reference	Rev	Date
CEMP Appendix B1- Heritage Management Plan – Kamay Ferry Wharves	KFW02-MCD-ALL-EN-PLN-000006	0	January 2024

I note the Heritage Management Plan has been updated to include the Archaeological Research Design, (ARD), Archaeological Work Method Statement (AWMS) and the Salvage Excavation Program.

As required by Condition of Approval A32 (i), I have considered the minor amendments to the Heritage Management Plan and note the amendments do not result in an increase to sensitive land uses and are consistent with the terms of the Infrastructure Approval (SSI 10049). I therefore approve the amendment.

Please call me on [REDACTED] if you have any questions.

A handwritten signature in blue ink, appearing to read "R. Peterson".

**Richard Peterson**

**Director - Trigalana Environmental Pty Ltd**

Cc: TfNSW: Tony Matthews



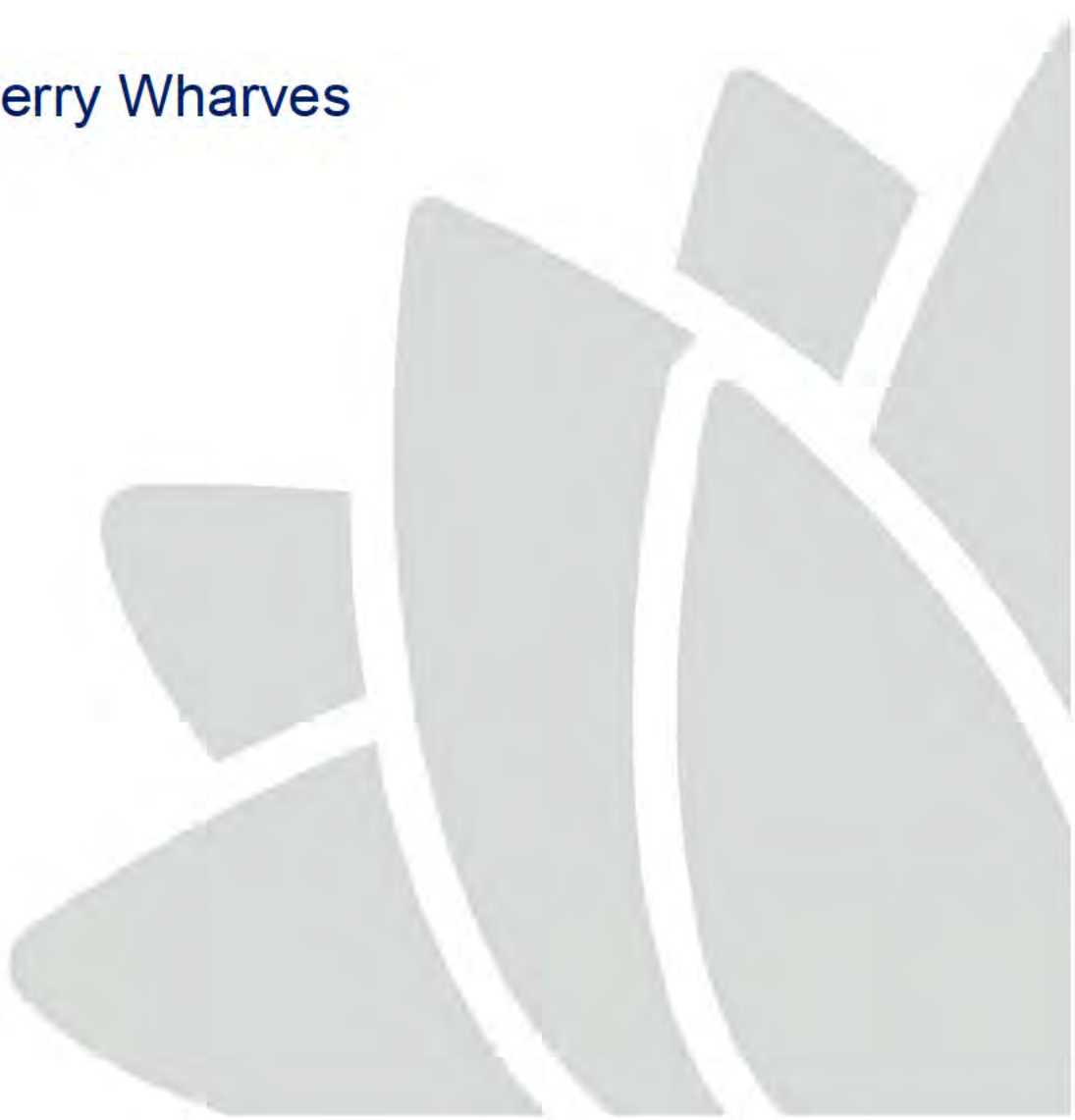


# CEMP Appendix B1

## Heritage Management Plan

Kamay Ferry Wharves

January 2024



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## Document status

Revision	Date	Description	Approval
A	December 2020	Draft for Transport for NSW comment	N/A
B	January 2021	Draft for tender	N/A
C	November 2022	Mott MacDonald draft for review by MCD	N/A
D	December 2022	Mott MacDonald update to address MCD comments	N/A
E	December 2022	Updated to address TfNSW comments	N/A
F	January 2023	Updated to address ER comments	N/A
G	March 2023	Updated to include EPBC conditions and address ER comments	N/A
H	March 2023	Updated to include additional consultation requirements as outlined in the EPBC CoA	N/A
I	April 2023	Updated following consultation	N/A
J	June 2023	Updated to address DPE comments	N/A
K	June 2023	Updated to address DPE comments	NSW DPE
0	January 2024	Updated Attachments to include the Archaeological Research Design (ARD), Archaeological Work Method Statement (AWMS) and Salvage Excavation Program.	Environmental Representative

## Distribution of controlled copies

This HMP as part of the CEMP is available to all personnel and sub-contractors via the Project document control management system. An electronic copy can be found on the Project website.

The document is uncontrolled when printed. One controlled hard copy of the HMP as part of the CEMP and supporting documentation will be maintained by the Quality Manager at the Project office [and on the project website].

Copy number	Issued to	Version

# Glossary/ Abbreviations

Abbreviations	Expanded text
Aboriginal place	An Aboriginal Place is an area declared by the Minister administering the Act to be of special significance with respect to Aboriginal culture.
Aboriginal objects	Aboriginal objects include any deposit, object or material evidence (not being a handicraft made for sale), including Aboriginal remains, relating to the Aboriginal habitation of NSW, before or concurrent with occupation by non-Aboriginal people, as defined in section 5 of the NPW Act
ARD	Archaeological Research Design
AWMS	Archaeological Work Method Statements
CEMP	Construction Environmental Management Plan
CEMS	Contractor's Environmental Management System
CMO	HESQ compliance database software
Contractor	McConnell Dowell Contractors (Aust) Pty Ltd (MCD)
CMP	Conservation Management Plan
CoA	Condition of approval
DPE	NSW Department of Planning and Environment
EIS	Environmental Impact Statement
Environmental heritage	Places, buildings, works, relics, movable objects and precincts, of State or local heritage significance as outline in Section 4 of the Heritage Act
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EPBC Act	<i>Environmental Protection and Biodiversity Conservation Act 1999</i>
EPBC – CoA	<i>Environmental Protection and Biodiversity Conservation Act 1999</i> Conditions of Approval
EWMS	Environmental Work Method Statements
HSEQ	Health, Safety, Environment and Quality



Abbreviations	Expanded text
Heritage Act	<i>Heritage Act 1997</i>
Heritage NSW	Heritage New South Wales
HMP	Heritage Management Sub Plan
LALC	Local Aboriginal Land Council
MCD	McConnell Dowell Contractors (Aust) Pty Ltd
MCoA	Ministers Condition of Approval
NPW Act	<i>National Parks and Wildlife Act 1974</i>
NPWS	National Parks and Wildlife Service
PACHCI	Procedure for Aboriginal Cultural Heritage Consultation and Investigation (Roads and Maritime, 2011)
PAD	Potential Archaeological Deposit
Project, the	Kamay Ferry Wharves
RAP	Registered Aboriginal Parties
REMM	Revised Environmental Management Measure
RMS - Roads and Maritime	Now Transport for NSW (TfNSW)
Secretary	Secretary of the NSW Department of Planning and Environment (or delegate)
Site	Area defined by the construction boundary at La Perouse and Kurnell
Transport for NSW	Transport for New South Wales

# 1 Introduction

## 1.1 Context

This Heritage Management Sub Plan (HMP) forms part of the Construction Environmental Management Plan (CEMP) for the Kamay Ferry Wharves (the Project). Under the Minister’s Conditions of Approval (MCoA), the CEMP must include an Aboriginal Cultural Heritage Management Plan, a Non-Aboriginal Heritage Management Plan and an Underwater Cultural Heritage Management Plan. These plans have been combined into one document (this HMP) as permitted under MCoA A18.

This HMP has been prepared by heritage specialists Mott MacDonald, Cosmos Archaeology (Maritime) and Austral Archaeology (Terrestrial) to address the requirements of the Minister’s Conditions of Approval (MCoA) and *Environment Protection and Biodiversity Conservation Act 1999* (EPBC) Conditions of Approval (EPBC-CoA), the Revised Environmental Management Measures (REMMs) listed in the Kamay Ferry Wharves Environmental Impact Statement (EIS) and all applicable legislation (refer to Attachment G).

This HMP has been prepared in accordance with:

- Ministers Conditions of Approval (MCoA) granted to the project on 21st July 2022
- EPBC-CoA granted to the project on [Insert date]
- Completion of the Environmental Risk Assessment Workshop.

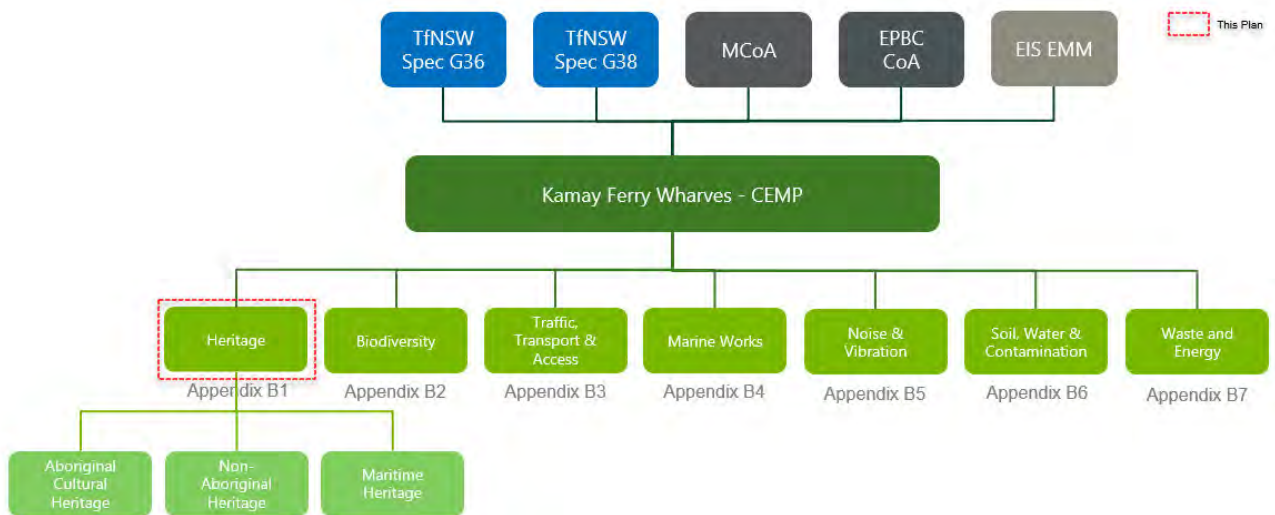


Figure 1-1 CEMP and Sub Plans

## 1.2 Background and project description

Transport for New South Wales (Transport for NSW) is constructing new ferry wharves at La Perouse and Kurnell in Botany Bay. Refer to site location map in Section 2.1 of the CEMP. This would allow for an alternative connection between La Perouse and Kurnell other than by road. The primary purpose of this infrastructure would be to operate a public ferry service. It would also provide supplementary temporary mooring for non-ferry commercial vessels (such as whale watching vessels) and recreational boating.

A detailed description of the Project is provided Chapter 5 of the EIS. The EIS assessed the impacts of construction and operation of the Project on Aboriginal, non-Aboriginal and underwater heritage.

As part of EIS development, detailed Aboriginal cultural heritage, non-Aboriginal heritage and underwater heritage assessments were prepared to address the Secretary's Environmental Assessment Requirements issued by the Department of Planning, Industry and Environment. The related technical papers which form part of the EIS include:

- Appendix E Aboriginal Cultural Heritage Assessment Report.
- Appendix F Statement of Heritage Impact.
- Appendix G Underwater Cultural Heritage Assessment.

A summary of the heritage impacts identified in the EIS included:

- **Aboriginal heritage** | Two Aboriginal artefacts would be lost due to excavation work for the proposed utilities trench at Kurnell. There is also potential to impact unknown heritage and archaeology within the Foreshore Midden Potential Archaeological Deposit (PAD) at Kurnell and Low Potential PAD and rock engravings at La Perouse. To reduce the impact on Aboriginal heritage, a Salvage Excavation program will be undertaken in consultation with local RAPs as outlined in section 6.3. The likelihood of indirect impacts from vibration activities would be reduced through adopting safe working distances and vibration monitoring.
- **Non-Aboriginal heritage** | Construction of the wharves, installation of utilities and landscaping at Kurnell would directly impact and cause damage to the coursed stone sea wall, Monument Track and an African Olive tree. There would be direct impacts to the Landscape element of the La Perouse Conservation Management Plan (CMP). During construction, access would be restricted to visiting the heritage items within the construction boundary. Construction at the wharf tie-in areas would cause archaeological impacts to the former wharf approach road at La Perouse and the former sandstone sea wall at Kurnell. These impacts would have a wider impact on the heritage value and setting of the Kurnell Peninsula Headland, Kamay Botany Bay National Park (North and South) and Towra Point Reserve and Kurnell Historic Site (in Kamay Botany Bay National Park).
- **Underwater heritage** | Construction at the wharves would directly impact the second slipway, old wharf approach road and potential Aboriginal heritage at La Perouse, and the Trust Wharf remains and potential Aboriginal heritage at Kurnell. If there are unknown underwater heritage features within the wharf alignment, these could also be impacted during wharf construction.

### 1.3 Environmental Management System overview

The Contractor's Environmental Management System (CEMS) overview is described in section 4.4 of the CEMP.

# 2 Purpose and objectives

## 2.1 Purpose

The purpose of this HMP is to describe how Aboriginal, non-Aboriginal and underwater heritage will be protected and managed during construction of the Project.

## 2.2 Objectives

The key objective of the HMP is to ensure all MCoA, environmental management measures and licence and/or permit requirements relevant to Aboriginal, Non-Aboriginal and underwater heritage are described, scheduled and assigned responsibility as outlined in:

- the Project EIS.
- the MCoA as granted to the Project on 21/07/2022 (SSI 10049).
- the EPBC-CoA as granted to the Project on 16/03/2023.

The HMP was developed to address MCoA E32 as outlined below in Table 2-1.

Table 2-1 Development of the HMP

Ref.	Compliance Obligation	Compliance Reference
Ministers Conditions of Approval		
C7	The CEMP Sub-plans must state how: a) the environmental performance outcomes identified in the documents listed in Condition A1 will be achieved. b) the mitigation measures identified in the documents listed in Condition A1 will be implemented; c) the relevant terms of this approval will be complied with; and d) issues requiring management during construction (including cumulative impacts), as identified through ongoing environmental risk analysis, will be managed through SMART principles.	a) Section 4.4 and Section 4.5 b) Attachment G c) Attachment G d) Section 6.10
E32	A Non-Aboriginal Heritage Management Plan (HMP) must be prepared and include maritime heritage considerations and requirements.	This Plan
	A suitably qualified and experienced maritime archaeologist is to undertake the maritime component of any aspect related to maritime heritage including relevant construction management plans, in consultation with Heritage NSW.	Section 1.1

Ref.	Compliance Obligation	Compliance Reference
	The HMP must include a policy and measures to manage the retention, conservation, storage and display of any artefacts and relics recovered by the SSI.	Attachment A
	The HMP must be prepared prior to construction and be approved by the Planning Secretary.	CEMP Section 3
<b>Revised Environmental Management Measures</b>		
AH3	<p>A Construction Heritage Management Plan (HMP) will be prepared and implemented under the CEMP. The HMP will include:</p> <ul style="list-style-type: none"> <li>a. Construction measures and procedures to minimise and manage impacts on Aboriginal cultural heritage</li> <li>b. Sensitive area maps that identify Aboriginal heritage values, culturally and archaeologically sensitive areas and constraints within the study area</li> <li>c. Unexpected Heritage Items Procedure (NSW Roads and Maritime Services, 2015d)</li> <li>d. Include consultation with and contact details for the La Perouse Local Aboriginal Land Council, Registered Aboriginal Parties and National Parks and Wildlife Service.</li> </ul>	<p>This Plan</p> <ul style="list-style-type: none"> <li>a) Section 6.1 to 6.8 and Section 6.9</li> <li>b) CEMP Appendix H – Site Environmental Plans</li> <li>c) Attachment A</li> <li>d) Section 3</li> </ul>

Ref.	Compliance Obligation	Compliance Reference
UH1	<p>Underwater heritage management measures will be included as part of the Construction Heritage Management Plan (HMP).</p> <p>The HMP will include:</p> <ul style="list-style-type: none"> <li>a) Construction measures and procedures to minimise and manage impacts on underwater heritage.</li> <li>b) Sensitivity area maps that identify areas of underwater heritage sensitivity and constraints in the study area.</li> <li>c) Artefact management procedures, including identification of approved submerged reburial locations.</li> <li>d) Relevant work method requirements, including the installation and removal of the construction platform at La Perouse, temporary causeway at Kurnell and any other temporary structures.</li> <li>e) Maritime heritage inductions tailored for underwater work activities including, but not limited to. anchoring or trenching</li> <li>f) Restricted zones which limit activities and movements (ie no tracked machines) to be established for the following heritage items: First Slipway at La Perouse; Remains of the sandstone block causeway for La Perouse wharf; Paragon Restaurant / Boat Davits; Holt Jetty / Isaac Smith memorial; and Captain Cook’s Landing Site.</li> <li>g) Archival, baseline and periodic monitoring protocols (before and during construction, including a final site inspection within three months of completion of works) for the heritage items identified in UH1</li> <li>h) Unexpected Heritage Items Procedure (Transport for NSW, 2022).</li> <li>i) Consultation requirements with National Parks and Wildlife Service, Heritage NSW, Randwick City Council and Sutherland Shire Council.</li> </ul>	<p>This Plan</p> <ul style="list-style-type: none"> <li>a) Section 6.10</li> <li>b) CEMP Appendix H</li> <li>c) Attachment D</li> <li>d) Section 6.9</li> <li>e) Section 7.2</li> <li>f) Attachment B – Section B.2.6 Maritime Exclusion Zones</li> <li>g) Attachment H</li> <li>h) Attachment A</li> <li>i) Section 3.1</li> </ul>

## 2.3 Targets

The following targets have been established for the management of Aboriginal cultural heritage, non-Aboriginal heritage and maritime heritage impacts during the project:

- Ensure full compliance with the relevant legislative requirements, MCoA and environmental management measures.

- Minimise or avoid impacts on known Aboriginal, non-Aboriginal and underwater heritage sites.
- Follow correct procedure and ensure notification of any Aboriginal, non-Aboriginal and underwater heritage objects/places uncovered during construction.
- Ensure Aboriginal Cultural Heritage Awareness Training is provided to all personnel in the form of inductions before they begin work on-site.

# 3 Consultation

## 3.1 Consultation undertaken to date

Consultation and collaboration with registered Aboriginal stakeholders have been integral to the assessment and management of Aboriginal cultural heritage for the project. Consultation is outlined in the EIS in Chapter 6 and Appendix D Consultation Process and Outcomes Report.

The following stakeholders in table 3-1 have been consulted in the development of this HMP in accordance with MCoA C6. Consultation has been conducted in accordance with the recommendations from the National Indigenous Australians Agency (NIAA) as outlined in the project's EPBC CoA, this includes:

- Ensuring the project has engaged with the Traditional Owners and other First Nations stakeholders with an interest in the project and have provided them with sufficient time to make informed assessments of the possible impact of the project on their interests.
- Engaging with any other Traditional Owners and First Nations stakeholders who may have an interest in the project, including:
  - █ [REDACTED]
  - █ [REDACTED]
- Including measures in the Heritage Management Plan that are agreed on with Traditional Owners, RAPs and the La Perouse LALC for First Nations cultural heritage protection and management.

## 3.2 Ongoing consultation

### 3.2.1 Consultation process

Consultation will be undertaken for several heritage management documents that are required prior to commencement of actions that may impact the listed heritage item as listed in the MCoA. The table below outlines the consultation process and timelines for each of the documents:

Table 3-1 Consultation process as per the Ministers Conditions of Approval

Document	MCoA	Who	When
Site Establishment Management Plan	A20	NPWS Sutherland Shire Council Randwick City Council Heritage NSW	Prior to setting up the establishment of the site compound.  Note: this plan is not required once the CEMP and sub plans are approved



Document	MCoA	Who	When
Heritage Management Plan	C6 C11 E32	NPWS Sutherland Shire Council Randwick City Council Heritage NSW Registered Aboriginal Parties La Perouse Local Aboriginal Land Council	Prior to construction
Excavation and Salvage Methodology	E33	Heritage NSW Registered Aboriginal Parties La Perouse Local Aboriginal Land Council	Prior to the commencement of archaeological excavations
Archaeological Research Design	E33	Heritage NSW Registered Aboriginal Parties La Perouse Local Aboriginal Land Council	Prior to the commencement of archaeological excavations
Archaeological Work Method Statement	-	Heritage NSW Registered Aboriginal Parties La Perouse Local Aboriginal Land Council	Prior to the commencement of archaeological excavations

### 3.2.2 Ongoing consultation with Registered Aboriginal Parties

The HMP will be provided to the Registered Aboriginal Parties (RAPs) for consultation as outlined in Section 3.1.

Ongoing consultation with RAPs will be held at intervals not exceeding three (3) months during construction of the project. RAPs will continue to be provided with the opportunity to be consulted about the Aboriginal cultural heritage management requirements of the project throughout design and construction.

The Registered Aboriginal Parties are listed in Table 3-2.

Table 3-2 Registered Aboriginal Parties

Registered Aboriginal Party	Aboriginal stakeholder group and contact details where provided
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

Registered Aboriginal Party	Aboriginal stakeholder group and contact details where provided
<p>[REDACTED]</p>	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>
<p>[REDACTED]</p>	<p>[REDACTED]</p> <p>[REDACTED]</p>

# 4 Existing environment

The figures provided in this section show the known Aboriginal, non-Aboriginal and underwater heritage present within and adjacent to the Site as determined in the EIS.

Chapters 7, 8 and 9 of the EIS provide a summary of the existing environment for Aboriginal, non-Aboriginal and underwater heritage.

The related technical papers which form part of the EIS include:

- Appendix E Aboriginal Cultural Heritage Assessment Report
- Appendix F Statement of Heritage Impact
- Appendix G Underwater Cultural Heritage Assessment.

## 4.1 Aboriginal heritage

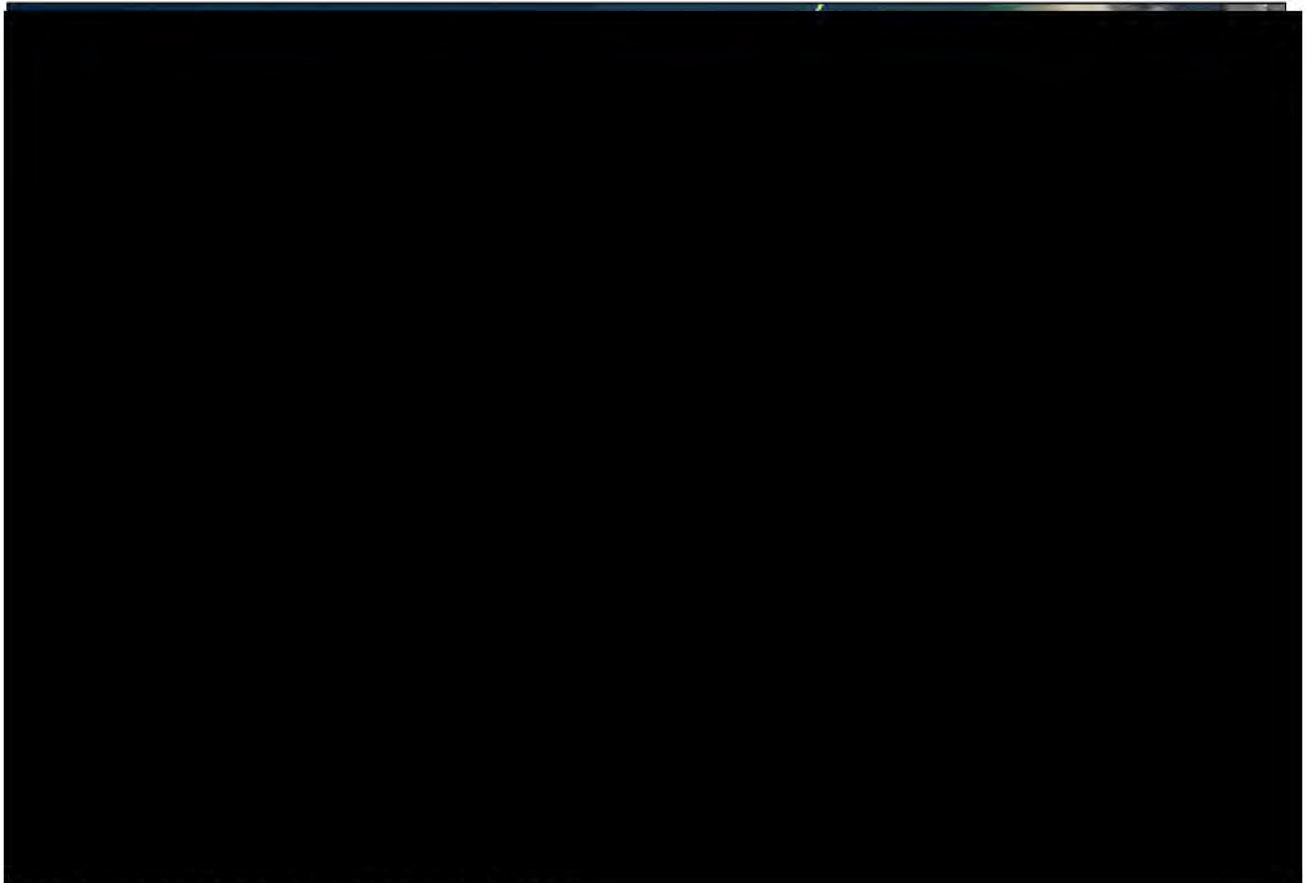


Figure 4-1 Aboriginal heritage at La Perouse

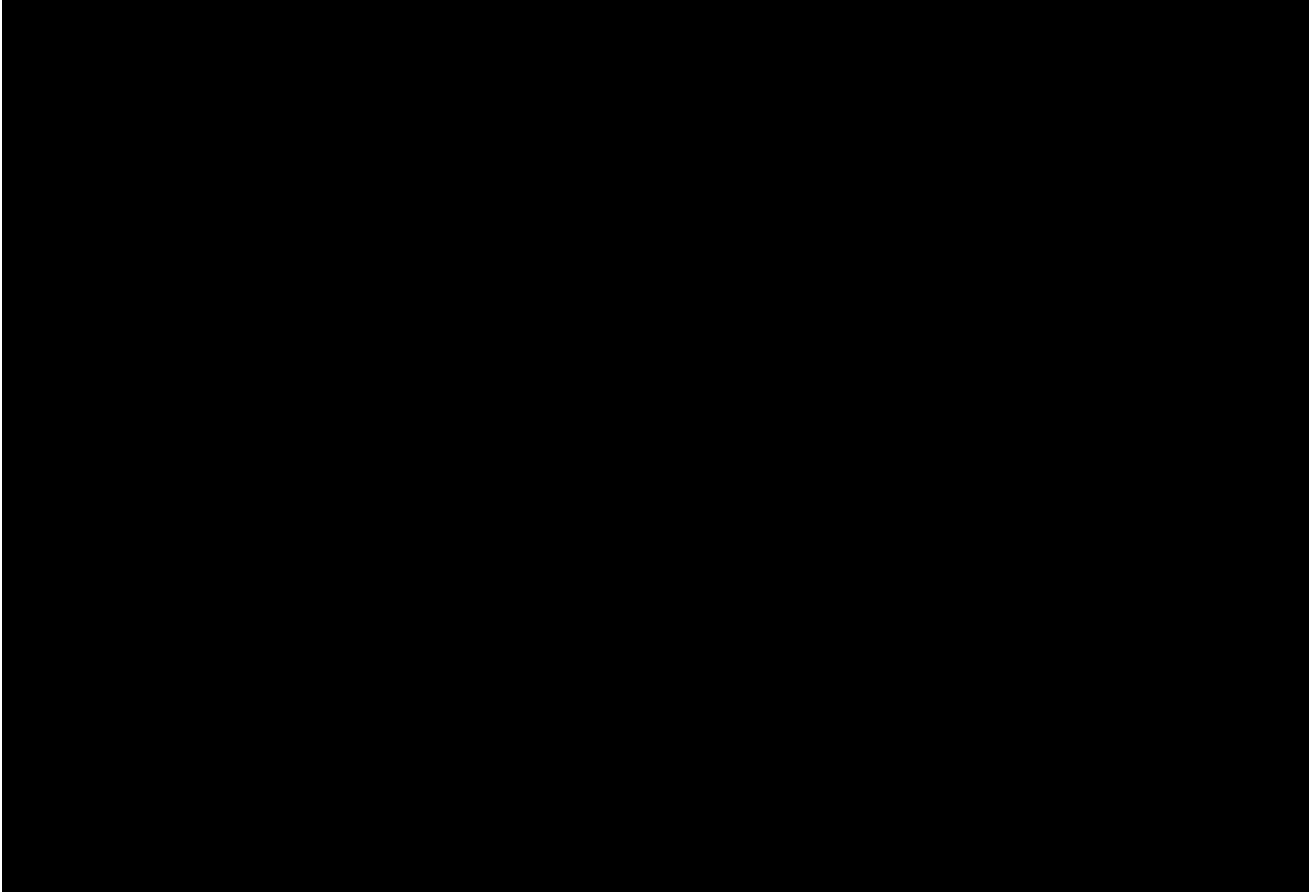


Figure 4-2 Aboriginal heritage at Kurnell

## 4.2 Non-Aboriginal heritage



Figure 4-3 Non-Aboriginal heritage items at La Perouse



Figure 4-4 Non-Aboriginal heritage items at Kurnell



Figure 4-5 Potential Non-Aboriginal archaeology at La Perouse



Figure 4-6 Potential Non-Aboriginal archaeology at Kurnell

### 4.3 Underwater heritage

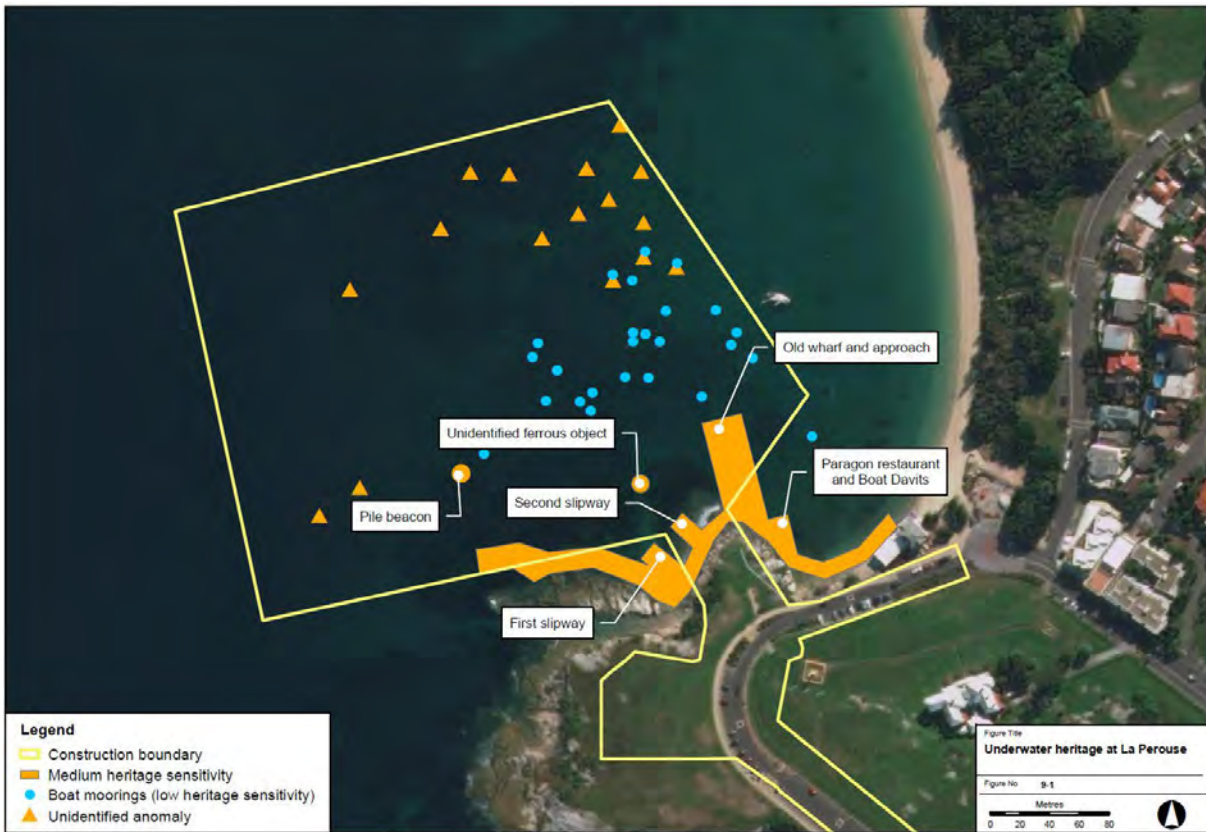


Figure 4-7 Underwater heritage at La Perouse



Figure 4-8 Underwater heritage at Kurnell



## **4.4 Environmental Performance Outcomes – Aboriginal Heritage**

As outlined in Appendix A of the EIS, the project has been designed to avoid impacts on known Aboriginal heritage by avoiding Aboriginal heritage items and limiting ground disturbance. Management measures have been developed to avoid and mitigate any potential impacts during construction through this Heritage Management Plan and are outlined in Section 6 and Section 6.10.

## **4.5 Environmental Performance Outcomes – Non-Aboriginal Heritage**

As outlined in Appendix A of the EIS, the project has been designed to avoid impacts to non-Aboriginal heritage items where possible by avoiding known heritage items and limited land disturbance.

Where impacts to non-Aboriginal heritage are not able to be avoided, the impacts will be minimised through implementation of management measures outlined in Section 6 and Section 6.10 of this Heritage Management Plan. The project will not result in significant impacts to Nationally or State listed heritage.



# 5 Environmental aspects and impacts

## 5.1 Construction activities

Key aspects of the project that could result in adverse impacts to Aboriginal, non-Aboriginal and underwater heritage include:

- Early works including non-substantial construction activities such as services relocations.
- Planned salvage of Aboriginal heritage items.
- Initial clearing and/or grubbing of vegetation.
- Ferry wharf construction including piling activities
- Construction of site compounds and spoil / mulch and / or equipment stockpile areas.

## 5.2 Aboriginal heritage impacts

Table 5-1 summarises the expected direct impacts to Aboriginal heritage during construction for those items within the construction boundary as determined in the EIS.

Table 5-1: Summary of Aboriginal heritage impacts

Site name and AHIMS ID	Type of harm	Degree of harm	Consequence of harm	Overall archaeological significance
<b>La Perouse</b>				
Site 3, La Perouse (AHIMS ID 45-6-0650)	Nil	Nil	Nil	Moderate to high
Site 4, La Perouse (AHIMS ID 45-6-0651)	Nil	Nil	Nil	Moderate to high
Site 6, La Perouse (AHIMS ID 45-6-0653)	Nil	Nil	Nil	Moderate to high
Low Potential PAD	Unknown	Unknown	Unknown	Unknown
<b>Kurnell</b>				
KMT ISO 01 (AHIMS 52-3-2080)	Direct	Total	Total loss of value	Low
KMT ISO 02 (AHIMS 52-3-2081)	Direct	Total	Total loss of value	Low
Foreshore Midden – Captain Cook’s Landing Place (AHIMS 52-3-0219)	Partial	Minor	Partial loss of value	High

### 5.3 Non-Aboriginal heritage impacts

A summary of construction impacts on non-Aboriginal heritage items as determined in the EIS is provided in Table 5-2.

Table 5-2 Summary of non-Aboriginal heritage impacts

Heritage item	Conservation Status	Impact			
		Direct	Potential direct	Indirect (visual)	Archaeological
<b>La Perouse</b>					
Kamay Botany Bay National Park (North and South) and Towra Point Reserve	State Heritage Register	Minor	Minor	Minor	Minor
Botany Bay National Park (Botany Bay National Park, La Perouse Headland, Yarra Bay and Frenchmans Bay)	Local Heritage List	Negligible	Negligible	Negligible	Major
Kamay Botany Bay: Botanical collection sites	National Heritage List	Negligible	Neutral	Negligible	Neutral
La Perouse Memorial	Local Heritage List	Neutral	Negligible	Negligible	Neutral
La Perouse Museum (former Cable Station)	Local Heritage List	Neutral	Neutral	Negligible	Neutral
Tomb of Pere le Receveur	Local Heritage List	Neutral	Neutral	Negligible	Neutral
Bare Island Fort	State Heritage Register	Neutral	Neutral	Neutral	Neutral
Macquarie Watchtower	Local Heritage List	Neutral	Neutral	Neutral	Neutral
Yarra Bay House	Local Heritage List	Neutral	Neutral	Negligible	Neutral
Yarra Bay Beach and Reserve	Local Heritage List	Neutral	Neutral	Negligible	Neutral
Jessie Stuart Broomfield Fountain	Local Heritage List	Neutral	Neutral	Neutral	Neutral
1920s Bungalow at 27 Goorawahl Avenue	Local Heritage List	Neutral	Neutral	Neutral	Neutral

Heritage item	Conservation Status	Impact			
		Direct	Potential direct	Indirect (visual)	Archaeological
<b>Kurnell</b>					
Kurnell Peninsula Headland	National Heritage List	Minor	Minor	Minor	Minor
Kamay Botany Bay National Park (North and South) and Towra Point Reserve	State Heritage Register	Minor	Minor	Minor	Minor
Kurnell Historic Site (in Kamay Botany Bay National Park)	Local Heritage List	Minor	Minor	Minor	Minor
Kamay Botany Bay: Botanical collection sites	National Heritage List	Negligible	Neutral	Negligible	Neutral
Silvery Beach and roadway	Local Heritage List	Neutral	Neutral	Negligible	Neutral
Kurnell monuments (in Kamay Botany Bay National Park)	Local Heritage List	Neutral	Negligible	Negligible to minor	Neutral
Captain Cook monument	Local Heritage List	Neutral	Negligible	Minor	Neutral
Banks memorial	Local Heritage List	Neutral	Neutral	Negligible	Neutral
Forby Sutherland monument	Local Heritage List	Neutral	Neutral	Negligible	Neutral
Solander monument	Local Heritage List	Neutral	Neutral	Negligible	Neutral
Captain Cook watering well	Local Heritage List	Neutral	Neutral	Negligible	Neutral
Captain Cook watering hole	Local Heritage List	Neutral	Neutral	Negligible	Neutral
Captain Cook's landing place	Local Heritage List	Neutral	Neutral	Negligible	Neutral
Alpha Farm site	Local Heritage List	Neutral	Neutral	Neutral	Neutral
Flagpole	Local Heritage List	Neutral	Neutral	Negligible	Neutral

## 5.4 Underwater heritage impacts

Table 5-3 summarises the potential underwater heritage impacts during construction.

Table 5-3: Summary of construction impacts on underwater heritage (stating the likelihood and level of consequence)

Item	Sensitivity	Impact (probability and level of impact)						
		Direct impact		Potential direct impact		Indirect impact		
		Construction pad or causeway	Piling	Anchoring	Propeller jet turbulence	Vibration	Visual	
<b>La Perouse</b>								
Known heritage	First slipway	Medium	None	None	None	None	Certain, negligible	Certain, positive
	Second slipway	Medium	Certain, moderate	None	None	None	Certain, negligible	Certain, positive
	Wharf and approach	Medium	Probable, minor	None	Highly probable, minor	Improbable, minor	Certain, negligible	Certain, positive
	Remains of wharf buildings (paragon restaurant)	Medium	None	None	None	None	Certain, negligible	Certain, positive
	Boat davits	Medium	None	None	None	None	Certain, negligible	None
	Boat moorings	Low	None	Probable, minor	Probable, negligible	Probable/Improbable, negligible	Certain, negligible	None
	Unidentified ferrous object	Medium	None	Highly probably, minor	Highly improbable, minor	Improbable, minor	Certain, negligible	None

Item		Sensitivity	Impact (probability and level of impact)					
			Direct impact		Potential direct impact		Indirect impact	
			Construction pad or causeway	Piling	Anchoring	Propeller jet turbulence	Vibration	Visual
	Pile beacon	Low	None	None	Highly improbable, negligible	Improbably, negligible	Certain, negligible	None
	Kamay Botany Bay National Park heritage listing	Medium	Certain, negligible	Certain, negligible	None	None	Certain, negligible	Certain, minor
Potential Aboriginal heritage	Across the whole study area	Low	Almost impossible, minor	Almost impossible, minor	None	None	Certain, negligible	None
Potential non-Aboriginal heritage	Potential maritime infrastructure	Low	None	Highly improbable, minor	Highly probable, minor	Highly improbable, minor	Certain, negligible	None
	Potential shipwrecks	Low	None	Highly improbable, minor	Highly improbable, moderate	Highly improbable, moderate	Certain, negligible	None
	Potential discard	Low	None	Highly improbable, minor	Highly probable, minor	Highly improbable, negligible	Certain, negligible	None
<b>Kurnell</b>								
Known heritage	Holts jetty	Medium	None	None	Highly improbable, minor	Highly improbable, negligible	Certain, negligible	Certain, positive



Item		Sensitivity	Impact (probability and level of impact)					
			Direct impact		Potential direct impact		Indirect impact	
			Construction pad or causeway	Piling	Anchoring	Propeller jet turbulence	Vibration	Visual
	Trust wharf remains	Medium	Certain, moderate	None	Probable, minor	Improbable, negligible	Certain, negligible	Certain, positive
	Isaac Smith Monument	Medium	None	None	None	None	Certain, negligible	Certain, positive
	Tipped stone sea wall	Medium	None	None	None	None	Certain, negligible	None
	Silver beach seawall	Medium	None	None	None	None	Certain, negligible	None
	Kurnell Peninsula Headland heritage listing	Medium	Certain, negligible	Certain, negligible	None	None	Certain, negligible	Certain, positive
	Kamay Botany Bay National Park heritage listing	Medium	Certain, negligible	Certain, negligible	None	None	Certain, negligible	Certain, positive
Potential Aboriginal heritage	Close to foreshore	Low to medium	Probably, minor	Highly improbable, minor	None	None	Certain, negligible	None
	Beyond foreshore	Low	None	Almost impossible, minor	None	None	Certain, negligible	None

Item		Sensitivity	Impact (probability and level of impact)					
			Direct impact		Potential direct impact		Indirect impact	
			Construction pad or causeway	Piling	Anchoring	Propeller jet turbulence	Vibration	Visual
Potential non-Aboriginal heritage	Potential maritime infrastructure	Low	None	Highly improbable, minor	None	None	Certain, negligible	None
	Potential shipwrecks	Low	None	Highly improbable, moderate	Highly improbable, negligible	Improbable, negligible	Certain, negligible	None
	Potential discard	Low	None	Highly improbable, minor	Highly probable, minor	Improbable, minor	Certain, negligible	None

# 6 Environmental mitigation and management measures

Prior to construction, archaeological salvage excavations are to be conducted in accordance with the MCoA and REMM's. These include the development of an Archaeological Work Method Statement (Section 6.1) and Archaeological Research Design (Section 6.2) which inform the scope, location and methodology of the Salvage Excavation Program (Section 6.3). Following excavation a Final Excavation Report will be completed (Section 6.4).



Figure 6-1 Archaeological salvage excavation process outlined in Sections 6.1 - 6.4

Specific measures and requirements to address contract specification, MCoA, EPBC-CoA and REMM in relation to Aboriginal, non-Aboriginal and underwater heritage are outlined in Table 6-2.

## 6.1 Archaeological Work Method Statement (AWMS)

The Archaeological Work Method Statement identifies the archaeological context, research design and archaeological methodology to be undertaken.

Archaeological work method statements (AWMS) has been prepared by a suitably qualified heritage specialist in accordance with the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011), the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* and the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010a; 2010b) and is included in **Attachment J**.

During excavation and subsurface works or any other identified high-risk activities identified as part of the environmental risk assessment, archaeological supervision and vibration monitoring may be required at the potential location of the rock engraving at La Perouse (AHIMS ID 45-6-0653). If the engraving is identified and/or the vibration levels would result in damage to the integrity of the sandstone structure, works must cease, the site protected and the construction methodology be reviewed, in consultation with a heritage consultant, to mitigate further impacts.

## 6.2 Archaeological Research Design (ARD)

An Archaeological Research Design (ARD) provides a background review of archaeological investigation in the vicinity of the Site; identification of project area-specific research questions targeted at characterising the nature, extent and significance of any archaeological deposits present; and an outline of proposed tasks for the archaeological excavation program.

In accordance with MCoA E33, prior to the commencement of archaeological excavation, an Archaeological Research Design and Excavation Methodology (ARD) was prepared accordance with the *Heritage Council's Archaeological Assessments Guideline* (1996), using a methodology prepared in consultation with Heritage NSW, to guide the archaeological program and is included in **Attachment I**. The revised methodology was also prepared consultation with Heritage NSW and will submitted to the Planning Secretary if requested.

The ARD confirms the areas within the construction boundaries requiring archaeological investigation, management and any salvage requirements, and outline the archaeological investigation method. The AWMS was also prepared prior to construction to support the ARD (Section 6.1).

## 6.3 Salvage Excavation Program

A program of archaeological salvage excavation was developed to investigate and record significant archaeological remains within the Low Potential PAD at La Perouse and includes the jetty tie-in where utilities, wharf piles and landscaping works, where they would be impacted by the construction activities.

The archaeological salvage excavation is guided by the ARD (Section 6.2) and would be managed by an Excavation Director who meets the NSW Heritage Council's Excavation Director criteria. The Salvage Excavation Program is outlined in Attachment C.

## 6.4 Final Excavation Report

Following the completion of the salvage excavation program (Section 6.3) a Final Excavation Report will be prepared by a suitably qualified person and in accordance with the *Guide to Investigation, assessing and reporting on Aboriginal cultural heritage in NSW, OEH 2011* and the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales, DECCW 2010*. The report will include:

- the results of the archaeological test excavations and any subsequent salvage excavations (with artefact analysis and identification of a final repository for finds)
- the details of any further historical research undertaken to enhance the final reporting
- results of archaeological excavations (including artefact analysis and identification of a final repository for relics including details of their ongoing conservation and protection in perpetuity by the landowner).

The report will be prepared in accordance with guidelines and standards required by Heritage Council of NSW and the relevant Council's local studies unit and in consultation with RAPs in accordance with MCoA E25.

Following completion of the archaeological excavation and the subsequent analysis and reporting, further consultation will be undertaken to determine the long-term repository for any retrieved Aboriginal objects from the salvage excavation program.

The final report must be provided for information to the Planning Secretary, Heritage NSW, relevant Councils, La Perouse Local Aboriginal Land Council (LALC), RAPs and local libraries within 12 months of the completion of the Aboriginal archaeological excavations (both test and salvage).

## 6.5 Protection, Monitoring and Exclusion Zones

The Kamay Wharves project has been designed with the area's heritage significance in mind and generally minimises impacts to heritage values. The aspects of the project which may have a detrimental impact on significant elements within the project area are the erection of the permanent passenger wharf structure, excavations and trenching associated with utility services and landscaping works.

The protection, monitoring and exclusion zones are outlined in Attachment B.

## 6.6 Unexpected Heritage Items (including Human Remains) Procedure

Transport for NSW has recently (July 2022) published an Unexpected Heritage Items Procedure (including Human remains) which is applicable for all divisions of Transport for NSW, excepting where there are separate unexpected finds procedures that operate for specialist divisions (e.g. Sydney Trains, Rail Delivery and Sydney Metro divisions). The Procedure was developed in

accordance with guidelines and standards prepared by the Heritage Council of NSW or Heritage NSW and as such meets the requirements of MCoA E21.

'Unexpected Finds' can be defined as any unanticipated archaeological discovery. In the event that heritage items, including skeletal remains, are identified in the course of construction of the Project, the procedure detailed in the TfNSW *Unexpected Heritage Items Procedure* (July 2022), will be followed in accordance with MCoA E21 and MCoA E22.

Refer to Attachment A for the Heritage Items (including Human Remains) Procedure.

## 6.7 Notice of discovery of a relic

In the event of the discovery of a relic, the archaeologist (or any other worker) will notify McConnell Dowell and TfNSW, who will in turn notify the Planning Secretary (or its delegate), Randwick City Council and Sutherland Shire Council in accordance with MCoA E22, and the Heritage Council (or its delegate) in accordance with the requirements of s146 of the *Heritage Act 1977* and Section 6.1 of the TfNSW *Unexpected Heritage Items Procedure*.

## 6.8 Nominated Archaeologist

The following qualified archaeologists are nominated to direct and supervise all archaeological investigations and monitoring at the study site in accordance with MCoA E34. The Archaeological Director and Principal will be responsible for liaising with the NSW Heritage Council, or its delegate, regarding any archaeological matters prior, during and after archaeological investigation of the site.

The Archaeological Director will have the authority to advise on the duration and extent of oversight required during archaeological investigations.

Table 6-6-1 Proposed Archaeological Directors and Archaeological Team

Position	Nominated Archaeologist
Maritime archaeologist	Cosmos Coroneos
Historical archaeologist – Excavation director	David Marcus
Aboriginal archaeologist	Amanda Hansford
Archaeological teams	Suitably qualified staff from Cosmos Archaeology & Austral Archaeology

## 6.9 Environmental Work Method Statements

As outlined in Section 4.4.5 of the CEMP, Environmental work method statements (EWMS) will be prepared to manage and control all high-risk activities and others that have the potential to negatively impact on the environment.

These EWMS are prepared prior to the commencement of relevant construction activities and will be developed to:

- Provide a description of the work activity, including any plant and equipment to be used
- Include relevant mitigation measures and controls developed through SMART principles

- Outline of the sequence of tasks for the activity, including interfaces with other construction activities and identify any cumulative impacts
- Communicate requirements, actions, processes and controls to construction personnel using plans, diagrams and simply written instructions
- Identify any environmental and/or socially sensitive areas, sites or place
- Identify of potential environmental risks/impacts due to the work activity

The following EWMS will be developed throughout construction (prior to the respective activity commencing) and will include, where applicable, heritage aspects and controls.

- Site Embellishment
- Anchor handling & Placement
- Services Installation Works
- Demolition
- Refuelling
- Landside Civil Works
- Installation of Major Temporary Works (*including the installation and removal of the construction platform at La Perouse, temporary causeway at Kurnell and any other temporary structures*)
- Working within or near a sensitive area
- Heritage Storage Work
- Piling - Install of Piles, including Bored Rock Sockets
- Installation of In-situ Concrete Pile Plugs, Precast Concrete Headstocks and Deck Planks
- Installation of In-situ Concrete Deck
- Installation and grouting of Steel Headstocks
- Repair of Protective Coatings
- Terrestrial Vegetation Disturbance
- Marine Vegetation Disturbance
- Treatment of Acid Sulfate Soils

## 6.10 Environmental mitigation measures overview

Table 6-2: Aboriginal, non-Aboriginal and underwater heritage management and mitigation measures

ID	Measure/Requirement	Responsibility	When to implement	Timing / frequency	Reference	Evidence
<b>GENERAL</b>						
HM_1.	A Construction Heritage Management Plan (HMP) must be prepared and implemented under the CEMP.	McConnell Dowell Environment & Sustainability Lead	Construction	Prior to and during construction	REMM AH3	This HMP
HM_2.	Site Environmental Plans that identify heritage values, culturally and archaeologically sensitive areas and constraints within the study area must be developed.	McConnell Dowell Environment & Sustainability Lead	Construction	Prior to and during construction	REMM AH3	Site Environmental Plans Appendix H of the CEMP
HM_3.	Develop and implement a procedure for managing Unexpected Heritage Items in accordance with the Transport for NSW <i>Unexpected Heritage Items Procedure</i> .	McConnell Dowell Environment & Sustainability Lead	Construction	Prior to and during construction	REMM AH3 MCoA E21 MCoA E22	Attachment A Unexpected Heritage Items Procedure
HM_4.	In the event any heritage or potential heritage items are uncovered during construction, work is to cease and the Unexpected Heritage Finds Procedure is to be followed.	McConnell Dowell Environment & Sustainability Lead	Construction	Unexpected Heritage Finds	MCoA E26 Best Practice	Attachment A Unexpected Heritage Items Procedure Site Inspection Record
HM_5.	Prior to and during vibration generating activities that have the potential to impact on	McConnell Dowell	Construction	During construction	REMM AH3	Construction Noise and

ID	Measure/Requirement	Responsibility	When to implement	Timing / frequency	Reference	Evidence
	<p>heritage items, vibration monitoring must be undertaken to identify minimum working distances to prevent cosmetic damage.</p> <p>If vibration levels would result in damage to the integrity of the item, works must cease, the site must be protected and the construction methodology be reviewed, in consultation with a heritage consultant, to mitigate further impacts.</p> <p>Advice from a heritage specialist will be sought on methods and locations for installing equipment used for vibration and movement monitoring at heritage-listed structures.</p>	Environment & Sustainability Lead			REMM NAH3 MCoA E30 MCoA E49 MCoA E50	Vibration Management Sub Plan – Attachment E
HM_6.	<p>Heritage protection zones and protection requirements for heritage items within and in the vicinity of the construction boundary must be established prior to construction. Exclusion zones to be established will be determined in consultation with a suitably qualified heritage specialist and may include Parawebbing, signage, temporary fencing and/or inductions.</p>	McConnell Dowell Environment & Sustainability Lead	Prior to construction	Prior to and during construction	REMM NAH3 REMM AH7	Environment & Sustainability Inspection report
HM_7.	<p>Heritage Awareness Inductions will be given to all workers during site inductions.</p> <p>Inductions will include Aboriginal Heritage, Non-Aboriginal Heritage and Underwater Heritage.</p> <p>Inductions will be carried out to ensure workers they are aware of their obligations and best practice.</p>	McConnell Dowell Environment & Sustainability Lead	Prior to construction	Prior to and during construction	REMM NAH6	Induction/Training Register



ID	Measure/Requirement	Responsibility	When to implement	Timing / frequency	Reference	Evidence
HM_8.	<p>All ground penetrations must be accompanied by a MCD Excavation &amp; Penetration Permit in accordance with McConnell Dowell's Permit to Work Procedure.</p> <p>The Excavation &amp; Penetration Permit will identify the location of the proposed excavation and identify specific heritage protection measures such as no ground penetration zones and areas that require archaeologist supervision.</p> <p>No ground penetration is permitted without an Excavation &amp; Penetration Permit</p>	Construction Manager	Prior to ground penetration	During construction	MCoA C11 Best Practice	Excavation & Penetration Permit
<b>SITE SPECIFIC ABORIGINAL HERITAGE MANAGEMENT / MITIGATION MEASURES</b>						
HM_9.	Aboriginal Cultural Heritage Awareness Inductions must be given to all workers during site inductions. The inductions must be based on and updated with stakeholder feedback, consultation with the La Perouse Local Aboriginal Land Council, Registered Aboriginal Parties and following any unexpected finds.	McConnell Dowell Environment & Sustainability Lead	Construction	During construction	REMM AH4	Attachment A – Unexpected Heritage Items Management Procedure  Induction/training register
HM_10.	A Salvage Excavation Program must be prepared by a suitably qualified heritage specialist in accordance with the <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW</i> (Department of Environment, Climate Change and Water NSW, 2010). The program is to be developed and be carried out prior to any subsurface impacts within the Low PAD at La Perouse.	McConnell Dowell Environment & Sustainability Lead  Construction Manager	Prior to any subsurface impacts within the Low Potential PAD at La Perouse	Prior to construction	REMM AH5	Attachment C - Salvage Excavation Program

ID	Measure/Requirement	Responsibility	When to implement	Timing / frequency	Reference	Evidence
	This includes the jetty tie-in where utilities, wharf piles and landscaping works are to be undertaken. Following completion of the archaeological excavation and the subsequent analysis and reporting, further consultation must be undertaken to determine the long-term repository for any retrieved Aboriginal objects.					
HM_11.	A visual inspection by a suitably qualified heritage specialist in accordance with the <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW</i> (Department of Environment, Climate Change and Water NSW, 2010) must be undertaken for the potential rock engravings (Site 3, La Perouse [AHIMS ID 45-6-0650] and Site 4, La Perouse [AHIMS ID 45-6-0651]) before setting-up the ancillary facilities and starting construction.	McConnell Dowell Environment & Sustainability Lead	Prior to setting up construction compound at La Perouse	Prior to construction	REMM AH6 MCoA E27	Environment & Sustainability Inspection Report
HM_12.	Exclusion zones must be established for all registered AHIMS rock engraving sites within the construction boundary or directly adjacent, and these covered with geotextile fabric (or similar) before setting-up the ancillary facilities and creating the construction compound.	McConnell Dowell Environment & Sustainability Lead	Prior to setting up construction compound or any construction at La Perouse	Prior to construction	REMM AH7 MCoA E29	Environment & Sustainability Inspection Report
HM_13.	Throughout construction, all reasonable steps must be taken prevent unnecessary harm, modify or otherwise impact Aboriginal objects or places of cultural significance.	McConnell Dowell Environment & Sustainability Lead	Prior to construction	Prior to and during construction	MCoA E23	Environmental Compliance Tracking Matrix

ID	Measure/Requirement	Responsibility	When to implement	Timing / frequency	Reference	Evidence
HM_14.	Archaeological work method statements (AWMSs) must be prepared in accordance with the methodology outlined in Section 6.1.	McConnell Dowell Environment & Sustainability Lead	Prior to construction	Prior to and during construction	REMM AH8	Attachment J
HM_15.	At the completion of Aboriginal cultural heritage salvage excavations, an Aboriginal Cultural Heritage Excavation Report(s) must be prepared by a suitably qualified person.	McConnell Dowell Environment & Sustainability Lead	Following Salvage Works (Section 6.3)	Following Salvage Works (Section 6.3)	MCoA E25 MCoA E35	Aboriginal Cultural Heritage Excavation Report
HM_16.	Archaeological supervision must be undertaken by a suitably qualified heritage specialist during ground penetrating works: <ul style="list-style-type: none"> <li>- Below 400mm at Kurnell within the Foreshore Midden – Captain Cook’s Landing Place (AHIMS ID 52-3-0219).</li> <li>- During ground penetrating works in or around AHIMS Site # 45-60653 (Site 6 - La Perouse)</li> </ul> <p>If archaeological material is identified, works must cease and the construction methodology revised to mitigate further impacts. Any revision to the methodology must be undertaken in consultation with Heritage NSW, RAPs and LALCs</p>	McConnell Dowell Environment & Sustainability Lead	During construction at Kurnell	During construction	REMM AH9 MCoA E28 MCoA E31	Archaeological inspection report
HM_17.	During construction, vibration monitoring is to be conducted in the immediate area of AHIMS Site # 45-6-0653 (Site 6 - La Perouse).	McConnell Dowell Environment & Sustainability Lead	During Construction	During Construction	MCoA E30	Environmental Monitoring Tracker

ID	Measure/Requirement	Responsibility	When to implement	Timing / frequency	Reference	Evidence
	<p>If vibration monitors are affixed to sandstone, non-invasive adhesive methods (such as beeswax) must be used in consultation with a Heritage Consultant.</p> <p>If it is identified that levels of vibration would result in damage to AHIMS Site # 45-6-0653 (Site 6 - La Perouse), all works must cease and the construction methodology revised to mitigate further impacts. This must be undertaken in consultation with Heritage NSW, RAPs and LALCs.</p>					
HM_18.	Ongoing consultation with RAPs is to occur throughout construction at intervals not exceeding three (3) months.	TfNSW & MCD	During Construction	During Construction	MCoA E24	Meeting minutes
<b>SITE SPECIFIC NON-ABORIGINAL HERITAGE MANAGEMENT / MITIGATION MEASURES</b>						
HM_19.	<p>A Heritage Register must be established to document the location, condition, significance and storage requirements of any memorials, monuments and interpretive panels which need temporarily relocating and storing during construction including the Captain Cook Watering Well, the Landing Place Memorial, interpretative panels on the extant wharf and/or any other heritage items that may be required to be relocated or affected as part of construction.</p> <p>Storage of heritage items will be conducted prior to construction works, items will be stored onsite and reinstated at the completion of construction. The methodology for storage will be documented under an</p>	McConnell Dowell Environment & Sustainability Lead	Construction	Prior to and during construction	REMM NAH3	Attachment D Heritage Register EWMS – Heritage Storage Work

ID	Measure/Requirement	Responsibility	When to implement	Timing / frequency	Reference	Evidence
	Environmental Work Method Statement (EWMS) which will be developed in consultation with a heritage specialist and include applicable environmental risk analyses.					
HM_20.	An Archaeological Research Design (ARD) must be prepared in accordance with the Heritage Council's <i>Archaeological Assessments Guideline</i> (1996), using a methodology prepared in consultation with NSW Heritage. The ARD will confirm the areas within the construction boundaries requiring archaeological investigation and management, any salvage requirements following detailed design, and outline the archaeological investigation method. Archaeological Work Method Statements (AWMS) must be prepared prior to construction to support the ARD.	McConnell Dowell Environment & Sustainability Lead	Prior to construction	Prior to and during construction	REMM NAH4 MCoA E33	Archaeological Research Design Archaeological Work Method Statements
HM_21.	Non-Aboriginal Heritage Awareness Inductions must be given to all workers during site inductions. This will ensure they are aware of their obligations under the NSW <i>Heritage Act 1977</i> and best practice as outlined in <i>The Burra Charter</i> (Australia ICOMOS 2013). Updates to the inductions must be made following stakeholder feedback, any unexpected finds and the outcomes of the ARD.	McConnell Dowell Environment & Sustainability Lead	Prior to construction	Prior to and during construction	REMM NAH5 MCoA E23	Attachment A Induction/training register
HM_22.	A Photographic Archival Recording Program must be undertaken in accordance with the <i>How to Prepare Archival Recording of</i>	McConnell Dowell	Prior to construction	Prior to and during construction	REMM NAH7	Attachment E - Photographic

ID	Measure/Requirement	Responsibility	When to implement	Timing / frequency	Reference	Evidence
	<p><i>Heritage Items</i> (NSW Heritage Office 1998) and <i>Photographic Recording of Heritage Items Using Film or Digital Capture</i> (NSW Heritage Office 2006), in consultation with Heritage NSW. Photographic archival recording must be carried out for heritage items that are directly impacted within the construction boundaries and must record the setting and views of the heritage items within the study area that would be subject to minor or greater visual impacts, based on Table 5-2. The impacted elements include but are not limited to:</p> <ol style="list-style-type: none"> <li>1. The former sea wall at Kurnell;</li> <li>2. The former wharf approach road at La Perouse;</li> <li>3. The archaeological potential areas at La Perouse; and</li> <li>4. Nearby heritage items subject to minor visual impacts, including: Kurnell Peninsula Headland; Kamay Botany Bay National Park (North and South) and Towra Point Reserve; Kurnell Historic Site (in Kamay Botany Bay National Park); Kurnell monuments (in Kamay Botany Bay National Park); and Captain Cook monument.</li> </ol>	Environment & Sustainability Lead				Archival Recording Program
HM_23.	Monument Track must be reinstated in the same location. This will ensure that the historical circulation pattern is maintained in accordance with the policies outlined in Section 5.5: Landscape of the Meeting Place Precinct CMP. Specifically:	McConnell Dowell Environment & Sustainability Lead	Construction	During construction	REMM NAH8	Design Drawings Site inspection report

ID	Measure/Requirement	Responsibility	When to implement	Timing / frequency	Reference	Evidence
	<ul style="list-style-type: none"> <li>- The existing concrete slabs will be temporarily removed and reinstated, rather than being replaced. If this is not possible, replaced sections will match the existing track.</li> <li>- Care will be taken to remove sections with interpretive text and ensure that they are returned to their original location.</li> </ul>	Construction Manager				
HM_24.	Where any archaeological investigations identify remains, consultation with Heritage NSW, Heritage Council and National Parks and Wildlife Service will be undertaken to determine the long-term repository for any retrieved objects including investigating opportunities for leaving archaeological remains exposed and incorporating them into the visual landscape.	McConnell Dowell Environment & Sustainability Lead	Construction	During construction	REMM NAH5	Design Drawings
<b>SITE SPECIFIC UNDERWATER HERITAGE MANAGEMENT / MITIGATION MEASURES</b>						
HM_25.	<p>Environmental work method statements must be reviewed by a suitably qualified heritage specialist where additional heritage mitigation measures have been proposed (i.e. mitigation measures not previously addressed in the HMP).</p> <p>The review will be conducted in accordance with Heritage NSW Guidelines, for the installation and removal of the construction platform at La Perouse, temporary causeway at Kurnell and any other temporary structures.</p>	McConnell Dowell Environment & Sustainability Lead	Prior to construction	Prior to and during construction	REMM UH1	Environmental Work Method Statements (EWMS)

ID	Measure/Requirement	Responsibility	When to implement	Timing / frequency	Reference	Evidence
HM_26.	Develop and implement Artefact Management Procedures including identification of approved submerged reburial locations in consultation with a suitably qualified specialist.	McConnell Dowell Environment & Sustainability Lead	Prior to construction	Prior to and during construction	REMM UH1	Attachment D – Maritime Artefact Collection and Curation Policies
HM_27.	Maritime Heritage Inductions must be undertaken prior to underwater work activities to cover activities such as anchoring and trenching.	McConnell Dowell Environment & Sustainability Lead	Prior to construction	Prior to and during construction	REMM UH1	Induction/training register
HM_28.	Restricted zones which limit activities and movements (i.e. no tracked machines) to be established for the following heritage items: First Slipway at La Perouse; Remains of the sandstone block causeway for La Perouse wharf; Paragon Restaurant / Boat Davits; and the Holt Jetty / Isaac Smith memorial/ Captain Cook's Landing Site.	McConnell Dowell Environment & Sustainability Lead	Prior to construction	Prior to and during construction	REMM UH1	CEMP Appendix H: Sensitive Area Plans
HM_29.	An Underwater Heritage Monitoring Procedure (before and during construction, including a final site inspection within three months of completion of works) must be developed by a suitably qualified heritage specialist and implemented for the following heritage items: First Slipway at La Perouse; Remains of the sandstone block causeway for La Perouse wharf; Paragon Restaurant / Boat Davits; and the Holt Jetty / Isaac Smith memorial/ Captain Cook's Landing Site.	McConnell Dowell Environment & Sustainability Lead	Prior to construction	Prior to and during construction	REMM UH1	Attachment H - Underwater Heritage Monitoring Procedure



ID	Measure/Requirement	Responsibility	When to implement	Timing / frequency	Reference	Evidence
HM_30.	An archaeological dive inspection must be carried out within the footprint of the wharves by a suitably qualified heritage specialist. Where a culturally significant heritage item is present, any movable heritage items must be relocated away from the impact area in accordance with the <i>Maritime Artefact Collection and Curation Procedure</i> (Attachment D) before starting work.	McConnell Dowell Environment & Sustainability Lead	Prior to construction	Prior to construction	REMM UH2	Archaeological Dive Inspection Report  Attachment D - Maritime Artefact Collection and Curation Procedure
HM_31.	Unidentified seabed anomalies must be avoided through the use of a five metre no-anchoring exclusion zone. If these areas are required for anchoring or mooring, a dive inspection will determine if the location is of low cultural heritage sensitivity, to enable these activities to occur.	McConnell Dowell Environment & Sustainability Lead	Prior to marine construction	During construction	REMM UH3	CEMP Attachment H - Sensitive area plans  Archaeological Dive Inspection Report

# 7 Compliance Management

## 7.1 Roles and responsibilities

The McConnell Dowell organisational structure and overall roles and responsibilities are outlined in Section 4.4 of CEMP. Specific responsibilities for the implementation of environmental controls are detailed in Chapter 7 of this HMP.

## 7.2 Induction and Training

All employees, contractors and utility staff working on site will undergo site induction heritage training relating to Aboriginal, non-Aboriginal and maritime heritage management issues prior to construction commencing.

Prior to commencing work onsite, all construction personnel will receive a brief archaeological and heritage induction as part of the project induction. This will include specific information about the potential locations and types of archaeological remains that may be encountered within the project area.

The induction training will address elements related to heritage management, including:

- the existence and requirements of this sub plan;
- relevant legislation;
- the roles and responsibilities for heritage management;
- the location of identified heritage sites and no-go areas; including no anchoring and trenching areas.
- the proposed heritage management and protection measures; and
- the procedure to follow in the event of an unexpected heritage item find, or discovery of human remains, during construction works (Unexpected Heritage Items Management Procedure – refer Attachment A).

The induction will be updated based on stakeholder feedback, consultation with the La Perouse Local Aboriginal Land Council, Registered Aboriginal Parties, following any unexpected finds and from the outcome of the Archaeological Research Design (ARD).

Records of personnel who have undertaken induction training will be managed in accordance with the projects Records Management Plan (KFW02-MCD-BPW-DC-PLN-000001).

Further details regarding staff induction and training are outlined in Section 6.3 of the CEMP.

## 7.3 Monitoring and inspections

Inspections of sensitive areas and activities with the potential to impact Aboriginal and non-Aboriginal heritage will occur for the duration of the project. Some specific monitoring requirements in relation to some items have been documented in Table 6-2.

Requirements and responsibilities in relation to monitoring and inspections are documented in Sections 8.1.1 and 8.1.2 of the CEMP.

## **7.4 Auditing**

Audits (both internal and external) will be undertaken to assess the effectiveness of environmental controls and compliance with this sub plan, MCoA and other relevant approvals, licenses and guidelines.

Audit requirements are detailed in Section 8.3 of the CEMP.

## **7.5 Reporting**

Reporting requirements relevant to this sub plan, as outlined by the MCoA, are referenced in Section 8.2 of the CEMP.

# 8 Review and improvement

## 8.1 Review and endorsement

The HMP has been prepared by a suitably qualified specialist (Mott MacDonald, Cosmos Archaeology & Austral Archaeology), reviewed by McConnell Dowell and TfNSW and endorsed by the ER.

Approval of the HMP by DPE is required 30 days prior to commencement of construction. Any minor amendments to the HMP are to be endorsed by the ER. Refer to Section 3 of the CEMP for endorsement and approval requirements of the CEMP & Sub Plans.

## 8.2 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 objectives and targets.

## 8.3 HMP update and amendment

The processes described in Section 3.1.1 of the CEMP may result in the need to update or revise the HMP. This will be carried out on an as-needed basis during the project by McConnell Dowell.

McConnell Dowell will review and update the HMP where required prior to significant changes in the design and construction methodology that may alter the risk rating identified in the Aspect and Impacts Register or after significant environmental incidents.

If the works are anticipated to extend beyond 18 months, the HMP would be reviewed and updated, where required, within 12 months of the date of approval.

Only the Environment & Sustainability Lead, or delegate, has the authority to alter any of the environmental management documentation.

Where significant changes to the HMP have occurred, 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 6.5 of the CEMP.

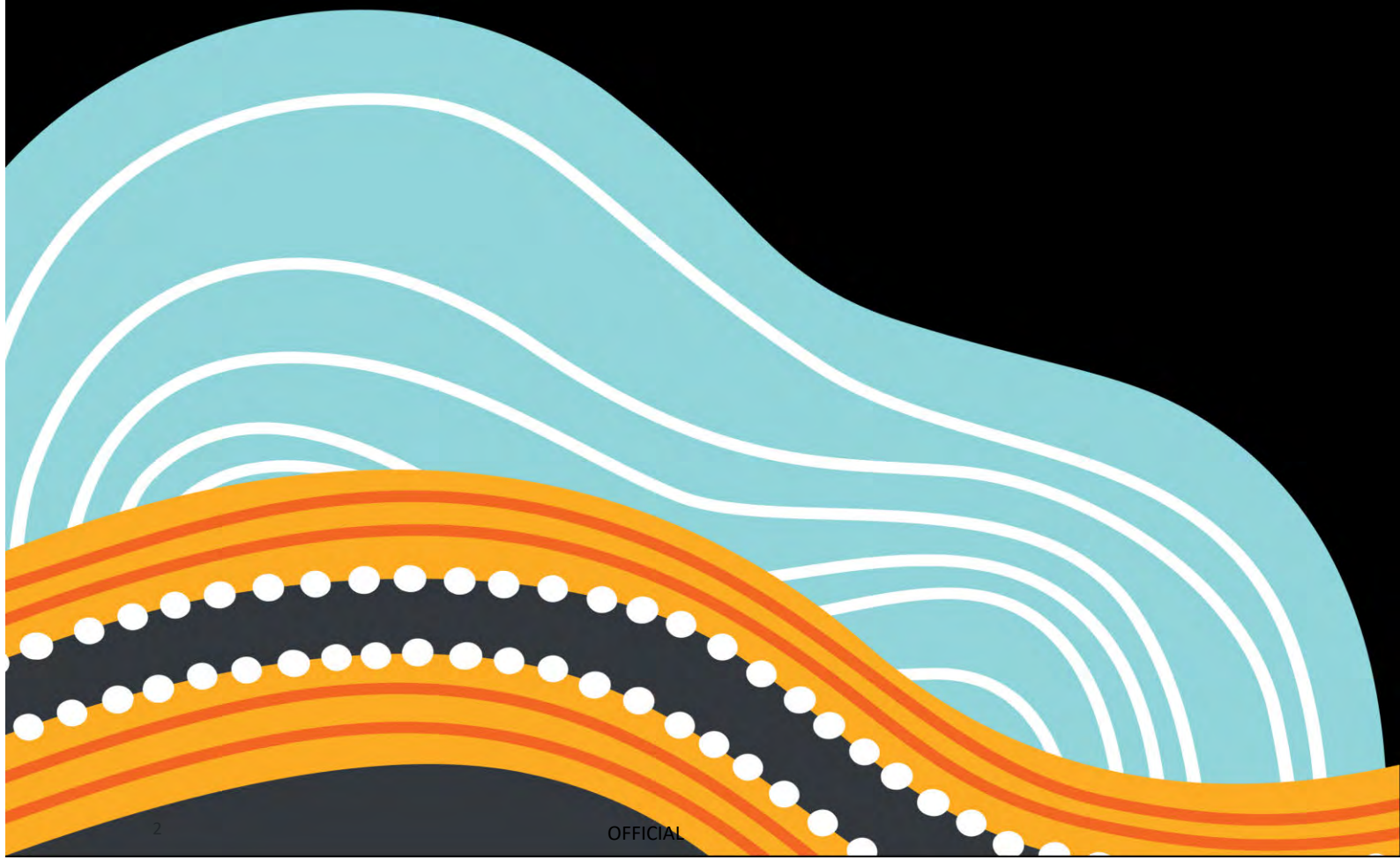
# Attachment A – Unexpected Heritage Items (including Human Remains) Procedure

# Unexpected heritage items procedure

June 2023



# Acknowledgement of Country



# Versions

Version	Date	Amendment notes
1.0	Nov 2011	First issue
1.1	Jul 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.
1.2	Oct 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.
1.3	Mar 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.
1.4	May 2022	Rebranded from Roads and Maritime to Transport for NSW. Minor updates for example to accommodate government department name changes, legislation updates, combining contacts from appendix d with former Section 5 as the new Section 7; adjustment of roles and titles following organisational change; clarification of who the procedure applies to in section 2.
2	June 2023	Update to be Project specific for the Kamay Ferry Wharves and to respond to DPE comments



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# 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 activities undertaken by Transport for NSW (Transport) or contractors on behalf of Transport.
- Address Transport's 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)*.

# 2. Scope

This procedure assumes that an appropriate level of Aboriginal and non-Aboriginal heritage assessment has been completed before work commences on site. In some cases, 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 and following Transport for NSW (Transport) internal reporting, if required.

**Important: This procedure applies to all Transport construction and maintenance activities.**

However, when working for Sydney Trains, Rail Delivery and Sydney Metro divisions within Transport please refer to their separate unexpected finds procedures that will apply.

This procedure applies to:

- The discovery of any unexpected heritage item (usually during construction), where Transport 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 Transport projects that are approved or determined under, Part 4 (Division 4.7), Part 5 or Division 5.2 of the *Environmental Planning and Assessment Act 1979 (NSW)* (EP&A Act), or any development that is exempt under the Act.

This procedure applies to staff performing work for Transport. 'Staff' includes all permanent, temporary and casual staff, staff seconded from another organisation and contingent workers including labour hire, professional services contractors and consultants.

This procedure does not apply to:

- The legal discovery and disturbance of heritage items as a result of investigations being undertaken in accordance with Heritage NSW, Department of Planning and Environment *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 (NSW)*; or an approval issued under the *Heritage Act*<sup>1</sup>.
- 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 4, including Division 4.7, or Part 5, including Division 5.2 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 AHIP<sup>2</sup>; an approval issued under the *Heritage Act 1977 (NSW)*; the

<sup>1</sup> Transport heritage obligations are incorporated into the conditions of heritage approvals

<sup>2</sup> The Procedure for Aboriginal cultural heritage consultation and investigation (2011) recommends that applicable 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.

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 Transport 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 Transport does not have approval to disturb<sup>3</sup> 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* (NSW) protects Aboriginal objects which are defined as:

*"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"*<sup>4</sup>.

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 Heritage NSW<sup>5</sup> and when a person becomes aware of an Aboriginal object they must notify the Department of Premier and Cabinet Secretary about its location<sup>6</sup>. Assistance on how to do this is provided in Section 6 (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).

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

<sup>4</sup> Section 5(1) *National Park and Wildlife Act 1974* (NSW).

<sup>5</sup> Except when, Division 4.7 of Part 4 or Division 5.2 of Part 5 applies.

<sup>6</sup> This is required under s89(A) of the *National Park and Wildlife Act 1974* (NSW) and applies to all projects assessed under Division 4.7, Part 4, and Division 5.2 Part 5 of the EP&A Act, including exempt development.

### 3.2.1 Archaeological relics

The *Heritage Act 1977* (NSW) 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”<sup>7</sup>*

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.

**Important: All relics are subject to statutory controls and protection.**

If a relic is likely to be disturbed, a heritage approval is usually required from the Heritage Council of NSW<sup>8</sup>. When a person discovers a relic, they must notify the Heritage Council of NSW of its location<sup>9</sup>. Advice on how to do this is provided in Section 6 (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 Transport 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* (NSW) (Heritage Act) 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 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 classed as:

- Reportable deaths.
- Aboriginal objects.
- Relics.

Where it is suspected that less than 100 years has elapsed since death, human skeletal remains come under the jurisdiction of the State Coroner and the *Coroners Act 2009* (NSW). Under s 35(2) of that Act, 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 old<sup>10</sup> regardless of ancestry. Public health controls may also apply.

Where remains are suspected of being more than 100 years old, they are considered to be either Aboriginal objects or non-Aboriginal relics depending on the ancestry of the individual. Aboriginal human remains are protected under the *National Parks and Wildlife Act 1974*, while non-Aboriginal remains are protected under the *Heritage Act 1977* (NSW).

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<sup>7</sup> Section 4(1) *Heritage Act 1977* (NSW).

<sup>8</sup> Except when Division 4.7 of Part 4 or Division 5.2 of Part 5 of the *EP&A Act* applies.

<sup>9</sup> This is required under s146 of the Heritage Act and applies to all projects assessed under, Part 4, including Division 4.7, Part 5 and including Division 5.2 of the EP&A Act, including exempt development.

<sup>10</sup> Under s 19 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.

The approval and notification requirements of these Acts are described above in Sections 3.1 and 3.2. Additionally, the discovery of Aboriginal human remains also triggers notification requirements to the Commonwealth Minister for the Environment under s 20(1) of the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cth).

**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.

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

## 4. Procedure overview

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 6.

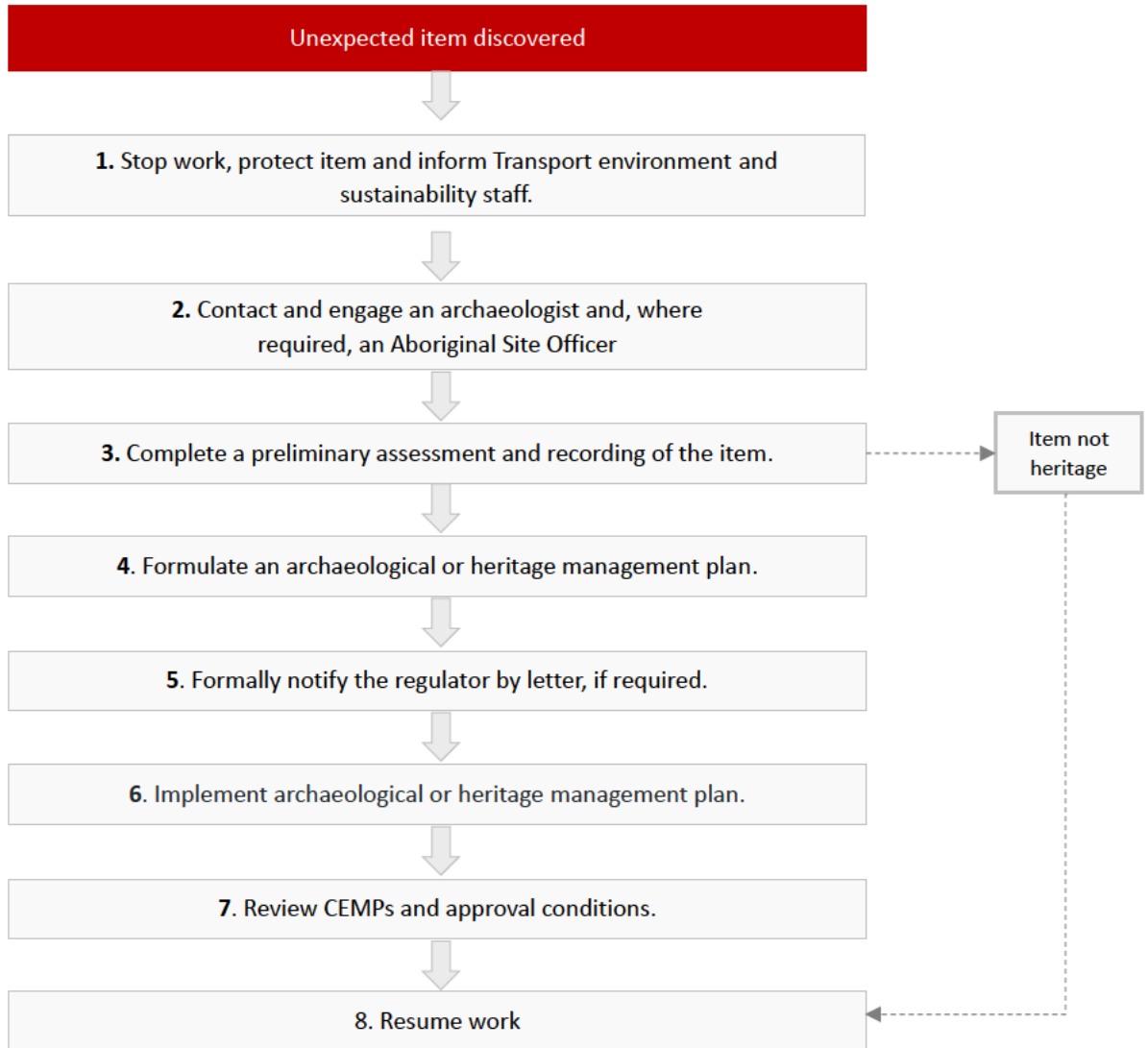


Figure 1: Overview of steps to be undertaken on the discovery of an unexpected heritage item.

**Important:**

Transport 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.

## 5. Related information

### 5.1 Related Transport policies and framework

- [Transport Environment and Sustainability Policy](#)
- [Environment & Sustainability Management Framework](#)
- Cultural heritage policy

### 5.2 This procedure should be read in conjunction with:

- Procedure for Aboriginal Cultural Heritage Consultation and Investigation
- EMF-HE-GD-0077 Cultural heritage guidelines
- Environmental Impact Assessment Procedure for Routine and Minor Works EMF-PA-PR-0081
- Environmental Impact Assessment Procedure for Bushfire Hazard Reduction - EIA-P06
- Environmental Impact Assessment Procedure for Review of Environmental Factors EMF-PA-PR-0070
- Environmental Impact Assessment Procedure for State Significant Infrastructure EMF-PA-PR-0072
- EMF-EM-PR-0001 Environmental Incident Procedure

**Important:**

If you are working under a contract that predates 19 July 2021 under legacy Roads and Maritime work, please contact the Assurance and performance improvement team via [nevops@transport.nsw.gov.au](mailto:nevops@transport.nsw.gov.au)

### 5.3 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.



## 6. Unexpected heritage items procedure

### 6.1 Specific tasks to be implemented following discovery of an unexpected heritage item.

Aboriginal Cultural Heritage Officer (ACHO); Aboriginal Sites Officer (ASO); Archaeologist (A); Project Manager (PM); Environment and sustainability Staff (RS); Registered Aboriginal Parties (RAPs); Senior Specialist (Heritage) (SS(H)); T.

Step	Task	Responsibility	Guidance and tools
<b>1</b>	<b>Stop work, protect item and inform Transport environment and sustainability staff</b>		
1.1	Stop all work in the immediate area of the item and notify the Project Manager or Team Leader-RM. (For maintenance activities, the Team Leader is to also notify the Works Supervisor-RM).	All	<b>Appendix A</b> (Identifying unexpected heritage items)
1.2	Establish a 'no-go zone' around the item. Use high-visibility fencing where practical.	PM	
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	
1.4	Inspect, document and photograph the item using 'Unexpected Heritage Item Recording Form (Appendix B).	PM	<b>Appendix B</b> (Unexpected Heritage Item Recording Form)  <b>Appendix C</b> (Photographing Unexpected Heritage items)
1.5	Is the item likely to be bone?  If <b>yes</b> , follow the steps in Appendix E. 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.  If <b>no</b> , continue to next step.		<b>Appendix E</b> (Uncovering bones)
1.6	Is the item likely to be:  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, rockery, personal effects, tools, machinery and domestic or industrial refuse)  and/or  b) An Aboriginal object? (An Aboriginal object may include a shell midden, stone tools, bones, rock art or a scarred tree).		<b>Appendix A</b> (Identifying heritage items)

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	<p>If <b>yes</b>, proceed directly to Step 1.8 If <b>no</b>, proceed to next step.</p>		
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 <b>yes</b>, 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>		<b>Appendix A</b> (Identifying heritage items)
1.8	<p>Inform relevant Transport Environment and Sustainability staff of item by providing them with the completed Appendix B.</p>	PM	<b>Section 7</b> (Seeking advice)
1.9	<p>Environment and Sustainability staff to advise Project Manager or Works Supervisor whether Transport has an approval or safeguard in place (apart from this procedure) to impact on the 'item'. (An approval may include an approval under the Heritage Act, the National Parks and Wildlife Act or the Environmental Planning and Assessment Act).</p> <p>Does Transport have an approval, permit or appropriate safeguard in place to impact on the item?</p> <p>If <b>yes</b>, work may recommence in accordance with the approval, permit or safeguard. There is no further requirement to follow this procedure.</p> <p>If <b>no</b>, continue to next step.</p>		
1.10	<p>Liaise with Traffic Management Centre where the delay is likely to affect traffic flow.</p>	PM	
1.11	<p>Report the item as a 'Reportable Event' in accordance with the Transport <i>Environmental Incident Procedure (EMF-EM-PR-0001)</i>. Implement any additional reporting requirements related to the project's approval and CEMP, where relevant.</p>	PM	Environmental Incident Procedure EMF-EM-PR-0001

Step	Task	Responsibility	Guidance and tools
<b>2</b>	<b>Contact and engage an archaeologist and, where required, an Aboriginal site officer</b>		
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> <p>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 Transport contractor panels on the <a href="#">Buy NSW (NSW government)</a> homepage.</p> <p>Environment and sustainability staff and Transport heritage staff can also advise on appropriate consultants.</p>	PM ; ES; SS(H))	<p><b>Section 7</b> (Seeking advice)</p> <p><a href="#">Buy NSW (NSW government)</a></p>
2.2	Where the item is likely to be an Aboriginal object, speak with your Aboriginal Cultural Heritage Officer 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 (i.e., a RAP) has been nominated as a result of previous consultation, then that person is to be contacted.	PM or WS-RM (ACHO; 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	<b>Appendix C</b> (Photographing Unexpected Heritage items)
<b>3</b>	<b>Preliminary assessment and recording of the find</b>		
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 (e.g., the item is not a 'relic', a 'heritage item' or an 'Aboriginal object'). Any such advice should be provided in writing (e.g., via email) and confirmed by the Project Manager or Works Supervisor - RM.	A/PM/ASO	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 most cases, a site inspection is required to conduct a preliminary assessment.	PM	
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 reflect the extent of the newly assessed protective area. No works are to take place within this area once established.	A/PM/ASO	
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 (e.g., the item is not a 'relic', a 'heritage item' or an 'Aboriginal object'). Any such advice should be provided in writing (e.g., via email) and confirmed by the Project Manager or Works Supervisor - RM.	A/PM/ASO	Proceed to Step 8
3.5	Where required, seek additional specialist technical advice (such as a forensic or physical anthropologist to identify skeletal remains). Environment and sustainability staff and/or Transport heritage staff can provide contacts for such specialist consultants.	ES/SS(H)	<b>Appendix D</b> (Key environmental contacts)

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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 - RM. Any verbal conversations with regulators must be noted on the project file for future reference.	PM/A	
<b>4</b>	<b>Prepare an archaeological or heritage management plan</b>		
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:  <ul style="list-style-type: none"> <li>(a) description of the feature</li> <li>(b) historic context if data is easily accessible</li> <li>(c) likely significance</li> <li>(d) heritage approval and regulatory notification requirements</li> <li>(e) heritage reporting requirements</li> <li>(f) stakeholder consultation requirements</li> <li>(g) relevance to other project approvals and management plans etc.</li> </ul>	A/ASO	<b>Appendix F</b> (Archaeological/Heritage Advice Checklist)
4.2	In preparing the plan, the archaeologist with the assistance of environment and sustainability 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 (e.g., Aboriginal Cultural Heritage Assessment Report). This will outline if the unexpected item is consistent with previous heritage/project approval(s) and/or previously agreed management strategies. The Project Manager and environment and sustainability 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.	A/ES/PM	<b>Appendix F</b> (Archaeological/Heritage Advice Checklist)
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 environment and sustainability staff and Transport heritage staff, if required.	PM/ES/SS(H)	

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Step	Task	Responsibility	Guidance and tools
<b>5</b>	<b>Notify the regulator, if required.</b>		
5.1	Review the archaeological or heritage management plan to confirm if regulator notification is required. Is notification required?  If <b>no</b> , proceed directly to Step 6 If <b>yes</b> , proceed to next step.	PM/ES/SS(H)	
5.2	If notification is required, complete the template notification letter.	PM	<b>Appendix G</b> (Letter notification template)
5.3	Forward the draft notification letter, archaeological or heritage management plan and the site recording form to r environment and sustainability staff and Senior Specialist (Heritage) for review, and consider any suggested amendments.	PM/ES/SS(H)	
5.4	Forward the signed notification letter to the relevant regulator (i.e., notification of relics must be given to the Heritage NSW,) while notification for Aboriginal objects must be given to the relevant Aboriginal section of Heritage NSW.  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 Division 4.7 (SSD) and Division 5.2 (SSI) EP&A Act projects, the Department of Planning and Environment must also be notified.	PM	<b>Appendix D</b> (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	
<b>6</b>			
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 (ES)	
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 (RAPs and ES)	PACHCI Stage 3
6.3	Where heritage approval is required contact environment and sustainability 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/ES	
6.4	For Division 4.7 (SSD) and Division 5.2 (SSI) EP&A Act 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 environment and sustainability staff and Environment and Sustainability specialist staff if unsure.	PM/ES	
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	

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6.6	Where statutory approval (or Division 4.7 (SSD)/ Division 5.2 (SSI) of the EP&A Act project modification) is not required and where recording is recommended by the archaeologist, sufficient time must be allowed for this to occur.	PM	
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 (e.g., museums or local councils) should be consulted on this issue. Contact environment and sustainability staff and Senior Specialist (Heritage) for advice on this matter, if required.	PM	
<b>7</b>	<b>Review CEMPs and approval conditions</b>		
7.1	Check whether written notification is required to be sent to the regulator before recommencing 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 (e.g., 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	
<b>8</b>	<b>To resume work</b>		
8.1	Seek written clearance to resume project work from environment and sustainability staff and the archaeologist. For <b>unidentified Aboriginal objects or places of cultural significance are discovered</b> written response from Heritage NSW will be 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 all relevant project/heritage approvals/determinations.  Any unidentified Aboriginal objects or places of cultural significance are discovered they will be registered on the Aboriginal Heritage information Management System (AHIMS) if required by Heritage NSW	ES/A/PM	
8.2	If required, ensure archaeological excavation/heritage reporting and other heritage approval conditions are completed in the required timeframes. This includes artefact retention repositories, conservation and/or disposal strategies.	PM/A	
8.3	Forward all heritage/archaeological assessments, heritage location data and its ownership status to the Senior Specialist (Heritage). They will ensure all heritage items in Transport's ownership and/or control are considered for the Transport S170 Heritage and Conservation Register.	PM/SS(H)	
8.4	If additional unexpected items are discovered this procedure must begin again from Step 1.	PM/TL-RM	

## 7. Seeking advice

Advice on this procedure should be sought from Transport’s Environment and Sustainability heritage staff (see contact details below). Contractors and alliance partners should ensure their own project environment managers are aware of and understand this procedure. Environment and sustainability staff can assist non-Transport project environment managers with enquires concerning this procedure.

**Important: Transport staff and contractors must not seek advice on this procedure directly from Heritage NSW without first seeking advice from Environment and Sustainability heritage staff or environment and sustainability 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 staff within Environment and Sustainability to assist with the preliminary archaeological identification and technical reviews of heritage/archaeological reports.

### Heritage regulators

Department/Office	Contact	Phone
Heritage NSW, Department of Planning and Environment	<a href="#">Heritage NSW</a>	(02) 9873 8500
Department of Climate Change, Energy, Environment and Water (Commonwealth)	<a href="#">DCCEEW</a>	(02) 6272 3933

### Project-specific contacts

Position	Name	Phone
MCD Project Manager	Adam Adamczewski	0403 002 296
MCD Senior Environment and Sustainability Advisor	Mitch Jones	0488 552 226
Transport Project Manager	Tony Matthews	0411 076 046
Transport Senior Environment and Sustainability Officer	Chris Williams	0427 468 630
Aboriginal Cultural Heritage Officer	Noni Ross	0476 813 136
Consultant Archaeologist		
Local Police Station		
Environment Line		131 555

## 8. Definitions

Term	Definition
Archaeologist	Archaeologist
ACHO	Aboriginal Cultural Heritage Officer
AHIP	Aboriginal Heritage Impact Permit

AHIMS	Aboriginal Heritage Information System
ASO	Aboriginal Site Officer
CEMP	Construction Environment Management Plan
DCCEEW	Department of Climate Changes, Energy, Environment and Water
DPE	Department of Planning and Environment
HNSW	Heritage NSW, Department of Planning and Environment
PACHCI	Procedure for Aboriginal Cultural Heritage Consultation and Investigation
PM	Project Manager
RAP	Registered Aboriginal Parties
E&S	Environment and Sustainability (branch)
SS(H)	Senior Specialist (Heritage)
TL-RM	Team Leader –Roads and Maintenance or equivalent role
Transport	Transport for NSW
WS-RM	Works Supervisor – Roads and Maintenance or equivalent role



## 9. Accountabilities

Role	Responsibility
Aboriginal Cultural Heritage Officer (ACHO)	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 Transport <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 Transport <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 Management (PM)	Ensures all aspects of this procedure are implemented. The PM can delegate specific tasks to a construction environment manager, Transport site representatives or environment and sustainability staff, where appropriate.
Environment and sustainability staff (ES)	Provide 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 Transport to be consulted about a proposed project or activity in accordance with OEH's Aboriginal cultural heritage consultation requirements for proponents (2010).
Senior Specialist (Heritage)	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 - Roads and Maintenance (TL-RM)	Ensures Maintenance staff stop work in the vicinity of an unexpected heritage item. Completes <i>Unexpected Heritage Item Recording Form in Appendix B</i> and notifies WS-RM.
Technical Specialist	Professional consultant contracted to provide specific technical advice that relates to the specific type of unexpected heritage find (for example a forensic or physical anthropologist who can identify and analyse human skeletal remains).
Works Supervisor - Roads and Maintenance (WS-M)	Ensures Roads and Maintenance staff are aware of this procedure. Supports the Team Leader - Roads and Maintenance during the implementation of this procedure and ensures reporting of unexpected heritage items through environment management systems.

## 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.



Figures: 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).



Figures: 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).



Figures: Top left-hand picture continuing clockwise: road pavement (Great Western Highway, Lawson); sandstone kerbing (Parramatta Road, Mays Hill); Telford sandstone road base (Great Western Highway, Leura); ceramic conduit and sandstone culvert headwall (Blue Mountains, NSW); corduroy timber road base (Entrance Road, Wamberal).



**Alignment pin**



**Survey tree**



**Alignment stone**



**Survey tree**



**Milestone**



Figures: 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*.



Figures: 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 Act 2002*.



Figures: 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



## TRANSPORT FOR NSW - UNEXPECTED HERITAGE ITEM

Date	Recorded by	Name	
		Position	
Project name			
<b>Description of works being undertaken</b> (e.g., removal of failed pavement by excavation and pouring concrete slabs in 1m x 1m replacement sections).			
<b>Description of exact location of item</b> (e.g., Within the road formation on Parramatta Road, east bound lane, at the corner of Johnston Street, Annandale, Sydney)			
<b>Description of item found (What type of item is it likely to be? Tick the relevant boxes)</b>			
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. 'Work, building or structure'	<input type="checkbox"/>	'Work' can generally be defined as a form of 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. <b>Remember that you must contact the local police immediately by telephone if you are certain that the bone(s) are human remains</b>	
E. Other	<input type="checkbox"/>		
<b>Provide a short description of item</b> (e.g., Metal tram tracks running parallel to road alignment. Good condition. Tracks set in concrete, approximately 10cms (100 mm) below the current ground surface).			

**Sketch**

(Provide a sketch map of 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).

**Action taken (tick either A or B)**

A. Unexpected item **would not** be further impacted by works

**Describe how works would avoid impact on the item**

(e.g., the tram tracks will be left in situ, and recovered with road paving).

B. Unexpected item **would** be further impacted by works

**Describe how works would impact on the item**

(e.g., milling is required to be continued to 200 mm depth to ensure road pavement requirements are met. Tram tracks will need to be removed).

Project manager / works supervisor signature



# Unexpected heritage item recording form

## Appendix C: Photographing unexpected heritage items

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



Figure 4: Close up detail of the sandstone surface showing material type, formation and construction detail. This is essential for establishing date of the feature.

### 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 as examples.



Figure 3: Ceramic bottle artefact with stamp.

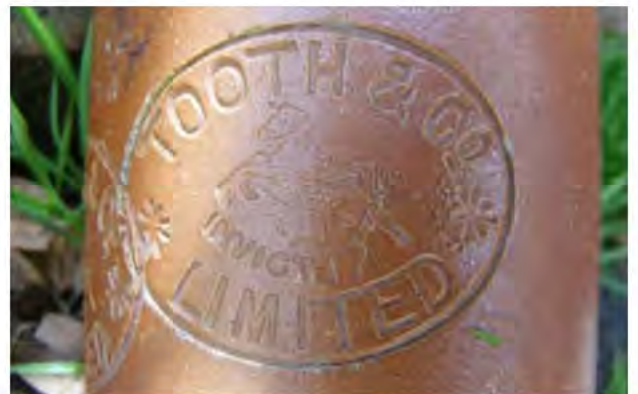


Figure 4: Detail of the stamp allows 'Tooth & Co Limited' to be made out. This is helpful to a specialist in gauging the artefact's origin,

### 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, Transport 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 and Sustainability 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 E: Uncovering bones

This appendix provides project managers with:

- (1) advice on what to do when bones are discovered.
- (2) guidance on the notification pathways.
- (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 environment and sustainability staff and/or Environment and Sustainability heritage staff.

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 complete skeleton that is obviously human<sup>11</sup>.

This preliminary phone call is to let the police know that Transport 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

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

<sup>11</sup> After Department of Environment and Conservation NSW (2006), Manual for the identification of Aboriginal Remains:

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 environment and sustainability staff is considered appropriate. This must be followed up later by Transport'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 Heritage NSW and the Transport Aboriginal Cultural Heritage Officer (ACHO) must be notified immediately. The ACHO must contact and inform the relevant Aboriginal community stakeholders who may request to be present on site. Relevant stakeholders are determined by Transport's Procedure for Aboriginal Cultural Heritage Consultation and Investigation (PACHCI).

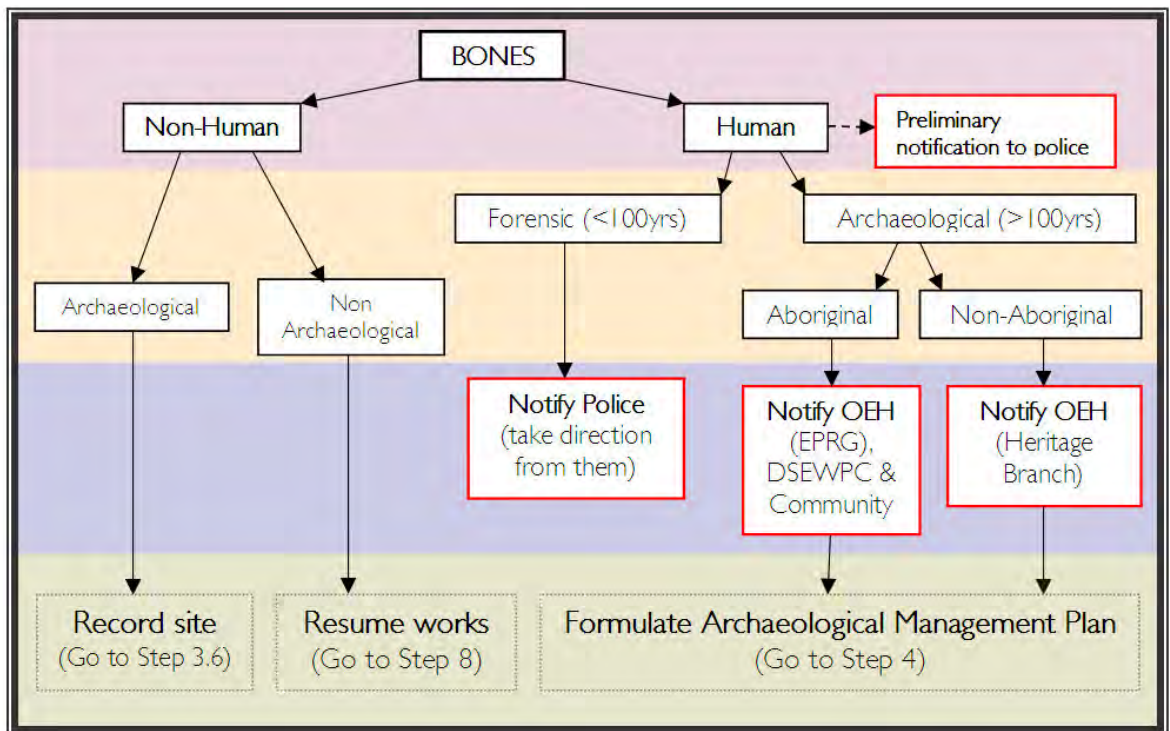
### c) Human bones are archaeological in nature (more than 100 years old) and likely to be non-Aboriginal remains.

#### Action

Heritage NSW must be notified immediately.

The 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). Transport’s ACHO 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 2010* (NSW). Specifically, Transport 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 Regulation 2012* (NSW)<sup>12</sup>.

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 [NSW Health](#).

In addition, due to the potential significant statutory and common law controls and prohibitions associated with interfering with a public cemetery, project teams are advised, when works uncover human remains adjacent to cemeteries, to confirm the cemetery’s exact boundaries.

<sup>12</sup> This requirement is in addition to heritage approvals under the *Heritage Act 1977*.

## Appendix F: Archaeological Heritage Advice Checklist

The following checklist can be used by the Project Manager and the archaeologist to ensure all relevant archaeological issues are considered when developing the management plan required at Step 4 of this procedure.

An archaeological or heritage management plan can include a range of activities and processes, which differ depending on the find and its significance.

Assessment and Investigation	Required	Outcomes/notes
Assessment of significance.	Yes/No	
Assessment of heritage impact.	Yes/No	
Archaeological excavation.	Yes/No	
Archival photographic recording.	Yes/No	
<b>Heritage approvals and notifications.</b>		
AHIPs, s 140, s 139 exceptions, s 60, etc.	Yes/No	
Regulator relics/objects notification.	Yes/No	
Transport's S170 Heritage and Conservation Register listing requirements.	Yes/No	
Compliance with CEMP or other project heritage approvals.	Yes/No	
<b>Stakeholder consultation.</b>		
Aboriginal stakeholder consultation requirements and how it relates to Transport's <i>Procedure for Aboriginal Cultural Heritage Consultation and Investigation (PACHCI)</i> .	Yes/No	
Advice from Environment and sustainability staff, Aboriginal Cultural Heritage Advisor, Transport heritage team.	Yes/No	
<b>Artefact/heritage item management.</b>		
Retention or conservation strategy (e.g., items may be subject to long conservation and interpretation) Disposal strategy (e.g., former road pavement) Short-term and permanent storage locations (interested third parties to be consulted on this issue).	Yes/No	
Control Agreement for Aboriginal objects.	Yes/No	
<b>Program and budget.</b>		
Time estimate associated with archaeological or heritage conservation work.		
Total cost of archaeological heritage work.		

## Appendix G: Notification letter template

**Drafting guidance:** Paste the details below into a Transport for NSW letter template.

[Insert date]

[Insert reference number]

[Insert file number]

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

[Insert salutation and name],

Re: Unexpected heritage item discovered during Transport for NSW (Transport) works.

I write to inform you of an unexpected [select: relic, heritage item or Aboriginal object] found during Transport 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].

**Drafting guidance**

On finding Aboriginal human skeletal remains this letter must also be sent to the Commonwealth Minister for the Department of Agriculture, Water and the Environment (DAWE) 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 or maintenance works background and area. Provide a summary of the description and location of the item, including a map and image where possible. Include how the works were assessed under the *Environmental Planning and Assessment Act 1979* (NSW) (e.g., Part 5). Include any project approval number, if available].

Transport [or contractor on behalf of Transport] 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, Transport [or contractor on behalf of Transport] 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].



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# Attachment B – Protection, Monitoring and Exclusion Zones

## B.1 Built Heritage Condition Reports

Pre-construction condition assessment of Aboriginal and non-Aboriginal heritage items will be carried out by a suitably qualified building condition surveyor prior to construction as required under MCoA E58.

Pre-construction condition assessments will be conducted for all Aboriginal and non-Aboriginal heritage items within:

- 150m radius of piling activities
- 75m of excavation activities (using a hammer)
- 25m of vibration compaction activities (<7 tonne plant)
- 50m of vibration compaction activities (>7 tonne plant)

The reports should be presented to the custodian of the item and a formal acceptance of the condition report should be provided as a record. Condition reports may indicate inherent weaknesses in structures which will require additional monitoring during the works. Where these weaknesses are a result of lack of appropriate maintenance of the item, agreement should be reached with the custodian of the item as to an appropriate level of remediation, if any, at completion of the works.

## B.2 Protection of Non-Aboriginal Built Heritage Items

The following protection methods should be applied to heritage items during the works, depending on location, distance from the works and construction of built heritage item. This work should be coordinated through the Construction Management Plan.

### B.2.1 Hoardings

Hoardings are required to protect the following built heritage items from impacts associated with works, such as parking, vehicular movement, plant, equipment and materials storage. Hoardings should be erected to allow a minimum 5 metre buffer zone around the heritage item and signed appropriately to note that the area is a protection zone and should not be breached. Silt socks should boarder the hoarding to prevent construction water run-off. The area should be checked weekly (minimum) to ensure no breach of containment or damage has occurred to the item. Provide evidence of check with dated photographs and inspection schedule.



Figure B-1: Example of typical marine ply hoarding.

### B.2.2 Screening

Site fencing should include screening to eliminate dust from spreading to neighbouring heritage sites. Silt socks should be used to prevent construction water run-off from the construction site. Where heritage items are within the site, they should be separately screened.

### B.2.3 Dust Protection

Certain heritage items will need additional protection if they are close to the works and are likely to be subject to dust.

Items such as monuments may need to be wrapped in an appropriate material and manner dependent on the material, form and location of the heritage item.



Figure B-2: Screening and wrapping of heritage items during construction



Figure B-3: Wrapping of smaller heritage features with foam and core-flute during construction.

## B.2.4 Vibrational Monitoring

Vibrational monitoring will be conducted in accordance with Attachment E of the CNVMP, this includes (but is not limited to) vibration monitoring of AHIMS Site # 45-6-0653 (Site 6 - La Perouse) in accordance with MCoA E30.

## B.2.5 Temporary Storage

Prior to works, any contractors specifically engaged the temporary storage of heritage items will be briefed about the heritage significance of the site and requirements for temporary storage.

Dismantling and storing fabric with heritage significance will be conducted following the procedures outlined below, as a minimum. Greater attention may need to be paid to some monuments.

1. A suitable transport methodology (e.g., secured to timber pallets) and storage location should be identified prior to the commencement of works.
2. Should heavy machinery be required for the removal of monument elements, no more than one unit (one monolith or section) should be physically lifted at a time. More than one machine may be used as part of the salvage process.
3. Any heavy machinery used for disassembly of monuments should be fitted with appropriate lifting attachments to ensure that no physical damage occurs to the units.

Temporary onsite storage will need adhere to the following conditions:

- Units must be stored on dry and even surfaces.
- Units must not be stacked in a way that may result in damages; and
- Units should be covered to avoid the effects of inclement weather – particularly if leading to the build-up of moisture, which may be detrimental to the fabric.

Long term storage should keep the units in a dry, secure place after removal. All items should be clearly labelled, according to their corresponding assemblages.



## B.2.6 Maritime Exclusion Zones

A 5m restricted zone has been developed for each of the identified heritage items; First Slipway at La Perouse, remains of the sandstone block causeway for La Perouse wharf, Paragon Restaurant, Boat Davits, Holt Jetty, Isaac Smith memorial and Captain Cook's Landing Site. Coordinates for the exclusion zones have been tabulated below in Table B-1 and are outlined in Figure B-5 and Figure B-6.

Table B-1: Exclusion zones for identified underwater heritage items

Heritage item	Exclusion zone coordinates	Datum: GDA94 CRS: MGA Zone 56		GPS	
				Latitude	Longitude
First slipway	Point 1	336489.04	6237782.37	33° 59' 16.14625" S	151° 13' 47.13734" E
	Point 2	336509.51	6237767.14	33° 59' 16.65198" S	151° 13' 47.92458" E
	Point 3	336502.78	6237757.42	33° 59' 16.96365" S	151° 13' 47.65584" E
	Point 4	336482.87	6237772.28	33° 59' 16.47024" S	151° 13' 46.89017" E
Paragon	Point 1	336554.74	6237806.29	33° 59' 15.40682" S	151° 13' 49.71303" E
	Point 2	336561.75	6237779.85	33° 59' 16.26879" S	151° 13' 49.96834" E
	Point 3	336537.54	6237773.40	33° 59' 16.46454" S	151° 13' 49.02081" E
	Point 4	336531.28	6237800.13	33° 59' 16.46454" S	151° 13' 49.02081" E
Wharf causeway	Point 1	336522.12	6237808.82	33° 59' 15.30642" S	151° 13' 48.44390" E
	Point 2	336536.52	6237811.90	33° 59' 15.21454" S	33° 59' 15.21454" S
	Point 3	336543.34	6237789.85	33° 59' 15.93394" S	151° 13' 49.25784" E
	Point 4	336536.52	6237811.90	33° 59' 15.21454" S	151° 13' 49.00698" E
Boat davits	Point 1	336547.08	6237811.15	33° 59' 15.24480" S	151° 13' 49.41788" E
	Point 2	336534.65	6237805.08	33° 59' 15.43482" S	151° 13' 48.92953" E
	Point 3	336541.47	6237792.28	33° 59' 15.85404" S	151° 13' 49.18662" E
	Point 4	336553.53	6237797.98	33° 59' 15.67581" S	151° 13' 49.66030" E
Holt jetty	Point 1	335309.60	6235910.13	34° 0' 16.24117" S	151° 12' 59.91815" E
	Point 2	335370.26	6235894.80	34° 0' 16.77294" S	151° 13' 2.27144" E
	Point 3	335366.52	6235876.76	34° 0' 17.35627" S	151° 13' 2.11347" E
	Point 4	335305.30	6235893.87	34° 0' 16.76642" S	151° 12' 59.73956" E



Figure B-4: Example of star pickets and boundary fencing around a restricted zone.

### **La Perouse**

Inside the La Perouse project area, heritage items consist of the First Slipway at La Perouse, remains of the sandstone block causeway for La Perouse wharf, Paragon Restaurant and Boat Davits (Figure B-5). These items were identified to be of medium sensitivity.

The restricted zones for the remains of the sandstone block causeway for La Perouse Wharf and the Paragon Restaurant are the only two areas that overlap with the current construction development footprint. These areas are deemed to be under threat of minor impact and will require additional threshold limits to be placed in consultation with the construction team. Additional protection may include a layer of geotextile fabric and then sand placed on top of the heritage item.

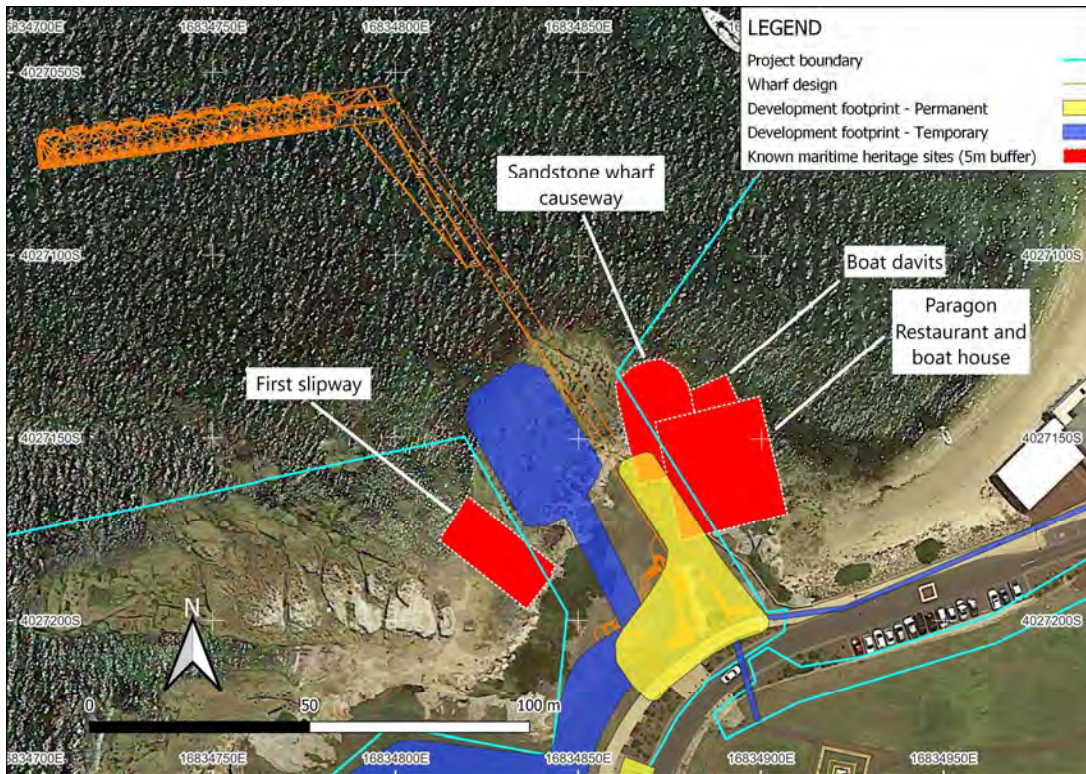


Figure B-5: La Perouse - Restricted zones overlaid on the development footprint and the wharf outline. (Base images google earth)

### Kurnell

Inside the Kurnell project area, heritage items consist of Holt Jetty, Isaac Smith memorial and Captain Cook's Landing Site (Figure B-6). The Holt jetty and the Isaac Smith memorial were identified to be of medium sensitivity. Captain Cook's Landing Site was identified as High sensitivity.

The restricted zones for the heritage items are located adjacent to the temporary development footprints and outside the current project boundary. The restricted zone boundaries should still be designated, to ensure there are no incidental impact during construction works and that these zones remain outside the project boundary.

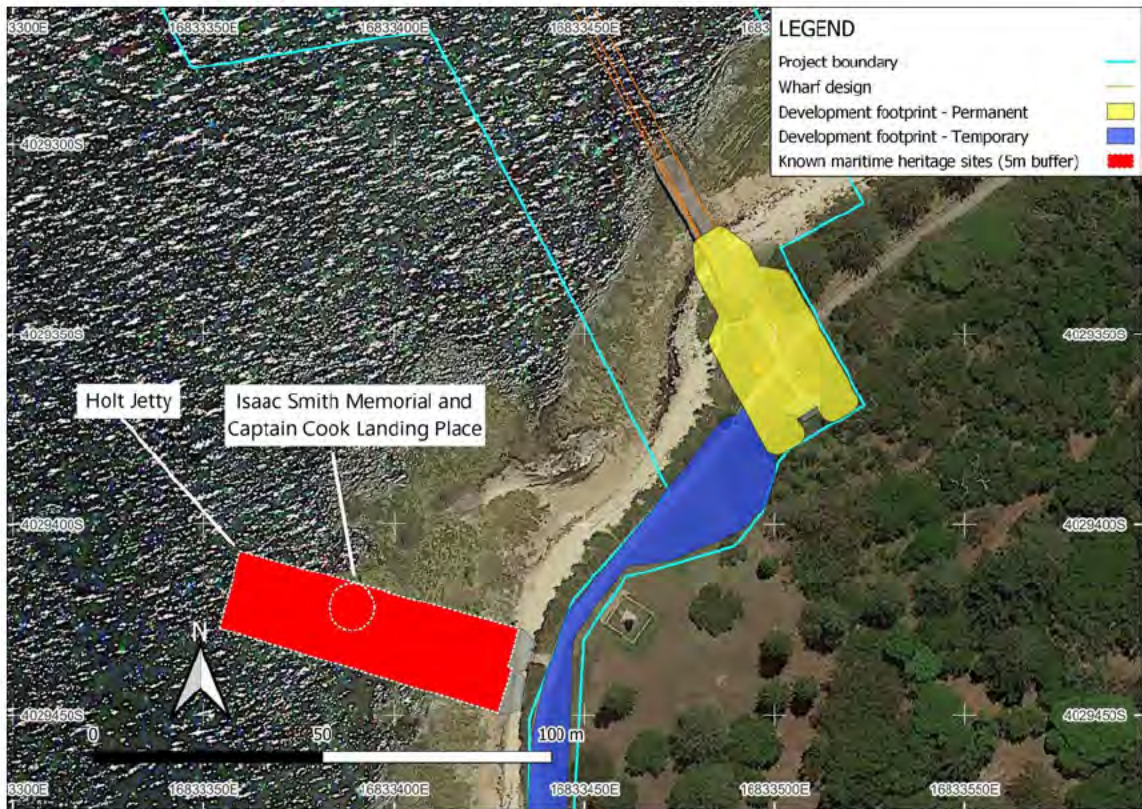


Figure B-6: Kurnell - Restricted zones overlaid on the development footprint and the wharf outline. (Base images google earth).

## B2.7 Seabed Anomalies

A five metre no-anchoring exclusion zone has been created around each of the unidentified seabed anomalies. An inspection of these will be conducted as part of the initial dive inspection. However, if these areas, or new areas, are required for anchoring or mooring, a dive inspection by qualified maritime archaeologist will need to be undertaken to determine if the item is of low cultural heritage sensitivity which would enable these activities to occur.

### La Perouse

Sixteen seabed anomalies were identified in the La Perouse project area. The midway position of the no - anchoring exclusion zones have been tabulated in Table B-1. Figure B-7 demonstrates the exclusion zones in relation to the wharf footprint and project boundary.

Table B-1: Unverified Anomalies with Study Area 1, La Perouse

Target ID	Object	Easting (WGS84 UTM Zone 56H)	Northing (WGS84 UTM Zone 56H)	Source
LP_MG_0010	Magnetic anomaly, possibly associated with ID: LP_SC_027 (mooring block)	336471.00 m E	6237963.00 m S	Magnetometer
LP_SC_0001	Possible mooring block or tire	336285.67 m E	6237802.75 m S	Side scan sonar
LP_SC_0002	Unknown debris	336306.46 m E	6237823.97 m S	Side scan sonar
LP_SC_0003	Possible mooring block	336303.30 m E	6237928.40 m S	Side scan sonar

Target ID	Object	Easting (WGS84 UTM Zone 56H)	Northing (WGS84 UTM Zone 56H)	Source
LP_SC_0004	Possible cinderblocks, bricks or other debris	336386.94 m E	6238010.35 m S	Side scan sonar
LP_SC_0005	Possible mooring block	336391.59 m E	6238008.64 m S	Side scan sonar
LP_SC_0006	Possible car tire	336410.33 m E	6238009.45 m S	Side scan sonar
LP_SC_0009	Possible Mooring block	336470.14 m E	6238007.77 m S	Side scan sonar
LP_SC_0020	Possible mooring block	336442.50 m E	6238009.84 m S	Side scan sonar
LP_SC_0021	Possible mooring block	336424.55 m E	6238005.23 m S	Side scan sonar
LP_SC_0022	Possible mooring block	336365.31 m E	6237971.22 m S	Side scan sonar
LP_SC_0028	Possible mooring block	336492.18 m E	6237959.33 m S	Side scan sonar
LP_SC_0031	Scattered debris, possible pipe	336440.45 m E	6237958.61 m S	Side scan sonar

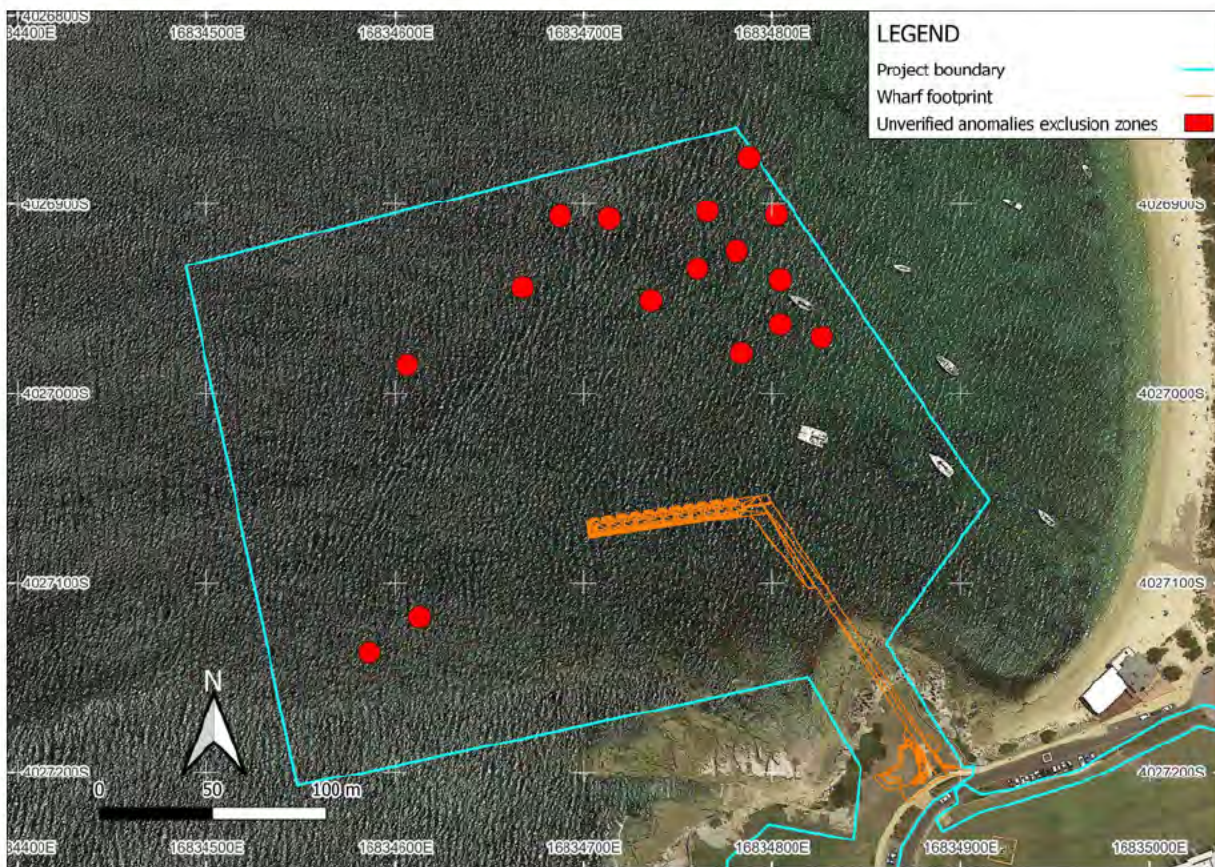


Figure B-7: Exclusion Zone (in red) of 13 unverified anomalies at La Perouse

## Kurnell

Two seabed anomalies were identified in the Kurnell project area. The midway position of the no anchoring exclusion zones has been tabulated in Table B-2. Figure B-8 demonstrates the exclusion zones in relation to the wharf footprint and project boundary.

Table B-2: Unverified anomalies within Study Area 2, Kurnell

Target ID	Object	Easting (WGS84 UTM Zone 56H)	Northing (WGS84 UTM Zone 56H)	Source
KN_SC_0008	Possible pipe, pile, or log	335398.04 m E	6236238.93 m S	Side scan sonar
KN_MG_0002	Unknown	335459.00 m E	6236140.00 m S	Magnetometer



Figure B-8 Exclusion Zones (in red) of two unverified anomalies at Kurnell

## B.3 Monitoring & Reporting

Monitoring of heritage items will be conducted throughout construction through the site inspections (Section 7.3). Which will identify the construction activities being undertaken and monitor and review the construction methodology to confirm the integrity of the nearby significant structural elements.

For any heritage items identified at risk during the pre-construction condition assessment (Section B.1), minimum safe working distances will be established, and vibration monitoring will be carried

out prior to the commencement of construction and monitored through construction to identify any construction-related impacts.

If impacts are detected during construction, work in the area must stop and appropriate environmental management measures must be implemented such as alternative construction techniques or installing protection structures in collaboration with a heritage specialist.

# Attachment C – Salvage Excavation Program



A large teal graphic element on the left side of the page, consisting of a triangle at the top and a trapezoid below it, forming a shape that resembles a stylized 'M' or a mountain peak.

# Salvage Program

Kamay Ferry Wharves

July 2023

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# Salvage Program

Kamay Ferry Wharves

July 2023

# Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
A	28/03/2023	A MARKHAM	D MARKUS	K CHRISTIAN	Draft
B	08/05/2023	B CALVERT	T BRASSIL	K CHRISTIAN	Draft V2
C	11/05/2023	B CALVERT	T BRASSIL	K CHRISTIAN	Final Draft
D	26/07/023	C WOODING	A MARKHAM	K. CHRISTIAN	Final

**Document reference: KFW02-MCD-EN-PRG-000003**

**Information class: Standard**

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# 1 Salvage Program

In 2021, Artefact Pty Ltd undertook Aboriginal and non-Aboriginal heritage assessments to support the Environmental Impact Statement (EIS) for the Kamay Wharf upgrade project. The assessments identified various Aboriginal and non-Aboriginal heritage items within the proposed construction area; the reports also made recommendations for the management of these items. Specific recommendations requiring salvage/further works were considered and responses have been outlined below.

## 1.1 Aboriginal Heritage

Within the La Perouse study area, a visual inspection of compound/facilities area should be completed prior to construction commencing. An inspection of the assessment area will be undertaken to further assess levels of disturbance and archaeological potential for rock engravings.

A low potential PAD will also require archaeological salvage. The salvage methodology will include the archaeological excavation of the low potential PAD. This forms part of the construction curtilage shown in Figure 1-1. The construction curtilage is limited to the purple boundary outlined in the figure, while the low potential PAD is identified in yellow.



**Figure 1-1 Construction curtilage at La Perouse.**

Based upon the size of the area of potential, the archaeology team anticipates that initial excavation of 30 test pits; these would be completed by a team of 4 archaeologists and 4 Aboriginal stakeholders to be selected in collaboration with the client. This will include:

- The hand excavation of 1000 x 1000-millimetre test pits across a systematic 10-metre grid in areas considered to have higher sensitivity.
- All excavation will be conducted by hand, and the excavation of initial test pits will proceed in 50 millimetres spits. Based on the results of the initial pits, subsequent pits will be excavated either in 100-millimetre spits or by stratigraphic unit, dependant on which unit is smaller.

- Recording of each salvage pit will be conducted during excavation using either printed pro forma or digital pro forma stored on an electronic tablet.
- 100% of excavated potential artefact bearing deposit will be sieved. The team has allowed for dry sieving as part of the excavation program. Depending on the soils encountered and site conditions, material may need to be wet sieved. Water for the sieving station would be provided by a water tanker and pump. Artefacts will be collected from the sieves and bagged according to excavation pit provenance. Each test pit will be backfilled to the best of our ability with the sieved material excavated from the pits after the testing program.
- Should either higher than anticipated numbers of cultural heritage material, or significant artefacts be retrieved, additional excavations may be required. These will occur only after consultation between the proponent, project archaeologist, the Registered Aboriginal Parties, the Department of Planning and Environment, and Heritage NSW.
- Within the Kurnell study area, monitoring of construction works below 400mm should be undertaken within the location of the Foreshore Midden – Captain Cook’s Landing Place. Monitoring will be undertaken by a qualified archaeologist where construction occurs below 400mm.
- If archaeological material is located during monitoring within the Kurnell Study area, the project archaeologist will advise the proponent’s project manager, Heritage NSW and the Department of Planning and Environment prior to any further archaeological testing or salvage works. The proponent and/or project archaeologist will seek advice from Heritage NSW and the Department of Planning and Environment as to whether any proposed testing and/or salvage methodology requires review and approval.
- Following advice from Heritage NSW and the Department of Planning and Environment, the project archaeologist will develop a suitable testing and/or salvage methodology and proceed as per the instructions of the relevant government agencies.

## 1.2 Non-Aboriginal Heritage

Non-Aboriginal heritage salvage program is based on the recommendations outlined in the Conditions of Approval and incorporates those protections into staged monitoring and salvage programs. Additionally, the archaeology team will provide instruction to ensure all heritage protection zones and boundaries are erected prior to construction commencing.

### **Monument Track (Kurnell)**

As per Revised Environmental Management Measures NAH 8, Monument Track will be reinstated in the same location following construction. This will ensure that the historical circulation pattern is maintained in accordance with the policies outlined in section 5.5: Landscape of the Meeting Place Precinct CMP.

If possible, the existing concrete slabs will be temporarily removed under supervision prior and reinstated rather than being replaced. The removal of the Monument Track, the storage location of its elements and its reinstatement must be recorded in the Monument Register. If this is not possible temporarily remove the existing concrete slabs, then the track will be replaced at the end of construction to match the existing track.

Archaeological advice will be provided as required.

### **Coursed stone sea wall (Kurnell)**

As per Revised Environmental Management Measures NAH 4, should impacts occur to the coursed stone sea wall, it will need to be reinstated in the same location following completion of construction activities. Archaeological advice will be provided for the recording and reinstatement of the feature.

### 1.3 Communication

Austral Archaeology Pty Ltd have been engaged by Mott MacDonald on behalf of McConnell Dowell for the Kamay Ferry Wharves project, as managed by TfNSW.

Mott MacDonald will have a dedicated Project Manager who will be the first point of contact for McConnell Dowell. During site works the PM will provide daily update emails which will outline the on-site findings. If any significant heritage items are located during the onsite works, the PM will inform the McConnell Dowell immediately.

### 1.4 Draft Report

Two draft reports will be produced, an Aboriginal heritage salvage report and a non-Aboriginal heritage salvage report. The reports will consist of the following components:

- Introduction
- Planning framework.
- Summary of background research that has been completed.
- Results of the salvage
- Assessment of significance
- Archaeological assessment
- Conclusions and further management recommendations.

### 1.5 Final Report

Two final reports will be produced, an Aboriginal heritage salvage report and a non-Aboriginal heritage salvage report. The reports will consist of the following components:

- Introduction
- Planning framework.
- Summary of background research that has been completed.
- Results of the salvage
- Assessment of significance
- Archaeological assessment
- Conclusions and further management recommendations.

### 1.6 Engagement

Based upon the key tasks outlined above, the following salvage will be completed as required by the project schedule.

Task	Quoted Field Days	Number of People
Low Potential PAD	5	4
Non-Aboriginal Archaeological investigation	2	1
<b>Works if Required:</b>		
Non-Aboriginal Salvage Archaeological Salvage (Estimation)	5	3



### 1.7 Proposed Schedule

The proposed schedule for the overall field works can be programmed over the following time period.

Salvage Field Days	Week 1	Week 2	Week 3	Week 4
Low Potential Pad				
Non-Aboriginal Investigations				



# Attachment D – Maritime Artefact Collection and Curation Procedure

It is unlikely that archaeological relics or movable objects will be retrieved from site during wharf development works. It is possible, however, that archaeological relics may be encountered during seabed impact with piling or anchoring and float to the surface or are observed during a diving inspection.

Relics that are encountered on site might need to be collected and assessed by a maritime archaeologist to determine their significance. If archaeological relics are recovered from the seafloor/marine environment, it is the responsibility of the owner (TfNSW) to ensure that they are stored in containers with salt water and covered from sunlight where possible. If the object(s) are too large to be stored in containers (i.e., timber planking), they are to be kept wet by spraying down with salt water at intervals, so the object does not dry out. These large objects also need to be covered and stored out of direct sunlight.

Items encountered during works and recovered from site, should be appropriately tagged with date, time, and approximate area where the object was located (refer to Section C.2 for detailed recording procedures). The relic’s significance will then be assessed to determine if they are of State or local significance and if the relic if it is to be conserved, relocated, or discarded (see Table D-1). This assessment will be made by the maritime archaeologist.

Relocation means the objects/relics will be returned to the a submerged reburial location and should only be considered where relic’s significance is (at least) below the State Significance threshold and following consultation with and approval from Heritage NSW and the Heritage Council. Relocation works will be supervised by the maritime archaeologist and will be fully analysed/documentated and catalogued prior to reburial.

Table D-1: Artefact conservation and curation policies

Action	Criteria	Example
<i>Conserve</i>	Rare artefacts that would be a significant archaeological deposit or relic encountered during site works and/or damaged further during Wharf development works.  <i>Note – Heritage NSW’s preferred option for archaeological remains of State significant relics should is conserve, retain, display and interpreted.</i>	Wharf and shipwreck remains from the 19 <sup>th</sup> century
<i>Relocate</i>	Artefacts in good condition relating to a shipwreck.	May include timber elements (planking or frames) and copper sheathing, fastenings and fittings.
	Examples of common artefacts in good condition associated with wharf slipway activities.	Diagnostic fragments of bottle glass, ceramics and building materials such as ferrous, stone and brick.
	Structural elements associated with La Perouse wharf structure.	Submerged piles and ferrous fastenings.

<i>Discard</i>	Modern materials, not culturally significant or rare.	Poly-rope, aluminium cans, fenders, Styrofoam, plastics, fibreglass, modern appliances, asbestos, etc.
----------------	-------------------------------------------------------	--------------------------------------------------------------------------------------------------------

## D.1 Recording methods and procedures

If an object is found that may be of heritage value, it is important that a detailed recording is taken to provide adequate information to the maritime archaeologist or archaeologist to make an accurate assessment of the object's cultural heritage significance. With vague and unclear information, it is more likely that the maritime archaeologist will make a cautious decision and assess the object as significant and/or part of a wreck site until such time as it is examined in detail.

The following list details the information required to help the maritime archaeologists identify unexpected finds:

<b>Unique Identifying number</b>	(this number is to appear in any photographs of the object)
<b>Date and time of recovery</b>	(details)
<b>Location of find</b>	(to be expressed as general area description and GDA94)
<b>Description</b>	(Include broad dimensions, such as width, length, depth, and diameter where relevant, as well as a description of the material)
<b>Photographs</b>	(All photos must, when possible and practical, have a scale and ID number – see Figure C-1.



Figure C-1 Photograph of artefact recovered during excavation works. Note ID tag with unique number and scale in photograph.

# Attachment E – Photographic Archival Recording Program

A photographic recording is an archival record of a heritage place or object. Its purpose is to document a heritage item for future generations. Specific requirements on photographic equipment, archivally stable materials and photographic method aim to ensure optimum survival of the photographic record.

A Photographic Archival Recording Program must be undertaken in accordance with the *How to Prepare Archival Recording of Heritage Items* (NSW Heritage Office 1998) and *Photographic Recording of Heritage Items Using Film or Digital Capture* (NSW Heritage Office 2006) in consultation with Heritage NSW. This is to meet the requirements of NAH6.

The Photographic archival recording must be carried out for heritage items that are directly impacted within the construction boundaries and will record the setting and views of the heritage items within the study area that would be subject to minor or greater visual impacts, based on Table 5-2 and Table 5-3.

The impacted elements include but are not limited to:

- Items in Table 5-2 identified as impacted
- Items in Table 5-3 identified as impacted
- The former sea wall at Kurnell
- The former wharf approach road at La Perouse
- The archaeological potential areas at La Perouse
- Nearby heritage items subject to minor visual impacts including; Kurnell Peninsula Headland; Kamay Botany Bay National Park (North and South) and Towra Point Reserve; Kurnell Historic Site (in Kamay Botany Bay National Park); Kurnell monuments (in Kamay Botany Bay National Park); and the Captain Cook monument.

The program and timing of the archival photographic recording would include:

- Pre-works photography recording the existing condition and views of the works area
- During works, to capture site changes and any additional items uncovered, recovered or located
- After works, once works are completed to provide a baseline for change of the sites.

# Attachment F – Construction Heritage Storage Register

The following table (Table 8-1) provides an example template of a heritage register that will be used during construction to document the provision of adequate storage protections to monuments (and other relevant structures) potentially affected by the works. It will consider Non-Aboriginal heritage items within the construction boundary as well as in the immediate vicinity.

Table 8-1. Construction Heritage Storage Register template.

Non-Aboriginal Heritage Items						
Heritage item	Summary Significance	Condition	Storage / other requirements for protection	Existing Location (include GPS where applicable)	Storage Location (For stored monuments)	
National						
State						
Local						

# Attachment G – Environmental Requirements

## Relevant legislation and guidelines

### Legislation

All legislation relevant to this HMP is included in Appendix C of the CEMP.

### Additional approvals, licences, permits and requirements

Refer to Appendix C of the CEMP.

### Guidelines

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

- Procedure for Aboriginal Cultural Heritage Consultation and Investigation (Roads and Maritime Services 2011).
- Aboriginal cultural heritage consultation requirements for proponents 2010 (DECCW 2010) (for reference only).
- Altering Heritage Assets (Heritage Office and DUAP 1996).
- Assessing Heritage Significance (NSW Heritage Office 2001).
- Roads and Maritime Cultural Heritage Guidelines (November 2015).
- Roads and Maritime Standard Management Procedure: Unexpected Heritage Items (November 2015).
- Archaeological Assessment Guidelines (NSW Heritage Office and NSW Department of Urban Affairs and Planning 1996).
- *NSW Government Policy on Aboriginal Participation in Construction* (released 1 May 2015, updated 1 August 2016).
- NSW Heritage Manual (Heritage Office and Department of Urban Affairs and Planning 1994).
- The Burra Charter: the Australia ICOMOS Charter for Places of Cultural Significance (ICOMOS, 2013).

## Minsters Conditions of Approval

The MCoA relevant to this Plan are listed in the tables below. A cross reference is also included to indicate where the condition is addressed in this Plan or other Project management documents.

Table G-1 Minister's Conditions of Approval relevant to the HMP

CoA No.	Condition Requirements	Document Reference
<b>C10</b>	Unexpected Heritage Finds and Human Remains Procedure required under Condition C10 may be submitted as part of the Non-Aboriginal Heritage CEMP Sub-plan and Aboriginal Cultural Heritage CEMP Sub-plan.	Attachment A



CoA No.	Condition Requirements	Document Reference
<b>C11</b>	<p>The Aboriginal Cultural Heritage CEMP Sub-plan must:</p> <ul style="list-style-type: none"> <li>a) be prepared by a suitably qualified and experienced person;</li> <li>b) be prepared in consultation with Heritage NSW and the RAPS;</li> <li>c) include a protocol for ongoing consultation with the RAPS and LALCs for the duration of this project;</li> <li>d) include measures to prevent harm to any Aboriginal objects outside the construction boundary;</li> <li>e) include a program to monitor and report on the effectiveness of any mitigation and management measures in protecting or limiting harm to Aboriginal objects;</li> <li>f) ensure any workers on site receive suitable Aboriginal cultural heritage induction(s) prior to carrying out any activities which may disturb Aboriginal sites, and that suitable records are kept of these inductions;</li> <li>g) include a Trigger Action Response Plan that included stop work provision, notification protocols and significance assessment protocols to manage key Aboriginal heritage, including: <ul style="list-style-type: none"> <li>i. the discovery of any potential human remains;</li> <li>ii. the discovery of previously unidentified Aboriginal objects within the construction footprints; and</li> <li>iii. managing unauthorised ground disturbance.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>a) Section 1.1</li> <li>b) Section 3.1</li> <li>c) Section 3.2</li> <li>d) Section 6.9</li> <li>e) Section 7.3</li> <li>f) Section 7.2</li> <li>g) <ul style="list-style-type: none"> <li>i. Attachment A &amp; Section 6.6</li> <li>ii. Attachment A &amp; Section 6.6</li> <li>iii. Section 6.10 (HM_8)</li> </ul> </li> </ul>
<b>E21</b>	<p>An Unexpected Heritage Finds and Human Remains Procedure (required to be included in the relevant CEMP Sub-plans under Condition C10) must be prepared to manage unexpected heritage finds (including maritime discoveries) in accordance with guidelines and standards prepared by the Heritage Council of NSW or Heritage NSW and submitted to the Planning Secretary no later than one (1) month before the commencement of construction.</p>	Attachment A

CoA No.	Condition Requirements	Document Reference
E22	<p>The Unexpected Heritage Finds and Human Remains Procedure, as submitted to the Planning Secretary, must be implemented for the duration of construction.</p> <p>Note: Human remains that are found unexpectedly during the carrying out of work may be under the jurisdiction of the NSW State Coroner and must be reported to the NSW Police immediately</p>	Attachment A
E23	<p>All reasonable steps must be taken so as not to harm, modify or otherwise impact Aboriginal objects or places of cultural significance except as authorised by this approval.</p>	Attachment A
E24	<p>The RAPs must be kept informed at intervals not exceeding three (3) months about construction of the SSI. The RAPs must continue to be provided with the opportunity to be consulted about the Aboriginal cultural heritage management requirements of the SSI throughout design and construction.</p>	Section 3
E25	<p>At the completion of Aboriginal cultural heritage test and salvage excavations, an Aboriginal Cultural Heritage Excavation Report(s) must be prepared by a suitably qualified person. The Aboriginal Cultural Heritage Excavation Report(s), must:</p> <ul style="list-style-type: none"> <li>(a) be prepared in accordance with the Guide to Investigation, assessing and reporting on Aboriginal cultural heritage in NSW, OEH 2011 and the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales, DECCW 2010; and</li> <li>(b) document the results of the archaeological test excavations and any subsequent salvage excavations (with artefact analysis and identification of a final repository for finds).</li> </ul> <p>The RAPs must be given a minimum of 28 days to provide comments before the report is finalised. The final report must be provided for information to the Planning Secretary, Heritage NSW, relevant Councils, La Perouse Local Aboriginal Land Council (LALC), RAPs and local libraries within 12 months of the completion of the Aboriginal archaeological excavations (both test and salvage).</p>	Section 6.1, 6.2 and 6.3

CoA No.	Condition Requirements	Document Reference
E26	Where previously unidentified Aboriginal objects or places of cultural significance are discovered, all work must immediately stop in the vicinity of the affected area. Works potentially affecting the previously unidentified objects and places must not recommence until Heritage NSW has been informed and provided a response in writing. The measures to consider and manage this process must be specified in the Unexpected Heritage Finds and Human Remains Procedure required by Condition E21 and include registration in the Aboriginal Heritage Information Management System (AHIMS).	Attachment A
E27	The Proponent must undertake a visual inspection before commencement of construction of AHIMS Site # 45-6-0650 (Site 3 - La Perouse) and AHIMS Site # 45-6-0651 (Site 4 - La Perouse and geotextile fabric (or similar) should be laid on the ground surface within the location of both sites.	Section 6
E28	Supervision by an appropriately qualified and experienced archaeologist of AHIMS Site # 45-60653 (Site 6 - La Perouse) must be undertaken during ground penetrating works. If the engraving is identified, all works must cease and the construction methodology revised to mitigate further impacts. Any revision to the methodology must be undertaken in consultation with Heritage NSW , RAPs and LALCs	Section 6.7
E29	During construction works impacts to the exposed sandstone surrounding AHIMS Site # 45-60653 (Site 6 - La Perouse) must be avoided. Visual markers must be used to delineate these areas.	Section 6
E30	During construction works, monitoring of vibration impacts in the immediate area of AHIMS Site # 45-6-0653 (Site 6 - La Perouse) must be undertaken. If vibration monitors are affixed to sandstone, non-invasive adhesive methods (such as beeswax) must be used. If it is identified that levels of vibration would result in damage to AHIMS Site # 45-6-0653 (Site 6 - La Perouse), all works must cease and the construction methodology revised to mitigate further impacts. This must be undertaken in consultation with Heritage NSW, RAPs and LALCs.	Section 6 Construction Noise and Vibration Management Plan

CoA No.	Condition Requirements	Document Reference
E31	Supervision by an appropriately qualified and experienced archaeologist is required for any excavation near AHIMS Site #52-3-0219 (Foreshore Midden — Captain Cook's Landing Place) where it exceeds 400mm in depth. If Aboriginal cultural heritage is identified during the proposed works, further archaeological investigations may be required. This must be determined in consultation with Heritage NSW, RAPs and La Perouse LALC	Section 6
E32	A Non-Aboriginal Heritage Management Plan (HMP) must be prepared and include maritime heritage considerations and requirements. A suitably qualified and experienced maritime archaeologist is to undertake the maritime component of any aspect related to maritime heritage including relevant construction management plans, in consultation with Heritage NSW. The HMP must include a policy and measures to manage the retention, conservation, storage and display of any artefacts and relics recovered by the SSI. The HMP must be prepared prior to construction and be approved by the Planning Secretary.	This Plan
E33	Prior to the commencement of archaeological excavation, an Archaeological Research Design and Excavation Methodology must be prepared in accordance with the Heritage Council of NSW guidelines to guide the archaeological program. The revised methodology must be prepared in consultation with Heritage NSW and submitted to the Planning Secretary if requested.	Section 6.2
E34	Prior to the commencement of archaeological excavation, the Proponent must nominate a suitably qualified Excavation Director who complies with Heritage NSW Excavation Director Criteria 2019 (September 2019) to direct the historical archaeological program. The Excavation Director must be present to oversee excavation, advise on archaeological issues, advise on the duration and extent of oversight required during archaeological excavations consistent with the Archaeological Research Design and Excavation Methodology required by Condition E33	Section 6.7

CoA No.	Condition Requirements	Document Reference
E35	Following the completion of the archaeological excavation programs a Final Excavation Report must be prepared that includes: the details of any further historical research undertaken to enhance the final reporting and results of archaeological excavations (including artefact analysis and identification of a final repository for relics including details of their ongoing conservation and protection in perpetuity by the landowner). The report must be prepared in accordance with guidelines and standards required by Heritage Council of NSW and the relevant Council's local studies unit within twelve (12) months of completion of archaeological excavation.	Section 6.2
E49	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 attended 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 6.10 (HM_5) CEMP Appendix B5 – Attachment E (Construction Monitoring Program – Noise & Vibration).
E50	Advice from a heritage specialist must be sought on methods and locations for installing equipment used for vibration and movement monitoring at heritage-listed structures.	Section 6.10 (HM_5)
E58	A pre-construction condition assessment of Aboriginal and non-Aboriginal heritage items that have the potential to be impacted must be carried out by a suitably qualified building condition surveyor prior to construction. During construction, inspections of the construction activities and work areas must be undertaken to monitor and review the construction methodology and confirm the integrity of the nearby significant structural elements. For heritage items identified at risk during the pre-construction condition assessment, minimum safe working distances must be established, and vibration monitoring must be carried out prior to the commencement of construction and monitored through construction to identify any construction-related impacts. If impacts are detected during construction, work in the area must stop and appropriate environmental management measures must be implemented such as alternative construction techniques or installing protection structures in collaboration with a heritage specialist.	Section 6 Construction Noise and Vibration Management Plan



## EPBC Conditions of Approval

EPBC Conditions relevant to construction are listed Table G-2 below. This includes the responsible owner of the condition and relevant compliance evidence.

Table G-2 EPBC Compliance table

Ref	Description	Owner	Evidence
1)	The approval holder must not clear outside of the project area.	All	CEMP Appendix B2 – Biodiversity Management Sub Plan
<b>National Heritage Places</b>			
2)	The approval holder must comply with NSW Approval conditions E21 – E37 and E49 to minimise impacts on the Indigenous, Non-Indigenous, and Natural heritage values of Kurnell Peninsula Headland.	All	CEMP Appendix B1 – Heritage Management Sub Plan
<b>Listed Threatened Species and Ecological Communities</b>			
3)	Within the project area, the approval holder must not clear more than: a) 0.0683 hectares of seagrass meadows b) 0.0683 hectares of White’s Seahorse habitat.	All	CEMP Appendix B2 – Biodiversity Management Sub Plan
4)	The approval holder must comply with NSW Approval conditions E6 – E8 and E11 related to preconstruction surveying and protection measures.	All	CEMP Appendix B2 – Biodiversity Management Sub Plan
5)	The approval holder must comply with NSW Approval conditions E62 – E65, E67 – E68, and E70 related to the prevention and management of contamination on protected matters.	All	CEMP Appendix B6 – Soil, Water & Contamination Management Sub Plan

Ref	Description	Owner	Evidence
<b>Construction Environmental Management Plan</b>			
6)	The approval holder must comply with NSW Approval conditions C1 – C13 related to the preparation and implementation of a Construction Environmental Management Plan (CEMP) to avoid, mitigate and manage impacts on protected matters during construction.	All	Construction Environmental Management Plan (this plan)
7)	The CEMP required by the NSW Approval must include environmental management measures to manage impacts to protected matters and be informed by the contamination documentation.	MCD	CEMP Appendix B6 – Soil, Water & Contamination Management Sub Plan
<b>Marine Biodiversity Offset Strategy</b>			
10)	The approval holder must comply with NSW Approval conditions E12 – E20 related to the requirements of the Marine Biodiversity Offset Strategy (MBOS) to compensate for the clearing of 0.0683 hectares of seagrass meadows and White's Seahorse habitat.	TfNSW	TfNSW



Ref	Description	Owner	Evidence
11)	<p>To monitor the outcomes of the MBOS for seagrass meadows and White's Seahorse habitat, the approval holder must include a Marine Biodiversity Offset Report as part of the compliance report until at least the 10th anniversary of the commencement of the action, unless otherwise agreed to in writing by the Minister. Each Marine Biodiversity Offset Report must include:</p> <ul style="list-style-type: none"> <li>a. a progress report on the implementation of the MBOS;</li> <li>b. a list of success metrics;</li> <li>c. details of the monitoring methodology(ies) implemented and the locations of reference sites;</li> <li>d. monitoring results including a comparison against reference sites;</li> <li>e. a summary of any adaptive management steps taken to improve implementation and/or monitoring methodology(ies); and</li> <li>f. a conclusion as to whether the outcomes, as measured against the success metrics, have been achieved, are likely to be met or are unlikely to be met, as determined by a suitably qualified person.</li> </ul>	TfNSW	TfNSW

Ref	Description	Owner	Evidence
12)	<p>To assess the ongoing success of the MBOS, the approval holder must submit a Rehabilitation Monitoring Review to the department within 6 years of the date of this approval and every 5 years thereafter, unless otherwise agreed to in writing by the Minister. Each Rehabilitation Monitoring Review must include:</p> <ul style="list-style-type: none"> <li>a. a review of the monitoring methodology by a suitably qualified person;</li> <li>b. a conclusion based on the success metrics as to whether the environmental offsets for seagrass meadows and White's Seahorse habitat have been achieved, are likely to be met or are unlikely to be met, as determined by a suitably qualified person; and</li> <li>c. if environmental offsets for seagrass meadows and White's Seahorse habitat have not been achieved based on the success metrics: <ul style="list-style-type: none"> <li>i. a list measurable and time-bound remediation measures which will be undertaken to ensure the success metrics are achieved; and</li> <li>ii. justification for how the remediation measures will provide full compensation for the impacts to seagrass meadows and White's Seahorse habitat.</li> </ul> </li> </ul>	TfNSW	TfNSW
<b>Submission and Publication of Plans</b>			
13)	The approval holder must submit all plans required by these conditions electronically to the department.	TfNSW	TfNSW
14)	If the approval holder submits a revised version of a plan for the Planning Secretary's approval, the approval holder must provide the revised plan to the department within 5 business days and an explanation of the differences between the approved plan and the revised plan.	TfNSW	TfNSW
15)	If a revised version of a plan is approved by the Planning Secretary, the approval holder must provide the revised plan to the department within 10 business days of the Planning Secretary's approval.	TfNSW	TfNSW

Ref	Description	Owner	Evidence
16)	Unless otherwise agreed to in writing by the Minister, the approval holder must publish each plan on the website within 15 business days of the date: <ul style="list-style-type: none"> <li>a. the plan is approved by the Planning Secretary; or</li> <li>b. a revised version of the plan is approved by the Planning Secretary.</li> </ul>	TfNSW	TfNSW
17)	The approval holder must keep all published plans required by these conditions on the website until the expiry date of this approval.	TfNSW	TfNSW
18)	The approval holder must exclude or redact sensitive ecological data from plans published on the website or otherwise provided to a member of the public.	TfNSW	TfNSW
19)	If sensitive ecological data is excluded or redacted from a plan, the approval holder must notify the department in writing what exclusions and redactions have been made in the version published on the website	TfNSW	TfNSW
<b>Notification of Date of Commencement of the Action</b>			
20)	The approval holder must notify the department electronically of the date of commencement of the action, within 5 business days of the commencement of the action.	TfNSW	TfNSW
21)	If the commencement of the action does not occur within 5 years from the date of this approval, then the approval holder must not commence the action without the prior written agreement of the Minister.	TfNSW	TfNSW
<b>Compliance Records</b>			
22)	The approval holder must maintain accurate and complete compliance records.	All	CEMP Section 8.4
23)	If the department makes a request in writing, the approval holder must provide electronic copies of compliance records to the department within the timeframe specified in the request.		

Ref	Description	Owner	Evidence
24)	Note: Compliance records may be subject to audit by the department, or by an independent auditor in accordance with section 458 of the EPBC Act, and/or be used to verify compliance with the conditions. Summaries of the results of an audit may be published on the department's website or through the general media.	TfNSW	TfNSW
25)	The approval holder must ensure that any monitoring data (including sensitive ecological data), surveys, maps and other spatial and metadata required under the conditions of this approval are prepared in accordance with the Guidelines for biological survey and mapped data (Commonwealth of Australia 2018), or as otherwise specified by the Minister in writing.	All	CEMP Section 8.1.2
26)	The approval holder must ensure that any monitoring data (including sensitive ecological data), surveys, maps and other spatial and metadata required under the conditions of this approval are prepared in accordance with the Guide to providing maps and boundary data for EPBC Act projects (Commonwealth of Australia 2021), or as otherwise specified by the Minister in writing.	All	CEMP Section 8.1.2
<b>Annual Compliance Reporting</b>			
27)	The approval holder must prepare a compliance report for each 12-month period following the date of this approval, or as otherwise agreed to in writing by the Minister.	TfNSW	TfNSW
28)	Each compliance report must be consistent with the Annual Compliance Report Guidelines (Commonwealth of Australia 2014).	TfNSW	TfNSW
29)	Each compliance report must include: <ul style="list-style-type: none"> <li>a. Accurate and complete details of compliance and any non-compliance with the conditions and the plans, and any incidents.</li> <li>b. One or more shapefile showing all clearing of any protected matters, and/or their habitat, undertaken within the 12-month period at the end of which that compliance report is prepared.</li> <li>c. A schedule of all plans in existence in relation to these conditions and accurate and complete details of how each plan is being implemented.</li> </ul>	TfNSW	TfNSW

Ref	Description	Owner	Evidence
30)	<p>The approval holder must:</p> <ul style="list-style-type: none"> <li>a) Publish each compliance report on the website within 60 business days following the end of the 12-month period for which that compliance report is required.</li> <li>b) Notify the department electronically, within 5 business days of the date of publication, that a compliance report has been published on the website.</li> <li>c) Provide the weblink for the compliance report in the notification to the department.</li> <li>d) Keep all published compliance reports required by these conditions on the website until the expiry date of this approval.</li> <li>e) Exclude or redact sensitive ecological data from compliance reports published on the website or otherwise provided to a member of the public.</li> <li>f) If sensitive ecological data is excluded or redacted from the published version, submit the full compliance report to the department within 5 business days of its publication on the website and notify the department in writing what exclusions and redactions have been made in the version published on the website.</li> </ul> <p>Note: Compliance reports may be published on the department's website</p>	TfNSW	TfNSW
<b>Reporting Non-Compliance</b>			
31)	The approval holder must notify the department electronically, within 2 business days of becoming aware of any incident and/or potential non-compliance and/or actual non-compliance with these conditions or commitments made in a plan.	TfNSW	TfNSW

Ref	Description	Owner	Evidence
32)	<p>The approval holder must specify in the notification:</p> <ul style="list-style-type: none"> <li>a) Any condition or commitment made in a plan which has been or may have been breached.</li> <li>b) A short description of the incident and/or potential non-compliance and/or actual non-compliance.</li> <li>c) The location (including co-ordinates), date, and time of the incident and/or potential non-compliance and/or actual non-compliance.</li> </ul> <p>Note: If the exact information cannot be provided, the approval holder must provide the best information available.</p>	TfNSW	TfNSW
33)	<p>The approval holder must provide to the department in writing, within 12 business days of becoming aware of any incident and/or potential non-compliance and/or actual non-compliance, the details of that incident and/or potential non-compliance and/or actual non-compliance with these conditions or commitments made in a plan. The approval holder must specify:</p> <ul style="list-style-type: none"> <li>a) Any corrective action or investigation which the approval holder has already taken.</li> <li>b) The potential impacts of the incident and/or non-compliance and/or non-compliance.</li> <li>c) The method and timing of any corrective action that will be undertaken by the approval holder.</li> </ul>	TfNSW	TfNSW
<b>Independent Audit</b>			
34)	<p>The approval holder must ensure that an independent audit of compliance with these conditions is conducted for every five-year period following the commencement of the action until this approval expires, unless otherwise specified in writing by the Minister.</p>	TfNSW	TfNSW

Ref	Description	Owner	Evidence
35)	<p>For each independent audit, the approval holder must:</p> <ul style="list-style-type: none"> <li>a) Provide the name and qualifications of the nominated independent auditor, the draft audit criteria, and proposed timeframe for submitting the audit report to the department prior to commencing the independent audit.</li> <li>b) Only commence the independent audit once the nominated independent auditor, audit criteria and timeframe for submitting the audit report have been approved in writing by the department.</li> <li>c) Submit the audit report to the department for approval within the timeframe specified and approved in writing by the department.</li> <li>d) Publish each audit report on the website within 15 business days of the date of the department's approval of the audit report.</li> <li>e) Keep every audit report published on the website until this approval expires.</li> </ul>	TfNSW	TfNSW
36)	Each audit report must report for the five-year period preceding that audit report.	TfNSW	TfNSW
37)	Each audit report must be completed to the satisfaction of the Minister and be consistent with the Environment Protection and Biodiversity Conservation Act 1999 Independent Audit and Audit Report Guidelines (Commonwealth of Australia 2019).	TfNSW	TfNSW
<b>Completion of the Action</b>			
38)	The approval holder must notify the department electronically 60 business days prior to the expiry date of this approval, that the approval is due to expire.	TfNSW	TfNSW
39)	Within 20 business days after the completion of the action, and, in any event, before this approval expires, the approval holder must notify the department electronically of the date of completion of the action and provide completion data.	TfNSW	TfNSW
<b>Changes to State Conditions</b>			
40)	The approval holder must inform the department in writing within 2 business days of requesting any change to the NSW Approval conditions that may relate to protected matters.	TfNSW	TfNSW

Ref	Description	Owner	Evidence
41)	The approval holder must inform the department in writing within 5 business days of any approved changes made to the NSW Approval conditions that may relate to protected matters.	TfNSW	TfNSW



## Revised Environmental Management Measures

Relevant REMMs are listed in Table 3 below. This includes references to required outcomes, the timing of when the commitment applies relevant documents or sections of the environmental assessment influencing the outcome and implementation.

Table G-3 Environmental management measures relevant to this HMP

Outcome	REMM #	Commitment	Responsibility	Timing	HMP Reference
Aboriginal heritage					
Avoiding impacts to Aboriginal heritage (general)	AH1	Detailed design will consider opportunities to avoid impacts to significant heritage values and known/discovered intact archaeological remains in consultation with La Perouse Local Aboriginal Land Council and other Registered Aboriginal Parties.	Transport for NSW	Detailed design	N/A
Avoiding impacts to Aboriginal heritage (general)	AH2	<p>During detailed design, elements of design such as finishes and treatments as well as heritage interpretation, such as displays and panels, will be informed by the Aboriginal cultural heritage principles in the following policies and plans:</p> <ul style="list-style-type: none"> <li>• Kamay Botany Bay National Park: Interpretation and Storytelling Plan (WolfPeak Environment and Heritage, 2020)</li> <li>• Kamay Botany Bay National Park Kurnell Master Plan (NSW DPIE, 2019).</li> <li>• Kamay Botany Bay National Park Plan of Management (NSW DPIE, 2020a)</li> <li>• Meeting Place Precinct: Botany Bay National Park – Kurnell. Conservation Management Plan (Context Pty Ltd, 2008).</li> <li>• La Perouse Headland Conservation Management Plan (Jill Sheppard Heritage Consultants, 2009).</li> </ul>	Transport for NSW	Detailed design	N/A

Outcome	REMM #	Commitment	Responsibility	Timing	HMP Reference
Impacts to Aboriginal heritage (general)	AH3	<p>A Construction Heritage Management Plan (HMP) will be prepared and implemented under the CEMP. The HMP will include:</p> <ul style="list-style-type: none"> <li>a) Construction measures and procedures to minimise and manage impacts on Aboriginal cultural heritage</li> <li>b) Sensitivity area maps that identify Aboriginal heritage values, culturally and archaeologically sensitive areas and constraints within the study area</li> <li>c) Unexpected Heritage Items Procedure (Transport for NSW, 2022)</li> <li>d) Include consultation with, and contact details for, the La Perouse Local Aboriginal Land Council, Registered Aboriginal Parties and National Parks and Wildlife Service.</li> </ul>	Contractor	Pre-construction and construction	<p>This HMP.</p> <ul style="list-style-type: none"> <li>a) Section 6.1 – 6.9</li> <li>b) CEMP Appendix H – Site Environmental Plans</li> <li>c) Section 6.6 and Attachment A</li> <li>d) Section 3.1</li> </ul>
Aboriginal cultural heritage awareness (general)	AH4	<p>Aboriginal Cultural Heritage Awareness Inductions will be given to all workers during site inductions. This will ensure they are aware of the site's heritage values and context. Updates will be provided based on stakeholder feedback, consultation with the La Perouse Local Aboriginal Land Council, Registered Aboriginal Parties and following any unexpected finds.</p>	Contractor	Pre-construction Construction	Attachment A
Impacts to low potential PAD	AH5	<p>A Salvage Excavation Program will be developed and be carried out prior to any subsurface impacts within the Low Potential PAD at La Perouse. This includes the jetty tie-in wharf utilities, wharf piles and landscaping works. Following completion of the archaeological excavation and the subsequent analysis and reporting, further consultation will be undertaken to determine the long-term repository for any retrieved Aboriginal objects.</p>	Contractor	Pre-construction and construction	Chapter 6

Outcome	REMM #	Commitment	Responsibility	Timing	HMP Reference
Potential damage to the rock engraving at La Perouse	AH6	A visual inspection of the potential rock engravings (Site 3, La Perouse [AHIMS ID 45-6-0650] and Site 4, La Perouse [AHIMS ID 45-6-0651]) will be undertaken before setting-up the ancillary facilities and starting construction.	Contractor	Pre-construction	Chapter 6
	AH7	Establish exclusion zones for all registered AHIMS rock engraving sites within the construction boundary, or directly adjacent, and cover with geotextile fabric (or similar) before setting-up the ancillary facilities and creating the construction compound.	Contractor	Pre-construction	Chapter 6
Impacts to rock engravings	AH8	Archaeological work method statements will be prepared prior to setting up ancillary facilities, construction compounds or construction works, to prevent impact and preserve the integrity the rock engraving at La Perouse (AHIMS ID 45-6-0653). During excavation and subsurface works or any other identified high-risk activities, archaeological supervision and vibration monitoring will be undertaken at the potential location of the rock engraving at La Perouse (AHIMS ID 45-6-0653).  If the engraving is identified and/or the vibration levels would result in damage to the integrity of the sandstone structure, works must cease, the site protected and the construction methodology be reviewed in consultation, with a heritage consultant, to mitigate further impacts.	Contractor	Pre-construction and construction	Chapter 6
Potential damage to AHIMS sites at La Perouse and Kurnell	AH9	Archaeological supervision will be undertaken during excavations below 400mm at Kurnell within the Foreshore Midden – Captain Cook’s Landing Place (AHIMS ID 52-3-0219). If archaeological material is identified, further archaeological investigations may	Contractor	Pre-construction Construction	Chapter 6

Outcome	REMM #	Commitment	Responsibility	Timing	HMP Reference
		be required following review and assessment of the archaeological resources identified.			
<b>Non-Aboriginal heritage</b>					
Impacts to Non-Aboriginal heritage (general)	NAH1	<p>Detailed design will consider opportunities to avoid impacts to significant heritage values and known/discovered intact archaeological remains in consultation with Heritage NSW. Options to consider during the detailed design include:</p> <ul style="list-style-type: none"> <li>Excavating the utility trench at Kurnell underneath the buried portion of the coursed stone sea wall near the wharf tie-in, instead of removing a section of the sea wall.</li> <li>Excavating the utility trench at Kurnell underneath the archaeological remains of the former sea wall near the wharf tie-in, instead of impacting the archaeological remains.</li> <li>Limiting the impact depth of landscape works at La Perouse to reduce impacts to the archaeological remains of the former wharf approach road.</li> <li>Avoiding impact to the remnant Coast Banksia community at La Perouse. Where impact cannot be avoided, offset planting of native vegetation at La Perouse and Kurnell will be provided.</li> </ul>	Transport for NSW	Detailed design	N/A
Impacts to Non-Aboriginal heritage (general)	NAH2	<p>During detailed design, elements of design, such as finishes and treatments, as well as heritage interpretation, such as displays and panels, will be informed by the non-Aboriginal cultural heritage principles in the following policies and plans:</p> <ul style="list-style-type: none"> <li>Kamay Botany Bay National Park Kurnell Master Plan (NSW DPIE, 2019).</li> </ul>	Transport for NSW	Detailed design	N/A

Outcome	REMM #	Commitment	Responsibility	Timing	HMP Reference
		<ul style="list-style-type: none"> <li>• Kamay Botany Bay National Park Plan of Management (NSW DPIE, 2020a)</li> <li>• Meeting Place Precinct: Botany Bay National Park – Kurnell. Conservation Management Plan (Context Pty Ltd, 2008).</li> <li>• La Perouse Headland Conservation Management Plan (Jill Sheppard Heritage Consultants, 2009).</li> </ul>			
Impacts to Non-Aboriginal heritage (general)	NAH3	<p>Non-Aboriginal heritage management measures will be included as part of the Construction Heritage Management Plan (HMP). The HMP will include:</p> <ol style="list-style-type: none"> <li>Construction measures and procedures to minimise and manage impacts on non-Aboriginal cultural heritage.</li> <li>Sensitivity area maps that identify non-Aboriginal heritage values, culturally and archaeologically sensitive areas and constraints within the study area.</li> <li>Identification of heritage protection zones and protection requirements for heritage items within and in the vicinity of the construction boundary.</li> <li>An outline of the required archaeological management strategies.</li> <li>A heritage register to document the location, condition, significance, storage requirements of any memorials, monuments and interpretive panels which need temporary relocation and storage during construction, including The Captain Cook watering well, The Landing Place Memorial and interpretive panels on the extant wharf.</li> <li>Unexpected Heritage Items Procedure (Transport for NSW, 2022)</li> </ol>	Contractor	Pre-construction and construction	<ol style="list-style-type: none"> <li>Section 6.9</li> <li>CEMP Attachment H – Site Environmental Plans</li> <li>CEMP Attachment H – Site Environmental Plans</li> <li>Section 6.1 – 6.5</li> <li>Attachment F</li> <li>Attachment A</li> <li>Section 3.1</li> </ol>

Outcome	REMM #	Commitment	Responsibility	Timing	HMP Reference
		g) Consultation with National Parks and Wildlife Service, Heritage NSW, Randwick City Council and Sutherland Shire Council.			
Damage to former sea wall at Kurnell and former wharf approach road at La Perouse Preserving the heritage record of the coursed stone sea wall and other listed items impacted by the project	NAH4	An Archaeological Research Design (ARD) will be prepared before work starts. The ARD will confirm the areas within the construction boundaries requiring archaeological investigation and management and any salvage requirements, following detailed design. It will outline the archaeological investigation method. Archaeological Work Method Statements (AWMS) will be prepared prior to construction to support the ARD.	Contractor	Pre-construction	N/A
Incorporating identified archaeological remains	NAH5	Where any archaeological investigations identify remains, opportunities should be considered for leaving archaeological remains exposed and incorporating them into the visual landscape. Consultation with Heritage NSW and National Parks and Wildlife Service will be undertaken to determine the long-term repository for any retrieved objects.	TfNSW	During Construction	Section 6.9
Heritage awareness and responsibilities	NAH6	Non-Aboriginal Heritage Awareness Inductions will be given to all workers during site inductions. This will ensure they are aware of their obligations under the NSW <i>Heritage Act 1977</i> and best practice as outlined in <i>The Burra Charter</i> (Australia ICOMOS 2013). Updates will be provided based on stakeholder feedback and following any unexpected finds and the outcome of the ARD.	Contractor	Construction	Attachment A
Recording Non-	NAH7	A Photographic Archival Recording Program will be undertaken in accordance with the <i>How to Prepare</i>	Contractor	Pre-construction	Attachment C

Outcome	REMM #	Commitment	Responsibility	Timing	HMP Reference
Aboriginal heritage features		<p><i>Archival Recording of Heritage Items</i> (NSW Heritage Office 1998) and <i>Photographic Recording of Heritage Items Using Film or Digital Capture</i> (NSW Heritage Office 2006). Photographic archival recording will be carried out for heritage items that are directly impacted within the construction boundaries and should record the setting and views of the heritage items within the study area that will be subject to minor or greater visual impacts based on Table 8-4 of the EIS. The impacted elements include but are not limited to:</p> <ul style="list-style-type: none"> <li>• The former sea wall at Kurnell.</li> <li>• The former wharf approach road at La Perouse.</li> <li>• The archaeological potential areas at La Perouse.</li> <li>• Nearby heritage items subject to minor visual impacts including: Kurnell Peninsula Headland; Kamay Botany Bay National Park (North and South) and Towra Point Reserve; Kurnell Historic Site (in Kamay Botany Bay National Park); Kurnell monuments (in Kamay Botany Bay National Park); and the Captain Cook monument.</li> </ul>			
Reinstatement of Monument Track to maintain the historical circulation pattern	NAH8	<p>Monument Track will be reinstated in the same location following construction. This will ensure that the historical circulation pattern is maintained in accordance with the policies outlined in Section 5.5: Landscape of the Meeting Place Precinct CMP. Specifically:</p> <ul style="list-style-type: none"> <li>• The existing concrete slabs will be temporarily removed and reinstated rather than being replaced. If this is not possible, replaced sections will match the existing track.</li> </ul>	Contractor	Construction	Chapter 6

Outcome	REMM #	Commitment	Responsibility	Timing	HMP Reference
		<ul style="list-style-type: none"> <li>Care will be taken to remove sections with interpretive text and ensure that they are returned to their original location.</li> </ul>			
<b>Underwater heritage</b>					
Underwater heritage impacts (general)	UH1	<p>Underwater heritage management measures will be included as part of the Construction Heritage Management Plan (HMP). The HMP will include:</p> <ol style="list-style-type: none"> <li>Construction measures and procedures to minimise and manage impacts on underwater heritage.</li> <li>Sensitivity area maps that identify areas of underwater heritage sensitivity and constraints in the study area.</li> <li>Artefact management procedures, including identification of approved submerged reburial locations.</li> <li>Relevant work method requirements, including the installation and removal of the construction platform at La Perouse, temporary causeway at Kurnell and any other temporary structures.</li> <li>Maritime heritage inductions tailored for underwater work activities including, but not limited to, anchoring or trenching</li> <li>Restricted zones which limit activities and movements (ie no tracked machines) to be established for the following heritage items: First Slipway at La Perouse; Remains of the sandstone block causeway for La Perouse wharf; Paragon Restaurant / Boat Davits; Holt Jetty / Isaac Smith memorial; and Captain Cook's Landing Site.</li> <li>Archival, baseline and periodic monitoring protocols (before and during construction, including a final site inspection within three</li> </ol>	Contractor	Pre-construction and construction	<ol style="list-style-type: none"> <li>Section 6.9</li> <li>CEMP Attachment H – Site Environmental Plans</li> <li>Attachment D</li> <li>CEMP Section 2.3</li> <li>Section 7.2</li> <li>CEMP Attachment H – Site Environmental Plans</li> <li>Attachment H</li> <li>Attachment A</li> <li>Section 3.1</li> </ol>



Outcome	REMM #	Commitment	Responsibility	Timing	HMP Reference
		<p>months of completion of works) for the heritage items identified in UH1</p> <p>h) Unexpected Heritage Items Procedure (Transport for NSW, 2022).</p> <p>i) Consultation requirements with National Parks and Wildlife Service, Heritage NSW, Randwick City Council and Sutherland Shire Council.</p>			
Unexpected underwater heritage finds during wharf construction	UH2	An archaeological dive inspection will be carried out within the footprint of the wharves. Where a culturally significant heritage item is present, any movable heritage items will be relocated away from the impact area before starting work.	Contractor	Pre-construction	Chapter 6
Unidentified seabed anomalies	UH3	Unidentified seabed anomalies will be avoided through the use of a five metre no-anchoring exclusion zone. If these areas are required for anchoring or mooring, a dive inspection will determine if the item is of low cultural heritage sensitivity, to enable these activities to occur.	Contractor	Pre-construction and construction	Chapter 6

# Attachment H – Underwater Heritage Monitoring Procedure

The objective of the *Underwater Heritage Monitoring Procedure* is to undertake survey inspections to collect information on whether the construction works have impacted on the following heritage items; *First Slipway at La Perouse, Remains of the sandstone block causeway for La Perouse wharf, Paragon Restaurant, Boat Davits, Holt Jetty, Isaac Smith memorial and Captain Cook’s Landing Site*. Detailed methodology for this will form part of the AWMS.

Table F-1 Underwater Heritage Monitoring Procedure

Objective	Procedure
(a) details of baseline data available	Inspection of 2020 photo and video footage. This will need to be updated with an inspection as part of the heritage dive, prior to construction start.
(b) details of baseline data to be obtained and when	Current photo and video footage of heritage items prior to construction.
(c) details of all monitoring of the project to be undertaken	<p>A report will be produced with the following information -</p> <ul style="list-style-type: none"> <li>• Conduct of survey</li> <li>• Dates and personnel</li> <li>• Recording process               <ul style="list-style-type: none"> <li>○ Photo archive</li> <li>○ Video archive</li> <li>○ To be shot in with a total station</li> </ul> </li> <li>• Findings               <ul style="list-style-type: none"> <li>○ Detailed observations and key features</li> </ul> </li> <li>• Proposed thresholds limits and management responses</li> </ul>
(d) the parameters of the project to be monitored	All underwater heritage items listed as part of this HMP
(e) the frequency of monitoring to be undertaken	<ul style="list-style-type: none"> <li>• Prior to construction – Archaeological Dive Inspection</li> <li>• During Construction - Visual periodic monitoring throughout construction</li> <li>• Post Construction - a final site inspection within three months of completion of works</li> </ul>
(f) the location of monitoring	Within the construction footprint of the Wharves.
(g) the reporting of monitoring results and analysis results against relevant criteria	Archaeological Dive Inspection report will be used to document findings and if any movable heritage items were relocated away from the impact area.
(h) details of the methods that will be used to analyse the monitoring data	The inspection would include video and image survey with annotated descriptions of each area on a surveyed plan which shows the extents of construction works.

Objective	Procedure
(i) procedures to identify and implement additional mitigation measures where the results of the monitoring indicate unacceptable project impacts	<p>The inspection will identify any threats to the heritage items. A threshold limit will be applied to an at-risk item and proposed action and mitigation will be suggested during reporting.</p> <p>In the event that results of monitoring indicate unacceptable project impacts, additional management measures are to be implemented such as ceasing work that could further impact heritage items and reviewing construction methodology with heritage specialist.</p>
(j) a consideration of SMART principles	All reporting will incorporate SMART principles.
(k) any consultation to be undertaken in relation to the monitoring programs.	Consultation would be undertaken as required with stakeholders including the construction team.

# Attachment I – Archaeological Research Design (ARD)

A large teal graphic element on the left side of the page, consisting of a triangle at the top and a trapezoid below it, forming a shape that resembles a stylized 'M' or a building facade.

# Archaeological Research Design

Kamay Ferry Wharves

July 2023

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# Archaeological Research Design

Kamay Ferry Wharves

July 2023

# Issue and Revision Record

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# Compliance Matrix

## MINSITERS CONDITIONS OF APPROVAL

The Minister's Conditions of Approval (MCoA) and the Revised Environmental Management Measures relevant to this document, the Archaeological Research Design (ARD), are outlined in Table 0-1

**Table 0-1 Conditions of Approval Relevant to the ARD**

CoA No.	Condition Requirement	How Addressed
<b>MCoA</b>		
<b>E21</b>	An unexpected heritage Finds and Human Remains Procedure (required to be included in the relevant CEMP Sub-plan under Condition C10) must be prepared to manage unexpected heritage finds (including maritime discoveries) in accordance with guidelines and standards prepared by the Heritage Council of NSW or Heritage NSW and submitted to the Planning Secretary no later than one (1) month before the commencement construction	HMP Section 3.10 Section 3.11 Induction/training register
<b>E22</b>	The unexpected Heritage Finds and Human Remains Procedure, as submitted to the Planning Secretary, must be implemented for the duration of the construction.  Note: Human remains that are found unexpectedly during the carrying out of work may be under the jurisdiction of the NSW State Coroner and must be reported to the NSW Police immediately.	Section 3.11
<b>E23</b>	All reasonable steps must be taken so as not to harm, modify or otherwise impact Aboriginal objects or places of cultural significance except as authorised by this approval.	This Report HMP AWMS Contractor's Environmental Management Plan (CEMP)
<b>E25</b>	At the completion of Aboriginal cultural heritage test and salvage excavations, an Aboriginal Cultural Heritage Excavation Report(s) must be prepared by a suitably qualified person. The Aboriginal Cultural Heritage Excavation Report(s), must:  (a) be prepared in accordance with the Guide to Investigation assessing and reporting on Aboriginal cultural heritage in NSW, OEH 2011 and the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales, DECCW 2010; and  (b) document the results of the archaeological test excavations and any subsequent salvage excavations (with artefact analysis and identification of a final repository for finds).  The RAPs must be given a minimum of 28 days to provide comments before the report is finalised. The final report must be provided for information to the Planning Secretary, Heritage NSW, relevant Councils, La Perouse Local Aboriginal Land Council (LALC), RAPs and local Libraries within 12 months of the completion of the Aboriginal archaeological excavations (both test and salvage).	Section 3.13 Section 3.13.5 Attachment B of the Heritage Management Subplan

<b>E26</b>	Where previously unidentified Aboriginal objects or places of cultural significance are discovered, all work must immediately stop in the vicinity of the affected area. Works potentially affecting the previously unidentified objects and places must not recommence until Heritage NSW has been informed and provided a response in writing. The measures to consider and manage this process must be specified in the Unexpected Heritage Finds and Human Remains Procedure required by Condition E21 and include registration in the Aboriginal Heritage Information Management System (AHIMS).	HMP Section 3.10 Section 3.11 Induction/training register
<b>E33</b>	Prior to the commencement of archaeological excavation, an Archaeological Research Design and Excavation Methodology must be prepared in accordance with the Heritage Council of NSW guidelines to guide the archaeological program. The revised methodology must be prepared in consultation with Heritage NSW and submitted to the Planning Secretary if requested.	This report
<b>E34</b>	Prior to the commencement of archaeological excavation, the Proponent must nominate a suitably qualified Excavation Director who complies with Heritage NSW Excavation Director Criteria 2019 (September 2019) to direct the historical archaeological program. The Excavation Director must be present to oversee excavation, advise on archaeological issues, advise on the duration and extent of oversight required during archaeological excavations consistent with the Archaeological Research Design and Excavation Methodology required by Condition E33	Section 3.3
<b>REMMs</b>		
<b>AH3</b>	A Construction Heritage Management Plan (HMP) will be prepared and implemented under the CEMP. The HMP will include: a. Construction measures and procedures to minimise and manage impacts on Aboriginal cultural heritage b. Sensitive area maps that identify Aboriginal heritage values, culturally and archaeologically sensitive areas and constraints within the study area c. Unexpected Heritage Items Procedure (NSW Roads and Maritime Services, 2015d) d. Include consultation with and contact details for the La Perouse Local Aboriginal Land Council, Registered Aboriginal Parties and National Parks and Wildlife Service.	HMP Section 3.10 Section AWMS
<b>AH4</b>	Aboriginal Cultural Heritage Awareness Inductions will be given to all workers during site inductions. This will ensure they are aware of the site's heritage values and context. Updates will be provided based on stakeholder feedback, consultation with the La Perouse Local Aboriginal Land Council, Registered Aboriginal Parties and following any unexpected finds.	Section 3.5 Induction training/register
<b>AH5</b>	A Salvage Excavation Program will be developed and be carried out prior to any subsurface impacts within the Low Potential PAD at La Perouse. This includes the jetty tie-in where utilities, wharf piles and landscaping works. Following completion of the archaeological excavation and the subsequent analysis and reporting, further consultation will be undertaken to determine the long-term repository for any retrieved Aboriginal objects.	Section 3.13
<b>AH6</b>	A visual inspection of the potential rock engravings (Site 3, La Perouse [AHIMS ID 45-6-0650] and Site 4, La Perouse [AHIMS ID 45-6-0651]) will be undertaken before setting-up the ancillary facilities and starting construction.	Section 3.8 Site inspection report AWMS
<b>AH7</b>	Establish exclusion zones for all registered AHIMS rock engraving sites within the construction boundary or directly adjacent and cover with geotextile fabric (or similar) before setting-up the ancillary facilities and creating the construction compound.	Section 3.7 Site inspection report AWMS

<b>AH9</b>	Archaeological supervision will be undertaken during excavations below 400mm at Kurnell within the Foreshore Midden – Captain Cook’s Landing Place (AHIMS ID 52-3-0219). If archaeological material is identified, further archaeological investigations may be required following review and assessment of the archaeological resources identified.	Section 3.8.2
<b>NAH4</b>	An Archaeological Research Design (ARD) will be prepared before work starts. The ARD will confirm the areas within the construction boundaries requiring archaeological investigation, management and any salvage requirements, following detailed design. It will outline the archaeological investigation method. Archaeological Work Method Statements (AWMS) will be prepared prior to construction to support the ARD.	This report
<b>NAH6</b>	Non-Aboriginal Heritage Awareness Inductions will be given to all workers during site inductions. This will ensure they are aware of their obligations under the NSW Heritage Act 1977 and best practice as outlined in The Burra Charter (Australia ICOMOS 2013). Updates will be provided based on stakeholder feedback and following any unexpected finds and the outcome of the ARD.	Section 3.5 Induction training/register
<b>NAH7</b>	<p>A Photographic Archival Recording Program will be undertaken in accordance with the How to Prepare Archival Recording of Heritage Items (NSW Heritage Office 1998) and Photographic Recording of Heritage Items Using Film or Digital Capture (NSW Heritage Office 2006). Photographic archival recording will be carried out for heritage items that are directly impacted within the construction boundaries and record the setting and views of the heritage items within the study area that will be subject to minor or greater visual impacts based on Table 8-4 of the EIS. The impacted elements include but are not limited to:</p> <ul style="list-style-type: none"> <li>a. The former sea wall at Kurnell</li> <li>b. The former wharf approach road at La Perouse</li> <li>c. The archaeological potential areas at La Perouse</li> <li>d. Nearby heritage items subject to minor visual impacts including; Kurnell Peninsula Headland, Kamay Botany Bay National Park (North and South) and Towra Point Reserve, Kurnell Historic Site (in Kamay Botany Bay National Park), Kurnell monuments (in Kamay Botany Bay National Park) and Captain Cook monument.</li> </ul>	Section 3.6 PAR
<b>NAH8</b>	<p>Monument Track will be reinstated in the same location following construction. This will ensure that the historical circulation pattern is maintained in accordance with the policies outlined in section 5.5: Landscape of the Meeting Place Precinct CMP. Specifically:</p> <ul style="list-style-type: none"> <li>a. The existing concrete slabs will be temporarily removed and reinstated rather than being replaced. If this is not possible, replaced sections will match the existing track</li> <li>b. Care will be taken to remove sections with interpretive text and ensure that they are returned to their original location.</li> </ul>	Section 3.4 Section 3.8

## Glossary / Abbreviations

Abbreviations	Expand Text
<b>Aboriginal place</b>	An Aboriginal Place is an area declared by the Minister administering the Act to be of special significance with respect to Aboriginal culture.
<b>Aboriginal objects</b>	Aboriginal objects include any deposit, object or material evidence (not being a handicraft made for sale), including Aboriginal remains, relating to the Aboriginal habitation of NSW, before or concurrent with occupation by non-Aboriginal people, as defined in section 5 of the NPW Act
<b>ARD</b>	Archaeological Research Design
<b>AWMS</b>	Archaeological Work Method Statements
<b>CEMP</b>	Construction Environmental Management Plan
<b>CEMS</b>	Contractor's Environmental Management System
<b>CMP</b>	Conservation Management Plan
<b>Contractor</b>	McConnell Dowell Constructors (Aust) Pty Ltd.
<b>DPE</b>	Department of Planning and Environment
<b>EIS</b>	Environmental Impact Statement
<b>Environmental heritage</b>	Places, buildings, works, relics, movable objects and precincts, of State or local heritage significance as outline in Section 4 of the Heritage Act
<b>EP&amp;A Act</b>	<i>Environmental Planning and Assessment Act 1979</i>
<b>EPBC Act</b>	<i>Environmental Protection and Biodiversity Conservation Act 1999</i>
<b>EPBC – CoA</b>	<i>Environmental Protection and Biodiversity Conservation Act 1999 Conditions of Approval</i>
<b>EWMS</b>	Environmental Work Method Statements
<b>Heritage Act</b>	<i>Heritage Act 1997</i>
<b>Heritage NSW</b>	Heritage New South Wales
<b>HMP</b>	Heritage Management Sub Plan
<b>LALC</b>	Local Aboriginal Land Council
<b>MCoA</b>	Ministers Condition of approval

<b>NPW Act</b>	<i>National Parks and Wildlife Act 1974</i>
<b>PACHCI</b>	Procedure for Aboriginal Cultural Heritage Consultation and Investigation (Roads and Maritime, 2011)
<b>PAD</b>	Potential Archaeological Deposit
<b>Project, the</b>	Kamay Ferry Wharves
<b>RAP</b>	Registered Aboriginal Parties
<b>REMM</b>	Revised Environmental Management Measure
<b>Secretary</b>	Secretary of the NSW Department of Planning and Environment (or delegate)
<b>TfNSW</b>	Transport for New South Wales

# 1 Introduction

## 1.1 Background

Austral Archaeology Pty Ltd (Austral) has been engaged by Mott MacDonald Pty Ltd (on behalf of McConnell Dowell) to prepare an Archaeological Research Design (ARD) for Transport for NSW (TFNSW) as part of works associated with the Kamay Ferry Wharves (the Project). The project involves the reinstatement of two ferry wharves in Botany Bay (Kamay) damaged during a storm in 1974. The primary purpose of the wharves is to allow a ferry service to operate between La Perouse and Kurnell. The ferry service would provide an alternative way for people to access Kamay Botany Bay National Park (the National Park) other than by road. Commercial vessels and recreational boats would also be allowed to use the wharves. The project is a State Significant Infrastructure (SSI) project (SSI-10049, approved 21/07/2022) with EPBC Approval (EPBC Ref 202/8825, approved 16/03/2023). A companion document, the Archaeological Work Methods Statement (AWMS), discusses Aboriginal heritage.

Both the La Perouse and Kurnell portions of the Project area possess significant Aboriginal, historic and maritime heritage values. Mitigation and management measures pertaining to the protection of, as well as to monitoring and minimising of impacts to heritage values at both sites are contained within a number of documents and instruments:

- Revised Environmental Management Measures (REMMs) listed in the *Kamay Ferry Wharves Response to Submissions Report (2022)*;
- Minister's Conditions of Approval (MCoA);
- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC) Conditions of Approval (EPBC-CoA);
- The Construction Environmental Management Plan (CEMP) for the Project, and;
- The Heritage Management Sub Plan (HMP).

A detailed description of the Project is provided in Chapter 5 of the EIS. As part of EIS development, detailed Aboriginal cultural heritage, non-Aboriginal heritage and underwater heritage assessments were prepared to address the Secretary's Environmental Assessment Requirements issued by the Department of Planning, Industry and Environment (DPIE). One relevant technical paper comprising part of the EIS relates to Aboriginal cultural heritage:

- Appendix F Non-Aboriginal Heritage Technical Paper: Statement of Heritage Impact (SoHI).

A summary of the non-Aboriginal heritage impacts identified in the EIS states that while there are many heritage items present in both locations which range in significance from local to national, the majority are located outside of the construction boundary. Impacts are generally limited to elements at Kurnell which include various sea walls, the Monument Track, Captain Cook watering well and the Landing Place memorial. Proposed mitigation strategies include monitoring of vibration, archaeological investigations and temporary relocation of portable heritage items during the construction phase.

Following the EIS's submission, Minister's Conditions of Approval (MCoA) was released and contains conditions regarding the management of non-Aboriginal heritage within the Project area. These are reproduced in Table 0-1. In addition, the CEMP and HMP contain strategies and protocols to manage Aboriginal heritage in the Project area, derived from both the MCoA and EMMs set out in the EIS. In particular, HER\_06 (EMM AH6) is relevant to the current document, requiring the preparation of ARD and AWMS. This document addresses these requirements.



The following report outlines the archaeological investigation, management and salvage methodology required to mitigate the impacts to the identified historical (non-Aboriginal) archaeological resource within the area of works following the project’s detail design. The report is based on a review of previous documentation and archaeological assessment, primary historical records and site inspection. It has been prepared in accordance with the Minister’s CoA for SSI-10049 (Section E33).

### 1.1.1 Non-Aboriginal Heritage Assessment (SoHI) (Artefact 2021)

significance for the SSI-10049 study area. The assessment mapped heritage items and archaeological potential, as well as identifying impacts that may result from the proposed wharf constructions at both the Kurnell and La Perouse areas of the site. The assessment then recommended steps to mitigate those impacts. As part of the impact mitigation, the Artefact (2021) report also considered redesign options for SSI 10049. Ultimately, the assessment determined that impacts to non-Aboriginal archaeological heritage could be mitigated with the guidance of an ARD.

Please refer to Table 1-1 below for a directory that identifies the foundational archaeological chapters from the Artefact (2021) assessment relevant to this ARD.

**Table 1-1 Artefact (2021) Non-Aboriginal Heritage Assessment (SoHI)**

SoHI	Page
Legislative and Policy Context	11-17
Assessment Methodology	18-34
Historical Background	35-118
Non-Aboriginal Archaeological Assessment	145-174
Heritage Impact Assessment	175-235
Conclusions and Mitigation Measures	236-245

Please refer to Appendix A of this document for the compliance matrix for associated with REMM NAH1-NAH7.

## 1.2 Project Brief and Location

Please refer to page 3 of this document for a detailed Compliance Matrix that summarises all relevant conditions of approval and directs the reader to the appropriate sections of this report.

This ARD meets the requirements as set out by the development consent for SSI-10049.

Development consent 10049 is based on the description of the project works and geographical extent set out by Condition A1 documents:

- a. Kamay Ferry Wharves Environmental Impact Statement (the EIS), dated June 2021;
- b. Kamay Ferry Wharves Response to Submissions Report (the Submissions Report), dated October 2021; and
- c. Kamay Ferry Wharves Marine Biodiversity Offset Strategy (the MBOS), dated November 2021.

This report does not consider the potential Aboriginal archaeology of the study site. However, any Aboriginal sites and objects are protected by the National Parks and Wildlife Act (NPW Act) and are included in the separate AWMS prepared for this project.

The heritage value of the structures currently standing on the study site is not assessed as part of this report. The discovery of unknown and unassessed remains will require additional assessment.

### 1.2.1 Project Location

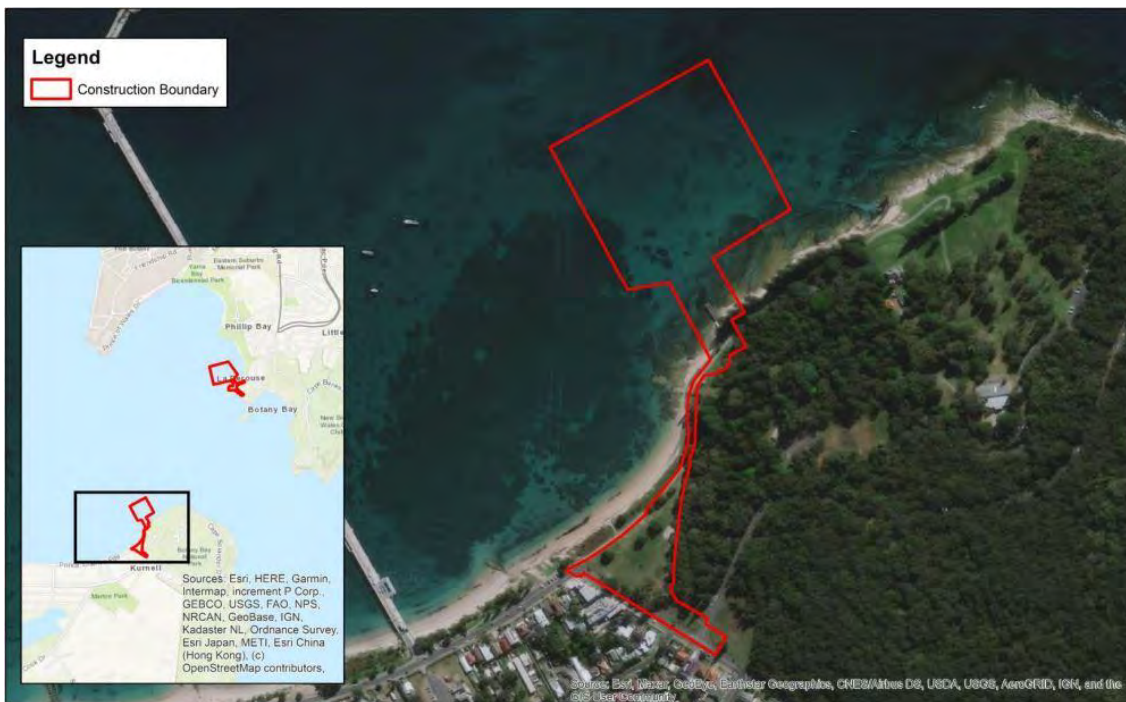
The project is located in Kamay (Botany Bay) on either side of the ocean entrance to the bay Figure 1-1. The project has been divided into two study areas, consisting of the La Perouse construction area and the Kurnell construction area. The La Perouse construction area is located approximately 14 kilometres (km) south of the Sydney Central Business District (CBD) and the Kurnell construction boundary is located approximately 16km south of the Sydney CBD. The AWMS includes both the La Perouse and Kurnell study areas.

The Kurnell construction area is located along the north-west side of the Kamay Botany Bay National Park and to the east of Silver Beach (Figure 1-2). It includes the area along the north side of Captain Cook Drive next to a residential area and follows Monument Track along the foreshore to the extant wharf about 60 metres (m) north-east of Captain Cook's Landing Place. The Kurnell portion of the Project area is located within the Sutherland Shire Local Government Area (LGA), being within the Parish of Sutherland and County of Cumberland.

The La Perouse construction area is located on the La Perouse headland, adjacent to a residential area and the commercial area of Port Botany (Figure 1-3. The La Perouse headland includes a museum and access to La Perouse park and beaches. The New South Wales Golf Club is located approximately 900m to the east. The La Perouse headland is located within the City of Randwick LGA, being within the Parish of Botany and the County of Cumberland.



**Figure 1-1 Project area (source: Artefact, Kamay Wharves Ferry Project Non-Aboriginal Heritage Technical Paper: Statement of Heritage impact, p.3).**



**Figure 1-2 Kurnell construction area (source: Artefact, Kamay Wharves Ferry Project Non-Aboriginal Heritage Technical Paper: Statement of Heritage impact, p.4)**



**Figure 1-3 La Perouse construction area (source: Artefact, Kamay Wharves Ferry Project Non-Aboriginal Heritage Technical Paper: Statement of Heritage impact, p.5)**

### 1.3 Statutory Context

As of 6 March 2023, the project is approved under Section 133(1) of the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC approval reference 2020/8825). The approval holder is TfNSW for the Kamay wharves replacement project. The controlling provisions in respect to a National heritage place are Section 15B and Section 15C.

The current project is an SSI project defined under Schedule 3, clause 1 of the *SEPP (State and Regional Development) 2011*. Developmental approval SSI-10049w as granted on 21/07/2022, under Section 5.19 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

Please refer to Artefact (2021) pages 11-17 for the legislative context of historical archaeology within this project, SSI 10049. Please refer to Section 1.1.1 of this ARD document for a full directory of the historical archaeology components of Artefact's (2021) assessment.

### 1.4 Project Responsibilities

**Table 1-2 Roles and Responsibilities**

Role	Responsibilities
<b>Austral Archaeology Pty Ltd Archaeology Director</b>	Proprietor of Austral; high level responsibility for all works undertaken by and on behalf of the company.
<b>Principal Archaeologist</b>	Directs archaeological investigations during the Kamay Wharves project. Meets NSW Heritage Council Criteria (September 2019). Provides expert advice to the Environmental Manager. Co-author of this ARD document. Selects and leads a team of suitably qualified archaeologists. Has the authority to advise on the duration and extent of oversight required during archaeological investigations.
<b>Archaeologist/s</b>	A suitably qualified member of the Principal team. Reports to the Director(s) and Principal.
<b>Heritage Lead</b>	Mott MacDonald Heritage Lead. Receives expert advice from the Principal Archaeologist during the Kamay Wharves project.
<b>Environment &amp; Sustainability Lead</b>	McConnell Dowell's Environment & Sustainability Lead. Receives expert advice from Mott MacDonald Heritage Lead and Principal Archaeologist during the Kamay Wharves Project.

### 1.5 Report Preparation and Consultation

This document was co-authored by Austral Archaeology Director, David Marcus and Principal Anthropologist/Archaeologist, Dr Amanda Markham. David Marcus is recognised by the Heritage Council of NSW as a suitably qualified and experienced heritage consultant who has been approved in a similar role on sites of local and State significance, and who will oversee and advise on all historical archaeology matters. As a supplement to an existing body of work, this report relies on foundational research and analysis conducted by Artefact Heritage Services (2021). For details, please refer to Section 1.1.1.

Please refer to Artefact (2021) Non-Aboriginal Heritage Assessment pages 145-149 and 159-165. These sections place the current work in context with the recommendations of prior studies.

Please refer to Section 2 of this ARD document for a full directory of the historical archaeology components of Artefact (2021) assessment.

In addition, the following documents describe the Project area's heritage values in detail:

- Meeting Place Precinct: Botany Bay National Park – Kurnell. Conservation Management Plan (Context Pty Ltd 2008) [Meeting Place Precinct CMP]
- La Perouse Headland Conservation Management Plan (Jill Shepard Heritage Consultant 2009) [La Perouse Headland CMP]
- Kamay Botany Bay National Park Plan of Management (NSW DPIE 2020)
- Kamay Botany Bay National Park, Kurnell; Master Plan (NSW DPIE 2019)

## 1.6 Public Dissemination

Public dissemination of the project currently comprises the following Commonwealth and NSW government approvals:

- EPBC 2020/8825 approval decision, published 20 March 2023 at [Project Decision EPBC 2020/8825](#)
- SSI-10049 MCoA approval decision, published 21 July 2022 at [Project Approval SSI-10049](#).

The project can voluntarily consider or may be requested by a consent authority to deliver public dissemination of information regarding the archaeological program at the study site during the excavation. This may include establishing a website or page that is updated with news from the archaeological dig; establishing viewing portals in the site fence; inviting locals to an open day once relics are exposed, if site conditions allow safe access (for instance, a viewing platform); erecting signage around the site façade that details the archaeological investigation or distributing leaflets.

Public dissemination can be utilised at any time and repeatedly during the life of a project but often occurs at the outset of major archaeological excavation works at a site. If needed, any additional public dissemination policy for archaeological work would be developed and approved by/with TfNSW, the Heritage Council or its delegate and any other relevant stakeholders.

## 1.7 Acknowledgements

Mott MacDonald and Austral Archaeology would like to acknowledge the contribution of the following people for their assistance in the preparation of this document:

- Mitch Jones, Senior Environmental and Sustainability Advisor at McConnell Dowell; and
- Corey O'Driscoll, Senior Assessment Officer at Heritage NSW Department of Planning and Environment.

## 2 Historical Background

### 2.1 Historical Context

A full historical background is available in Artefact (2021, 35-118). Please refer to Section 1.1.1 of this ARD document for a full directory of the historical archaeology components of Artefact (2021) assessment. Table 2-1 below summarises the historic land uses of the project area and is adapted from Table 8-1 within the chapter 8 of the EIS.

**Table 2-1 Summary history and historical land uses**

Phase	History Summary
<b>La Perouse</b>	
<p><b>Phase 1: Early explorations (1770-c.1820)</b></p>	<ul style="list-style-type: none"> <li>● First phase of non-Aboriginal land use included early exploration by the British and French</li> <li>● Investigation of the La Perouse headland and Frenchmans Bay by the Endeavour crew in 1770, including botanical collecting by Joseph Banks and Daniel Solander</li> <li>● First Fleet docked for several weeks just west of the headland and Bare Island in January 1788</li> <li>● The French established several structures following their arrival in January 1788 (including the French camp, observatory, garden, and stockade):                         <ul style="list-style-type: none"> <li>– The location of the garden is estimated to be west of the Macquarie Watchtower and included botanical species planted by the French crew</li> <li>– The French stockade was likely located in a similar position on the headland and was made from timber and included longboats and two defensive guns</li> <li>– A tomb was also established by the French crew for Pere Receveur who died during the expedition’s stay in Botany Bay and was buried on the La Perouse headland. The tomb has since been formalised as a memorial/monument.</li> </ul> </li> </ul>
<p><b>Phase 2: Militarisation and the Cable Station (c.1820-c.1905)</b></p>	<ul style="list-style-type: none"> <li>● Military development across the headland as a memorial site for French visitors</li> <li>● Construction of the Cable Station for preparation of the undersea cable. This included:                         <ul style="list-style-type: none"> <li>– Temporary accommodation for the Eastern Extension Telegraph Company (two timber huts and four tents along the south-east side of Frenchmans Beach)</li> <li>– Cable stations (have been two of these over time)</li> <li>– Gear house and cable storage tanks near the foreshore</li> <li>– Cable house to the south-east of Frenchmans Beach</li> </ul> </li> <li>● La Perouse headland was encompassed within a Government reserve in the early 1820s</li> <li>● Macquarie Watchtower was established in 1822</li> <li>● The Customs Department operated from the Macquarie Watchtower between 1833 and the early 20<sup>th</sup> century</li> </ul>

	<ul style="list-style-type: none"> <li>• The boat house and boat davits (two cranes used to lower boats into the water) were situated at the eastern end of Frenchmans Beach and operated between 1833 and the early 20<sup>th</sup> century</li> </ul>
<p><b>Phase 3: Tourism, recreation and wharf infrastructure (c.1905-present)</b></p>	<ul style="list-style-type: none"> <li>• From the early 20<sup>th</sup> century, the overall land use came to reflect the tourist and recreational boom</li> <li>• Closure of the military and government activities on the headland and conversion of military and government buildings and facilities into tourist and historical sites</li> <li>• Establishment of a slipway in early 1900s at east end of Frenchmans Beach for private boat launching</li> <li>• Establishment of the former La Perouse wharf at the west end of the headland which included an approach road along the north-west boundary of the headland</li> <li>• Additions of landing stairs and a timber shed with a hipped roof which were constructed in 1925</li> <li>• Cable Station no longer used for cable operations by 1917 and ancillary facilities demolished</li> <li>• Second slipway constructed by 1917</li> <li>• Larger boatsheds constructed along foreshore of Frenchmans Bay from 1920s allowing tourists to hire boats and order food/drinks</li> <li>• Paragon Restaurant constructed by 1943</li> <li>• Anzac Parade Loop formalised by 1963 over former approach road</li> <li>• Paragon Restaurant and former wharf structure destroyed by a storm in 1974.</li> </ul>
<p><b>Kurnell</b></p>	
<p><b>Phase 1: Early explorations (1770-1825)</b></p>	<ul style="list-style-type: none"> <li>• First phase of non-Aboriginal activity at Kurnell included early exploration by the British</li> <li>• Kurnell headland investigated by the Endeavour crew in 1770 (a commemorative plaque is currently located about 270m north-east of the construction boundary)</li> <li>• Botanical collecting by Joseph Banks and Daniel Solander during Endeavour crew's 8 day stay</li> <li>• Very little development near construction boundary between Cook's voyage and 1815</li> <li>• Captain Phillip of the First Fleet inspected the area and ordered the land be cleared but decided against establishing a colony at Kurnell.</li> </ul>
<p><b>Phase 2: Farming grants (1815-1899)</b></p>	<ul style="list-style-type: none"> <li>• The 19<sup>th</sup> century non-Aboriginal land use within the Kurnell construction boundary primarily consisted of farming (this involved vegetation clearing and erecting fences)</li> <li>• James Birnie was granted 700 acres on the west side of the peninsular by Governor Macquarie and started farming cattle</li> <li>• A homestead and cottages were constructed to north-west of the construction boundary (at the site of Alpha House)</li> <li>• Alpha farm was sold to John Connell in 1828 and was continually used to farm cattle and for timber-getting by subsequent generations of the Connell family</li> <li>• Alpha house was relocated further to the north-east</li> </ul>

	<ul style="list-style-type: none"> <li>● Land purchased in 1861 by Holt who continued to use the farm for timber-getting and cattle</li> <li>● First recorded structure within the construction boundary was the Captain Cook monument which Holt erected in 1870</li> <li>● Planting of commemorative Norfolk Island Pines during 1881 visit by British royalty</li> <li>● Holts Wharf was constructed by 1882, providing greater access between Kurnell and La Perouse</li> <li>● The listed African Olive tree was planted during this time.</li> </ul>
<p><b>Phase 3: Establishment of the National Park (1899-present)</b></p>	<ul style="list-style-type: none"> <li>● In 1899, 250 acres of land at Kurnell (including area around the construction boundary) was resumed by the NSW Government to establish the Captain Cook Landing Place Reserve</li> <li>● Captain Cook Landing Place Reserve was managed by the Landing Place Trust until 1967, who undertook a number of updates and developments (e.g. commemorative plantings, pathways and the new wharf shelter shed, boatshed and sea wall).</li> <li>● A heavy storm hit Kurnell in 1912 and damaged some of the infrastructure established by the Landing Place Trust</li> <li>● The Landing Place Trust built a new wharf known as Trust Wharf in 1912 (remains of this are still visible today under the existing Kurnell viewing platform)</li> <li>● Landing Place Trust constructed the boatshed about 150m south-west of the Kurnell viewing platform</li> <li>● A small cottage was established by 1912 near Captain Cook Drive</li> <li>● Captain Cook Drive was previously planned as part of Polo Street and was not formally established until 1953-56 when it became the first fully sealed road connecting Kurnell to Cronulla to facilitate the construction of the Australian Oil Refinery</li> <li>● The Landing Place Trust established several new plaques that commemorated Captain Cook's voyage near the Captain Cook monument which included the Landing Place Memorial and Captain Cook's watering well plaque, which are still present today</li> <li>● Trust Wharf was destroyed by a storm in 1974 although the stone landing survived</li> <li>● The Kurnell viewing platform was constructed in the same location around 2009</li> <li>● The former Foreshore Track was replaced with the now Monument Track and the previous stone paving barriers around the commemorative plaques were removed and replaced with the current sandstone blocks that the plaques are mounted on.</li> </ul>



## 2.2 Summary of Heritage Items

This section lists the heritage items in the vicinity of the Project. In accordance with the SEARs, the following heritage registers were searched for listed heritage items during the preparation of the EIS:

- Heritage registers hosted on the Australian Heritage Database:
  - World Heritage List (WHL)
  - National Heritage List (NHL)
  - Commonwealth Heritage List (CHL)
- Heritage registers hosted on the NSW State Heritage Inventory, including:
  - The State Heritage Register (SHR)
  - *Randwick Local Environmental Plan 2012 (RLEP)*
  - *Sutherland Shire Local Environmental Plan 2015 (SLEP)*
  - S170 heritage and conservation registers.

Table 2-2 and Table 2-3 list the heritage items located within and adjacent to the construction boundaries. The tables below are adapted from Table 3 and Table 4 within Appendix F (Artefact's SoHI) of the EIS.

**Table 2-2 summary of the heritage items within & adjacent to the construction boundary Kurnell**

Item	Location	Significance	Listing	Distance to Project area
<b>Kurnell Peninsula Headland</b>	Kurnell	National	NHL ID 105812	Within
<b>Kamay Botany Bay: botanical collection sites</b>	Kurnell	National	NHL ID 106162	Within
<b>Kamay Botany Bay National Park (North and South) and Towra Point Reserve</b>	Kurnell	State	SHR 01918	Within
<b>Kurnell monuments (in Kamay Botany Bay National Park)</b>	Kurnell	Local	SLEP 2503	Within
<b>Silver Beach and roadway</b>	Kurnell	Local	SLEP 2506	Within
<b>Captain Cook monument</b>	Kurnell	Local	SLEP A2514	Within
<b>Captain Cook watering well</b>	Kurnell	Local	SLEP A2519	Within
<b>Landing place wharf abutment</b>	Kurnell	Local	SLEP A2516	Within

<b>Captain Cook watering hole</b>	Kurnell	Local	SLEP A2518	20m east
<b>Captain Cook's landing site</b>	Kurnell	Local	SLEP A2511	35m west
<b>Banks Memorial</b>	Kurnell	Local	SLEP A2512	75m north-east
<b>Alpha Farm Site</b>	Kurnell	Local	SLEP A2517	150m south-east
<b>Forby Sutherland monument</b>	Kurnell	Local	SLEP A2515	160m east
<b>Solander monument</b>	Kurnell	Local	SLEP A2513	180m east
<b>Captain Cook's landing place</b>	Kurnell	Local	SLEP A2510	190m east
<b>Flagpole</b>	Kurnell	Local	SLEP A2520	230m east

**Table 2-3 Summary of the heritage items within & adjacent to the construction boundary La Perouse**

<b>Item</b>	<b>Location</b>	<b>Significance</b>	<b>Listing</b>	<b>Distance to Project area</b>
<b>Kamay Botany Bay: botanical collection sites</b>	Kurnell	National	NHL ID 106162	Within
<b>Kamay Botany Bay National Park (North and South) and Towra Point Reserve</b>	La Perouse	State	SHR 01918	Within
<b>Botany Bay National Park (Botany Bay National Park, La Perouse Headland, Yarra Bay and Frenchmans Bay)</b>	La Perouse	Local	RLEP C5	Within
<b>Bare Island Fort</b>	La Perouse	State	SHR 00978 RLEP I171	150m south-east
<b>La Perouse Memorial</b>	Anzac Parade, La Perouse	Local	RLEP I169	10m east
<b>La Perouse Memorial (former Cable Station)</b>	Anzac Parade, La Perouse	Local	RLEP I168	50m east

<b>Macquarie Watchtower</b>	Anzac Parade, La Perouse	Local	RLEP I166	85m north-east
<b>Tomb of Pere le Receveur</b>	Anzac Parade, La Perouse	Local	RLEP I167	50m south-east
<b>Jessie Stuart Broomfield Fountain</b>	Anzac Parade, La Perouse	Local	RLEP I170	175m east
<b>Yarra Bay House</b>	Elaroo Avenue	Local	RLEP I172	360m north
<b>Yarra Bay Beach and Reserve</b>	La Perouse	Local	RLEP I245	400m north

### 2.3 Impacts to Heritage Items and Curtilage

This section of the ARD describes the heritage items, objects and values which will be impacted directly or indirectly by the Project. It does not present all heritage or archaeological resources in the vicinity of the Project; however, a full assessment of the archaeological resources at both the La Perouse and Kurnell portions of the Project area is available in Artefact (Artefact Heritage Pty Ltd 2021, 145-74) and in the conservation management plans, Meeting Place Precinct CMP and La Perouse Headland CMP. Please refer to Section 2.2 of this ARD document for a full directory of the historical archaeology components of Artefact (2021) assessment. Table 2-4 lists all construction impacts on non-Aboriginal items as determined in the EIS.

**Table 2-4 Summary of non-Aboriginal heritage impacts**

Heritage item	Impact			
	Direct	Potential direct	Indirect (visual)	Archaeological
<b>La Perouse</b>				
<b>Kamay Botany Bay National Park (North and South) and Towra Point Reserve</b>	Minor	Minor	Minor	Minor
<b>Botany Bay National Park (Botany Bay National Park, La Perouse Headland, Yarra Bay and Frenchmans Bay)</b>	Negligible	Negligible	Negligible	Major
<b>Kamay Botany Bay: Botanical collection sites</b>	Negligible	Neutral	Negligible	Neutral
<b>La Perouse Memorial</b>	Neutral	Negligible	Negligible	Neutral
<b>La Perouse Museum (former Cable Station)</b>	Neutral	Neutral	Negligible	Neutral
<b>Tomb of Pere le Receveur</b>	Neutral	Neutral	Negligible	Neutral

<b>Bare Island Fort</b>	Neutral	Neutral	Neutral	Neutral
<b>Macquarie Watchtower</b>	Neutral	Neutral	Neutral	Neutral
<b>Yarra Bay House</b>	Neutral	Neutral	Negligible	Neutral
<b>Yarra Bay Beach and Reserve</b>	Neutral	Neutral	Negligible	Neutral
<b>Jessie Stuart Broomfield Fountain</b>	Neutral	Neutral	Neutral	Neutral
<b>1920s Bungalow at 27 Goorawahl Avenue</b>	Neutral	Neutral	Neutral	Neutral
<b>Kurnell</b>				
<b>Kurnell Peninsula Headland</b>	Minor	Minor	Minor	Minor
<b>Kamay Botany Bay National Park (North and South) and Towra Point Reserve</b>	Minor	Minor	Minor	Minor
<b>Kurnell Historic Site (in Kamay Botany Bay National Park)</b>	Minor	Minor	Minor	Minor
<b>Kamay Botany Bay: Botanical collection sites</b>	Negligible	Neutral	Negligible	Neutral
<b>Silvery Beach and roadway</b>	Neutral	Neutral	Negligible	Neutral
<b>Kurnell monuments (in Kamay Botany Bay National Park)</b>	Neutral	Negligible	Negligible to minor	Neutral
<b>Captain Cook monument</b>	Neutral	Negligible	Minor	Neutral
<b>Banks memorial</b>	Neutral	Neutral	Negligible	Neutral
<b>Forby Sutherland monument</b>	Neutral	Neutral	Negligible	Neutral
<b>Solander monument</b>	Neutral	Neutral	Negligible	Neutral
<b>Captain Cook watering well</b>	Neutral	Neutral	Negligible	Neutral
<b>Captain Cook watering hole</b>	Neutral	Neutral	Negligible	Neutral
<b>Captain Cook's landing place</b>	Neutral	Neutral	Negligible	Neutral
<b>Alpha Farm site</b>	Neutral	Neutral	Neutral	Neutral
<b>Flagpole</b>	Neutral	Neutral	Negligible	Neutral

## 3 Archaeological Research Design

The Kamay Wharves project has been designed with the area's heritage significance in mind and generally minimises impacts to heritage values. The aspects of the project which may have a detrimental impact on significant elements within the project area are the erection of the permanent passenger wharf structure, excavations and trenching associated with utility services and landscaping works.

Impacts to heritage items, elements, curtilage identified in Section which can be managed through movement, exclusion areas and monitoring are discussed below. In addition, the program of archaeological salvage recommended by the EIS Appendix F.

### 3.1 Archaeological Program

The proposed program of archaeological works required in accordance with the project SEARs and the prior reports completed by Artefact require:

- Establishment of a moveable heritage register
- Heritage induction
- Photographic archival recording of items listed in REMM NAH7
- Establish heritage protection zones and barriers
- Monitoring and managing impacts to the sea wall at Kurnell as listed in the archaeological management remit of REMM NAH04
- Monitoring and managing damage to the former wharf approach road at La Perouse
- Monitoring and advice for removal and reinstatement of the Monument Track in accordance with the archaeological management remit of REMM NAH04.

### 3.2 Research Questions

These research questions are presented based around the themes which are most suited to the nature of the archaeological resource and the likely levels of impact to it.

It is noted that these research questions revolve primarily around determining whether the proposed works impacts on the location of archaeological remains and identifying the nature of any such remains.

#### 3.2.1 General Themes

- What is the level of archaeological preservation identified across the impact area? Does it vary or is it consistent?
- What is the nature of any archaeological material identified? Is it purely structural elements associated with the seawalls or the associated backfill and levelling deposits, or is occupational material also present?
- Do the results of the test excavation program hold true for the entirety of the area subject to archaeological monitoring? How does it differ?

#### 3.2.2 Built Heritage

- What can the archaeological remains tell us about the various structures and layout of the former built heritage and structural elements of the site?
- What is the manner of construction of structural elements such as seawalls, and is a change visible over time?

- To what degree was the land modified to construct the seawalls and other similar infrastructure? Did this require excavation on the landward side of the wall, or was the area subject to filling after the walls were completed? What other information does the excavation work demonstrate about the prior disturbance within the impact area?

### 3.2.3 Historical Plans Accounts and Archaeology

- In what way does the evidence of structures in the archaeological record differ from those proposed by the historical record?
- How do the results of the GPR survey previously undertaken relate to the findings from the archaeological investigations?
- What particular structural features are unrepresented or misrepresented in the historical descriptions? Are there patterns in the types of features that are unrepresented or misrepresented?
- To what degree does archaeological evidence provide information that cannot be arrived at by the examination of the extant historical accounts?

## 3.3 Personnel

### 3.3.1 Nominated Archaeologists

The following qualified archaeologists are nominated to direct and supervise all archaeological investigations and monitoring at the study site. The Archaeological Director and Principal will be responsible for liaising with the NSW Heritage Council, or its delegate regarding any archaeological matters prior, during or after archaeological investigation of the site.

The Archaeological Director will have the authority to advise on the duration and extent of oversight required during archaeological investigations.

**Table 3-1 Proposed archaeological Director and Archaeological Team**

Position	Nominated Archaeologist
Company Director	David Marcus (Austral)
Archaeological Director	David Marcus (Austral)
Principal	Dr Amanda Markham (Austral)
Site Supervisor	Pete Douglas (subject to final confirmation)
Archaeologists	Teleeha Thomas (Austral) (subject to final confirmation)

## 3.4 Establishment of a Moveable Heritage Register

A Moveable Heritage Register must be established to document the location, condition, significance, storage requirements of any memorials, monuments and interpretive panels which need temporarily relocating and storing during construction including The Captain Cook watering well monument, The Landing Place Memorial and interpretative panels on the extant wharf or any other heritage items that may be required to be relocated or amended as part of construction.

### 3.5 Archaeological and Heritage Induction

Prior to commencing work, all construction personnel should receive a project induction which will include archaeological and heritage induction information including specific information about the potential locations and types of archaeological remains that may be encountered within the project area. This process will be detailed as part of the CEMP.

The following cultural heritage induction includes both Aboriginal and non-Aboriginal heritage. All site personnel must comply with the CEMP, Sub Plans and MCD Procedures including the CEMP and the HMP.

All site personnel must undertake a cultural heritage induction which will include the following:

- A description of Aboriginal cultural heritage in the Kamay Botany Bay.
- A description of the tangible and intangible aspects of Aboriginal heritage and why it is important.
- An overview of the NPW Act and the Heritage Act and the implications and fines applicable for breaching the Acts.
- A general overview of historic heritage in the Kamay Botany Bay area.
- A description of all historic heritage site types within the Project area.
- The process for reporting unknown cultural heritage site.
- The process for reporting damage to cultural heritage sites.
- The process for reporting human remains.

These controls will all form part of the one induction for the site, inclusion of other heritage constraints.

### 3.6 Photographic Archival Recording

A Photographic Archival Recording Program must be undertaken in accordance with the How to Prepare Archival Recording of Heritage Items (Heritage Office 1998) and Photographic Recording of Heritage Items Using Film or Digital Capture (NSW Heritage Office 2006) in consultation with Heritage NSW. Photographic archival recording must be carried out for heritage items that are directly impacted within the construction boundaries and record the setting and views of the heritage items within the study area that would be subject to minor or greater visual impacts based on Tables 5-2 and Table 5-3 of CEMP Appendix B1 Heritage Management Plan. The impacted elements include but are not limited to:

- The former sea wall at Kurnell.
- The former wharf approach road at La Perouse.
- The areas of archaeological potential at La Perouse.
- Nearby heritage items subject to minor visual impacts including:
  - Kurnell Peninsula Headland,
  - Kamay Botany Bay National Park (North and South) and Towra Point Reserve,
  - Kurnell Historic Site (in Kamay Botany Bay National Park),
  - Kurnell monuments (in Kamay Botany Bay National Park); and,
  - The Captain Cook monument.

All archival and photographic recording of heritage items shall be carried out by a qualified heritage consultant in consultation with TfNSW.

This program will capture Archaeological items within the boundary of the works but is being undertaken separately.

### 3.7 Exclusion Zones

Prior to the setting-up of ancillary facilities and creation of the construction compound, exclusion zones around heritage items and elements must be established under the advice and supervision of a qualified archaeologist. Exclusion zones will be demarcated using high visibility temporary fencing, where applicable. Exclusion zones will be included in site inductions for all personnel. The location of these heritage items and elements must be marked on site maps as a minimum, and where works are undertaken in close proximity the significant fabric should be physically protected with barriers.

### 3.8 Archaeological Monitoring

#### 3.8.1 La Perouse

During excavation, subsurface works or any other identified high-risk activities, archaeological supervision and vibration monitoring may be required in the vicinity of the former wharf approach road at La Perouse, in accordance with the advice of a vibration monitoring specialist. Archaeological monitoring must take place under the supervision of a suitably qualified archaeologist.

Should impacts to archaeological items or elements be identified and/or the vibration levels be likely to result in damage, works must cease, the site be protected and the construction methodology be reviewed in consultation with a heritage consultant to mitigate further impacts.

#### 3.8.2 Kurnell

Following the advice of a vibration monitoring specialist, archaeological supervision may be required during construction to monitor vibration impacts to Captain Cook monument (part of SLEP 2503 and A2514) and the coursed stone sea wall at Kurnell. Monitoring must take place under the supervision of a suitably qualified archaeologist.

Should impacts to Captain Cook monument (part of SLEP 2503 and A2514) be identified and/or the vibration levels be likely to result in damage, works must cease, the site be protected and the construction methodology be reviewed in consultation with a heritage consultant to mitigate further impacts.

Should impacts to the course stone sea be unavoidable, for example, construction trenching is necessary underneath the wall, the sections of sea wall may need to be removed during works. The sea wall must then be reinstated and repaired following completion of the works. Where sections of the wall are removed, the stones must be removed with care and should be labelled and securely stored to facilitate reinstatement after the works.

### 3.9 Reinstatement of Monument Track

The Monument Track in the Kurnell portion of the Project area will be impacted by the works. It is to be removed under archaeological supervision prior to the commencement of construction. Following the conclusion of construction works, the Monument Track and its elements must be reinstated in the same location. This will ensure that the historical circulation pattern is maintained in accordance with the policies outlined in Section 5.5: Landscape of the Meeting Place Precinct CMP. Specifically:

- The existing concrete slabs will be temporarily removed and reinstated rather than being replaced. If this is not possible, replaced sections will match the existing track.
- Care will be taken to remove sections with interpretive text and ensure that they are returned to their original location.



- The removal of the Monument Track, the storage location of its elements and its reinstatement must be recorded in the Monument Register.

### 3.10 Unexpected Finds Procedures

The following unexpected finds procedures are consistent with the Heritage Management Sub Plan under section 6.5 and Attachment A of that report.

Where non-Aboriginal items are identified, an assessment will need to be made as to the significance of the item. Non-Aboriginal heritage items may include archaeological 'relics' or other non-Aboriginal items (i.e. works, structures, buildings or movable objects). The Heritage Act ('Heritage Act 1977 No 136 – NSW Legislation' n.d.) defines a relic 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..."*

The following process should be followed with respect to unexpected items:

- Should any suspected non-Aboriginal items be encountered during works associated with this proposal, works must cease in the vicinity and the find should not be moved until assessed by a qualified archaeologist.
- The archaeologist will investigate and assess the non-Aboriginal item to determine the nature, extent and significance of the find. This will enable recommendations to be provided on how work can proceed and whether any further work is required. The archaeologist must supply written advice to the Project Manager within 24 hours stating:
  - Determination of whether the find is a relic.
  - Advice on whether how the project is to proceed and whether the establishment of any no-go areas is necessary.
  - Recommendation on further works that may be required and timeframe for completion of these works.
- Heritage NSW may need to be notified. This will include a statement concerning the find, management measures implemented and notification of any further works arising.
- Should any Aboriginal objects be identified, the procedure outlined in Section 3.2 shall be implemented.

### 3.11 Suspected Human Remains Procedure

The following suspected human remains procedure is consistent with the Heritage Management Sub Plan under section 6.5 and Attachment A of that report.

If any suspected human remains are discovered within the Project area, all activity must cease. The following process must be undertaken:

- Immediately cease all work at that location and not further move or disturb the remains.
- Notify the NSW Police, Planning and Infrastructure and Heritage NSW's Environmental Line on 131555 as soon as practicable and provide details of the remains and their location.
- Establish an appropriate no-go area. This will need to be established in consultation with NSW Police, Heritage NSW and as required, a qualified archaeologist and the La Perouse LALC.
- Works will not be able to recommence within the location of the find until confirmation from NSW Police and Heritage NSW is obtained. If the remains are confirmed as not being human then works may recommence. In the event that remains are human then consultation

is to be undertaken with NSW Police, Heritage NSW and the Aboriginal stakeholders to establish a plan of management.

- Works in the vicinity of the find will only be able to commence once the plan of management has been established and approval has been obtained from all relevant parties.
- Should any human remains be identified, this will trigger a review of the HMP in accordance with Section 8.

### 3.12 Notice of Discovery of a Relic

The following Notice of Discovery of a Relic procedure is consistent with the Heritage Management Sub Plan under section 6.5 and Attachment A of that report.

In the event of the discovery of a relic, the archaeologist (or any other worker) will notify TfNSW, who will in turn notify the Planning Secretary (or its delegate), Randwick City Council and the Sutherland Shire Council in accordance with CoA E22, and the Heritage Council (or its delegate) in accordance with the requirements of s146 of the Heritage Act 1977 and Section 6.1 of the TfNSW Unexpected Heritage Items Procedure.

### 3.13 Salvage Excavation Program – La Perouse

A Safe Work Method (SWMS) will be prepared for the work. All staff engaged in the archaeological excavations are to hold general Construction Industry Training Induction cards.

The archaeological excavation will consist of an archaeologist monitoring all works within the study area that require excavation. Excavations will be undertaken as a series of 1m x 1m test pits as outlined in Section 3.13.1.

Where archaeological material is found, targeted manual excavation will occur where required by qualified archaeologists. Small hand tools such as picks, shovels, pointing trowels, brushes and pans will be used in manual excavation, either for cleaning up excavated areas or revealing exposed features or deposits. Where an *in situ* historic feature is located, mechanical excavation will cease. The feature will then be cleaned up by hand and recorded. The archaeologist will endeavour to expose and identify all significant historic features and deposits. Once the nature and extent of archaeological material is known, discussions will be held to determine whether alternative alignments for services are possible that avoid areas of archaeological significance.

Provenance data and fabric descriptions will be recorded on numbered context recording sheets and the vertical and horizontal positions of all significant deposits and features will be recorded concerning a permanent site datum. This survey information will be transferred to scaled site plans showing the spatial relationships between features revealed during the investigation. Documentary records of the excavation will be supplemented by the preparation of Context Schedules and a Harris Matrix for the excavation area (where significant stratigraphic relationships are identified).

All significant elements will be photographed with a scale bar. Digital media will be used for general photographic recording. Artefacts will be collected but will not be processed during this phase of works. All artefacts will be retained for later analysis.

Artefacts will be bagged in suitable polyethylene or paper bags, double-tagged with Tyvek (or similar) labels and put in temporary secure storage on Austral Archaeology's premises. The labels will be annotated with the trench or pit number as well as the context or layer number using permanent ink pens. Where possible, the artefacts will be subjected to a detailed statistical analysis to fully answer the research questions outlined above. There are several statistical and analytical tools, such as a Ceramic Variation Index for determining the social standing of the users of a ceramic assemblage, available to archaeologists to make far-reaching

statements relating to class, gender and social customs and these can be employed to further enhance the understanding of the site. After the project, they will be handed over to the proponent for retention and/or lodgement in an appropriate storage facility.

If Aboriginal archaeological material or deposits are encountered during earthworks, all work within a 50-metre radius will cease immediately to allow an archaeologist to assess the find. The archaeologist will consult with the Heritage NSW and the relevant Aboriginal stakeholders, regarding the Aboriginal cultural material.

### 3.13.1 Testing & Salvage Excavation Strategy

The following testing and salvage excavation methodology has been developed in accordance with:

- The Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (Office of Environment and Heritage 2011);
- The Code of Practice;
- Condition E25 of the MCoA;
- Management measure HER\_07 of the HMP;
- Recommendation REMM AH7 , and;
- The recommendations set out in the ACHA (Artefact 2021b) and ASR (Artefact 2020).

The process provided below describes the testing and salvage methodology for the Low Potential PAD. Located in the La Perouse portion of the study area.

The location for the proposed test excavation is at La Perouse, in the area of Low Potential PAD shown in Figure 3-1. the construction curtilage is limited to the purple boundary outlined in the figure, while the low potential PAD is identified in yellow.



**Figure 3-1 Low Potential PAD area (yellow) and extent of Salvage Excavation (purple).**

### 3.13.2 Stage 1

The test excavations will be undertaken as a series of 1m x 1m test pits set within in a systematic grid across the Low Potential PAD, in areas considered to have higher potential to retain sub-surface archaeological material. Testing will be undertaken in accordance with the following protocols:

- Test excavations units will be excavated using hand tools only.
- The first excavation unit will be excavated and documented in 50mm spits.
- Based on the evidence of the first excavation unit, 100mm spits or sediment profile/stratigraphic excavation (whichever is smaller) may then be implemented.
- All material excavated from the test excavation units will be sieved using a 5mm aperture wire-mesh sieve.
- Test excavation units must be excavated to at least the base of the identified Aboriginal object-bearing units and must continue to confirm the soils below are culturally sterile.
- Photographic and scale-drawn records of the stratigraphy/soil profile, features and informative Aboriginal objects will be made for each single excavation point.
- Test excavations units must be backfilled as soon as practicable. requirements of the Code of Practice.
- Following test excavation (if Aboriginal cultural heritage material is recovered during testing), an AHIMS site recording form will be completed and lodged with the AHIMS Registrar.
- If an AHIMS form is lodged, then an Aboriginal Site Impact Recording (ASIRF) form will be completed and submitted to the AHIMS Registrar as soon as practicable after the test excavations and/or salvage program have concluded.
- Test excavations will be sufficiently comprehensive to allow characterisation of the Aboriginal objects present without having a significant impact on the archaeological value of the subject area.

### 3.13.3 Stage 2 – Further Excavation

Where the test excavation reveals artefacts or cultural material of particular interest, significance or high density, further excavation **may** be undertaken. This includes the expansion of the test pits into an open excavation areas, in north/south/east/west directions around test pits. Excavation of open areas will continue until the artefact concentration and deposit is sufficiently characterised. If excavations require more than 30m<sup>2</sup>, additional excavation may occur pending consultation between the proponent, project archaeologist, the Registered Aboriginal Parties, Department of Planning and Environment, and Heritage NSW.

The open areas may vary in size from 1m x 1m in area to many square meters as required, depending on the following considerations:

- The nature of the cultural material identified (i.e. diagnostic tools, knapping floors, or hearths).
- A higher-than-expected artefact density.
- The potential to obtain dateable material.
- The depth and age of the cultural material.

Salvage excavation of open areas would be undertaken using standard archaeological practice, described in 3.13.4 below. This includes the same hand excavation techniques used for the test pitting method.

## AIMS

The aim of the testing and salvage excavation program is to assess whether subsurface archaeological deposits are present at the area identified as Low Potential PAD, and if so, to characterise the nature of the artefact assemblage. In addition, the aim of the testing and salvage program is to assist in further understanding how Aboriginal people utilised the study area, and the types of activities that were undertaken there.

Additionally, the testing and salvage excavations aims to recover a sample of culturally modified items to assist in drawing meaningful conclusions about the range and characteristics of the assemblage, and what this can tell us about the Aboriginal occupation and use of the area in the late Holocene period. Investigation of the landforms would assist in the evaluation of the vertical integrity of the archaeological deposits; and confirm or disprove the preliminary assessment of the integrity of the site.

### 3.13.4 Salvage Excavation Methodology

The following methodology has been developed to comply the Code of Practice, and applies to both testing and salvage excavations:

- All pits will be 1m x 1m.
- Pits will be spaced at 10m apart and set within a systematic 10m grid.
- All excavation will be conducted by hand, and the excavation of initial test pits will proceed in 50mm spits.
- Based on the results of the initial pits, subsequent pits will be excavated either in 100mm spits or by stratigraphic unit, dependant on which unit is smaller.
- Excavation will cease at culturally sterile soils or in case of the identification of human remains or anthropogenic shell middens.
- Recording of each test pit and open area will be conducted during excavation using either printed *pro forma* or digital *pro forma* stored on an electronic tablet.
- Photographic and scale-drawn records of the stratigraphy/soil profile, features and any diagnostic Aboriginal objects will be made for each pit.
- GPS location of each test pit will be recorded.
- All excavated materials will be sieved using 3 mm or 5 mm aperture sieves. Depending on the soils encountered and site conditions, material may need to be wet sieved.
- Aboriginal cultural and diagnostic materials collected from the sieves will be bagged and clearly labelled in the field according to excavation pit provenance.
- Each test pit will be backfilled after the testing program.
- Should Aboriginal cultural heritage material be located during the testing or salvage program, it will be recorded in accordance with the Code of Practice – Requirement 26, and site cards submitted to AHIMS.
- Aboriginal cultural heritage material will be stored at Austral's Albion Park office until analysis.
- Following analysis, all cultural material will be returned to the Aboriginal community and ASIRFs submitted to the AHIMS database.

### 3.13.5 Unexpected Contaminated Finds

Should asbestos (including ACM) be uncovered during excavation, works are to cease and will not recommence until approval is issued from MCD's Environment & Sustainability Lead in accordance with the project's Unexpected Contaminated Finds Procedure outlined in Attachment C of the Soil, Water & Contamination Management Plan.

### 3.13.6 Aboriginal Cultural Heritage Excavation Report

Upon completion of the salvage excavation program, an Aboriginal Cultural Heritage Excavation Report must be prepared.

The report will be prepared in accordance with the *Guide to Investigation, assessing and reporting on Aboriginal cultural heritage in NSW, OEH 2011* and the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales, DECCW 2010* and will include the following sections:

- A summary of the excavation program.
- Describe Aboriginal consultation undertaken during the project.
- Provide details of the Aboriginal objects which were partially or completely harmed (i.e. recovered through the excavations) during the works.
- Provide a description of the methods and results of the any excavations.
- Comment on the effectiveness of the mitigation measures (i.e. salvage excavations).
- Comment on the effectiveness of any management plan if in place.
- Results of the archaeological test excavations and any subsequent salvage excavations
- The current and proposed location of any Aboriginal objects recovered.
- Details the results of any analysis of recovered Aboriginal objects.
- Ensure the necessary *Aboriginal Site Impact Recording Forms (ASIRF)* are lodged with Heritage NSW at completion of the project.

## 4 References

Artefact Heritage Pty Ltd. 2021. 'Kamay Ferry Wharves Project; Non-Aboriginal Heritage Technical Paper: Statement of Heritage Impact'. Report to Arup on behalf of Transport for NSW.

Context Pty Ltd. 2008. 'Meeting Place Precinct: Botany Bay National Park – Kurnell. Conservation Management Plan'.

'Heritage Act 1977 No 136 - NSW Legislation'. n.d. Accessed 3 February 2021.  
<https://www.legislation.nsw.gov.au/view/html/inforce/current/act-1977-136>.

Heritage Office. 1998. *How to Prepare Archival Records of Heritage Items*. Sydney: Heritage Office. [http://www.heritage.nsw.gov.au/docs/info\\_archivalrecords.pdf](http://www.heritage.nsw.gov.au/docs/info_archivalrecords.pdf).

Jill Sheppard Heritage Consultant. 2009. 'La Perouse Headland Botany Bay National Park Conservation Management Plan, Stage 2 – Final Report [Volume 2 of 3].' Report prepared for the NSW Department of Environment, Climate Change & Water Parks & Wildlife Group Sydney Region.

NSW DPIE. 2019. 'Kamay Botany Bay National Park Kurnell Master Plan'.

———. 2020. 'Kamay Botany Bay National Park Plan of Management'.

NSW Heritage Office. 2006. 'Photographic Recording Of Heritage Items Using Film or Digital Capture'.

## A. Appendix A

### Revised Environmental Management Measures

Relevant REMMs are listed in Table 3 below. This includes references to required outcomes, the timing of when the commitment applies relevant documents or sections of the environmental assessment influencing the outcome and implementation.

Outcome	Ref Q#	Commitment	Responsibility	Timing	HMP References
Avoiding impacts to heritage (General)	NAH1	<p>Detailed design will consider opportunities to avoid impacts to significant heritage values and known/discovered intact archaeological remains in consultation with Heritage NSW. Options to consider during the detailed design include:</p> <ul style="list-style-type: none"> <li>a. Excavating the utility trench at Kurnell underneath the buried portion of the course stone sea wall near the wharf tie-in instead of removing a section of the sea wall.</li> <li>b. Excavating the utility trench at Kurnell underneath the archaeological remains of the former sea wall near the wharf tie-in instead of impacting the archaeological remains</li> <li>c. Limiting the impact depth of landscape works at La Perouse to reduce impacts to the archaeological remains of the former wharf approach road.</li> <li>d. Avoiding impact to remnant Coast Banksia community at La Perouse. Where impact cannot be avoided,</li> </ul>	Transport for NSW	Detailed design	N/A



Outcome	Ref Q#	Commitment	Responsibility	Timing	HMP References
		offset planting of native vegetation at La Perouse and Kurnell will be provided.			
Avoiding impacts to heritage (general)	NAH2	<p>The detailed design must take into consideration and be consistent where possible with the policies and aims outlined in:</p> <ul style="list-style-type: none"> <li>• Context, 2008. Meeting Place Precinct: Botany Bay National Park – Kurnell. Conservation Management Plan</li> <li>• Jill Sheppard Heritage Consultants, 2009. La Perouse Headland Conservation Management Plan</li> <li>• NPWS, 2020. Kamay Botany Bay National Park Plan of Management</li> <li>• Neeson Murcutt Architects Pty Ltd, 2019. Kamay Botany Bay National Park, Kurnell: Master Plan.</li> </ul>	Transport for NSW	Detailed design	N/A
Avoiding impacts to heritage (general)	NAH3	<p>Non-Aboriginal heritage management measures will be included as part of the Construction Heritage Management Plan (HMP). The HMP will include:</p> <ol style="list-style-type: none"> <li>a. Construction measures and procedures to minimise and manage impacts on non-Aboriginal cultural heritage.</li> <li>b. Sensitive area maps that identify non-Aboriginal heritage values, culturally and archaeologically sensitive areas and constraints within the study area.</li> <li>c. Identification of heritage protection zones and protection requirements for</li> </ol>	Contractor	Pre-construction and construction	HMP

Outcome	Ref Q#	Commitment	Responsibility	Timing	HMP References
		<p>heritage items within and in the vicinity of the construction boundary.</p> <ul style="list-style-type: none"> <li>d. An outline of the required archaeological management strategies.</li> <li>e. A heritage register to document the location, condition, significance, storage requirements of any memorials, monuments and interpretive panels which need temporarily relocating and storing during construction including The Captain Cook watering well, The Landing Place Memorial and interpretative panels on the extant wharf.</li> <li>f. Unexpected Heritage Items Procedure (NSW Roads and Maritime Services, 2015d).</li> <li>g. Consultation with National Parks and Wildlife Service, Heritage NSW, Randwick City Council and Sutherland Shire Council.</li> </ul>			
<p>Damage to former sea wall at Kurnell and former wharf approach road at La Perouse Preserving the heritage record of the coursed stone sea wall and other listed</p>	<p>NAH4</p>	<p>An Archaeological Research Design (ARD) must be prepared in accordance with the Heritage Council's <i>Archaeological Assessments Guideline</i> (1996) using a methodology prepared, in consultation with NSW Heritage. The ARD will confirm the areas within the construction boundaries requiring archaeological investigation, management and any salvage requirements, following detailed</p>	<p>Transport for NSW/Contractor</p>	<p>Pre-construction</p>	<p>Chapter 6</p>

Outcome	Ref Q#	Commitment	Responsibility	Timing	HMP References
items impacted by the project		design and outline the archaeological investigation method. Archaeological Work Method Statements (AWMS) must be prepared prior to construction to support the ARD.			
<b>Incorporating identified archaeological remains</b>	NAH5	Where any archaeological investigations identify remains, opportunities should be considered for leaving archaeological remains exposed and incorporating them into the visual landscape. Consultation with Heritage NSW and National Parks and Wildlife Service will be undertaken to determine the long term repository for any retrieved objects.	TfNSW	Pre-construction and construction	TBC
Heritage awareness and responsibilities	NAH6	Non-Aboriginal Heritage Awareness Inductions will be given to all workers during site inductions. This will ensure they are aware of their obligations under the NSW <i>Heritage Act 1977</i> and best practice as outlined in The Burra Charter (Australia ICOMOS 2013). Updates will be provided based on stakeholder feedback and following any unexpected finds and the outcome of the ARD.	Contractor	Construction	HMP Attachment A
Impacts on heritage fabric, views and landscapes at La Perouse and Kurnell	NAH7	A Photographic Archival Recording Program will be undertaken in accordance with the How to Prepare Archival Recording of Heritage Items (NSW Heritage Office 1998) and Photographic Recording of Heritage Items Using Film or Digital Capture (NSW Heritage Office 2006). Photographic archival recording will be carried out for heritage items that are directly impacted within the construction boundaries and record the setting and views of the heritage items within the study area that	Contractor	Pre-construction and construction	Chapter 6

Outcome	Ref Q#	Commitment	Responsibility	Timing	HMP References
		<p>will be subject to minor or greater visual impacts based on Table 8-4 of the EIS. The impacted elements include but are not limited to:</p> <ul style="list-style-type: none"> <li>a. The former sea wall at Kurnell</li> <li>b. The former wharf approach road at La Perouse</li> <li>c. The archaeological potential areas at La Perouse</li> </ul> <p>Nearby heritage items subject to minor visual impacts including; Kurnell Peninsula Headland, Kamay Botany Bay National Park (North and South) and Towra Point Reserve, Kurnell Historic Site (in Kamay Botany Bay National Park), Kurnell monuments (in Kamay Botany Bay National).</p>			
<p>Reinstatement of Monument Track to maintain the historical circulation pattern</p>	<p>NAH8</p>	<p>Monument Track will be reinstated in the same location following construction. This will ensure that the historical circulation pattern is maintained in accordance with the policies outlined in section 5.5 of the Landscape of the Meeting Place Precinct CMP. Specifically:</p> <ul style="list-style-type: none"> <li>a. The existing concrete slabs will be temporarily removed and reinstated rather than being replaced. If this is not possible, replaced sections will match the existing track.</li> <li>b. Care will be taken to remove sections with interpretive text and ensure that they are returned to their original location.</li> </ul>	<p>Contractor</p>	<p>Construction</p>	<p>Chapter 6</p>



# Attachment J – Archaeological Work Method Statement (AWMS)

A large teal graphic element on the left side of the page. It consists of a large triangle pointing upwards, with a horizontal line extending from its base to the right. Below this line, a vertical rectangle extends downwards, with its top-left corner cut off by a diagonal line that aligns with the top-left corner of the triangle above. This creates a shape that resembles a stylized 'L' or a corner of a building.

# **Aboriginal Archaeological Work Method Statement**

Kamay Ferry Wharves

July 2023

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# **Aboriginal Archaeological Work Method Statement**

Kamay Ferry Wharves

July 2023

## Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
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B	05/03/2023	A MARKHAM	D MARKUS	K CHRISTIAN	Draft for TfNSW review
C	11/05/2023	B CALVERT	A STEEDMAN	K CHRISTAN	Final Draft
D	26/07/2023	C WOODING	A MARKHAM	K CHRISTAN	Final

**Document reference: KFW02-MCD-BPW-PE-WMS-000001**

**Information class: Standard**

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# Compliance Matrix

## MINISTER'S CONDITIONS OF APPROVAL

The Minister's Conditions of Approval (MCoA) and compliance measures relevant to this document, the Aboriginal Archaeological Work Method Statement, are outlined in table 0-1. In addition, the corresponding Revised Environmental Management Measures (REMMs) in the Transport for NSW Response to Submissions report are also presented below.

**Table 0-2 Ministers Conditions of Approval relevant to the ARD**

CoA No.	Condition Requirement	How Addressed
<b>MCoA</b>		
E22	<p>The unexpected Heritage Finds and Human Remains Procedure, as submitted to the Planning Secretary, must be implemented for the duration of the construction.</p> <p>Note: Human remains that are found unexpectedly during the carrying out of work may be under the jurisdiction of the NSW State Coroner and must be reported to the NSW Police immediately.</p>	Section 3.4
E23	All reasonable steps must be taken so as not to harm, modify or otherwise impact Aboriginal objects or places of cultural significance except as authorised by this approval.	<p>This Report</p> <p>HMP</p> <p>ARD</p> <p>Construction Environmental Management Plan (CEMP)</p>
E25	<p>At the completion of Aboriginal cultural heritage test and salvage excavations, an Aboriginal Cultural Heritage Excavation Report(s) must be prepared by a suitably qualified person. The Aboriginal Cultural Heritage Excavation Report(s), must:</p> <p>(a) be prepared in accordance with the Guide to Investigation assessing and reporting on Aboriginal cultural heritage in NSW, OEH 2011 and the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales, DECCW 2010; and</p> <p>(b) document the results of the archaeological test excavations and any subsequent salvage excavations (with artefact analysis and identification of a final repository for finds).</p> <p>The RAPs must be given a minimum of 28 days to provide comments before the report is finalised. The final report must be provided for information to the Planning Secretary, Heritage NSW, relevant Councils, La Perouse Local Aboriginal Land Council (LALC), RAPs and local libraries within 12 months of the completion of the Aboriginal archaeological excavations (both test and salvage).</p>	<p>Section 1</p> <p>Section 3.10</p> <p>Attachment B of the Heritage Management Subplan</p>
E26	Where previously unidentified Aboriginal objects or places of cultural significance are discovered, all work must immediately stop in the vicinity of the affected area. Works potentially affecting the previously unidentified objects and places must not recommence until Heritage NSW has been informed and provided a response in writing. The measures to consider and manage this process must be specified in the Unexpected Heritage Finds and Human Remains Procedure required by	<p>HMP</p> <p>Section 3.1</p> <p>Section 3.11</p> <p>Induction/training register</p>

	Condition E21 and include registration in the Aboriginal Heritage Information Management System (AHIMS).	
<b>E27</b>	The Proponent must undertake a visual inspection before the commencement of construction of AHIMS site #45-6-0650 (site 3 – La Perouse) and AHIMS Site #45-6-0651 (Site 4 and geotextile fabric (or similar) should be laid on the ground surface within the location of both sites	Section 3.5
<b>E28</b>	Supervision by an appropriately qualified and experienced archaeologist of AHIMS Site #45—6-0653 (Site 6 – La Perouse) must be undertaken during ground penetrating works. If the engraving is identified, all works must cease and the construction methodology revised to mitigate further impacts. Any revision to the methodology must be undertaken in consultation with Heritage NSW, RAPs and LALC.	Section 3.7.1
<b>E29</b>	During construction works impacts to the exposed sandstone surrounding AHIMS Site # 45-6-0653 (Site 6 – La Perouse) Must be avoided. Visual markers must be used to delineate these areas.	Section 3.6
<b>E30</b>	During construction works, monitoring of vibration impacts in the immediate area of AHIMS Site # 45-6-0653 (Site 6 – La Perouse) must be undertaken. If vibration monitors are affixed to sandstone, non-invasive adhesive methods (such as beeswax) must be used. If it is identified that levels of vibration would result in damage to AHIMS Site # 45-6-0653 (Site 6 – La Perouse), all works must cease and the construction methodology revised to mitigate further impacts. This must be undertaken in consultation with Heritage NSW, RAPs and LALCs.	Section.3.7.1
<b>E31</b>	Supervision by an appropriately qualified and experienced archaeologist is required for any excavation near AHIMS Site #53-3-0219 (foreshore Midden – Captain Cook’s Landing Place) where it exceeds 400mm in depth. If Aboriginal cultural heritage is identified during the proposed works, further archaeological investigations may be required. This must be determined in consultation in Heritage NSW, RAPs and La Perouse LACA.	Section 3.10 Section 3.7.2
<b>E33</b>	Prior to the commencement of archaeological excavation, an Archaeological Research Design and Excavation Methodology must be prepared in accordance with the Heritage Council of NSW guidelines to guide the archaeological program. The revised methodology must be prepared in consultation with Heritage NSW and submitted to the Planning Secretary if requested.	This report
<b>E34</b>	Prior to the commencement of archaeological excavation, the Proponent must nominate a suitably qualified Excavation Director who complies with Heritage NSW Excavation Director Criteria 2019 (September 2019) to direct the historical archaeological program. The Excavation Director must be present to oversee excavation, advise on archaeological issues, advise on the duration and extent of oversight required during archaeological excavations consistent with the Archaeological Research Design and Excavation Methodology required by Condition E33	Section 3.10
<b>REMMs</b>		
<b>AH6</b>	A visual inspection of the potential rock engravings (Site 3, La Perouse [AHIMS ID 45-6-0650] and Site 4, La Perouse [AHIMS ID 45-6-0651]) will be undertaken before setting-up the ancillary facilities and starting construction.	Section 3.5
<b>AH7</b>	Establish exclusion zones for all registered AHIMS rock engraving sites within the construction boundary or directly adjacent and cover with geotextile fabric (or similar) before setting-up the ancillary facilities and creating the construction compound.	Section 3.6
<b>AH8</b>	Archaeological work method statements will be prepared prior to setting up ancillary facilities, construction compounds or construction works to prevent impact and preserve the integrity the rock engraving at La Perouse (AHIMS ID 45-6-0653). During excavation and subsurface	This Report

	<p>works or any other identified high risk activities, archaeological supervision and vibration monitoring will be undertaken at the potential location of the rock engraving at La Perouse (AHIMS ID 45-6-0653).</p> <p>If the engraving is identified and/or the vibration levels would result in damage to the integrity of the sandstone structure, works must cease, the site protected and the construction methodology be reviewed in consultation with a heritage consultant to mitigate further impacts.</p>	
<b>AH9</b>	<p>Archaeological supervision will be undertaken during excavations below 400mm at Kurnell within the Foreshore Midden – Captain Cook’s Landing Place (AHIMS ID 52-3-0219). If archaeological material is identified, further archaeological investigations may be required following review and assessment of the archaeological resources identified.</p>	Section 3.7.2
<b>NAH6</b>	<p>Non-Aboriginal Heritage Awareness Inductions will be given to all workers during site inductions. This will ensure they are aware of their obligations under the NSW Heritage Act 1977 and best practice as outlined in The Burra Charter (Australia ICOMOS 2013). Updates will be provided based on stakeholder feedback and following any unexpected finds and the outcome of the ARD.</p>	Section 3.1

## Glossary / Abbreviations

Abbreviations	Expanded text
<b>Aboriginal place</b>	An Aboriginal Place is an area declared by the Minister administering the Act to be of special significance with respect to Aboriginal culture.
<b>Aboriginal objects</b>	Aboriginal objects include any deposit, object or material evidence (not being a handicraft made for sale), including Aboriginal remains, relating to the Aboriginal habitation of NSW, before or concurrent with occupation by non-Aboriginal people, as defined in section 5 of the NPW Act
<b>ARD</b>	Archaeological Research Design
<b>AWMS</b>	Archaeological Work Method Statement
<b>CEMP</b>	Construction Environmental Management Plan
<b>CEMS</b>	Contractor's Environmental Management System
<b>CMP</b>	Conservation Management Plan
<b>Contractor</b>	McConnell Dowell Constructors (Aust) Pty Ltd.
<b>DPE</b>	Department of Planning and Environment
<b>EIS</b>	Environmental Impact Statement
<b>Environmental heritage</b>	Places, buildings, works, relics, movable objects and precincts, of State or local heritage significance as outline in Section 4 of the Heritage Act
<b>EP&amp;A Act</b>	<i>Environmental Planning and Assessment Act 1979</i>
<b>EPBC Act</b>	<i>Environmental Protection and Biodiversity Conservation Act 1999</i>
<b>EPBC – CoA</b>	<i>Environmental Protection and Biodiversity Conservation Act 1999</i> Conditions of Approval
<b>EWMS</b>	Environmental Work Method Statements
<b>Heritage Act</b>	<i>Heritage Act 1997</i>
<b>Heritage NSW</b>	Heritage New South Wales
<b>HMP</b>	Heritage Management Sub Plan
<b>LALC</b>	Local Aboriginal Land Council
<b>MCoA</b>	Ministers Condition of approval



<b>NPW Act</b>	<i>National Parks and Wildlife Act 1974</i>
<b>PACHCI</b>	Procedure for Aboriginal Cultural Heritage Consultation and Investigation (Roads and Maritime, 2011)
<b>PAD</b>	Potential Archaeological Deposit
<b>Project, the</b>	Kamay Ferry Wharves
<b>RAP</b>	Registered Aboriginal Parties
<b>REMM</b>	Revised Environmental Management Measure
<b>Secretary</b>	Secretary of the NSW Department of Planning and Environment (or delegate)
<b>TfNSW</b>	Transport for New South Wales

# 1 Introduction

## 1.1 Background

Austral Archaeology Pty Ltd (Austral) has been engaged by Mott MacDonald Pty Ltd (on behalf of McConnell Dowell) to prepare an Archaeological Work Method Statement (AWMS) as part of works associated with the Kamay Ferry Wharves (the Project).

The project involves the reinstatement of two ferry wharves in Botany Bay (Kamay) damaged during a storm in 1974. The primary purpose of the wharves is to allow a ferry service to operate between La Perouse and Kurnell. The ferry service would provide an alternative way for people to access Kamay Botany Bay National Park (the National Park) other than by road. Commercial vessels and recreational boats would also be allowed to use the wharves.

The Project is a State Significant Infrastructure (SSI) project (SSI-10049, approved 21/07/2022). The current document discusses Aboriginal heritage only. A companion document, the Archaeological Research Design (ARD), discusses non-Aboriginal heritage.

Both the La Perouse and Kurnell portions of the Project area possess significant Aboriginal, historic and maritime heritage values. Mitigation and management measures pertaining to the protection of, as well as relating to monitoring and minimising of impacts to heritage values at both sites, are contained within a number of documents and instruments:

- Revised Environmental Management Measures (REMMs) listed in the *Kamay Ferry Wharves Response to Submissions Report (2022)*;
- Minister's Conditions of Approval (MCoA);
- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC) Conditions of Approval (EPBC-CoA);
- The Construction Environmental Management Plan (CEMP) for the Project, and;
- The Heritage Management Sub Plan (HMP).

A detailed description of the Project is provided in Chapter 5 of the EIS. As part of EIS development, detailed Aboriginal cultural heritage, non-Aboriginal heritage and underwater heritage assessments were prepared to address the Secretary's Environmental Assessment Requirements issued by the Department of Planning, Industry and Environment (DPIE). One relevant technical paper comprising part of the EIS relates to Aboriginal cultural heritage:

- Appendix E Aboriginal Cultural Heritage Assessment Report (ACHA).

A summary of the Aboriginal heritage impacts identified in the EIS stated that:

- Two Aboriginal artefacts would be lost due to excavation work for the proposed utilities trench at Kurnell. There is also potential to impact unknown heritage and archaeology within the Foreshore Midden Potential Archaeological Deposit (PAD) at Kurnell and Low Potential PAD and rock engravings at La Perouse. The likelihood of indirect impacts from vibration activities would be reduced through adopting safe working distances and vibration monitoring.

Following the EIS's submission, the MCoA was released and it contains conditions regarding the management of Aboriginal heritage within the Project area. These are reproduced in Table 0.1.1. In addition, the CEMP and HMP contain strategies and protocols to manage Aboriginal heritage in the Project area, derived from both the MCoA and REMMs set out in TfNSW's Response to Submission Report. In particular, HER\_07 (EMM AH6) and HER\_10 (EMM AH8) are relevant to the current document, requiring the preparation of Archaeological Work Methods

Statements (AWMS) and a Salvage Excavation Program. This document addresses these requirements.

### 1.1.1 Heritage Management Plan Requirements

Section 6.1 of the HMP sets out the requirements for the AWMS and the ARD. This document has been adapted to address Aboriginal cultural heritage requirements, as set out in the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (Office of Environment and Heritage 2011), the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* and the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 [Consultation Requirements]* (DECCW 2011; 2010a).

The AWMS sets out the archaeological context, research design and archaeological methodology to be undertaken throughout the life of the Project. The AWMS must be prepared by a suitably qualified heritage specialist in accordance with DECCW 2010a, DECCW 2010b, Office of Environment and Heritage 2011, the MCoA, HMP, and REMMs within TfNSW's Response to Submissions Report EIS. The contents of the Aboriginal Salvage Excavation Program (ASEP) are set out in the HMP (p. 35).

The following document contains both the AWMS and the salvage excavation methodology, outlines the RAP consultation methodology, and the proposed management of any Aboriginal objects recovered during archaeological investigations.

### 1.1.2 Aboriginal Cultural Heritage Assessment (ACHA) (Artefact 2021b)

The Artefact (2021) report assessed the legislative context and Aboriginal archaeological potential and significance for the SSI-10049 study area. The assessment mapped archaeological potential and identified impacts that may result from the proposed wharf constructions at both the Kurnell and La Perouse areas of the site. Following survey of the site, Artefact carried out a program of test excavations at both Kurnell and La Perouse. The assessment recommended a staged salvage excavation program at La Perouse be undertaken prior to the project's construction phase within the area of the Low Potential Archaeological Deposit (Low Potential PAD). At Kurnell, the ACHA recommend archaeological monitoring where construction works extend below 400mm within the Foreshore Midden – Captain Cook's Landing Place (AHIMS ID 52-3-0219). If archaeological material was identified, Artefact (2021b) suggested that further potential archaeological investigations may be required, following assessment of the archaeological resources that were identified.

Please refer to Table 1-1 below for a directory that identifies the foundational archaeological chapters from the Artefact (2021b) assessment relevant to this AWMS.

**Table 1-1 Artefact (2021b) Aboriginal Cultural Heritage Assessment**

ACHA	Page
<b>Legislative and Policy Context</b>	9-12
<b>Aboriginal community consultation</b>	13-19
<b>Historical Background</b>	20-39
<b>Archaeological Assessment</b>	40-74
<b>Results</b>	75-86
<b>Discussion</b>	87-94
<b>Impact assessment and heritage management</b>	95-115
<b>Recommendations</b>	116-119

Please refer to Appendix A of this document for the compliance matrix for environmental mitigation measures AH1-AH9.

## 1.2 Project Brief and Location

Please refer to Table Table 0-2 of this document for a detailed Compliance Matrix that summarises all relevant conditions of approval and directs the reader to the appropriate sections of this report.

This AWMS meets the requirements as set out by the development consent for SSI-10049.

Development consent is based on the description of the project works and geographical extent set out by the following Condition A1 documents:

- a) *Kamay Ferry Wharves Environmental Impact Statement* (the EIS), dated June 2021;
- b) *Kamay Ferry Wharves Response to Submissions Report* (the Submissions Report) and dated October 2021.

This document does not consider the potential historic archaeology of the study site, nor does it set out the AWMS for the non-Aboriginal ARD. These are contained within a separate document, the *Archaeological Research Design* (ARD). However, any historic relics, places, sites, objects and values are protected by the NSW Heritage Act 1977 ('Heritage Act 1977 No 136 - NSW Legislation' n.d.).

### 1.2.1 Project Location

The project is located in Kamay (Botany Bay) on either side of the ocean entrance to the bay (Figure 1.1). The project has been divided into two study areas, consisting of the La Perouse construction area and the Kurnell construction area. The La Perouse construction area is located approximately 14 kilometres (km) south of the Sydney Central Business District (CBD) and the Kurnell construction boundary is located approximately 16km south of the Sydney CBD. The AWMS includes both the La Perouse and Kurnell study areas.

The Kurnell construction area is located along the north-west side of the Kamay Botany Bay National Park and to the east of Silver Beach (Figure 1.2). It includes the area along the north side of Captain Cook Drive next to a residential area and follows Monument Track along the foreshore to the extant wharf about 60 metres (m) north-east of Captain Cook's Landing Place. The Kurnell portion of the Project area is located within the Sutherland Shire Local Government Area (LGA), being within the Parish of Sutherland and County of Cumberland.

The La Perouse construction area is located on the La Perouse headland, adjacent to a residential area and the commercial area of Port Botany (Figure 1.3). The La Perouse headland includes a museum and access to La Perouse Park and beaches. The New South Wales Golf Club is located approximately 900m to the east. The La Perouse headland is located within the City of Randwick LGA, being within the Parish of Botany and the County of Cumberland.

## 1.3 Statutory Context

As of 6 March 2023, the project is approved under Section 133(1) of the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC approval reference 2020/8825). The approval holder is TfNSW for the Kamay wharves replacement project. The controlling provisions in respect to a National heritage place are Section 15B and Section 15C.

The current project is an SSI project defined under Schedule 3, clause 1 of the *SEPP (State and Regional Development) 2011*. Developmental approval SSI-10049 was granted on

21/07/2022, under Section 5.19 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

Please refer to Artefact (2021b) pages 11-17 for the legislative context of historical archaeology within this project, SSI 10049. Please refer to Section 1.1.2 of this AWMS document for a full directory of the relevant components of Artefact's (2021b) assessment.

## 1.4 Project Responsibilities

**Table 1-2 Roles and Responsibilities**

Role	Responsibilities
<b>Austral Archaeology Pty Ltd Archaeology Company Director</b>	Proprietor of Austral; high level responsibility for all works undertaken by and on behalf of the company.
<b>Principal Archaeologist</b>	Directs archaeological investigations during the Kamay Wharves project. Meets NSW Heritage Council Criteria (September 2019). Provides expert advice to the Environmental Manager. Co-author of this ARD document. Selects and leads a team of suitably qualified archaeologists. Has the authority to advise on the duration and extent of oversight required during archaeological investigations.
<b>Archaeologist/s</b>	A suitably qualified member of the Principal Archaeologist's team. Reports to the Director(s) and Principal Archaeologist.
<b>Heritage Lead</b>	Mott MacDonald Heritage Lead. Receives expert advice from the Principal Archaeologist during the Kamay Wharves project.
<b>Environmental manager</b>	McConnell Dowell's Environment & Sustainability Lead. Receives expert advice from the Principal Archaeologist during the Kamay Wharves Project.



**Figure 1-1 Project area (source: Artefact, Kamay Wharves Ferry Project Non-Aboriginal Heritage Technical Paper: Statement of Heritage impact, p.3)**



**Figure 1-2 Kurnell construction area (source: Artefact, Kamay Wharves Ferry Project Non-Aboriginal Heritage Technical Paper: Statement of Heritage impact, p.4)**



**Figure 1-3 La Perouse construction area (source: Artefact, Kamay Wharves Ferry Project Non-Aboriginal Heritage Technical Paper: Statement of Heritage impact, p.5)**

**1.5 Aboriginal community consultation**

The ACHA included consultation that was completed in accordance with the Consultation Requirements (Artefact 2020).

Several groups and individuals registered as part of Stage 1 of the Consultation Requirements and consulted for the ACHA were contacted in relation to the ASEP. Table 1-3 lists the RAPs contacted in regard to the project.

**Table 1-3 RAPs identified for the ACHA**

Representative	Aboriginal stakeholder group
[REDACTED]	[REDACTED]
[REDACTED] [REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

Consultation undertaken for the salvage program to be finalised when excavations are completed.

## 1.6 Report preparation

This document was co-authored by Austral Archaeology Director, David Marcus and Principal Anthropologist/Archaeologist, Dr Amanda Markham. Consultations undertaken with the Aboriginal community are set out in Section 1.5. A consultation summary is included in Appendix A. As a supplement to an existing body of work, this report relies on foundational research and analysis conducted by Artefact Heritage Services (2021b). For details, please refer to Section 1.1.2.

## 1.7 Public dissemination

Public dissemination of the project currently comprises the following Commonwealth and NSW government approvals:

- EPBC 2020/8825 approval decision, published 20 March 2023 at [Project Decision · EPBC 2020/8825](#)
- SSI-10049 MCoA approval decision, published 21 July 2022 at [Project Approval SSI-10049](#).

The project can voluntarily consider, or may be requested by a consent authority, to deliver public dissemination of information regarding the archaeological program at the study site during the excavation. This may include establishing a website or page that is updated with news from the archaeological excavation; establishing viewing portals in the site fence; inviting locals to an open day once relics are exposed, if site conditions allow safe access (for instance, a viewing platform); erecting signage around the site façade that details the archaeological investigation or distributing leaflets. Public dissemination can be utilised at any time and repeatedly during the life of a project but often occurs at the outset of major archaeological excavation works at a site. If needed, any public dissemination policy for archaeological work would be developed and approved by/with TfNSW, Heritage NSW, the La Perouse Local Aboriginal Land Council (La Perouse LALC) or its delegate and any other relevant stakeholders.



## 1.8 Acknowledgements

Mott MacDonald and Austral Archaeology would like to acknowledge the contribution of the following people for their assistance in the preparation of this document:

- Mitch Jones, Senior Environmental and Sustainability Advisor at McConnell Dowell; and
- Corey O’Driscoll, Senior Assessment Officer at Heritage NSW Department of Planning and Environment.

## 2 Archaeological Context

The archaeological context of both Project areas has been addressed in the EIS and ACHA, which should be referred to for detailed information on the heritage context and archaeological background which underpins this AWMS. Summaries of those investigations are presented below, along with additional information gathered through research carried out for the historic archaeological investigations, and geotechnical and contamination investigations for the Project areas.

### 2.1 Landscape

The landscape context of Kamay Botany Bay comprises both rocky headlands and a sandy intertidal beach environment. The soil landscapes on both the Kurnell and La Perouse peninsulas are composed of marine- and wind-deposited sand at lower elevations mingled with sand dune formations stabilised against erosion with natural and re-planted vegetation. Hawkesbury Sandstone predominates on the higher elevations in the Project area, with thin layers of coarse sand and loam in areas resistant to erosional effects from vegetation cover. The underlying geology of the local area is Hawksbury Sandstone, and soil landscapes in the local area include the Hawkesbury soil landscape, which is characterised by shallow soils (<500 millimetres [mm]) with high erodibility, with steep landform contexts. The local environment would have represented a resource-rich estuarine environment, and it is likely that Aboriginal people made significant use of shellfish from the area as food.

The information in Table 2-1 has been summarised from Artefact's (2020) *Aboriginal Archaeological Survey Report (PACHCI Stage 2)*.

**Table 2-1 Assessment of landscape features**

Information	Details
<b>Soils</b>	The natural soil landscapes on both the Kurnell and La Perouse peninsulas are comprised of marine- and wind-deposited sand at lower elevations, mingled with sand dune formations stabilised against erosion with natural and re-planted vegetation. Marine-deposited siliceous and calcareous sands fringe the foreshore of Kamay Botany Bay. Hawkesbury Sandstone predominates on the higher elevations in the project area, with thin layers of coarse sand and loam in areas resistant to erosional effects from vegetation cover. In the south-western part of the Project area, estuarine soil landscapes have accumulated from the low energy silt discharge of the George's River on the tidal sandbanks of the southern floor of Kamay Botany Bay.
<b>Hydrology</b>	The study area is bordered by Botany Bay and the Tasman Sea (Pacific Ocean) to the east. Botany Bay is a relatively shallow sand-floored inlet, with most of the bay floor being 10m or less in depth. Several major waterways flow into Botany Bay, the Georges and Cook rivers, along with a large number of smaller creeks and streams. In the Kurnell portion of the study area, two 1 <sup>st</sup> order streams flow south to north into Botany Bay. In the La Perouse portion of the study area, Lake Perrie, a freshwater reservoir, is located approximately 1.5km to the east. Bunnerong Creek, largely a canal, is located approximately 2.5km to the north.
<b>Geology</b>	The geology of the study area consists of Triassic Hawkesbury Sandstone partially overlaid with Quaternary marine sand and sand dune formations (Herbert 1983, 19; Stroud et al. 1985).

<p><b>Landform</b></p>	<p>The La Perouse portion of the study area comprises a rocky plateau with sandstone outcrops and areas of flat, manicured grass on its central and highest elevations. The plateau slopes dramatically in the eastern and southern portions, interspersed with cliff faces and rocky slopes. In the north-western section, a slope landform extends through revegetated dunes to an intertidal beach.</p> <p>The Kurnell portion of the study area is dominated by a steep slope to the south, descending to a gently-sloping littoral zone and intertidal beach.</p>
<p><b>Past Fauna and Flora</b></p>	<p>The land surrounding Kamay Botany Bay prior to European arrival was significantly forested. Sclerophyll vegetation such as eucalypts, angophoras and banksias were fundamental in limiting dune expansion and erosion throughout the Kurnell and Brighton-Le-Sands area. An increase in Aboriginal permanent occupation and fire-stick farming practices facilitated the increase in salt tolerant vegetation such as <i>Leptospermum laevigatum</i> and <i>Monotoca elliptica</i> (Benson and Eldershaw 2007).</p>
<p><b>Disturbance</b></p>	<p>The study area has been heavily modified by post-European occupation. The Kurnell portion has subject to disturbance from extensive clearing by timber-getters in the 19<sup>th</sup> century, the construction of jetties, sea-walls, dune stabilisation, and recreational infrastructure such as footpaths, monuments and landscaping. Extensive fill and revegetation works have also been undertaken to stabilise dunes and soil.</p> <p>The La Perouse portion of the study area has also been heavily disturbed by military developments in the 19<sup>th</sup> and 20<sup>th</sup> centuries, and tourism in the 20<sup>th</sup> and 21<sup>st</sup> centuries. Military installations included sheds, cottages, an overseas telecommunications cable station and associated infrastructure, roads and pathways. In the late 19<sup>th</sup> century, a public ferry wharf, a slipway, boathouse and dirt access road were constructed. Development continued in the 20<sup>th</sup> century with improved road access, construction of a tramline, and tennis court. Areas of fill and extensive clearance of native vegetation also took place in the 19<sup>th</sup> and 20<sup>th</sup> centuries. From the mid-20<sup>th</sup> century on, tourism became the main activity at La Perouse, with carparks, footpaths, landscaping and earthworks to level terrain being the main disturbances.</p>

## 2.2 Ethnographic summary

The following section has been summarised from Artefact’s (2020) *Aboriginal Archaeological Survey Report (PACHCI Stage 2)*.

Aboriginal people living around Kamay and other coastal areas in the Sydney region primarily utilised marine foods such as fish and shellfish for their subsistence needs (Attenbrow 2010, 70–79). This is evidenced by the majority of archaeological evidence in the Sydney Basin being dated within the last 3,000 to 5,000 years, which potentially reflects the increased use of the foreshore areas by Aboriginal people who occupied areas around the modern coastline. Older occupation sites are likely to exist along the now submerged coastline, consistent with a pattern of higher intensity utilisation of marine resources in supporting Aboriginal populations (AMBS 2013, 25).

Ethnographic accounts written by European explorers and settlers in the late 18<sup>th</sup> century emphasise the maritime way of life of the Aboriginal people around Botany Bay. Small groups of Aboriginal people were recorded as camping near freshwater sources, often residing in rock shelters or utilising bark huts. Bark canoes were regularly used for line fishing and spear fishing in Botany Bay. Aboriginal people also relied heavily on shellfish collection on the tidal banks of the bay which was recorded by Europeans (AMBS 2013, 25). Attenbrow (2010, 70–79)

describes Aboriginal people in coastal areas around Sydney subsisting on a diet of land animals and plants, supplemented with freshwater fish resources.

Other documented cultural practices included burial of the dead in sandy coastal soils and within rock shelters, accompanied by stone artefacts and bone points. The use of exposed sandstone rock faces for engraving and rock art also occurred within the vicinity of the study area. Several rock art sites have been recorded on the exposed sandstone faces and caves at La Perouse near Bare Island, as well as on the Kurnell foreshore. Motifs on rock art in the area show frequent engravings of footprints and fish (Irish 2007, 20).

### 2.3 Recorded Aboriginal Sites

There are a number of recorded AHIMS sites both within the Project area and directly adjacent to it. The Low Potential PAD, recorded by Artefact (2020) in the La Perouse portion of the Project area, and the subject of proposed testing and salvage, is also included in Table 2-2.

**Table 2-2 AHIMS sites in the vicinity of the Project area**

AHIMS # Number	Site name	Site type	Distance from construction boundary
█	██████████	█	██████████
██████	██████████ ██████████ ██████████	█	██████
██████	██████████	██████████	██████████
██████	██████████	██████████	██████████
██████	██████	██████████	██████
██████	██████	██████	██████
██████	██████████	██████████	██████
██████	██████████	██████████	██████████
██████	██████████ ██████████ ██████████	██████████	██████████
██████	██████████ ██████████ ██████████	██████████	██████
██████	██████████ ██████████	██████████	██████████
██████	██████████	██████████	██████
██████	██████	██████████	██████████
██████	██████████	██████████	██████

██████████	██████████ ██████████	██████████	██████████
██████████	██████████	██████████	██████████
██████████	██████████	██████████	██████████

## 2.4 Previous Archaeological Studies

The following information has been summarised from Artefact’s (2020) *Aboriginal Archaeological Survey Report (PACHCI Stage 2)*.

The Project area falls within the Sydney Basin, where a significant number of Aboriginal archaeological investigations have been conducted in the past 30 years. Aboriginal occupation in the Sydney Basin dates back into the Pleistocene period (i.e. before 10,000 years ago). While there is some possible evidence for occupation of the region around 40,000 years ago, the earliest known radiocarbon date for the Aboriginal occupation of the Sydney Basin is associated with a cultural/archaeological deposit near Pitt Town, dated to 36,000 BP (Williams et al. 2014).

The archaeology of the Kamay Botany area has also been well documented, with academic and impact assessment investigations dating back to the late 19<sup>th</sup> and early 20<sup>th</sup> centuries (e.g. Coast History and Heritage 2019; Megaw 1968; 1969). Many of the later studies occur in response to upgrades or remediation work to tourism and recreation facilities at both the Kurnell and La Perouse locations.

**Table 2-3 Archaeological studies undertaken in the vicinity of the study area**

Author	Year	Details
Various	1899-1961	In 1899, human remains were identified at Kurnell during excavations completed for the installation of a flagpole. The remains were found 0.9m below the ground surface and are likely to be the remains of an Aboriginal person (Coast History and Heritage 2019). In 1936, a human skull was recovered from a location between the Forby Sutherland Monument and the northernmost of two pine trees which were located in front of Alpha House. The current location of the human remains recovered in 1899 and 1936 is unknown. In 1947, ten stone artefacts were retrieved from excavations completed for the foundations of the Banks Monument. The assemblage was comprised of eight Bondi points and two flakes. In 1961, two skeletons were identified during an excavation for electrical cabling along the foreshore. The human remains are likely to be the remains of Aboriginal people and were reburied in an unspecified location.
Megaw	1968	Megaw conducted an archaeological investigation of the area west of Cook’s Stream in the Kurnell portion of the study area. A series of auger cores were taken, demonstrating shell middens scattered throughout the area, with a substantial midden (greater than 1.8m thick in sections) located in the vicinity of the stream. Artefacts recovered from the midden included fish bones, bone points, stone artefacts including four fishhook files, and some early historical artefacts (including a bone button, bottle glass, and handmade iron nail). These indicate that the midden continued to be in use after the first European contact in Sydney. The shell species included rock platform species as well as species found in mudflats to the west, including mud oyster, hairy mussel, and edible mussel.
Megaw	1970-1971	Megaw undertook an investigation to the east of Cook’s Stream in the Kurnell portion of the study area. The main feature was a large midden, of

		<p>which more than 35m<sup>2</sup> removed through archaeological excavation. The excavations located Aboriginal human remains, faunal remains, a hearth, bone points, stone artefacts, and approximately 200 fishhooks and fishhook 'blanks'. Charcoal taken from the trenches was initially dated to between 2,000-1,415 years ago, however recent reanalysis using charcoal retained from the original excavations has dated the midden as up to 2,000 years old; 500 years more than previously thought.</p>
McIntyre-Tamwoy	2004	<p>McIntyre-Tamwoy undertook test excavations east of the Kurnell construction boundary as part of master planning for the 'Kurnell Meeting Place'. A total of seven pits were excavated, with most pits containing windblown sand. No Aboriginal archaeological remains were recovered during the testing program.</p>
Navin Officer	2006	<p>Navin Officer completed a Cultural Heritage Assessment for portions of land within both the Kurnell and La Perouse construction boundaries. The assessment included an Aboriginal and non-Aboriginal archaeological survey. The assessment resulted in the identification of Kurnell Potential Archaeological Deposit 1 (K PAD 1 - AHIMS ID 52-3-1366) along the Kurnell foreshore. The site cards of all AHIMS sites within 1km of the Botany Bay 132kV Electricity Cable Project were reviewed by Navin Officer. This included the site location on the La Perouse headland. A revised map was produced (Figure 48). The revised locations of the AHIMS sites were not ground-truthed during the survey and as a result, the AHIMS database was not updated with the revised site locations.</p>
Irish	2007	<p>Further investigations in advance of the master plan for the Kurnell Meeting Place. A total of 115 small shovel pits (approximately 200 x 500mm) were excavated to the depth of proposed works only in order to minimise risk of impact on archaeological material (a maximum depth of 400mm). The excavations uncovered an extensive fill layer, with midden, stone artefacts, and loose shells encountered in several pits north of the Kurnell construction boundary. An attempt was also made to uncover rock engravings recorded in 1968 (AHIMS # 52-3-0221), but they were unable to be relocated.</p>
Irish	2008	<p>Irish undertook salvage excavations of Cook's Stream at Kurnell in advance of it being reopened to the public. The stream was mechanically excavated until archaeological remains were uncovered, then manually excavated in 2m x 2m squares. Shell material, gravel, glass, and some human bone was found. The bone was determined to be most likely Aboriginal, but an exact age or origin could not be determined. Approximately 300 kilograms (kg) of midden was excavated from the stream and sieved. It contained 78 stone artefacts, 4.3kg of fish and mammal bone, 26 bone point tools, 14 broken or complete fishhooks, and other shell artefacts. Microscopic analysis of some of these tools showed that some had been used for cutting shell, and bone points were used for piercing skin or hides. Most of the archaeological material collected during this excavation and the 2007 test excavations was reburied by the stream in 2019.</p>
Jill Sheppard Heritage Consultant	2009	<p>Sheppard undertook an assessment of previously recorded AHIMS sites in the La Perouse portion of the study area, including the rock engravings on the headland and AHIMS #45-6-1144, a shell midden. Sheppard found remnants of shell at the location of AHIMS #45-6-1144. She also suggested that the area of Low Potential</p>

		PAD, the subject of the current investigation, may have in-situ archaeological material in sub-surface deposits.
Goward	2011	The thesis reported that in the late 18 <sup>th</sup> century, Benjamin Bowen Carter observed glass utilised by Aboriginal people in the La Perouse area. This account is based on Carter's interaction with an Aboriginal Elder, Maroot, in 1798. Carter observed that broken glass fragments were adhered to spears of ironwood by means of gum. Goward's study notes that the identification of Aboriginal glass artefacts in urban sites is often neglected due to the lack of understanding of differing reduction sequences utilised in glass tool manufacturing. The thesis presents a new approach to the identification of Aboriginal glass artefacts which may better illustrate the cross-cultural interactions of the post-contact period.
Coast History and Heritage	2019	Coast History and Heritage (2019) completed an ACHA for a portion of land which overlaps with the current Kurnell construction boundary area on behalf of NSW NPWS. The assessment was completed as a continuation of the Master Plan Works. As part of the assessment, it was found that AHIMS ID 52-3-0221 is likely to be located 200m north of the location recorded on the AHIMS database. The report recommended that NSW NPWS should apply for an AHIP to authorise proposed earthworks within the current Kurnell construction boundary.
Artefact	2020	<p><i>Aboriginal Archaeological Survey Report (PACHCI Stage 2)</i>. This assessment was carried out in advance of the proposed reinstatement of the Kamay Botany Bay wharves, as part of an EIS. In the La Perouse portion of the project area, Artefact were able to relocate 2 of 8 previously recorded AHIMS sites, and undertook a testing program which identified fill overlaying culturally sterile deposits Old Wharf Road. Artefact's ACHA also identified the area of the Low Potential PAD and recommended additional archaeological testing in this area, along with a range of vibration monitoring and archaeological supervision measures during works.</p> <p>At Kurnell, Artefact's investigations identified one AHIMS site, Foreshore Midden Captain Cook's Landing Place (AHIMS # 52-3-0219), within the Project area. In addition, the survey also identified a new area of PAD, K PAD 1. Testing was carried out at K PAD 1, with two isolated artefacts identified (KMT ISO 01 [AHIMS ID 52-3-2080] and KMT ISO 02[AHIMS ID 52-3-2081]). Artefact recommended archaeological monitoring during works in the area of Foreshore Midden Captain Cook's Landing Place (AHIMS # 52-3-0219), with additional testing if excavations during works exceed 400mm or further archaeological resources are identified.</p>

## 3 Archaeological Work Method Statements

The Kamay Botany Bay Wharves project has been designed with the area's Aboriginal and non-Aboriginal heritage significance in mind and seeks to minimise impacts to heritage values. However, some aspects of the project may have an impact on Aboriginal cultural heritage within the Project area. These include: the construction of the permanent passenger wharf structures, excavations and trenching associated with utility services, and landscaping works.

Artefact's (2021b) ACHA assessed the impacts of the proposed works on archaeological resources (including AHIMS sites) at both locations. In most cases, AHIMS sites and areas possessing high and moderate archaeological sensitivity and/or subsurface archaeological potential have been avoided by the Project's design.

Sites of Aboriginal heritage value at La Perouse within the Project area are described below. Note that three AHIMS sites are located *within* the Project area; however, they will not be impacted by the construction works:

- La Perouse (AHIMS # 45-6-0650), La Perouse (AHIMS # 45-6-0651), and La Perouse (AHIMS # 45-6-0653) are situated within the Project area. These sites were assessed by Artefact (2020) as having high to moderate archaeological significance. However, these sites will not be impacted by the construction works and will be subject to archaeological mitigation measures described in the following sections.
- Low Potential PAD will be impacted by the proposed works. It is subject to additional archaeological testing and salvage in accordance with the methodology set out in Section 3.8.

Other sites of Aboriginal heritage value at Kurnell include:

- Foreshore Midden - Captain Cook's Landing Place (AHIMS # 52-3-0219), KMT ISO 01 (AHIMS ID 52-3-2080), and KMT ISO 02 AHIMS ID 52-3-2081) are located within the Kurnell construction boundary.
- Foreshore Midden - Captain Cook's Landing Place (AHIMS ID 52-3-0219) is considered to have high archaeological and cultural heritage significance. It is subject to monitoring and mitigation measures described in the following sections.
- KMT ISO 01 (AHIMS ID 52-3-2080) and KMT ISO 02 AHIMS ID 52-3-2081) are considered to have low scientific and cultural heritage significance. These sites will be directly harmed by the construction works.

The following work method statements been devised with reference to the MCoA, REMMs, the CEMP and the HMP. The AWMS contains measures for Aboriginal heritage induction for all workers, establishment of pre-construction exclusion zones and site demarcation, archaeological monitoring, provisions for unexpected finds and human remains, and test excavation (where applicable).

### 3.1 Cultural Heritage Induction

The following cultural heritage induction includes both Aboriginal and non-Aboriginal heritage. All site personnel must comply with the CEMP, Subplans and McConnell Dowell Procedures.

All site personnel will undertake the project induction which will include the following:

- A description of Aboriginal cultural heritage in the Kamay Botany Bay



- A description of the tangible and intangible aspects of Aboriginal heritage and why it is important.
- An overview of the NPW Act and the Heritage Act and the implications and fines applicable for breaching the acts.
- A general overview of historic heritage in the Kamay Botany Bay area.
- A description of all historic heritage site types within the Project area.
- The process for reporting previously unknown cultural heritage sites.
- The process for reporting damage to cultural heritage sites.
- The process for reporting human remains.

In addition to the above, the cultural heritage induction will provide an overview of each recorded Aboriginal heritage site which has been identified within the Project area. This will include:

- The site boundaries and how they have been marked.
- The content of the site.
- Whether any salvage works have taken place.

These controls will all form part of the one induction for the site, inclusion of other heritage constraints.

### 3.2 Unexpected Aboriginal Finds Procedure

The following unexpected Aboriginal finds procedures are consistent with the Heritage Management Sub Plan under section 6.5 and Attachment A of that report.

This procedure has been prepared in accordance with the standard unexpected finds procedures issued by TfNSW (<https://www.rms.nsw.gov.au/documents/about/environment/protecting-heritage/managing-development/unexpected-heritage-items-procedure.pdf>).

If unexpected Aboriginal objects or sites are located, an assessment will need to be made as to the significance of the object.

The following process should be followed with respect to unexpected finds:

- Should any previously unidentified Aboriginal objects be encountered during works associated with this proposal, works must cease in the vicinity and the find should not be moved until assessed by a qualified archaeologist and the La Perouse LALC.
- A no-go area should be established around the suspected Aboriginal object, and clearly demarcated with flagging tape or similar.
- The archaeologist and the La Perouse LALC will investigate and assess the Aboriginal object to determine the nature, extent, and significance of the find. This will enable recommendations to be provided on how work can proceed and whether any further work is required. The archaeologist and the La Perouse LALC must supply written advice to the Project Manager within 24 hours stating:
  - Determination of whether the find is an Aboriginal object.
  - Advice on how the project is to proceed and whether the establishment of any no-go areas is necessary.
  - Recommendation on further works that may be required and timeframe for completion of these works.

Heritage NSW and Aboriginal stakeholders will be notified. This will include a statement concerning the find, management measures implemented and notification of any further works

arising. Aboriginal stakeholders are to be involved in any further assessments or works as required.

AHIMS site cards will be prepared for each new site identified and submitted to AHIMS in accordance with the Code. Should any Aboriginal objects be identified, this will trigger a review of the HMP in accordance with Section 8.

### 3.3 Unexpected Non-Aboriginal Finds Procedure

The following unexpected non-Aboriginal finds procedures are consistent with the Heritage Management Sub Plan under section 6.5 and Attachment A of that report.

Where non-Aboriginal items are identified, an assessment will need to be made as to the significance of the item. Non-Aboriginal heritage items may include archaeological 'relics' or other non-Aboriginal items (i.e. works, structures, buildings or movable objects). The Heritage Act ('Heritage Act 1977 No 136 - NSW Legislation' n.d.) defines a relic 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..."*

The following process should be followed with respect to unexpected items:

- Should any suspected non-Aboriginal items be encountered during works associated with this proposal, works must cease in the vicinity and the find should not be moved until assessed by a qualified archaeologist.
- The archaeologist will investigate and assess the non-Aboriginal item to determine the nature, extent and significance of the find. This will enable recommendations to be provided on how work can proceed and whether any further work is required. The archaeologist must supply written advice to the Project Manager within 24 hours stating:
- Determination of whether the find is a relic.
- Advice on whether how the project is to proceed and whether the establishment of any no-go areas is necessary.
- Recommendation on further works that may be required and timeframe for completion of these works.
- Heritage NSW may need to be notified. This will include a statement concerning the find, management measures implemented and notification of any further works arising.
- Should any Aboriginal objects be identified, the procedure outlined in Section 3.2 shall be implemented.

### 3.4 Suspected Human Remains Procedure

The following suspected human remains procedure is consistent with the Heritage Management Sub Plan under section 6.5 and Attachment A of that report.

If any suspected human remains are discovered within the Project area, all activity must cease. The following process must be undertaken:

- Immediately cease all work at that location and not further move or disturb the remains.
- Notify the NSW Police, Planning and Infrastructure and Heritage NSW's Environmental Line on 131555 as soon as practicable and provide details of the remains and their location.
- Establish an appropriate no-go area. This will need to be established in consultation with NSW Police, Heritage NSW and as required, a qualified archaeologist and the La Perouse LALC.

- Works will not be able to recommence within the location of the find until confirmation from NSW Police and Heritage NSW is obtained. If the remains are confirmed as not being human then works may recommence. In the event that remains are human then consultation is to be undertaken with NSW Police, Heritage NSW and the Aboriginal stakeholders to establish a plan of management.
- Works in the vicinity of the find will only be able to commence once the plan of management has been established and approval has been obtained from all relevant parties.
  - Should any human remains be identified, this will trigger a review of the HMP in accordance with Section 8.

### 3.5 Visual Inspection

A visual inspection of the rock engravings at Site 3, La Perouse (AHIMS # 45-6-0650) and Site 4, La Perouse (AHIMS # 45-6-0651) will be undertaken by a suitably qualified archaeologist. The inspection will occur prior to setting-up exclusion zones, ancillary facilities and commencement of construction.

The archaeologist will compile a brief site inspection report following the visual inspection, inclusive of photographs including a range pole or similar scale, GPS location, notes on visible soil type/profile, landform, ground surface visibility and any other relevant information. The site inspection report will be kept by the archaeologist and the construction manager and will form an additional annexure to the HMP.

### 3.6 Exclusion zones

Prior to the setting-up of ancillary facilities and creation of the construction compound exclusion zones around the La Perouse rock engravings, Site 3, La Perouse (AHIMS # 45-6-0650) and Site 4, La Perouse (AHIMS # 45-6-0651), and La Perouse (AHIMS # 45-6-0653) must be established under the advice and supervision of a qualified archaeologist. Exclusion zones will be demarcated using high visibility temporary fencing, and the ground surface of the sites covered with geotextile fabric (or similar) if required. Exclusion zones will be included in site inductions for all personnel. Photographs of the exclusion zones are to be included in the site inspection report discussed in Section 3.5.

### 3.7 Archaeological monitoring

#### 3.7.1 La Perouse

During excavation, subsurface works or any other identified high-risk activities, archaeological supervision and vibration monitoring must be undertaken at the potential location of the rock engraving at La Perouse (AHIMS # 45-6-0653). Monitoring must be supervised, and will seek qualified archaeologist input as required.

Should the rock engraving at La Perouse (AHIMS # 45-6-0653) be identified and/or the vibration levels be likely to result in damage to the integrity of the sandstone structure, works must cease, the site be protected and the construction methodology be reviewed in consultation with a heritage consultant to mitigate further impacts.

#### 3.7.2 Kurnell

Archaeological supervision must be undertaken during excavations below 400mm at Kurnell within the Foreshore Midden – Captain Cook's Landing Place (AHIMS # 52-3-0219). Monitoring must take place under the supervision of a suitably qualified archaeologist.

If archaeological material is located during monitoring within the Kurnell Study area, the project archaeologist will advise the proponent's project manager, Heritage NSW and the Department of Planning and Environment prior to any further archaeological testing or salvage works. The proponent and/or project archaeologist will seek advice from Heritage NSW and the Department of Planning and Environment as to whether any proposed testing and/or salvage methodology requires review and approval. Following advice from Heritage NSW and the Department of Planning and Environment, the project archaeologist will develop a suitable testing and/or salvage methodology and proceed as per the instructions of the relevant government agencies.

### 3.8 Testing & Salvage Excavation Strategy

The following testing and salvage excavation methodology has been developed in accordance with:

- The Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (Office of Environment and Heritage 2011);
- The Code of Practice;
- Condition E25 of the MCoA;
- Recommendation REMM AH7, and;
- The recommendations set out in the ACHA (Artefact 2021b) and ASR (Artefact 2020).

The process provided below describes the testing and salvage methodology for the Low Potential PAD. Located in the La Perouse portion of the study area.

The location for the proposed test excavations is at La Perouse, in the area of Low Potential PAD. This forms part of the construction curtilage shown in Figure 3-1, the construction curtilage is limited to the purple boundary outlined in the figure, while the low potential PAD is identified in yellow. Initial test excavations will be undertaken as a series of one metre x one metre test pits set within in a systematic grid across the Low Potential PAD. Approximately 30 test pits will be completed, depending upon the results obtained throughout the testing program. The location of the test pits will be determined following field assessment of the site.



**Figure 3-1 Low Potential PAD La Perouse (yellow) and extent of Salvage Excavation Work (purple).**

### 3.8.1 Stage 1

Stage 1 test excavations will comprise the hand excavation of approximately 30 1m x 1m test pits across a systematic 10m grid within the Low Potential PAD, in areas considered to have higher potential to retain sub-surface archaeological material. Testing will be undertaken in accordance with the following protocols:

- Test excavations units will be excavated using hand tools only.
- The first excavation unit will be excavated and documented in 50mm spits.
- Based on the evidence of the first excavation unit, 100mm spits or sediment profile/stratigraphic excavation (whichever is smaller) may then be implemented.
- All material excavated from the test excavation units will be sieved using a 5mm aperture wire-mesh sieve.
- Test excavation units must be excavated to at least the base of the identified Aboriginal object-bearing units and must continue to confirm the soils below are culturally sterile.
- Photographic and scale-drawn records of the stratigraphy/soil profile, features and informative Aboriginal objects will be made for each single excavation point.
- Test excavations units must be backfilled as soon as practicable. requirements of the Code of Practice.
- Following test excavation (if Aboriginal cultural heritage material is recovered during testing), an AHIMS site recording form will be completed and lodged with the AHIMS Registrar.
- If an AHIMS form is lodged, then an Aboriginal Site Impact Recording (ASIRF) form will be completed and submitted to the AHIMS Registrar as soon as practicable after the test excavations and/or salvage program have concluded.
- Test excavations will be sufficiently comprehensive to allow characterisation of the Aboriginal objects present without having a significant impact on the archaeological value of the subject area.

### 3.8.2 Stage 2 – Further Testing

Where the test excavation reveals artefacts or cultural material of particular interest, significance or high density, further excavation may be undertaken. This includes the expansion of the test pits into an open excavation areas, in north/south/east/west directions around test pits.

Excavation of open areas will continue until the artefact concentration and deposit is sufficiently characterised. If excavations require more than 30 m<sup>2</sup>, then additional excavation may occur pending consultation between the proponent, project archaeologist, the Registered Aboriginal Parties, Department of Planning and Environment, and Heritage NSW.

The open areas may vary in size from 1m x 1m in area to many square metres as required, depending on the following considerations:

- The nature of the cultural material identified (i.e. diagnostic tools, knapping floors, or hearths).
- A higher-than-expected artefact density.
- The potential to obtain dateable material.
- The depth and age of the cultural material.

Salvage excavation of open areas would be undertaken using standard archaeological practice, described in 3.9 below. This includes the same hand excavation techniques used for the test pitting method.

## AIMS

The aim of the testing and salvage excavation program is to assess whether subsurface archaeological deposits are present at the area identified as Low Potential PAD, and if so, to characterise the nature of the artefact assemblage. In addition, the aim of the testing and salvage program is to assist in further understanding how Aboriginal people utilised the study area, and the types of activities that were undertaken there.

Additionally, the testing and salvage excavations aims to recover a sample of culturally modified items to assist in drawing meaningful conclusions about the range and characteristics of the assemblage, and what this can tell us about the Aboriginal occupation and use of the area in the late Holocene period. Investigation of the landforms would assist in the evaluation of the vertical integrity of the archaeological deposits; and confirm or disprove the preliminary assessment of the integrity of the site.

### 3.9 Salvage Excavation Methodology

The following methodology has been developed to comply the Code of Practice, and applies to both testing and salvage excavations:

- All pits will be 1m x 1m.
- Pits will be spaced at 10m apart and set within a systematic 10m grid.
- All excavation will be conducted by hand, and the excavation of initial test pits will proceed in 50mm spits.
- Based on the results of the initial pits, subsequent pits will be excavated either in 100mm spits or by stratigraphic unit, dependant on which unit is smaller.
- Excavation will cease at culturally sterile soils or in case of the identification of human remains or anthropogenic shell middens.
- Recording of each test pit and open area will be conducted during excavation using either printed *pro forma* or digital *pro forma* stored on an electronic tablet.
- Photographic and scale-drawn records of the stratigraphy/soil profile, features and any diagnostic Aboriginal objects will be made for each pit.
- GPS location of each test pit will be recorded.
- All excavated materials will be sieved using 3 mm or 5 mm aperture sieves. Depending on the soils encountered and site conditions, material may need to be wet sieved.
- Aboriginal cultural and diagnostic materials collected from the sieves will be bagged and clearly labelled in the field according to excavation pit provenance.
- Each test pit will be backfilled after the testing program.
- Should Aboriginal cultural heritage material be located during the testing or salvage program, it will be recorded in accordance with the Code of Practice – Requirement 26, and site cards submitted to AHIMS.
- Aboriginal cultural heritage material will be stored at Austral's Albion Park office until analysis.
- Following analysis, all cultural material will be returned to the Aboriginal community and ASIRFs submitted to the AHIMS database.

#### 3.9.1 Unexpected Contaminated Finds

Should asbestos (including ACM) be uncovered during excavation, works are to cease and will not recommence until approval is issued from MCD's Environment & Sustainability Lead in accordance with the project's Unexpected Contaminated Finds Procedure outlined in Attachment C of the Soil, Water & Contamination Management Plan.

### 3.9.2 Aboriginal Cultural Heritage Excavation Report

Upon completion of the salvage excavation program, an Aboriginal Cultural Heritage Excavation Report must be prepared.

The report will be prepared in accordance with the *Guide to Investigation, assessing and reporting on Aboriginal cultural heritage in NSW, OEH 2011* and the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales, DECCW 2010* and will include the following sections:

- A summary of the excavation program.
- Describe Aboriginal consultation undertaken during the project.
- Provide details of the Aboriginal objects which were partially or completely harmed (i.e. recovered through the excavations) during the works.
- Provide a description of the methods and results of the any excavations.
- Comment on the effectiveness of the mitigation measures (i.e. salvage excavations).
- Comment on the effectiveness of any management plan if in place.
- Results of the archaeological test excavations and any subsequent salvage excavations
- The current and proposed location of any Aboriginal objects recovered.
- Details the results of any analysis of recovered Aboriginal objects.
- Ensure the necessary *Aboriginal Site Impact Recording Forms (ASIRF)* are lodged with Heritage NSW at completion of the project.

### 3.10 Personnel

#### 3.10.1 Nominated Archaeologists

The following qualified archaeologists are nominated to direct and supervise all archaeological investigations and monitoring at the study site. The Archaeological Director and Principal will be responsible for liaising with the Heritage NSW and the NSW Heritage Council, or their delegates regarding any archaeological matters prior, during or after archaeological investigation of the site.

**Table 7 Proposed Archaeological Directors and Archaeological Team**

Position	Nominated Archaeologist
Archaeological Director	David Marcus
Principal Archaeologist/Anthropologist	Dr Amanda Markham
Principal	Dr Amanda Markham (Austral)
Site Supervisor	Pete Douglas (Austral) (subject to final confirmation)
Archaeologists	Teleeha Thomas (Austral) (subject to final confirmation)

## 4 References

- AMBS. 2013. 'Caltex Kurnell Refinery Conversion: Heritage Impact Assessment'. Prepared for URS Australia PTY LTD.
- Artefact. 2020. 'PACHCI Stage 2 Kamay Ferry Wharves Project Upgrade'. Report prepared for Arup on behalf of Transport for NSW.
- . 2021a. 'Kamay Ferry Wharves Environmental Impact Statement (EIS)'.
- . 2021b. 'Kamay Ferry Wharves Project. PACHCI Stage 3: Aboriginal Cultural Heritage Assessment Report'.
- Attenbrow, V. 2010. *Sydney's Aboriginal Past*. Sydney: UNSW Publishing.
- Benson, D, and G Eldershaw. 2007. 'Backdrop to Encounter: The 1770 Landscape of Botany Bay, the Plants Collected by Banks and Solander and Rehabilitation of Natural Vegetation at Kurnell'. *Cunninghamia* 10 (1): 113–37.
- Coast History and Heritage. 2019. 'Aboriginal Cultural Heritage Assessment Report Stage 1 Master Plan Works Kamay Botany Bay'. Report prepared for NSW National Park and Wildlife Services.
- Context Pty Ltd. 2008. 'Meeting Place Precinct: Botany Bay National Park – Kurnell. Conservation Management Plan'.
- DECCW. 2010a. 'Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010'.
- . 2010b. 'Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales'.
- . 2011. 'Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales'.
- Goward, T. 2011. 'Aboriginal Glass Artefacts of the Sydney Region'. Honours Thesis.
- Herbert, C. 1983. *Sydney 1:100 000 Geological Sheet 9130*. 1st Edition. Geological Survey of New South Wales.
- 'Heritage Act 1977 No 136 - NSW Legislation'. n.d. Accessed 3 February 2021. <https://www.legislation.nsw.gov.au/view/html/inforce/current/act-1977-136>.
- Irish. 2008. 'Australian Archaeological Consulting Monograph Series Vol. 3. Final Report on Aboriginal Archaeological Monitoring and Salvage Excavations Meeting Place Precinct, Botany Bay National Park, Kurnell, NSW'. Report to Design Landscapes Pty Ltd and DECCW (Australian Association of Consulting Archaeologists Inc).
- Irish, P. 2007. 'Overview of Documented Aboriginal Cultural Heritage, Meeting Place Precinct, Botany Bay National Park, Kurnell, NSW'. Report prepared for DEC and the Government Architects Office.
- Jill Sheppard Heritage Consultant. 2009. 'La Perouse Headland Botany Bay National Park Conservation Management Plan, Stage 2 – Final Report [Volume 2 of 3]'. Report prepared for the NSW Department of Environment, Climate Change & Water Parks & Wildlife Group Sydney Region.



McIntyre-Tamwoy, S. 2004. 'Kurnell Meeting Place Enhancement Works. Results of Archaeological Test Excavations'. Report to NSW DEC.

Megaw, JVS. 1968. 'Trial Excavations in the Captain Cook Landing Place Reserve, Kurnell, N.S.W.' *Australian Institute of Aboriginal Studies Newsletter* 2 (9): 17–20.

———. 1969. 'Captain Cook and the Australian Aborigine'. *Australian Natural History* 16 (8): 255–60.

Navin Officer. 2006. 'Botany Bay 132kV Electricity Cable Project – Cultural Heritage Assessment'. Report prepared for Molino Stewart Pty Ltd.

NSW DPIE. 2019. 'Kamay Botany Bay National Park Kurnell Master Plan'.

———. 2020. '• Kamay Botany Bay National Park Plan of Management'.

NSW Roads and Maritime Services. 2015. 'Unexpected Heritage Items Procedure'.

Office of Environment and Heritage. 2011. 'Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW'.

Stroud, WJ, L Sherwin, HN Roy, and CJ Baker. 1985. 'Wollongong – Port Hacking 1:100 000 Geological Sheet 9029-9129, 1st Edition'. Sydney: Geological Survey of New South Wales. [http://www.resourcesandenergy.nsw.gov.au/\\_\\_\\_data/assets/image/0009/344169/Wollongong-Port\\_Hacking\\_100K\\_Geological\\_Sheet\\_9029-9129\\_1st\\_edition\\_1985.jpg](http://www.resourcesandenergy.nsw.gov.au/___data/assets/image/0009/344169/Wollongong-Port_Hacking_100K_Geological_Sheet_9029-9129_1st_edition_1985.jpg).

Williams, AN, F Atkinson, M Lau, and P Toms. 2014. 'A Glacial Cryptic Refuge in Southeast Australia: Human Occupation and Mobility from 36,000 Years Ago in the Sydney Basin, New South Wales'. *Journal of Quaternary Science* 29 (8): 735–48.

WolfPeak Environment and Heritage. 2020. 'Kamay Botany Bay National Park: Interpretation and Storytelling Plan'.

## A. Revised Environmental Management Measures

Relevant REMM are listed in Table 4-1 below. This includes references to required outcomes, the timing of when the commitment applies relevant documents or section of the environmental assessment influencing the outcome and implementation.

**Table 4-1 Revised environmental management measures relent to the AWMS & HMP**

Outcome	Ref #	Commitment	Responsibility	Timing	HMP Reference
<b>Aboriginal heritage</b>					
<b>Avoiding impacts to Aboriginal heritage (general)</b>	AH1	Detailed design will consider opportunities to avoid impacts to significant heritage values and known/discovered intact archaeological remains in consultation with La Perouse LALC and other Registered Aboriginal Parties.	Transport for NSW	Detailed design	N/A
<b>Avoiding impacts to Aboriginal heritage (general)</b>	AH2	<p>During detailed design, elements of design such as finishes and treatments as well as heritage interpretation, such as displays and panels, will be informed by the Aboriginal cultural heritage principles in the following policies and plans:</p> <ul style="list-style-type: none"> <li>• Kamay Botany Bay National Park: Interpretation and Storytelling Plan (WolfPeak Environment and Heritage 2020).</li> <li>• Kamay Botany Bay National Park Kurnell Master Plan (NSW DPIE 2019).</li> <li>• Kamay Botany Bay National Park Plan of Management (NSW DPIE 2020).</li> </ul>	Transport for NSW	Detailed design	N/A

		<ul style="list-style-type: none"> <li>• Meeting Place Precinct: Botany Bay National Park – Kurnell. Conservation Management Plan (Context Pty Ltd 2008).</li> <li>• La Perouse Headland Conservation Management Plan (Jill Sheppard Heritage Consultant 2009).</li> </ul>			
<b>Impacts to Aboriginal heritage (general)</b>	AH3	<p>A Construction Heritage Management Plan (HMP) will be prepared and implemented under the CEMP. The HMP will include:</p> <ul style="list-style-type: none"> <li>a) Construction measures and procedures to minimise and manage impacts on Aboriginal cultural heritage</li> <li>b) Sensitive area maps that identify Aboriginal heritage values, culturally and archaeologically sensitive areas and constraints within the study area</li> <li>c) Unexpected Heritage Items Procedure (NSW Roads and Maritime Services 2015)</li> <li>d) Include consultation with and contact details for the La Perouse Local Aboriginal Land Council, Registered Aboriginal Parties and National Parks and Wildlife Service.</li> </ul>	Contractor	Pre-construction and construction	HMP
<b>Aboriginal cultural heritage awareness (general)</b>	AH4	<p>Aboriginal Cultural Heritage Awareness Inductions will be given to all workers during site inductions. This will ensure they are aware of the site's heritage values and context. Updates will be provided based on stakeholder feedback, consultation with the La Perouse Local</p>	Contractor	Pre-construction Construction	HMP Attachment A

		Aboriginal Land Council, Registered Aboriginal Parties and following any unexpected finds.			
<b>Impacts to low potential PAD</b>	AH5	A Salvage Excavation Program will be developed and be carried out prior to any subsurface impacts within the Low Potential PAD at La Perouse. This includes the jetty tie-in where utilities, wharf piles and landscaping works. Following completion of the archaeological excavation and the subsequent analysis and reporting, further consultation will be undertaken to determine the long-term repository for any retrieved Aboriginal objects.	Contractor	Pre-construction and construction	Chapter 6
<b>Potential damage to the rock engraving at La Perouse</b>	AH6	A visual inspection of the potential rock engravings (Site 3, La Perouse [AHIMS ID 45-6-0650] and Site 4, La Perouse [AHIMS ID 45-6-0651]) will be undertaken before setting-up the ancillary facilities and starting construction.	Contractor	Pre-construction	Chapter 6
-	AH7	Establish exclusion zones for all registered AHIMS rock engraving sites within the construction boundary or directly adjacent and cover with geotextile fabric (or similar) before setting-up the ancillary facilities and creating the construction compound.	Contractor	Pre-construction	Chapter 6
<b>Impacts to rock engravings</b>	AH8	Archaeological work method statements will be prepared prior to setting up ancillary facilities, construction compounds or construction works to prevent impact and preserve the integrity the rock engraving at La Perouse (AHIMS ID 45-6-0653). During excavation and subsurface works or any other identified high risk activities, archaeological supervision and vibration monitoring will be undertaken at the potential	Contractor	Pre-construction and construction	Chapter 6

		<p>location of the rock engraving at La Perouse (AHIMS ID 45-6-0653).</p> <p>If the engraving is identified and/or the vibration levels would result in damage to the integrity of the sandstone structure, works must cease, the site protected and the construction methodology be reviewed in consultation with a heritage consultant to mitigate further impacts.</p>			
<p><b>Potential damage to AHIMS sites at La Perouse and Kurnell</b></p>	AH9	<p>Archaeological supervision will be undertaken during excavations below 400mm at Kurnell within the Foreshore Midden – Captain Cook’s Landing Place (AHIMS ID 52-3-0219). If archaeological material is identified, further archaeological investigations may be required following review and assessment of the archaeological resources identified.</p>	Contractor	Pre-construction Construction	Chapter 6

