


12 September 2024


Director Sustainability, Environment & Planning
Metro West
Sydney Metro
Transport for NSW
PO Box K659
HAYMARKET NSW 1240

REF: HMP REV9

Dear 

RE: Sydney Metro Central Tunnelling Package: Heritage Management Plan (Rev 9)

I refer to Sydney Metro's (SM) submission of the following document required by Condition C5 and C13 of the Sydney Metro West Infrastructure Approval (SSI 10038). A previous version of the document was approved by the Department of Planning and Environment (DPE) on 20 December 2021:

- Sydney Metro West, Central Tunnelling Package Heritage Management Plan (HMP Rev 08 dated 7 August 2023).

It is noted that:

- The Approved Heritage Management Plan (SMWSTCTP-AFJ-1NL-PE-PLN-000004) was prepared by Acciona Ferrovial Joint Venture (AFJV) to address the requirements of Condition C5(d) and C13 of the Infrastructure Approval for Phase B1 or Civil Works as described in the Sydney Metro West Phasing Report.
- The purpose of this Revision (Rev 9) was to update the HMP as part of the annual review of the project management plans.
- Previous versions of the document have been reviewed and updated following comments from Sydney Metro and the ER.

As the approved Environmental Representative for the Metro West and as required by Conditions A30(j), the Heritage Management Plan (Revision 9) is approved.

Yours sincerely




Environmental Representative – Sydney Metro West

CC: 



Heritage Management Plan

SMWSTCTP-AFJ-1NL-PE-PLN-000004 Revision 9

Sydney Metro West – Central Tunnelling Package



DOCUMENT APPROVAL

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GLOSSARY / ABBREVIATIONS

Abbreviation	Description / Definition
ACHAR	Aboriginal Cultural Heritage Assessment Report (Artefact, 2020) Technical Paper 4, Sydney Metro West Concept and Stage 1 Environmental Impact Statement (April 2020)
AFJV	Acciona Ferrovia Joint Venture (the Contractor)
Amendment Report	Sydney Metro West Westmead to The Bays and Sydney CBD Amendment Report Concept and Stage 1 (2020)
ARDEM	Archaeological Research Design and Excavation Methodology
CEMP	Construction Environmental Management Plan
Construction	Includes all work required to construct Stage 1 of the CSSI as described in the documents listed in Condition A1 of Schedule 3, including commissioning trails of equipment and temporary use of any part of the CSSI, but excluding Low Impact Work. <i>Note: As defined in Table 1 of SSI 10038 Infrastructure approval for the Project.</i>
CoA	Minister's Conditions of Approval (as relevant to Sydney Metro West Concept and Stage 1)
CTP	Central Tunnelling Package (refer to Section 1.3.3 of the CEMP)
DPIE	NSW Department of Planning, Infrastructure and Environment
EIS	Sydney Metro West Concept and Stage 1 Environmental Impact Statement (April 2020)
EMS	Environmental Management System
EP&A Act	<i>NSW Environmental Planning and Assessment Act 1979</i>
Heritage Act	<i>NSW Heritage Act 1977</i>
Heritage item	<i>A place, building, work, relic, archaeological site, tree, movable object or precinct of heritage significance, that is listed under one or more of the following registers: the State Heritage Register under the Heritage Act 1977 (NSW), a state agency heritage and conservation register under section 170 of the Heritage Act 1977 (NSW), a Local Environmental Plan under the EP&A Act, the World, National or Commonwealth Heritage lists under the Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth), and an "Aboriginal object" or "Aboriginal place" as defined in section 5 of the National Parks and Wildlife Act 1974 (NSW).</i> <i>Note: As defined in Table 1 of SSI 10038 Infrastructure approval for the Project.</i>
Heritage NSW	Heritage NSW (Department of Premier and Cabinet)
HMP	Heritage Management Plan (this Plan)
Minister, the	NSW Minister for Planning and Public Spaces
NPW Act	<i>NSW National Parks and Wildlife Act 1974</i>
Planning Secretary	The Planning Secretary of the Department of Planning, Industry and Environment

Abbreviation	Description / Definition
Project	Sydney Metro West Concept and Stage 1
RAP	Registered Aboriginal Parties
Relevant Councils	Any or all local government councils as relevant including Inner West, Strathfield, Burwood, Canada Bay and Parramatta Local Government Areas
REMM	Revised Environmental Mitigation Measure
Submissions Report	Sydney Metro West Westmead to The Bays and Sydney CBD Submissions Report Concept and Stage 1 (2020)
Unexpected heritage find	An object or place that is discovered during the carrying out of the CSSI and which may be a Heritage item but was not identified in the documents listed in Condition A1 of Schedule 3 or suspected to be present. An unexpected heritage item does not include human remains.

1. INTRODUCTION

1.1 BACKGROUND

Sydney Metro is Australia's biggest public transport program. Services on the North West Metro Line between Rouse Hill and Chatswood started in May 2019. The Sydney Metro network also includes Sydney Metro City & Southwest, Sydney Metro West and Sydney Metro Western Sydney Airport.

Sydney Metro West is a new 24 kilometre metro line between Westmead and the Sydney CBD. This infrastructure investment will double the rail capacity of the Greater Parramatta to Sydney CBD corridor with a travel time target between the two centres of about 20 minutes.

The planning approvals and environmental impact assessment for Sydney Metro West has been split into a number of stages recognising the size of the project. This includes:

- Stage 1 – Concept and all major civil construction works including station excavation and tunnelling between Westmead and The Bays. Planning approval for this stage was granted in March 2021.
- Stage 2 – All major civil construction works including station excavation and tunnelling from The Bays to Sydney CBD
- Stage 3 – Tunnel fit-out, construction of stations, ancillary facilities and station precincts, and operation and maintenance of the Sydney Metro West line.

An Environmental Impact Statement (EIS) (Jacobs/Arcadis, 2020) for the Concept and Stage 1 (herein referred to as the Project) assessed the heritage impacts in response to the Secretary's Environmental Assessment Requirements issued by the Department of Planning, Industry and Environment (DPIE). The non-Aboriginal heritage impacts were assessed in Chapter 12 and Technical Paper 3 and Aboriginal Cultural heritage impacts were assessed in Chapter 13 and Technical Paper 4 of the Project EIS. The Project was approved by the NSW Minister for Planning and Public Spaces on 11 March 2021 (SSI 10038).

1.2 SCOPE

The Heritage Management Plan (HMP) forms part of the Construction Environmental Management Plan (CEMP). This Plan outlines how Acciona Ferrovial Joint Venture (AFJV) will comply with and implement the applicable 'environmental requirements' for the Central Tunnelling Package (CTP) and identify how AFJV will manage the Aboriginal Cultural heritage and non-Aboriginal heritage impacts during construction of the CTP civils construction phase B1 and tunnelling construction phase B2 (in accordance with the Sydney Metro Phasing Report).

This HMP outlines how AFJV will comply with and implement the applicable elements from the following documents, herein referred to as the 'Project requirements':

- The Project EIS
- NSW Minister for Planning and Public Spaces Conditions of Approval (CoA)
- Revised Environmental Mitigation Measures (REMMs)
- Sydney Metro Construction Environmental Management Framework (CEMF).

2. OBJECTIVES AND TARGETS

The key objective of this HMP is to ensure that heritage impacts are minimised during construction and that all works are undertaken in compliance with the Project requirements.

In order to assess the environmental performance during construction, environmental objectives and targets have been established. These objectives and targets have been developed with consideration of key performance outcomes for each key issue as specified in Chapter 27 of the Project EIS. The performance outcomes relating to heritage in Chapter 27 of the EIS include:

- The long-term protection, conservation and management of the heritage significance of items of environmental heritage
- The long-term protection, conservation and management of the heritage significance of Aboriginal objects and places.

The CEMF has specific objectives in relation to heritage management that will apply to construction. Targets established to achieve the relevant performance outcomes outlined in the CEMF are outlined in Table 1.

The performance during construction will be monitored against the objectives and targets (refer to Section 3.3 of the CEMP) and performance monitoring will be documented in the compliance reporting and at least on an annual basis as part of auditing requirements (refer to Section 3.9 of the CEMP).

TABLE 1: OBJECTIVES AND TARGETS FROM THE CEMF

Objective	Target	Measurement Tool
Minimise impacts on items or places of heritage value	Minimise impacts on heritage items and to areas of archaeological potential during construction	Condition surveys and pre- and post-condition surveys Archival recording and reporting Monitoring records – vibration Monitoring records – archaeological Site inspections Audits Archaeological investigations in accordance Archaeological Research Design and Excavation Methodology (ARDEM) (SMWSTCTP-AFJ-1NL-HE-PLN-000001)) Reporting and recording required by ARDEM
Maximise worker’s awareness of Aboriginal and Non-Aboriginal heritage	Heritage specific induction for all on-site personnel Deliver site specific heritage awareness training at toolbox and pre-starts, including training on the Unexpected Heritage Finds Protocol Any additional training requirements identified in the ARDEM	Induction records Training records



3. ENVIRONMENTAL REQUIREMENTS

3.1 RELEVANT LEGISLATION AND GUIDELINES

The relevant legislation to the Heritage Management Plan is the:

- *Heritage Act 1977* (Heritage Act), and
- *National Parks and Wildlife Act 1974* (NPW Act)

Table 2 identifies the approvals relating to heritage that do not apply to an approved State significant infrastructure project under the *Environmental Planning & Assessment Act 1974* (EP&A Act)

TABLE 2: LEGISLATION / APPROVALS THAT DO NOT APPLY

Act	Exemption
Heritage Act 1977	<p>Section 57</p> <p>Do not undertake an activity that will affect a place, building, work, relic, moveable object or precinct which is subject to an Interim Heritage Order or is listed on the State Heritage Register without approval from the Heritage Council</p> <p>Section 139</p> <p>Do not disturb or excavate any land knowing or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed unless the disturbance or excavation is carried out in accordance with an excavation permit</p>
National Parks and Wildlife Act 1974	<p>Section 90 Aboriginal heritage impact permits</p> <p>Interim protection order – Division 2 of Part 6A</p> <p>Stop work order under Division 1 of Part 6A</p>

The relevant guidelines and standards relating to Aboriginal Cultural heritage and non-Aboriginal heritage management include:

- NSW Heritage Council's Criteria for Assessment of Excavation Directors (2011)
- NSW Heritage Council's Assessing Significance for Historical Archaeological Sites and Relics (2009)
- NSW Heritage Office Archaeological Assessments (1996)
- Office of Environment and Heritage's Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (2011)
- Office of Environment and Heritage's Aboriginal cultural heritage consultation requirements for proponents 2010 (DECCW 2010)
- NSW Heritage Council's Photographic Recording of Heritage Items Using Film or Digital Capture (2006) guidelines
- NSW Heritage Office Guidelines for Management of Human Skeletal Remains (1998)
- Code of Practice for Archaeological Investigations of Aboriginal Objects in New South Wales (DECC, 2010)

3.2 PROJECT REQUIREMENTS

The CoA and the CEMF requirements relevant to the preparation of this HMP are listed in Table 3. Other requirements relevant to this Plan are included in **Appendix A**.

TABLE 3: COMPLIANCE TABLE - REQUIREMENTS FOR PREPARATION OF THE HMP

Project Planning Approval		
C1	Construction Environmental Management Plans (CEMPs) and CEMP Sub-plans must be prepared in accordance with the Construction Environmental Management Framework (CEMF) included in the documents listed in Condition A1 of this schedule to detail how the performance outcomes, commitments and mitigation measures specified in the documents listed in Condition A1 of this schedule will be implemented and achieved during construction.	This Plan
C5	Of the CEMP Sub-plans required under Condition C1 of this schedule, the following CEMP Sub-plans must be prepared in consultation with the relevant government agencies identified for each CEMP Sub-plan. Details of issues raised by a government agency during consultation must be included in the relevant CEMP Sub-plan, including copies of all correspondence from those government agencies as required by Condition A6 of this schedule. Where a government agency(ies) request(s) is not included, the Proponent must provide the Planning Secretary / ER (whichever is applicable) justification as to why: d) Heritage (Non-Aboriginal and Aboriginal) – Heritage NSW, SOPA (in respect of Sydney Olympic Park), Place Management NSW (in respect of The Bays) and relevant councils.	Section 3.3 Appendix C
C6	The CEMP Sub-plans must state how:	
	(a) the environmental performance outcomes identified in the documents listed in Condition A1 of this schedule will be achieved;	Section 2
	(b) the mitigation measures identified in the documents listed in Condition A1 of this schedule will be implemented;	Section 5
	(c) the relevant conditions of this approval will be complied with; and	This Table Appendix A
	(d) issues requiring management during construction (including cumulative impacts), as identified through ongoing environmental risk analysis, will be managed through SMART principles.	Section 5
C7	With the exception of any CEMP Sub-plans expressly nominated by the Planning Secretary to be endorsed by the ER , all CEMP Sub-plans must be submitted to the Planning Secretary for approval.	This Plan will be submitted to the Planning Secretary for approval.
C8	The CEMP Sub-plans not requiring the Planning Secretary's approval must obtain the endorsement of the ER as being in accordance with the conditions of approval and all relevant undertakings made in the documents listed in Condition A1 of this schedule. Any of these CEMP Sub-plans must be submitted to the	Not applicable as this Plan will be submitted to the Planning Secretary for approval.

Project Planning Approval		
	ER with, or subsequent to, the submission of the CEMP but in any event, no later than one (1) month before construction or where construction is phased no later than one (1) month before the commencement of that phase.	
C9	Any of the CEMP Sub-plans to be approved by the Planning Secretary must be submitted to the Planning Secretary with, or subsequent to, the submission of the CEMP but in any event, no later than one (1) month before construction or where construction is phased no later than one (1) month before the commencement of that phase.	The CEMP sub-plans will be submitted for approval with or subsequent to the final submission of the CEMP for Planning Secretary approval no later than one month prior to the commencement of construction
C10	Construction must not commence until the CEMP and all CEMP Sub-plans have been approved by the Planning Secretary or endorsed by the ER (whichever is applicable), unless otherwise agreed by the Planning Secretary. The CEMP and CEMP Sub-plans , as approved by the Planning Secretary or endorsed by the ER (whichever is applicable), including any minor amendments approved by the ER , must be implemented for the duration of construction. Where construction of Stage 1 of the CSSI is phased, construction of a phase must not commence until the CEMP and CEMP Sub-plans for that phase have been approved by the Planning Secretary or endorsed by the ER upon nomination by the Planning Secretary (whichever is applicable).	CEMP Section 2.2
C13	In addition to the relevant requirements of the CEMP, the Heritage CEMP Sub-plan must include, but not be limited to:	
	(a) be prepared in consultation with a suitably qualified and experienced heritage expert;	Appendix D
	(b) identify exclusion zones, archival recording requirements, baseline and periodic monitoring protocols (including before and during construction);	Section 5.3.1 Section 5.4 Section 5.6
	(c) identify and assess the heritage significance of the ancillary structures proposed to be demolished or significantly impacted that are within the curtilage of White Bay Power Station and other items identified as retaining 'potential heritage significance' in the documents listed in Condition A1 of this schedule and which will be impacted by the CSSI;	Section 5.3.4
	(d) in association with Condition D61 of this schedule, set out the final site inspections to be conducted within three (3) months of completion of construction for the following heritage sites unless otherwise agreed by the Planning Secretary:	Section 5.7 AFJV is responsible for this condition to

Project Planning Approval		
	<p>(i) the Roxy Theatre (SHR I00711)</p> <p>(ii) White Bay Power Station (SHR I01015);</p> <p>(iii) the former State Abattoirs (State Environmental Planning Policy (State Significant Precincts) 2005 Item 141)</p> <p>(iv) the RTA Depot facade fronting Unwin Street (Parramatta Local Environmental Plan 2011 I576); and</p>	<p>the extent it relates to White Bay Power Station and the former State Abattoirs.</p>
	<p>(e) set out means of rectification of any damage by the CSSI to Heritage items (d)(i) to (d)(iv) above within six (6) months of the completion of construction at the construction site identified in the relevant Heritage CEMP Sub-plan. This rectification work must be in consultation with a suitably qualified and experienced heritage consultant to ensure the use of appropriate materials, appropriate conservation practices and in accordance with existing heritage management documents (for example, conservation management plans or strategies) to protect and conserve the heritage significance of the items.</p>	<p>Section 5.7</p> <p>Section 6.1</p> <p>AFJV is responsible for this condition to the extent it relates to White Bay Power Station and the former State Abattoirs.</p>
	<p>The Heritage CEMP Sub-plan must include Aboriginal cultural heritage management and mitigation measures (that may include conservation, archaeological salvage excavation and community collection) based on the Aboriginal Cultural Heritage Excavation Report and continuing Aboriginal community consultation.</p>	<p>Section 6.2</p>
Construction Environmental Management Framework		
9.2a	<p>Principal Contractors will develop and implement a Heritage Management Plan which will include as a minimum:</p>	<p>This Plan</p>
	<p>i. Evidence of and processes for consultation with Registered Aboriginal Parties and the NSW Heritage Council</p>	<p>Section 3.3</p> <p>Section Error! Reference source not found.</p>
	<p>ii. Identification of all heritage buildings and structures, to guide the assessment, retention, protection, conservation, salvage and reuse of heritage elements throughout the work;</p>	<p>Section 4</p>
	<p>iii. Identification of initiatives that will be implemented to enhance heritage values and minimise heritage impacts, including procedures and processes that will be used to implement and document heritage management initiatives;</p>	<p>Section 5</p> <p>Sydney Metro will be responsible for initiatives that will enhance heritage values (REMM NAH3)</p>
	<p>iv. The Heritage Management Plan must be prepared in accordance with the relevant conditions of the Planning Approval and the Construction Environmental Management Framework, and set out how the Contractor will evidence the achievement of these requirements</p>	<p>This Table</p> <p>Section 2</p> <p>Section 6</p> <p>Appendix A</p>

Project Planning Approval		
v. The responsibilities of key project personnel with respect to the implementation of the plan;		Section 6.1
vi. Both the methodology and critical stages within the Contractor's Activities for the identification, assessment, retention, protection, conservation, interpretation, salvage and reuse of heritage elements		Section 5
vii. Procedures for interpretation of heritage items uncovered through salvage or excavation during detailed design;		Sydney Metro will be responsible for heritage interpretation (REMM NAH3)
viii. Procedures for the investigation of archaeological relics, objects and/ or sites (where relevant), prior to works commencing that would affect them;		Section 5.2.2 Section 5.3.3
ix. Details for the short and / or long term management of objects, archaeological artefacts and/or movable heritage;		Section 5.3
x. archaeological management plans for both Aboriginal and non-Aboriginal archaeology		Section 5.2.2 Section 5.3.3
xi. Details of management measures to be implemented to prevent and minimise impacts on heritage items (including further heritage investigations, archival recordings and/or measures to protect unaffected sites during construction works in the vicinity);		Section 5
xii. Procedures for unexpected heritage finds, including procedures for dealing with human remains consistent with the Sydney Metro procedures;		Section 5.5 Appendix B
xiii. Heritage monitoring requirements; and		Section 6.3
xiv. Compliance record generation and management.		Section 6.4

3.2.1 REVISED ENVIRONMENTAL MITIGATION MEASURES

Refer to **Appendix A** for all relevant REMMs.

3.3 CONSULTATION

Prior to submission to the ER for endorsement and the Planning Secretary for approval, external consultation during the preparation of this Plan was undertaken with relevant government agencies as described in CoA C5, including:

- Heritage NSW
- Place Management NSW (in respect of They Bays)
- Sydney Olympic Park Authority (SOPA) (in respect of Sydney Olympic Park)
- Inner West Council
- City of Canada Bay
- Strathfield City Council
- Burwood Council, and
- City of Paramatta Council.

Details of issues raised by stakeholders during consultation is provided in **Appendix C** including copies of correspondence in accordance with Condition A6.

A description of ongoing consultation requirements to be implemented throughout construction are described in Section **Error! Reference source not found.** and Section 5.3.3 and 5.3.4.

4. EXISTING ENVIRONMENT AND POTENTIAL IMPACTS

The potential for impacts on non-Aboriginal heritage and Aboriginal Cultural heritage has been assessed as part of the Project EIS. The Non-Aboriginal heritage impacts were assessed in Chapter 12 and Technical Paper 3 of the EIS, and Appendix F ([Archaeological Research Design](#)) of the Submissions report. Aboriginal Cultural heritage impacts were assessed in Chapter 13 and Technical Paper 4 of the Project EIS, and revised for the Submissions Report.

Aboriginal heritage impacts have been defined as direct harm and indirect harm in accordance with the NPW Act. Direct harm may occur as a result of activities which disturb the ground surface including site preparation activities, and the installation of services and infrastructure. Indirect harm for Aboriginal heritage refers to impacts that may affect sites or features located immediately beyond or within the area of the proposed works. Indirect harm may include impacts from vibration, increased visitation, increased erosion, or changing access to wild resources.

Non-Aboriginal heritage impacts have been assessed based on impacts to the significance of the item as a result of:

- Direct impacts, resulting in the demolition or alteration of fabric of heritage significance or significant archaeological remains
- Potential direct impact, resulting in impacts from vibration, subsidence, architectural noise treatment and demolition of adjoining structures
- Indirect impacts, resulting in changes to the setting or curtilage of heritage items or places, historic streetscapes and landscapes, visual amenity or views.

The construction activities that have the potential to impact on Aboriginal and Non-Aboriginal heritage are:

- Enabling works including demolition of existing structures, vegetation clearing, site levelling and grading, establishment of site access/internal haul routes, and
- Station excavation at Sydney Olympic Park, North Strathfield, Burwood North, Five Dock and The Bays construction sites.

The potential for impacts on Aboriginal Cultural heritage is discussed in Section 4.1. The potential for impacts on non-Aboriginal heritage is discussed in Section 4.2. Refer to Section 5 for mitigation and management measures to minimise impacts to Aboriginal Cultural heritage and non-Aboriginal heritage.

The avoidance of impacts to Aboriginal and non-Aboriginal Heritage items has been prioritised throughout the design phase of the Project (Chapter 3 of the EIS). Refer to **Appendix A** and Section 5 for mitigation and management measures to minimise impacts to Aboriginal Cultural heritage and non-Aboriginal heritage.

Aspects and the potential for impacts have been considered during a high-level CTP wide risk assessment which is included as Appendix C of the CEMP. All activities with a residual risk ranking of 'high' or greater require an Environmental Work Method Statement which considers in greater detail the potential risks and appropriate management for that activity unless an existing risk assessment process is in place.

With reference to The Bays construction site, due to the sensitivities of the heritage value and potential archaeology attributable to this location, an EWMS will be prepared prior to the commencement of construction as approved in this plan, to address the following potential hazards:

- Failure to identify, or damage of unexpected heritage items.
- Unapproved heritage impacts at The Bays (including to the State heritage listed White Bay Power Station and the potential archaeology at the site)

Refer to the CEMP for further detail on the process of preparation, approval and implementation of EWMS, and ongoing risk identification processes.

4.1 ABORIGINAL CULTURAL HERITAGE

An Aboriginal Cultural Heritage Assessment Report (ACHAR) was prepared for the EIS and revised for the Sydney Metro West Westmead to The Bays and Sydney CBD Submissions Report Concept and Stage 1 (2020) (Submissions Report).

The ACHAR identified no recorded Aboriginal sites within 100m of the construction sites, with the exception of the potential archaeological deposit (PAD) at The Bays which is listed in the Aboriginal Heritage Information Management System as item 45-6-3826.

A summary of the indicative archaeological values for Aboriginal heritage for the project is provided in Table 4 (sourced from Table 15 of Submissions Report Appendix E (ACHAR)), which identifies an overall moderate indicative significance for Aboriginal heritage values at The Bays within the area of PAD.

TABLE 4 SUMMARY OF INDICATIVE SCIENTIFIC SIGNIFICANCE FOR ABORIGINAL HERITAGE VALUE

Construction site	Research potential	Scientific value	Representative value	Rarity value	Overall indicative significance assessment
Sydney Olympic Park	Low	Low	Low	Low	Low
North Strathfield	Low	Low	Low	Low	Low
Burwood North	Low	Low	Low	Low	Low
Five Dock	Low	Low	Low	Low	Low
The Bays (within the PAD)	Low-moderate	Moderate	Moderate	Moderate-high	Moderate
The Bays (outside the PAD)	Low	Low	Low	Low	Low

The following has been described in Section 8.10.5 of Submissions Report Appendix E (ACHAR):

- The White Bay area provided a range of subsistence resources that may have been utilised by Aboriginal people, including valuable marine and plant resources, close to reliable water sources, near ridges and cliffs, and close to raw materials suitable for the construction of stone tools. As such, there is low-moderate potential for Aboriginal archaeological remains to be preserved in the south-western portion of The Bays construction site (Figure 1). The former shoreline was in this location and remnants of intact deposit may remain buried beneath fill. Intact deposits have the potential to contain Aboriginal objects. This was identified as a PAD
- The remainder of The Bays construction site is considered to be of low research potential and of low significance as it is on reclaimed land.
- The remaining construction sites have been identified as being located outside of identified sensitive landforms or as being subject to substantial levels of disturbance and subsequently containing low archaeological significance, as described in Section 9.6 of the Submissions Report Appendix E (ACHAR).



Figure 1: The Bays – Location of Aboriginal Archaeological Potential

4.2 NON-ABORIGINAL HERITAGE

The Non-Aboriginal Heritage Assessment (Technical Paper 3) prepared by Artefact (2020), also defined the construction sites as the study area and applied a 50m buffer around each of the construction sites (refer to Figure 2, Figure 3, Figure 4, Figure 5, Figure 6).

The EIS (Technical Paper 3, Section 6) identified that the CTP works area has the potential to impact on several listed heritage items as described in Table 5. A full description of the heritage items and assessment of significance can be found in in the EIS (Technical Paper 3). Refer to Figure 2, Figure 3, Figure 4, Figure 5 and Figure 6 for the location of each heritage item.

EIS (Technical Paper 3, Section 6) identified that the State Abattoirs (State Environmental Planning Policy 2005 Listing No. A) within the boundary of the Sydney Olympic Park construction site would have been directly impacted as the proposed works encroached into the curtilage associated with this heritage listing. During preliminary design, AFJV have avoided this impact by reducing the footprint of this site, and as such no longer encroach onto the State Abattoirs heritage listing curtilage. As such, the impacts have been reduced from those identified in the EIS, as reflected in Table 5.

The direct impact identified to the White Bay Power Station (SHR Listing No. 01015) in Table 5 relates to the 0.7 hectares of The Bays construction site that encroaches into the White Bay Power Station heritage listing curtilage (as shown in Figure 6). Further the direct impact of partial demolition to the North Strathfield Railway Station Group relates to the station gardens only.

There is no planned demolition or significant impact to ancillary structures proposed within the curtilage of White Bay Power Station. However, in accordance with CoA C13(c), where construction inside this area of 'overlap', or anywhere inside this heritage curtilage, is identified during detailed design as having potential to demolish or significantly impact ancillary structures of the White Bay Power Station, an assessment will be undertaken to identify the item and the heritage significance prior to impact, and archival recording will be undertaken in accordance with REMM NAH1.

A similar assessment under CoA C13(c) has also been undertaken for the items identified as having 'potential heritage significance' shown in Table 6.

Any archaeological discoveries within the footprint of The Bays construction site, including the overlap area into the White Bay Power Station heritage curtilage, would be managed in accordance with the ARDEM(SMWSTCTP-AFJ-1NL-HE-PLN-000001).

Should further potential impacts that were not considered and approved in the EIS, Amendment Report and Submissions Report be identified during detailed design, these will be considered under the approval process described in Section 1.6 of the CEMP, for consistency with the Project approval, or for further consideration and assessment by DPIE.

TABLE 5: NON-ABORIGINAL HERITAGE ITEMS WITHIN THE STUDY AREA

Heritage Item	Construction Site	Significance	EIS Assessed impact
State Abattoirs	Sydney Olympic Park	State Environmental Planning Policy (State Significant Precincts) 2005 Listing No. A; Sydney Regional Environmental Plan No 24 – Homebush Bay Area Item No. 1	Minor potential direct impact – vibration Moderate indirect impact – views and vistas
Street Trees (adjacent to North Strathfield Railway Station)	North Strathfield	Canada Bay LEP Item No. I397	Negligible indirect impact – views and vistas (temporary)

Heritage Item	Construction Site	Significance	EIS Assessed impact
North Strathfield Railway Station Group	North Strathfield	Railcorp's Section 170 4801029	Minor direct impact – partial demolition Minor indirect impact – views and vistas
St Luke's Park gateway / entrance gates and trees only	Burwood North	Canada Bay LEP Item No. I308	Negligible indirect impact – views and vistas (temporary)
St Luke's Anglican Church and grounds	Burwood North	Canada Bay LEP Item No. I40	Negligible indirect impact – views and vistas (temporary)
Bath Arms Hotel	Burwood North	Burwood LEP Item No. I94	Minor indirect impact – views and vistas (temporary)
St Alban's Anglican Church Hall and Shops	Five Dock	Canada Bay LEP Item No. I228	Minor indirect impact – views and vistas
St Alban's Anglican Church Rectory	Five Dock	Canada Bay LEP Item No. I227	Minor indirect impact – views and vistas
St Alban's Anglican Church	Five Dock	Canada Bay LEP Item No. I226	Minor potential direct impact – vibration Moderate indirect impact – views and vistas
Police Station	Five Dock	Canada Bay LEP Item No. I211 NSW Police Service s170 4180246	No impact
White Bay Power Station	The Bays	SHR Listing No. 01015 Urban Growth NSW Development Corporation S170 4500460	Moderate direct impact – partial demolition Minor potential direct impact – vibration Moderate indirect impact – views and vistas
White Bay Power Station (inlet) canal	The Bays	Port Authority of NSW s170 4560062	Minor potential direct impact – vibration (additional assessments to be undertaken to ensure vibration criteria are achieved) Neutral to Moderate – potential direct impact

Heritage Item	Construction Site	Significance	EIS Assessed impact
			through accidental damage during construction.
White Bay Power Station (outlet) Canal	The Bays	Port Authority of NSW s170 4560026	No direct impact – construction would not be near to this item.
The Valley Heritage Conservation Area	The Bays	Leichhardt LEP Item No. C7	Minor indirect impact – views and vistas (temporary)
Beattie Street Stormwater Channel No. 15	The Bays	Sydney Water S170 4570329	No impact
Glebe Island Silos	The Bays	Port Authority of NSW s170 4560016 SREP No. 26 – City West Part 3 No. 1	Minor indirect impact – views and vistas (temporary)




It should be noted that potential vibration impacts will be better understood and defined following the completion of the site Detailed Noise and Vibration Impact Assessments (DNVIS) required by CoA D44. Also note, building structural assessments will be undertaken to inform appropriate vibration criteria for heritage buildings.

As per Section 2.5.1 of the Sydney Metro CNVS and Technical Paper 2 of the EIS, heritage buildings and structures should not be assumed to be more sensitive to vibration unless they are found to be structurally unsound. In accordance with CoA D49 a conservative vibration damage screening level of 2.5 mm/s will be adopted for heritage structures and other sensitive structures of great intrinsic value where they are found to be structurally unsound in the Condition Survey required by CoA D60. Refer to Section 9.2.3 of the Noise and Vibration Management Plan for further detail.

Sydney Metro West - CTP

Sydney Olympic Park heritage items

Legend

-  Construction site
-  EIS Heritage Study Area
-  State Abattoirs heritage item



This map is shown for reference purposes only. Access Ferrovia JV provides this information "as is" with the understanding that it is not guaranteed to be accurate, correct or complete and conclusions drawn from such information are the responsibility of the user. While every effort is made to ensure the information displayed is as accurate and current as possible, Access Ferrovia JV will not be held responsible for any loss, damage or inconvenience caused as a result of reliance on such information or data.

FIGURE 2: SYDNEY OLYMPIC PARK STUDY AREA AND HERITAGE ITEMS



North Strathfield Metro Station
Heritage Items
 18260 Metro West
 LGA: City of Canada Bay

SCALE 1:2,000
 SIZE A4
 DATE 5/12/2019

0 50 100 m





FIGURE 3: NORTH STRATHFIELD STUDY AREA AND HERITAGE ITEMS



 **Burwood North Station**
Heritage Items
 18260 Metro West
 LGA: City of Canada Bay and Burwood

SCALE 1:2,000
 SIZE A4
 DATE 5/12/2019

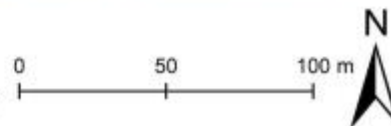
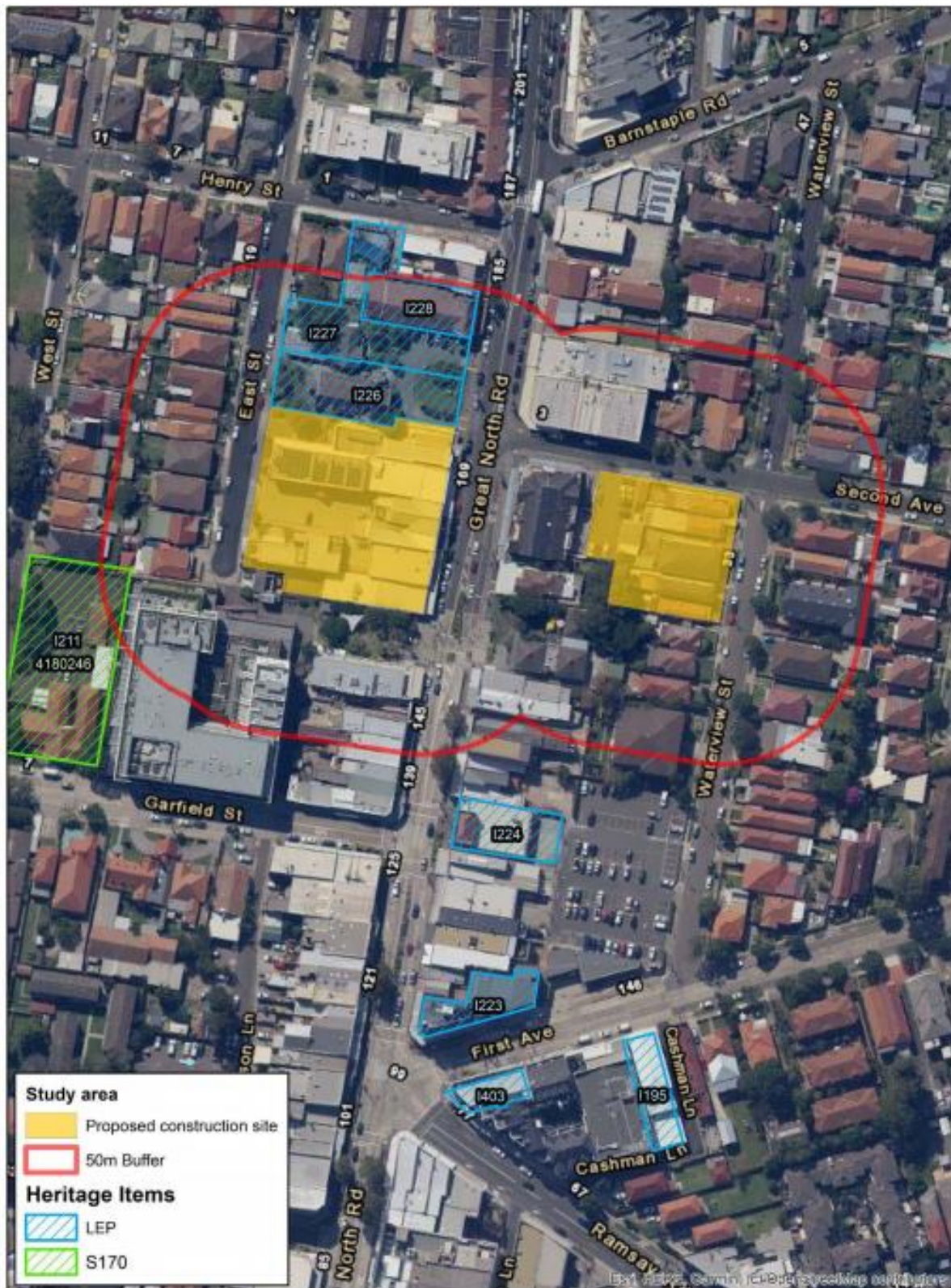


FIGURE 4: BURWOOD NORTH STUDY AREA AND HERITAGE ITEMS




Five Dock Station
Heritage Items
 18260 Metro West
 LGA: City of Canada Bay

SCALE 1:1,800
 SIZE A4
 DATE 5/12/2019

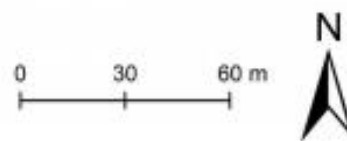


FIGURE 5: FIVE DOCK STUDY AREA AND HERITAGE ITEMS



Heritage Listed Items

21102: The Bays Metro ARD
LGA: Inner West

SCALE 1:2,500
SIZE A4
DATE 27/10/2021

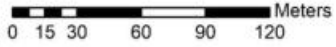



FIGURE 6: THE BAYS STUDY AREA AND HERITAGE ITEMS

The EIS identified potential unlisted heritage items and the relevant items are summarised in Table 6, which includes the proposed impacts. A full description of the potential heritage / unlisted items and assessment of significance can be found in in the EIS (Technical Paper 3).

The preliminary assessment of these items involved the exterior inspection only, as due to access constraints interior access was not possible. In accordance with REMM NAH10 an assessment has been undertaken to determine significance prior to impacting activities commencing for all items as shown in Table 6.

Archival recording will be carried out in accordance with the *NSW Heritage Office's How to Prepare Archival Records of Heritage Items* (1998), and *Photographic Recording of Heritage Items Using Film or Digital Capture* (2006), as per REMM NAH01 for all confirmed heritage items.

None of these items was identified as State Significant and therefor no additional approvals have been required.

TABLE 6: POTENTIAL UNLISTED HERITAGE ITEMS WITHIN THE STUDY AREA

Item	Construction Site	EIS identified Potential Significance	EIS Approved Impact	Confirmed heritage significance	Assessment Report
The Pine Inn (19 Parramatta Road, Concord)	Burwood North	Local	Full demolition	Local	Sydney Metro West – NAH10 Significance Assessment of Potential Heritage Items (13/05/22)
338-340 Parramatta Road, Burwood	Burwood North	Local	Full demolition	Local	Sydney Metro West – NAH10 Significance Assessment of Potential Heritage Items (13/05/22)
Former warehouse shed – Glebe Island	The Bays	Local	Full demolition (note, demolition not proposed)	Local	The Bays Shed 9 Significance Assessment (10/06/22)

Section 12.5.2 of the EIS identified heritage items that have the potential to be impacted by settlement as a result of ground excavation (summarised in Table 7). The risk of settlement across the whole CTP works is defined as 'slight: possible superficial damage unlikely to have a structural significance (risk level 2)'. Refer to Figure 3, Figure 5 and Figure 6 for the locations of the items in Table 7.

Note, Section 12.3.1 of the EIS states that the tunnel sections between stations and service facilities would generally be too deep to affect heritage items or archaeological deposits.

TABLE 7: POTENTIAL SETTLEMENT IMPACTS ON HERITAGE ITEMS (SUMMARY OF EIS SECTION 12)

Heritage Item	Construction Site	Significance	Predicted Magnitude
North Strathfield Railway Station Group	North Strathfield	Railcorp's 170 4801029	Settlement: 18mm
St Alban's Anglican Church Rectory	Five Dock	Canada Bay LEP I227	Settlement: 17mm
St Albans Anglican Church	Five Dock	Canada Bay LEP I226	Settlement: 30mm
Anzac Bridge	The Bays	RMS s170 4305018	Settlement: 10mm
Glebe Island Silos	The Bays	Port Authority of NSW s170 4560016	Settlement: 20mm

Areas within the CTP surface works area which are of historical archaeological potential have been summarised in Table 8. No areas were identified as containing historical archaeological potential except for The Bays.

TABLE 8: NON-ABORIGINAL PREDICTED ARCHAEOLOGICAL REMAINS (SOURCE: ARDEM SMWSTCTP-AFJ-1NL-HE-PLN-000001)

Historical Phase	Archaeological Item	Archaeological Potential	Archaeological Significance
Phase 1 (1800 – 1910)	Reclamation Fills	<ul style="list-style-type: none"> Bulk fill materials – High Potential Undocumented industrial and maritime rubbish or equipment – Low Potential 	<ul style="list-style-type: none"> Bulk fill materials – Local Significance Undocumented industrial and maritime rubbish or equipment – Local to State Significance depending on the nature of the individual items
	First White Bay Hotel and associated structures	Low	Local
	Timber Yard	Low	Not significant
	Rubble Ballast Dyke	Moderate	Local
Phase 2 (1910 – 1950)	Roundhouse, turntable and locomotive siding	Moderate	Local
	Railway Infrastructure	High	Not Significant
	White Bay Steel Works	Low	Local
	Coal Loading and Ash Handling Facilities of the	Low	Local / State if in good state of intactness

	White Bay Power Station		
	No. 9 Shed	Low	Not Significant
	US Army Warehouses and RAAF Mess Hall	Low	Local
	Circulating Water Conduit	High	Local
	Beattie Street Stormwater Canal	High	Local
Phase 3 (1950 – 1970)	Balmain Coal Loader	Moderate	Not significant

5. ENVIRONMENTAL CONTROLS

5.1 PROJECT WIDE HERITAGE MANAGEMENT

A range of standard and specific mitigation and management measures will be implemented in addition to the ARDEM (Section 5.3.3) to minimise Aboriginal cultural heritage, non-Aboriginal heritage and cumulative heritage impacts. The mitigation and management measures have been developed in consideration of CoAs and REMMs. Refer to **Appendix A** for CoA and REMMs relevant to the mitigation and management of Non-Aboriginal and Aboriginal Cultural heritage during construction.

TABLE 9. STANDARD HERITAGE MANAGEMENT MEASURES

ID	Measure/Requirement	Source	Timing	Responsibility
HMP1	All known heritage items within the CTP works area and no-go zones/protected areas will be identified on Environmental Control Plans and onsite.	CEMP	Prior to construction	Environment Manager
HMP2	Training will be provided to relevant Project personnel, including relevant sub-contractors on the location of known Aboriginal and non-Aboriginal heritage items, areas of archaeological sensitivity and artefacts (including photographs where available) along with key requirements from this plan through the project induction. Toolboxes and targeted training would also be employed where appropriate, where there is a high risk of direct impacts to heritage.	AFJV best practice	Prior to construction	Environment Manager
HMP3	The Proponent must not destroy, modify or otherwise physically affect any heritage item not identified in the project documents.	CoA D13	Construction	Environment Manager
HMP4	The White Bay Power Station and the former State Abattoirs, must not be destroyed, modified or otherwise adversely affected, except as identified in the EIS documents.	CoA D17	Construction	Environment Manager
HMP5	A method for the demolition of existing buildings and/or structures at specified construction sites would be developed to minimise direct and indirect impacts to adjacent heritage items.	REMM NAH4	Prior to construction	Site Supervisor
HMP6	If there are any items of local heritage significance that will be partially or fully destroyed, a salvaged materials and moveable heritage register will be developed.	CoA D18	Construction	Project Engineers
HMP7	All reasonable steps must be taken not to harm, modify or otherwise impact Aboriginal objects except as authorised by the Project approval.	CoA D19	Construction	Environment Manager

ID	Measure/Requirement	Source	Timing	Responsibility
HMP8	Settlement monitoring must be undertaken as per CoA D63.	CoA D63	Construction	Design Manager
HMP9	An assessment of significance of the items listed in Table 6 of this HMP must be undertaken in consultation with the relevant local council prior to impacting activities commencing.	REMM NAH10	Pre-construction Construction	Environment Manager
HMP10	Should further potential impacts to ancillary structures within the curtilage of White Bay Power Station that were not considered and approved in the EIS, Amendment Report and Submissions Report be identified during detailed design, these will be considered under the approval process described in Section 1.6 of the CEMP, for consistency with the Project approval, or for further consideration and assessment by DPIE.	Best practice	Pre-construction Construction	Environment Manager
HMP11	Potential indirect impacts to White Bay Power Station (outlet) Canal (Port Authority of NSW s170 4560026) would be assessed when the construction methodology at The Bays is finalised.	Best practice	Pre-construction	Environment Manager
HMP12	<p>A detailed geotechnical and hydrogeological model for Stage 1 would be developed and progressively updated during design and construction. The detailed geotechnical and hydrogeological model would include:</p> <ul style="list-style-type: none"> • Assessment of the potential for damage to structures, services, basements and other sub-surface elements through settlement or strain • Predicted groundwater inflows, groundwater take and changes to groundwater levels, including at nearby water supply works. <p>1. Where building damage risk is rated as moderate or higher (as per the CIRIA 1996 risk-based criteria), a structural assessment of the affected buildings/structures would be carried out and specific measures implemented to address the risk of damage.</p> <p>2. Where a significant exceedance of target changes to groundwater levels are predicted at surrounding land uses and nearby water supply works, an appropriate</p>	REMM GW05	Construction	Design Manager & Construction manager

ID	Measure/Requirement	Source	Timing	Responsibility
	groundwater monitoring program would be developed and implemented. The program would aim to confirm no adverse impacts on groundwater levels or to appropriately manage any impacts. Monitoring at any specific location would be subject to the status of the water supply work and agreement with the landowner.			

5.1.1 HERITAGE INDUCTION

A specific heritage induction will be prepared for all on-site personnel that will address all relevant heritage requirements. The induction would involve information and illustrate locations of the known and potential heritage items and their significance, specific mitigation measures, legislative requirements, responsibilities and circumstances that could result in a breach. Further information relating to training is provided in Section 6.1.

5.1.2 HERITAGE SPECIALIST

Prior to any Works commencing on the CTP, the AFJV will engage a suitably qualified heritage specialist to assist with the preparation and implementation of this Plan including, but not limited to:

- Provide advice/oversee heritage salvage of heritage items (to be identified during archaeological investigations at The Bays)
- Provide advice in the event unidentified Aboriginal objects are discovered prior to construction re-commencing
- Provide advice on methods and location for installation of site boundary hoarding or monitoring equipment on Heritage items
- Provide advice on proposed installation of at-property vibration treatment on Heritage items, and
- Provide advice on any rectification works that may be required at White Bay Power Station and the former State Abattoirs.
- Undertaken any additional assessments as required by this Plan

5.1.3 EXCAVATION DIRECTOR

In accordance with CoA D27 an Excavation Director, who complies with Heritage Council of NSW's Criteria for Assessment of Excavation Director (September 2019), will be appointed to oversee and advise on matters associated with historical and Aboriginal archaeology. The Excavation Director will be present to oversee excavation, advise on archaeological issues, advise on the duration and extent of oversight required during archaeological excavations required by the ARDEM.

The Excavation Director will also provide specific advice on installation of site boundary hoarding and monitoring equipment at heritage items with regards to impacts on potential archaeology where the potential for archaeology exists as identified in the EIS (i.e. at The Bays), as required under CoA D14. In accordance with the Unexpected Finds Procedure, the Excavation Director would inspect potential heritage items/artefacts and determine the appropriate management for the find.

5.2 ABORIGINAL CULTURAL HERITAGE MANAGEMENT

5.2.1 REGISTERED ABORIGINAL PARTIES FORUMS

In accordance with CoA D20 the Registered Aboriginal Parties (RAPs) will be kept informed about the project and continue to be provided with the opportunity to be consulted about the Aboriginal cultural heritage management requirements. Sydney Metro will facilitate forum/s to coordinate consultation with the RAPs.

Where relevant, AFJV will participate in the forums to keep RAPs informed about the construction of the CTP and in particular, to:

- inform any proposed impacts on known aboriginal heritage areas/items or areas of aboriginal archaeological potential
- inform proposed activities should a salvage exercise be undertaken
- inform long term management of aboriginal heritage
- provide opportunity for provision of management recommendations to be included into relevant work methodologies and/or management strategies.

5.2.2 ARCHAEOLOGICAL EXCAVATION

The revised ACHAR (Table 25) identified areas of archaeological potential relevant to the CTP, at The Bays (refer to Figure 1). In accordance with CoA D21 archaeological excavation would be undertaken at the area of archaeological potential at The Bays where potential construction impacts are identified, prior to the commencement of those impacting activities in this location.

Triggers for potential test excavations, which at The Bays construction site include:

- Subsurface impacts within the area assessed as demonstrating archaeological sensitivity
- Notification by the Historical Excavation Director that potential intact soil profiles, or Aboriginal objects, have been identified during historical archaeological investigations. Confirmation by the Aboriginal archaeological Excavation Director (where required) that the finds are intact soil profiles or Aboriginal objects, or
- Aboriginal object(s) identified as an unexpected find

Triggers for potential salvage excavations, which at The Bays construction site include:

- Identification of Aboriginal artefact(s) during test excavation. Minimum number not set due to potential high significance of sites
- Identification of rare or significant artefacts, features or site type
- Identification by the Aboriginal archaeological Excavation Director and/or the geomorphologist of Aboriginal artefacts in contexts that may provide significant information on site formation, including the potential extracting samples suitable for dating

The Aboriginal archaeological Excavation Director would then assess the need for test and salvage excavations given the nature and context of the find and the extent of proposed impacts (where required). Test and salvage excavations would then proceed under the methodology discussed in the archaeological method statement and in adherence to the core methodology and method area consideration presented in the ACHAR. RAP representatives would participate in all Aboriginal archaeological excavations. An archaeological method statement prepared for each work stage would be provided to the RAPs prior to archaeological work commencing. RAP sign off on individual archaeological method statement would not be required as the archaeological method statement would be prepared in adherence to the approved ACHAR.

Excavations will be conducted by a suitably qualified person in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW, 2020).

Upon completion of the test and salvage excavations, in accordance with CoA D23 and D28 an Aboriginal Cultural Heritage Excavation Report/s would be prepared by a suitably qualified expert 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 in consultation with the RAPs, who would be given a minimum of 28 days to consider the report and provide comments before the report is finalised. The final report will be provided to the Planning Secretary, Heritage NSW and Inner West Council no later than 24 months upon completion of the excavation (in accordance with CoA D29).

5.3 NON-ABORIGINAL HERITAGE MANAGEMENT

5.3.1 ARCHIVAL RECORDING

In accordance with REMM NAH1 heritage photographic and archival recording would be carried out in accordance with the *NSW Heritage Office's How to Prepare Archival Records of Heritage Items* (1998), and *Photographic Recording of Heritage Items Using Film or Digital Capture* (2006): for the following items to the extent they will be impacted by the CTP works:

- State Abattoirs (SEPP Listing No. A) (noting the Sydney Olympic Park construction site no longer intersects with this item)
- White Bay Power Station (SHR Listing No. 01015)
- The potential unlisted items identified in Table 6 should they be confirmed to have local heritage value.

Once complete, the report would be provided to Heritage NSW, the relevant Councils and the asset owner.

5.3.2 SALVAGE

The Bays site encroaches upon around 0.7 hectares of the SHR curtilage of the White Bay Power Station. No buildings or ancillary structures of the White Bay Power Station are proposed to be demolished or significantly impacted within this overlapping area. However, should significant heritage fabric within the 0.7 hectares of the SHR curtilage be identified, and proposed to be fully or partially demolished this would be salvaged for potential reuse opportunities in accordance with REMM NAH3. Salvage of any items relating to the White Bay Power Station would be undertaken in accordance with the ARDEM required by CoA D25 (refer to Section 5.3.3).

An assessment of significance of the potential unlisted heritage items listed in Table 6 will be undertaken prior to potential impactful works, as per REMM NAH10. The assessment of significance will be undertaken by the Heritage Specialist. If any potential unlisted heritage items identified in Table 6 are confirmed to have local heritage value upon an assessment of significance, then during the archival recording process, and/or a separate inspection, Sydney Metro in consultation with the heritage specialist will identify salvageable elements and materials. Salvageable elements and materials will include those where significance is retained and / or the potential for re-use, reinstatement or re-sale has been identified. The salvage from any State listed items must be undertaken in consultation with Heritage NSW.

Salvage process

The salvage process would be implemented generally as follows:

- The heritage specialist will undertake an inspection and archival recording of the property and identify elements and materials to be salvaged, as per REMM NAH3
- Items to be salvaged would be identified in a salvaged materials and moveable heritage register, as per CoA D18, in consultation with Sydney Metro to determine the feasibility of salvage, with consideration of the potential for significance to be retained and / or the potential for re-use, reinstatement or re-sale, as per CoA D18
- The elements identified for salvage shall be salvaged prior to demolition works, where safe to do so and if feasible (it is noted that in some instances although efforts may be taken to identify items in good condition, the actual condition of these elements may be too poor to successfully salvage). These elements shall be collectively identified as 'salvaged elements' and photographed, tagged and catalogued and stored in suitable repository locations
- Salvage of State listed items would be undertaken in consultation with Heritage NSW
- Salvaged items will be stored as directed by Sydney Metro.

5.3.3 ARCHEAOLOGICAL EXCAVATION

In accordance with CoA D25 a revised ARDEM(SMWSTCTP-AFJ-1NL-HE-PLN-000001) has been prepared for The Bays in accordance with the Heritage Council of NSW guidelines. The ARDEM has been prepared by the Excavation Director required under CoA D27 and includes:

- Site specific research which is conducted by a professional historian to clearly articulate the historical development of the allotments to assist with the reassessment of potential and significance
- Preparation of research questions based on the additional site-specific research
- A reconsideration of archaeological methods to manage the sites based on this additional assessment.

The ARDEM includes provision for early physical investigation of areas of impact identified as likely to contain State significant archaeology or subterranean Heritage items including the White Bay Power Station (inlet) canal and Beattie Street stormwater channel (refer to Table 5).

The ARDEM was prepared in consultation with Heritage NSW and Place Management NSW and was approved by the Planning Secretary prior to excavation works commencing at The Bays. The ARDEM must be implemented for the duration of the archaeological excavation program at The Bays.

The ARDEM will provide details relating to post excavation management including cleaning, bagging and labelling, and repository location for long term storage of the salvaged artefacts. The ARDEM will be implemented as per the requirement of REMM NAH6.

Following completion of the excavation program, a Final Excavation Report would be prepared in accordance with CoA D28 that includes:

- further detailed and site-specific historical research undertaken
- results of the archaeological excavations undertaken
- details of any significant artefacts recovered, and
- details of ongoing artefact management.

Sydney Metro will be responsible for consideration of re-use of artefacts for future stages of the Project and other Sydney Metro projects.

The Final Excavation Report will be provided to the Planning Secretary, Heritage NSW and Inner West Council no later than 24 months upon completion of the excavation (in accordance with CoA D29).

5.3.4 DEMOLITION MANAGEMENT

Demolition of buildings and structures adjacent to identified retained heritage buildings will be undertaken with care and under the guidance and recommendations from the heritage specialist where required, at the following locations:

- The Bays - White Bay Power Station (State Heritage Register (01015))
- Sydney Olympic Park – State Abattoirs SEPP (State Significant Precincts) (Item 141)
- Five Dock – adjoining St Albans Church (Canada Bay LEP 2013 (I226)).

In addition, the demolition subcontractor has prepared a Demolition Management Plan for the CTP project. The Demolition Management Plan requires a Demolition Work Plan to be prepared for each construction site (where demolition is required, regardless of heritage constraints). The Demolition Work Plan will detail the specific demolition requirements and methodology at each individual site to minimise direct or indirect impacts to adjoining properties, including adjoining heritage properties at the Sydney Olympic Park construction site and The Bays construction site, as required by REMM NAH2. AFJV will provide the Demolition Work Plans for Sydney Olympic Park and The Bays sites to the Heritage Specialist for review and comment.

5.4 VIBRATION MANAGEMENT

In accordance with CoA D46, vibration monitoring will be conducted during vibration generating activities that have the potential to impact heritage items. In accordance with CoA D49, if a heritage item is found to be structurally unsound (following inspection) a more conservative cosmetic damage criterion of 2.5 mm/s peak component particle velocity (from DIN 4150) will be applied.

The Project Wide Risk Assessment, included as Appendix C of the CEMP, identified tunnelling related vibration to have low residual risk to the project. This risk was identified to be 'almost certain' in occurrence, however mitigation strategies, mainly through vibration monitoring, ensure that the risk to heritage on the project, as a result of tunnelling, is negligible.

Details on the strategy and methodology of vibration monitoring are described in the Noise and Vibration Monitoring Program and identified in the DNVIS.

5.5 UNEXPECTED HERITAGE FINDS

Any unexpected heritage finds will be managed in accordance with the Sydney Metro Unexpected Heritage Finds Procedure provided in **Appendix B**. Section 6 of the Sydney Metro Unexpected Heritage Finds Procedure includes steps (refer to Step 1.6) to consider if unexpected heritage finds can be avoided, as required by CoA D13. Further in relation to CoA D13, if a state significant unexpected find is uncovered consideration will also be given to redesign in order to protect the item.

An archaeological find will be unexpected if it was not identified in the ARDEM as a class or type of possible remain, or if it was identified as locally significant but was assessed, after identification, as being of State significance.

The Sydney Metro Unexpected Heritage Finds Procedure complies with Section 146 of the *Heritage Act 1977*, Notification of discovery of relic: A person who is aware or believes that he or she has discovered or located a relic (in any circumstances, and whether or not the person has been issued with a permit) must:

- (a) within a reasonable time after he or she first becomes aware or believes that he or she has discovered or located that relic, notify the Heritage Council of the location of the relic, unless he or she believes on reasonable grounds that the Heritage Council is aware of the location of the relic, and
- (b) within the period required by the Heritage Council, furnish the Heritage Council with such information concerning the relic as the Heritage Council may reasonably require.

Notification under s146 of the *Heritage Act 1977* will be undertaken for all relics, however, AFJV will undertake consultation with Heritage NSW to seek agreement that notification under s146 of the *Heritage Act 1977* will only be required if the relic was unexpected.

Notification under s89a of the *National Parks and Wildlife Act 1974* will be required if a person becomes aware of an Aboriginal object.

5.6 ECMS AND EXCLUSION ZONES

An exclusion zone and signage, along with protective fencing will be erected at the interface of The Bays construction site and the White Bay Power Station. The indicative location of the exclusion fencing at The Bays is included in Figure 7.

As described in Section 5.4 a DNVIS will be prepared for each construction location. The DNVIS will identify the site-specific safe working distances for that vibration generating activity with the potential to impact on heritage items. Where safe working distances are within the CTP footprint, exclusion zones will be established to ensure no inadvertent encroachment which could result in potential heritage impacts.

Exclusions zones will be illustrated on Environmental Control Maps (ECMs) (refer to Section 3.4.4 of the CEMP) and will be communicated to AFJV personnel at the heritage induction prior to works commencing (refer to Section 6.1). Guidance from the vibration specialist will be sought in determining

appropriate exclusion zones and will be determined by the sensitivity of the structure/item and the adjacent works required.

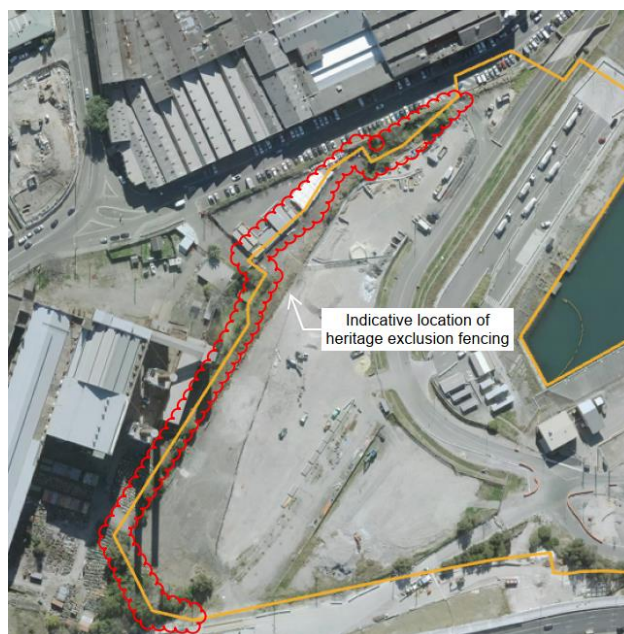


FIGURE 7: INDICATIVE LOCATION OF HERITAGE EXCLUSION FENCING AT THE BAYS

5.7 CONDITION SURVEYS

Prior to the commencement of activities with the potential to generate vibration impacts in that location, AFJV will undertake building condition surveys including elements of White Bay Power Station, the former State Abattoirs and St Albans Church in accordance with CoA C13(d), D60 and D61, in addition to any other heritage buildings identified as being at risk of vibration or settlement induced damage. Within three months of the completion of construction, final site inspections will be conducted (unless otherwise agreed by the Planning Secretary) in accordance with CoA C13(d). Where required, the AFJV would rectify any property damage caused directly or indirectly by the CTP works within six months of completion of the works.

Where damage is identified and confirmed to be the result of project construction, the AFJV would consult with a heritage specialist to ensure the rectification works are consistent with the relevant management documentation for that item in accordance with CoA C13(e).

5.8 SETTLEMENT

The potential for settlement as a result of the CTP has been identified in the EIS and is addressed in REMM GW05. Compliance with this REMM is described in the Groundwater Management Plan which includes measures and controls for understanding and managing settlement. This would include the development of a detailed geotechnical and hydrological model that would be progressively updated during design and construction. The model would be developed in accordance with REMM GW05, which would include assessment of the potential for damage to structures, services, basements and other sub-surface elements through settlement or strain. If building damage risk is rated as moderate or higher (as per the CIRIA 1996 risk-based criteria), a structural assessment of the affected buildings/structures would be carried out and specific measures implemented to address the risk of damage.

Further, an Instrumentation and Monitoring (I&M) Program is being developed for key sensitive locations across the Project and would be implemented to measure settlement in accordance with CoA D63. The program will identify settlement trigger levels which require additional action including monitoring, review of construction methodologies, design review and/or repairs.

The management of settlement is based on a four-stage risk-based approach as described below, which includes the management of heritage items. Figure 8 provides a more detail on the process described below.

- Stage 1: Preliminary ground movement assessment (ie theoretical prediction of ground movement)
- Stage 2: Identification and impact assessment
- Stage 3: Impact minimisation and protection, such as through design or construction methodology change, or the implementation of ground improvement works
- Stage 4: Instrumentation and monitoring, including “surface” and “in-tunnel” and/or “in-structure” monitoring (undertaken as per CoA D63).

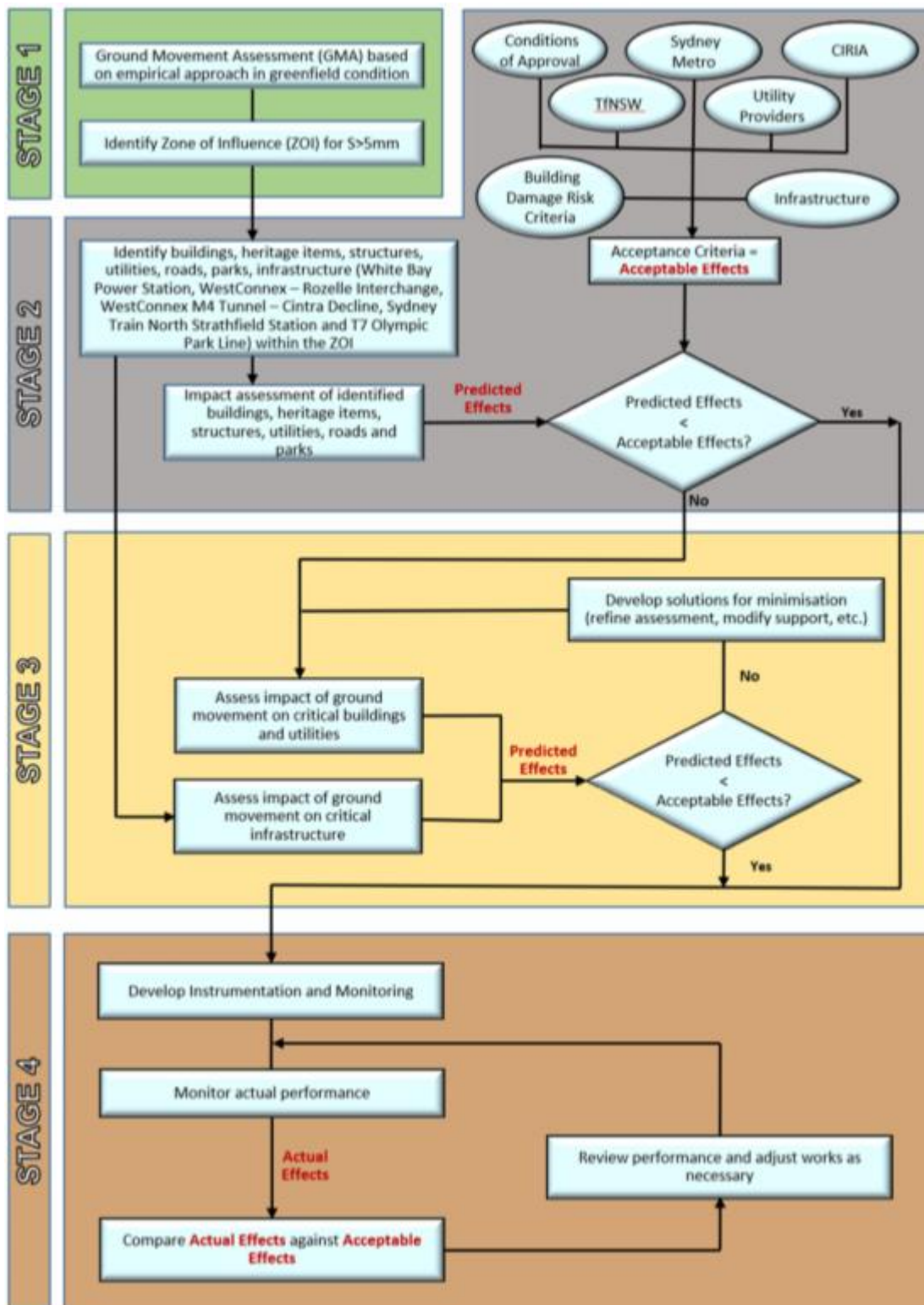


FIGURE 8: GENERAL METHODOLOGY OF THE GROUND MOVEMENT/SETTLEMENT ASSESSMENT AND MONITORING PROCESS

Chapter 18.6.3 of the EIS anticipated that features with high hydraulic conductivity would need to be grouted prior to excavation to reduce the potential for relatively high groundwater inflows into the excavations. The geology within the vicinity of the WBPS is comprised of potential sand-filled defects within the rock mass. As a result of tunnelling, excessive groundwater inflow and potentially induced sand piping at the TBM excavation poses a potential settlement risk in the overlying alluvium soil.

AFJV have undertaken a grouting program for The Bays to reduce the potential settlement magnitude as a result of the CTP Works. This environmental impact of this program was assessed by a suitable heritage consultant and the works were approved to be consistent with the Approved Project. The grouting program was implemented onsite to minimise groundwater inflows during tunnelling by filling in the voids within the rock which will limit the permeability of the rock and subsequently reduce the potential ground settlement in this area.

6. COMPLIANCE MANAGEMENT

6.1 ROLES AND RESPONSIBILITIES

The environmental roles and responsibilities of key project personnel are outlined in Section 3.5 of the CEMP.

Refer to Section 5.1.2 and Section 5.1.3 for detail on relevant external roles.

6.2 TRAINING

The general CTP environmental induction will address requirements in relation to heritage management. The induction would primarily communicate the requirements of this Plan including information and an illustration of locations of the known and potential heritage items and their significance, legislative requirements, responsibilities and circumstances that could result in a breach. The induction would also include training on the requirements of the Sydney Metro Unexpected Heritage Finds Procedure (**Appendix B**).

Specific targeted training packages will be developed by the Environmental Manager to ensure role specific requirements are communicated to staff involved in critical aspects of Heritage management as required. Targeted heritage training packages will include topics such as unexpected heritage finds procedure (Section 5.5) and salvage methodology (Section 5.3.2). Specific role identification would be undertaken via the Workforce Development and Industry Participation portfolio in accordance with Section 3.6 of the CEMP.

Toolbox talks will be scheduled weekly and used to raise awareness and educate personnel on construction related environmental issues during construction.

Refer to Section 3.6 of the CEMP for more detail on training and awareness.

6.3 MONITORING INSPECTIONS & AUDITS

Weekly site environmental inspections will be undertaken to assess the ongoing effectiveness and suitability of the environmental controls, including areas and activities with the potential to impact on Aboriginal Cultural Heritage and non-Aboriginal heritage. Refer to the CEMP for full detail on Project monitoring.

Monitoring of archaeological excavations will be conducted as detailed in Sections 5.2.2, 5.3.3 and 5.1.2.

Noise and vibration monitoring will be undertaken in accordance with the Noise and Vibration Management Plan and Noise and Vibration Construction Monitoring Program.

A Detailed Noise and Vibration Impact Statement will be prepared for each Construction Site to supplement the NVMP and refine impact predictions presented in the Project EIS. The DNVIS will use the Projects predictive modelling tool (refer to Section 8.4 of the Noise and Vibration Management Plan) and will consider actual construction methodologies, plant and equipment, location and duration of activities that could potentially impact on non-Aboriginal heritage.

Audits (both internal and external) will be undertaken to assess the effectiveness of environmental mitigation and management measures, compliance with Project requirements and any other relevant approvals, licenses and guidelines. Audit management is detailed in Section 3.9.4 of the CEMP.

6.4 REPORTING AND RECORDS

Refer to Section 3.10 of the CEMP for all recording and reporting requirements. The AFJV will retain records specific to heritage management including:

- Environmental inspections relating to areas or activities that have the potential to impact on Aboriginal Cultural and non-Aboriginal heritage
- Heritage salvage registers
- Archival recordings of heritage items
- Unexpected finds and stop work orders, and
- Records of any impacts avoided or minimised through design or construction methods.

Reporting requirements specifically relating to heritage management is detailed in Section 5 of this Plan.

7. REVIEW AND IMPROVEMENT

7.1 CONTINUOUS IMPROVEMENT

Continuous improvement of this HMP will be achieved by the ongoing evaluation of environmental management performance against environmental policies, objectives and targets.

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
- Develop and implement a plan of corrective and preventative action to address any non-conformances
- Verify the effectiveness of the corrective and preventative actions
- Document any changes in procedures resulting from process improvement
- Compare objectives and targets.

7.2 CEMP REVISION

Any revisions to this HMP will be in accordance with the process outlined in Section 3.11 of the CEMP. Section 2.2 of the CEMP provides information on the process for endorsement and approval of the CEMP. The ER can approve necessary minor changes in accordance with A30(j).

APPENDIX A OTHER CONDITIONS OF APPROVAL, REMMS AND CEMF REQUIREMENTS RELEVANT TO THIS PLAN

Minister's Conditions of Approval (11 March 2021) (SSI 10038)		
Ref	Requirement	Where addressed
A6	<p>Where the conditions of this approval require a document or monitoring program to be prepared, or a review to be undertaken, in consultation with identified parties, evidence of the consultation undertaken must be submitted to the Planning Secretary with the document. The evidence must include:</p> <ul style="list-style-type: none"> (a) documentation of the engagement with the party identified in the condition of approval that has occurred before submitting the document for approval; (b) a log of the dates of engagement or attempted engagement with the identified party and a summary of the issues raised by them; (c) documentation of the follow-up with the identified party(s) where feedback has not been provided to confirm that the party(s) has none or has failed to provide feedback after repeated requests; (d) outline of the issues raised by the identified party(s) and how they have been addressed; and (e) a description of the outstanding issues raised by the identified party(s) and the reasons why they have not been addressed. 	<p>Section 3.3 Appendix C</p>
D13	<p>The Proponent must not destroy, modify or otherwise physically affect any Heritage item not identified in documents referred to in Condition A1 of this schedule. Unexpected heritage finds identified by Stage 1 of the CSSI must be managed in accordance with the Unexpected Finds Protocol outlined in Conditions D31 to D33 of this schedule. Consideration of avoidance and redesign to protect state significant unexpected finds must be addressed where this condition applies.</p>	<p>Section 5.5</p>
D14	<p>Before installing protective site boundary hoarding or equipment used for vibration and noise monitoring at any Heritage item identified in the documents listed in Condition A1 of this schedule, the advice of a suitably qualified and experienced built heritage expert must be obtained and implemented to ensure any such work does not have an adverse impact on the heritage significance of the item. The installation must also consider and avoid impacts to potential historical archaeology and seek advice from the Excavation Director approved under Condition D27 below.</p>	<p>Section 5.1.2 Section 5.3.4 Noise and Vibration Management Plan</p>

D17	The Roxy Theatre, White Bay Power Station, the former State Abattoirs and the former RTA Depot facade fronting Unwin Street must not be destroyed, modified or otherwise adversely affected, except as identified in the documents listed in Condition A1 of this schedule.	Section 5.1 AFJV is responsible for this condition to the extent it relates the White Bay Power Station and the former State Abattoirs
D18	Where Heritage items, or items assessed to be of local heritage significance in the documents listed in Condition A1 of this schedule, are proposed to be fully or partially destroyed, heritage salvage must occur in consultation with a suitably qualified heritage specialist. The Proponent must develop a salvaged materials and moveable heritage register. The register must identify significant items to be salvaged. Salvage must occur where significance is retained and / or the potential for re-use, reinstatement or re-sale has been identified. The salvage from any State listed items must be undertaken in consultation with Heritage NSW	Section 5.3.4
D19	All reasonable steps must be taken not to harm, modify or otherwise impact Aboriginal objects except as authorised by this approval.	Section 5.1
D20	The Registered Aboriginal Parties (RAPs) must be kept informed about Stage 1 of the CSSI. The RAPs must continue to be provided with the opportunity to be consulted about the Aboriginal cultural heritage management requirements of Stage 1 of the CSSI.	Section Error! Reference source not found.
D21	Aboriginal archaeological test excavation must be undertaken at those areas identified in Table 25 of the revised Aboriginal Cultural Heritage Assessment Report (ACHAR) prepared by Artefact Heritage and dated November 2020.	Section 5.2.2
D22	An Aboriginal Archaeological Test Excavation Methodology(s) must be prepared and appropriately integrated with the revised Archaeological Research Design and Excavation Methodology. The Aboriginal Archaeological Salvage Excavation Methodology(s) must be prepared after analysis of the test excavation results.	Section 5.2.2
D23	At the completion of Aboriginal cultural heritage test and salvage excavations, an Aboriginal Cultural Heritage Excavation Report(s), prepared by a suitably qualified expert, must 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. The Aboriginal Cultural Heritage Excavation Report(s) must document the results of the archaeological test excavations and any subsequent salvage	Section 5.2.2

	excavations. The RAPs must be given a minimum of 28 days to consider the report and provide comments before the report is finalised. The final report must be provided to Heritage NSW within 24 months of the completion of the Aboriginal archaeological excavations (both test and salvage).	
D24	Where previously unidentified Aboriginal objects are discovered, all work must immediately stop in the vicinity of the affected area and a suitably qualified and experienced Aboriginal heritage expert must be contacted to provide specialist heritage advice, before construction recommences. The measures to consider and manage this process must be specified in the Heritage CEMP Sub-plan required by Condition C5 of this schedule and, where relevant, include registration in the Aboriginal Heritage Information Management System (AHIMS).	Section 5.5 Appendix B
D25	<p>Before the commencement of excavation at Parramatta and The Bays metro station construction sites, a revised Archaeological Research Design and Excavation Methodology(s) must be prepared in accordance with Heritage Council of NSW guidelines and with reference to the detailed design of Stage 1 construction of the CSSI to guide archaeological excavation. The revised Archaeological Research Design and Excavation Methodology(s) must be prepared by the Excavation Director (approved under Condition D27 below) and must include:</p> <p>(a) site specific research for the Parramatta and The Bays metro station construction sites which is conducted by a professional historian to clearly articulate the historical development of the allotments to assist with the reassessment of potential and significance;</p> <p>(b) comparative analysis from archaeological investigations in Parramatta (including theses, publications and grey literature reports);</p> <p>(c) preparation of research questions based on the additional site-specific research required by this condition, and relevant research agendas from previously excavated early historical occupation in Parramatta including recovered artefact assemblages; and</p> <p>(d) a reconsideration of archaeological methods to manage the sites based on this additional assessment.</p> <p>The revised Archaeological Research Design and Excavation Methodology(s) must apply to both Parramatta and The Bays metro station construction sites and be prepared in consultation with Heritage NSW and Place Management NSW (in respect of The Bays) and submitted to the Planning Secretary for approval.</p>	<p>Section 5.1.3 Section 5.1.3 AFJV is responsible for this condition to the extent it relates to The Bays construction site</p>

	The revised Archaeological Research Design and Excavation Methodology(s) must be implemented throughout the archaeological excavation programs.	
D26	The revised Archaeological Research Design and Excavation Methodology(s) must include provision for early physical investigation of areas of impact identified as likely to contain State significant archaeology or subterranean Heritage items in the research design to inform excavation in these areas. This must include the Parramatta and The Bays metro station sites, including Parramatta Convict Drain, Parramatta Sand Body, White Bay Power Station (inlet) Canal and Beattie Street Stormwater Channel.	Section 5.3.3
D27	Before commencement of archaeological excavation, the Proponent must nominate a suitably qualified Excavation Director , who complies with Heritage Council of NSW's <i>Criteria for Assessment of Excavation Director</i> (September 2019), to oversee and advise on matters associated with historical archaeology for the approval of the Planning Secretary, in consultation with Heritage NSW. 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 approved Archaeological Research Design and Excavation Methodology(s) required under Condition D25 of this schedule. Aboriginal archaeological excavations must be conducted by a suitably qualified person in accordance with the requirements of the <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales</i> (DECCW 2010). More than one Excavation Director may be engaged for Stage 1 of the CSSI to exercise the functions required under the conditions of this approval.	Section 5.1.3
D28	Following completion of archaeological excavation programs, a Final Excavation Report and an Aboriginal Cultural Heritage Excavation Report must be prepared that includes further detailed and site-specific historical research undertaken to enhance the final reporting, and results of archaeological excavations. The report must include details of any significant artefacts recovered (salvaged), where they are located and details of their ongoing conservation. The Final Excavation Report must document significant results and artefacts which may be re-used in future stages of the CSSI. The Final Excavation Report must be prepared in accordance with guidelines and standards required by Heritage Council of NSW.	Section 5.3.3

D29	The Final Excavation Report and Aboriginal Cultural Heritage Excavation Report must be submitted to the Planning Secretary, Heritage NSW and the Relevant Council for information no later than 24 months after the completion of the archaeological excavation.	Section 5.2.2 Section 5.3.3
D31	An Unexpected Heritage Finds and Human Remains Procedure must be prepared to manage unexpected heritage finds (heritage items and values) in accordance with any guidelines and standards prepared by the Heritage Council of NSW or Heritage NSW.	Section 5.5 Appendix B
D32	The Unexpected Heritage Finds and Human Remains Procedure must be prepared by a suitably qualified and experienced heritage specialist in consultation with the Heritage Council of NSW (with respect to non-Aboriginal cultural heritage) and in relation to Aboriginal cultural heritage, in accordance with the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010) and submitted to the Planning Secretary for information no later than one (1) month before the commencement of construction.	Section 5.5 Appendix B
D33	The Unexpected Heritage Finds and Human Remains Procedure, as submitted to the Planning Secretary, must be implemented for the duration of 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. Management of human remains in NSW is subject to requirements set out in the Public Health Act 2010 (NSW) and Public Health Regulation 2012 (NSW). Nothing in these conditions prevents separate procedures for the Unexpected Heritage Finds and Human Remains Procedure.	Section 5.5 Appendix B
D46	Vibration testing must be conducted 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. Such measures must include, but not be limited to, review or modification of excavation techniques.	Vibration testing is detailed in the Noise and Vibration Management Plan
D47	The Proponent must seek the advice of a heritage specialist on methods and locations for installing equipment used for vibration, movement and noise monitoring at Heritage items.	Section 5.1.2

D48	Before conducting at-property treatment at any Heritage item identified in the documents listed in Condition A1 of this schedule, the advice of a suitably qualified and experienced built heritage expert must be obtained and implemented to ensure any such work does not have an adverse impact on the heritage significance of the item.	Section 5.1.2
D49	If a Heritage item is found to be structurally unsound (following inspection) a more conservative cosmetic damage criterion of 2.5 mm/s peak component particle velocity (from DIN 4150) must be applied.	Minimum working distances and vibration monitoring is detailed in the Noise and Vibration Management Plan
D63	Appropriate equipment to monitor areas in proximity of construction sites and the tunnel route during construction must be installed with particular reference to at risk buildings, structures and utilities identified in the condition surveys required by Condition D60 of this schedule and / or geotechnical analysis as required. If monitoring during construction indicate exceedance of the predicted impacts identified in the documents in Condition A1 or determined through geotechnical analysis, then all construction affecting settlement must cease immediately if it is safe to do so and must not resume until fully rectified or a revised method of construction is established that will ensure protection of affected buildings.	Table 9 Section 5.8
Revised Environmental Mitigation Measures (REMMs)		
NAH1	Archival recording and reporting of the following heritage items would be carried out in accordance with the NSW Heritage Office's How to Prepare Archival Records of Heritage Items (1998), and Photographic Recording of Heritage Items Using Film or Digital Capture (2006): <ul style="list-style-type: none"> • Shops (and potential archaeological site) (Parramatta LEP Item No. I703) • Kia Ora (and potential archaeological site) (Parramatta LEP Item No. I716) • RTA Depot (Parramatta LEP Item No. I576) • State Abattoirs (SEPP Listing No. A) • White Bay Power Station (SHR Listing No. 01015) 	Section 5.3.1 AFJV is responsible for this condition to the extent it relates the White Bay Power Station and the State Abattoirs
NAH2	A method for the demolition of existing buildings and/or structures at specified construction sites would be developed to minimise direct and indirect impacts to adjacent and/or adjoining heritage items.	Section 5.3.4
NAH3	Prior to commencement of demolition of heritage elements at White Bay Power Station within The Bays construction site, significant heritage fabric would be	Section 5.3.4

	identified for salvage and reuse opportunities for salvaged fabric considered.	
NAH4	The policies of the White Bay Power Station Conservation Management Plan would be considered in regard to visual impacts of the Stage 1 works, particularly the acoustic shed (or other acoustic measures) and any temporary structures. Significant view lines would be retained during Stage 1 works.	The Bays construction site layout and management of visual amenity is detailed in the Visual Amenity Management Plan
NAH6	The archaeological research design would be implemented. Significant archaeological findings would be considered for inclusion in heritage interpretation (as per NAH5) for the project and be developed in consultation with the relevant local council	Section 5.3.3 Sydney Metro is responsible for preparation of a Heritage Interpretation Plan required by NAH5
NAH7	An Archaeological Excavation Report would be prepared by the Excavation Director and be provided to the Planning Secretary, Heritage NSW and relevant Council's within two years of the completion of archaeological excavations specified in the archaeological research design(s).	Section 5.3.3
NAH10	An assessment of significance would be prepared in consultation with the relevant local council for the following potential unlisted heritage items: 220 Church Street, Parramatta 48 Macquarie Street, Parramatta Pine Inn at 19 Parramatta Road, Concord 338-340 Parramatta Road, Burwood Former warehouse shed, Glebe Island. If the assessment of significance confirms these items have local heritage value, an archival recording would be undertaken.	Section 4.2 Section 5.3.1 AFJV responsible for this to the extent it relates to the items identified in Table 6
AH1	Aboriginal stakeholder consultation would be carried out in accordance with the Heritage NSW, Department of Premier and Cabinet's Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW, 2010).	Section Error! Reference source not found.
AH2	Archaeological test excavation (and salvage when required) would be carried out where intact natural profiles with the potential to contain significant archaeological deposits are encountered at the specified construction sites and the Parramatta power supply route. Excavations would be conducted in accordance with the methodology outlined in the Aboriginal cultural heritage assessment report.	Section 5.2.2
AH4	In the event that a potential burial site or potential human skeletal material is exposed during construction, the Sydney Metro Exhumation Management Plan would be implemented.	Superseded by CoA D31

GW5	<p>A detailed geotechnical and hydrogeological model for Stage 1 would be developed and progressively updated during design and construction. The detailed geotechnical and hydrogeological model would include:</p> <ul style="list-style-type: none">• Assessment of the potential for damage to structures, services, basements and other sub-surface elements through settlement or strain• Predicted groundwater inflows, groundwater take and changes to groundwater levels, including at nearby water supply works. <p>1. Where building damage risk is rated as moderate or higher (as per the CIRIA 1996 risk-based criteria), a structural assessment of the affected buildings/structures would be carried out and specific measures implemented to address the risk of damage.</p> <p>2. Where a significant exceedance of target changes to groundwater levels are predicted at surrounding land uses and nearby water supply works, an appropriate groundwater monitoring program would be developed and implemented. The program would aim to confirm no adverse impacts on groundwater levels or to appropriately manage any impacts. Monitoring at any specific location would be subject to the status of the water supply work and agreement with the landowner.</p>	Section 4.2.1
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APPENDIX B UNEXPECTED FINDS AND HUMAN REMAINS PROCEDURE



Unexpected Heritage Finds Procedure

SM-20-00099497

Metro Body of Knowledge (MBoK)

Applicable to:	Sydney Metro
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Name of Approver:	Carolyn Riley
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1. Introduction

1.1. Purpose

This Procedure has been prepared to provide a consistent approach to the management of unexpected Aboriginal and historic heritage uncovered during Sydney Metro activities. It applies to all Sydney Metro activities, both the pre-construction (prior to the Construction Heritage Management Plan approval) and construction phase (post Construction Heritage Management Plan approval) and pre or post-approval activities that are subject to the NSW *Heritage Act (1977)* (Heritage Act) and the *National Parks and Wildlife Act 1974* (NPW Act).

In NSW, there are strict laws to protect and manage both Aboriginal and historic heritage. As a result, appropriate management measures need to be implemented to avoid or minimise impacts, ensure compliance with statutory requirements, and to minimise the risk of penalties to individuals, Sydney Metro, and its contractors. This Procedure outlines Sydney Metro's obligations under the Heritage Act, NPW Act and the *Coroner's Act 2009* and State Significant Infrastructure (SSI) or State Significant Development (SSD) approvals issued by NSW Department of Planning and Environment where applicable.

Note that a Contractor must not amend this Procedure or use a different procedure without the prior approval of Sydney Metro.

This Procedure must be read in conjunction with the relevant approval conditions, contract documents and other plans and procedures including [SM-20-00099495 Exhumation Management Procedure](#), in addition to any other relevant documents as developed by the contractor for the delivery of Sydney Metro activities.

1.2. Scope

This Procedure applies to the discovery of any unexpected heritage item, where the find is not anticipated in an approved Archaeological Research Design (ARD) or Archaeological Method Statement (AMS) or other project specific document related to heritage. It applies to all Sydney Metro activities.

This Procedure must be followed by all Sydney Metro staff, contractors, subcontractors or any person undertaking work for Sydney Metro. It includes references to some of the relevant legislative and regulatory requirements but is not intended to replace them.

This Procedure *does not apply* to the discovery and disturbance of a heritage item:

- As a result of investigations being undertaken in accordance with the *Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW 4376 2010*; an Aboriginal Heritage Impact Permit (AHIP) issued under the NPW Act; or a permit approval issued under the Heritage Act; or
- As a result of construction related activities, where the disturbance is permissible in accordance with an AHIP, or an approval issued under the Heritage Act or State SSI or SSD planning approval; or
- Of local significance, where the find is identified and anticipated to occur in an AMS or ARD.

Construction Environment Management Plans (CEMPs), which are reviewed by the Sydney Metro Heritage team, should reference or include this Procedure. Where there is an approved CEMP, it 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 a reference.

1.3. Definitions and abbreviations

1.3.1. What is an unexpected heritage find?

An 'unexpected heritage find' can be defined as a:

- Unanticipated discovery of an Aboriginal object or archaeological work or relic, which Sydney Metro does not have approval to disturb and/or is not covered under an existing management process or plan
- Find that has not been identified or assessed in a project assessment or document related to heritage
- Find that is not referenced in an archaeological research design (ARD) or archaeological method statement (AMS)
- Find that is not covered by an existing approval under the NPW Act or Heritage Act.

1.3.2. Abbreviations

All terminology in this Procedure is taken to mean the generally accepted or dictionary definition. Acronyms and terms specific to this document are listed below.

Other terms and jargon are defined within the [SM-17-00000203 Sydney Metro Glossary](#).

Table 1: Terms/acronyms and definitions

	Definitions
Aboriginal object	An Aboriginal object is any deposit, object or material evidence (not being a handcraft made for sale) relating to the Aboriginal habitation of the area, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.
AHIP	Aboriginal Heritage Impact Permit.
AMS	Archaeological Method Statement.
ARD	Archaeological Research Design.
CEMP	Construction Environmental Management Plan.
CoA	Conditions of Approval.
CSSI	Critical State Significant Infrastructure.
Disturbance	Disturbance is considered to be any physical interference to an item that results in it being destroyed, defaced, damaged, harmed, impacted or altered in any way (this includes archaeological investigation activities).
EP&A Act	NSW <i>Environmental Planning and Assessment Act 1979</i> .
Excavation Director	A person that has been determined by the Heritage Council of NSW or its delegate to meet the <i>Criteria for Assessment of Excavation Directors</i> (4 September 2019 and as updated) and can therefore competently archaeologically investigate a site of either local and/or state significance.
Heritage Act	NSW <i>Heritage Act 1977</i> .
Heritage NSW	Formerly Office of Environment and Heritage (OEH). Now Heritage NSW .

	Definitions
NPW Act	NSW <i>National Parks and Wildlife Act 1974</i> .
Relic	A relic means any deposit, artefact, object or material evidence that: a) relates to the settlement of the area that comprises NSW, not being Aboriginal settlement; and b) is of State or local significance.
SSD	State Significant Development.
SSI	State Significant Infrastructure.

1.4. Accountabilities

The Executive Director, Environment, Sustainability & Planning is accountable for this Procedure including approving the document, monitoring its effectiveness and performing a formal document review.

Direct Reports to the Chief Executive are accountable for ensuring the requirements of this Procedure are implemented within their area of responsibility.

Direct Reports to the Chief Executive who are accountable for specific projects/programs are accountable for ensuring associated contractors comply with the requirements of this Procedure.

2. Types of unexpected heritage finds and their statutory protections

Project, field and environmental personnel (including construction contractors) are critical to the early identification and protection of unexpected heritage finds.

[Appendix A: Examples of unexpected heritage finds](#) illustrates the wide range of heritage items uncovered to date during Transport for NSW projects and provides an understanding of what unexpected finds may look like.

Unexpected heritage finds are categorised as either:

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

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

2.1. Aboriginal objects

The NPW Act provides the basis for the care, protection and management of Aboriginal objects and places in NSW.

An Aboriginal object is 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.*

An 'Aboriginal place' is an area declared by the Minister administering the Act to be of special significance with respect to Aboriginal culture. An Aboriginal place does not have to contain physical evidence of occupation (such as Aboriginal objects).

Under section 87 of the Act, it is an offence to harm or desecrate an Aboriginal object or place. There are strict liability offences. An offence cannot be upheld where the harm or desecration was authorised by an AHIP and the permit's conditions were not contravened. Defences and exemptions to the offence of harming an Aboriginal object or Aboriginal place are provided in section 87, 87A and 87B of the Act. A person must notify Heritage NSW if a person is aware of the location of an Aboriginal object.

Penalties for some of the offences can include two years imprisonment and/or up to \$550,000 (for individuals), and a maximum penalty of \$1.1 million (for corporations).

Examples of Aboriginal objects include stone 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 AHIP is usually required from Heritage NSW. When a person becomes aware of an Aboriginal object, they must notify Heritage NSW about its location. Assistance on how to do this is provided in section 4 (Step 5).

2.2. Historic heritage items

The Heritage Act provides for the care, protection and management of heritage items in NSW. Historic heritage include:

- Archaeological 'relics' as defined under the Heritage Act; and
- Other historic heritage such as works, buildings or movable objects, which are not considered 'relics' under the Act.

2.2.1. Archaeological relics

Under section 139, it is an offence to disturb or excavate any land knowing or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed, unless the disturbance or excavation is carried out in accordance with an excavation permit issued by Heritage NSW under the Act.

A relic is defined as: *'any deposit, artefact, object or material evidence that: (a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and (b) is of State or local heritage significance.'*

A person must notify Heritage NSW, if a person is aware or believes that they have discovered or located a relic (section 146). Penalties for offences under the Heritage Act can include six months imprisonment and/or a fine of up to \$1.1million.

IMPORTANT!

All relics are subject to statutory controls and protection.

If a relic is likely to be disturbed, an approval is usually required from the Heritage Council of NSW. When a person discovers a relic, they must notify the Heritage Council of NSW of its location.

2.2.2. Other historic heritage

Some historic heritage items are not considered to be 'relics', but are instead referred to as works, buildings, or movable objects. Examples of these items include culverts, former road surfaces, retaining walls, tramlines, rail track or sleepers, cisterns, fences, buildings and conduits.

Usually archaeological relics are uncovered via a process of excavation or soil removal. When an unexpected find is uncovered, an archaeological excavation permit under section 140 or section 60 of the Heritage Act may be required to further investigate or remove it if investigation is not covered by an existing approval. In contrast, 'other historic items' either exist above the ground surface (for example a shed), or they are designed to operate and exist beneath the ground surface (for example a culvert). They may also need a permit to alter, disturb or remove them if there is not an approval already in place.

2.3. Human skeletal remains

[SM-20-00099495 Exhumation Management Procedure](#) provides a more detailed explanation of the approval processes related to human skeletal remains.

Human skeletal remains can be classified as:

- Reportable deaths;
- Aboriginal objects; or
- 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 s35(2) of the Act, a person must report a 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 regardless of ancestry. Public health controls may also apply.

Where the 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 NPW Act, while non-Aboriginal heritage remains are protected under the Heritage Act.

The approval and notification requirements of these Acts are described above in Sections 2.1 and 2.2. The discovery of Aboriginal human remains also triggers notification requirements to the Commonwealth Minister for the Environment under s20 (1) of the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984*.

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.

3. Unexpected heritage finds procedure

On discovering something that could be an unexpected heritage item on a Sydney Metro project, the following procedure must be followed. There are seven steps in the procedure.

IMPORTANT!

Sydney Metro may have approval to impact certain heritage items during construction. If you think that you may have discovered a heritage item and you are unsure whether an approval is in place or not, **STOP** work and follow this Procedure.

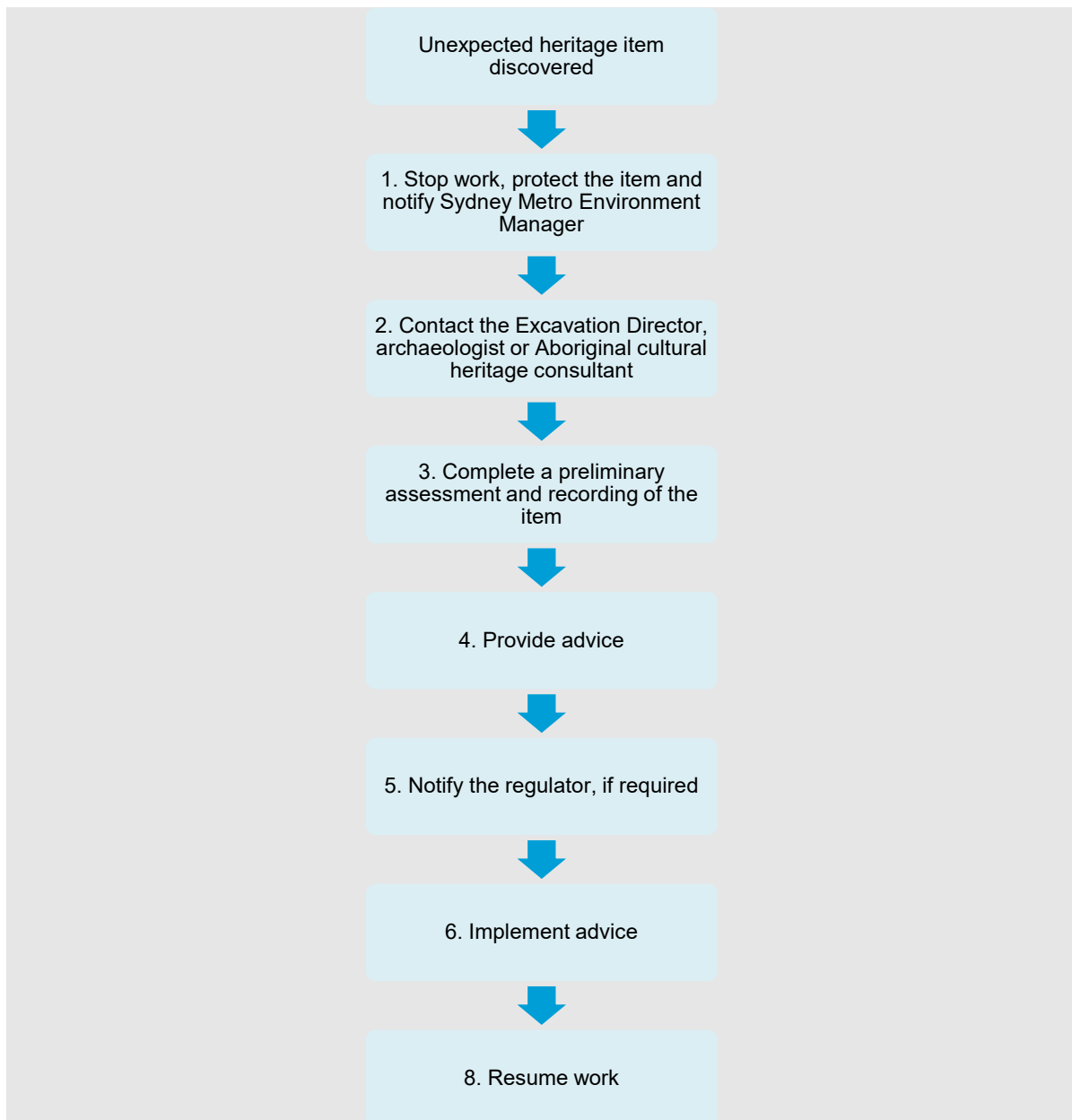


Figure 1: Summary of steps to be taken on the discovery of an unexpected heritage item

Table 2: Specific tasks to be implemented following the discovery of an unexpected heritage item

Step	Task	Responsibility	Guidance and tools
1	Stop work and protect the item		
1.1	Stop all work in the immediate area of the item and notify the Project Manager	Contractor/ Supervisor	Appendix A: Examples of unexpected heritage finds
1.2	Establish a 'no-go zone' around the item. Use high visibility fencing, where practical. No ground disturbing work is to be undertaken within this zone until further archaeological investigations are completed, and if required, appropriate approvals are obtained. Inform all on-site personnel about the no-go zone.	Contractor's Project Manager or Supervisor	
2	Engage an archaeologist		
2.1	Contact the nominated Excavation Director, archaeologist or Aboriginal cultural heritage consultant to discuss the location and nature of the item and arrange an inspection. The project CEMP should contain the contact details of the archaeologist. Provide as much information as possible to the Excavation Director, archaeologist or Aboriginal cultural heritage consultant, including photographs of the item. Inform the Sydney Metro Environment Manager and keep them involved in the process. The Environment Manager will inform the Sydney Metro Senior Heritage Advisor.	Contractor's Project Manager	
2.2	Where there is no project Excavation Director, archaeologist or Aboriginal cultural heritage consultant engaged for the work, engage a suitably qualified consultant to assess the find. If the find is likely to be an Aboriginal object, engage a suitably qualified and experienced Aboriginal cultural heritage consultant. If the find is a historic heritage item, engage a suitably qualified and experienced historical archaeologist.	Contactors Project Manager	
3	Preliminary assessment and recording		
3.1	Occasionally, the Excavation Director, archaeologist or Aboriginal cultural heritage consultant may determine from the photographs provided at Step 2.1 that it is not necessary to inspect the item because no heritage constraint exists for the project (for example the item is not an Aboriginal object or archaeological relic). This advice should be provided in writing (for example via email or letter with the consultant's name and company clearly identifiable) to the Sydney Metro Project Manager, Environment Manager and Senior Heritage Advisor.	Excavation Director, archaeologist or Aboriginal cultural heritage consultant	Proceed to Step 7
3.2	Arrange access for the Excavation Director, archaeologist or Aboriginal cultural heritage consultant to inspect the item as soon as practicable. In most cases, a site inspection is required to conduct a preliminary assessment.	Contactors Project Manager/ Excavation Director	

Step	Task	Responsibility	Guidance and tools
3.3	<p>Subject to the Excavation Director, archaeologist or Aboriginal cultural heritage consultant's assessment, work may recommence at a set distance from the item.</p> <p>This is to protect any other archaeological evidence that may exist in the vicinity, which may have not yet been uncovered.</p> <p>The 'no-go zone' established in Step 1.2 may need to be adjusted to reflect the area of archaeological potential, as determined by the Excavation Director, archaeologist or Aboriginal cultural heritage consultant.</p>	Excavation Director, archaeologist or Aboriginal cultural heritage consultant/ Contractor's Project Manager	
3.4	<p>Has the item been damaged or harmed?</p> <p>If yes, record the incident in the Incident Management System. Implement any additional reporting requirements related to the planning approval and CEMP where relevant.</p>	Contractor's Project Manager/ Excavation Director, archaeologist or Aboriginal cultural heritage consultant	
3.5	<p>Can the work avoid further impact to the item?</p> <p>Project Manager to confirm with Sydney Metro Environment Manager.</p>	Contractor's Project Manager	
3.6	<p>Record the item and complete the Unexpected Heritage Item Recording Form.</p>	Excavation Director, archaeologist or Aboriginal cultural heritage consultant	<p>Appendix B: Unexpected heritage find recording form</p> <p>Appendix C: Photographing unexpected heritage items</p>
3.7	<p>Is the item likely to be bone?</p> <p>If yes, follow the steps in Appendix D 'Uncovering bones'.</p> <p>Where it is obvious that the bones are human remains, you must notify the local police by telephone immediately.</p> <p>They may take command of all or part of the site.</p> <p>Also refer to SM-20-00099495 Exhumation Management Procedure.</p> <p>If no, proceed to the next step.</p>	Excavation Director, archaeologist or Aboriginal cultural heritage consultant	
3.8	<p>The Excavation Director, archaeologist or Aboriginal cultural heritage consultant may provide advice after the inspection and preliminary assessment that no heritage constraint exists for the project (for example the item is not an Aboriginal object or relic).</p> <p>This advice should be provided in writing (for example via email or letter with the consultant's name and company clearly identifiable) to the Sydney Metro Project Manager, Environment Manager and Senior Heritage Advisor.</p>	Excavation Director, archaeologist or Aboriginal cultural heritage consultant	Proceed to Step 7
3.9	<p>Where required, seek additional specialist technical advice (such as a forensic or physical anthropologist to identify skeletal remains).</p> <p>The Excavation Director, archaeologist or Aboriginal cultural heritage consultant can provide contacts for such specialist consultants.</p>	Excavation Director, archaeologist or Aboriginal cultural heritage consultant	

Step	Task	Responsibility	Guidance and tools
4	Provide advice		
4.1	The Excavation Director, archaeologist or Aboriginal cultural heritage consultant should provide written advice with input from Registered Aboriginal Parties where appropriate. The plan should include as a minimum a) a description of the item, b) an assessment of the significance of the item, c) approval or statutory notification requirements, d) reporting requirements, e) consultation requirements, and f) relevance to other project approvals or management plans.	Excavation Director, archaeologist or Aboriginal cultural heritage consultant	Appendix D: Archaeological/heritage advice checklist Other references DECCW 2010, Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 DECCW 2010, Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW Heritage Branch 2009, Assessing Significance for Historical Archaeological Sites and 'Relics'
4.2	In preparing the advice, the Excavation Director, archaeologist or Aboriginal cultural heritage consultant must review the CEMP, heritage sub-plans, conditions of project approval and associated heritage assessment documentation (for example an Environmental Impact Statement Technical Paper). The Excavation Director, archaeologist or Aboriginal cultural heritage consultant must determine if the item is consistent with previous heritage or project approvals or management plans. The Project Manager must provide all relevant documents to the Excavation Director to assist with this.	Excavation Director, archaeologist or Aboriginal cultural heritage consultant/ Contractor's Project Manager	
4.3	The Excavation Director, archaeologist or Aboriginal cultural heritage consultant must submit this advice as a report, letter or email to the Project Manager as soon as practicable.	Excavation Director, archaeologist or Aboriginal cultural heritage consultant	
4.4	The Project Manager, Sydney Metro Environment Manager and Sydney Metro Senior Heritage Advisor should review the advice to ensure that all requirements are addressed and can be reasonably implemented.	Consultant's Project Manager/ Sydney Metro Environment Manager/ Sydney Metro Senior Heritage Advisor	
5	Notify the regulator, if required		
5.1	Based on the advice and any statutory requirements, is notification to Heritage NSW and the Secretary required? If no, proceed directly to Step 6. If yes, proceed to next step.	Sydney Metro Environment Manager/ Sydney Metro Senior Heritage Advisor	

Step	Task	Responsibility	Guidance and tools
5.2	<p>If notification is required, provide the required information for a section 146 notification on the Heritage NSW Heritage Management System (HMS). The Environment Manager will provide the information to the Sydney Metro Senior Heritage Advisor who will lodge the notification via HMS.</p> <p>If the relic is uncovered when a section 139 (4) exception is being used, the section 146 notification must be sent to the Heritage Council of NSW via email.</p>	Sydney Metro Environment Manager and Senior Heritage Advisor	Heritage NSW notification requirements
5.3	A copy of the final supporting information and Unexpected Heritage Item Recording Form must be kept on file and a copy sent to the Sydney Metro Project Manager.	Sydney Metro Environment Manager/ Contractor's Project Manager	
6	Implement advice		
6.1	The advice should be modified to take into account any additional advice resulting from notification and discussions with the regulator if required.	Excavation Director, archaeologist or Aboriginal cultural heritage consultant/ Contractor's Project Manager	
6.2	Implement advice. Where impact cannot be avoided, this could include a formal assessment of heritage significance and impact assessment, preparation of excavation or recording methodologies, consultation with Registered Aboriginal Parties and obtaining heritage approvals if required.	Excavation Director, archaeologist or Aboriginal cultural heritage consultant/ Contractor's Project Manager	DECCW 2010, Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 DECCW 2010, Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW
6.3	Where heritage approvals are required, contact the Sydney Metro Environment Manager for further advice and support. Please note there are time constraints associated with heritage approval preparation and processing.	Excavation Director, archaeologist or Aboriginal cultural heritage consultant/ Contractor's Project Manager	
6.4	For SSI or SSD projects, or projects approved under Part 5 of the EP&A Act, assess whether the heritage impact is consistent with the project approval or if project approval modification is required from the Department of Planning, Industry and Environment or the relevant consent authority.	Excavation Director, archaeologist or Aboriginal cultural heritage consultant/ Contractor's Project Manager	
6.5	Where statutory approvals (or project modifications) are required, impact upon Aboriginal objects or relics must not occur until heritage and planning approvals have been issued by the appropriate regulator.	Excavation Director, archaeologist or Aboriginal cultural heritage consultant/ Contractor's Project Manager	

Step	Task	Responsibility	Guidance and tools
6.6	Where statutory approval is not required but where recording is recommended by the Excavation Director, archaeologist or Aboriginal cultural heritage consultant, sufficient time and resources must be allowed for this to occur.	Excavation Director, archaeologist or Aboriginal cultural heritage consultant/ Contractor's Project Manager	
6.7	Ensure short term and permanent storage locations are identified for archaeological material or other heritage material recovered from site, where required. Interested third parties (for example local Aboriginal land councils, local councils or museums) should be consulted on this issue. Contact the Excavation Director, archaeologist or Aboriginal cultural heritage consultant for advice on this issue.	Excavation Director, archaeologist or Aboriginal cultural heritage consultant/ Contractor's Project Manager	
7	Resume work		
7.1	Seek written clearance to resume project work from the Excavation Director, archaeologist or Aboriginal cultural heritage consultant. Clearance would only be given once all archaeological excavation or heritage recommendations and approvals (where required) are complete. Resumption of project work must be in accordance with all the relevant project and heritage approvals/determinations.	Contractor's Project Manager	
7.2	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.	Excavation Director, archaeologist or Aboriginal cultural heritage consultant/ Contractor's Project Manager	
7.3	If additional unexpected heritage items are discovered, this procedure must begin again from Step 1.	All	

4. Responsibilities

Table 3: Roles and responsibilities

Role	Responsibility
Contractor/Supervisor	<ul style="list-style-type: none"> Stop work immediately when an unexpected heritage item is encountered. Cordon off area until Contractor Environmental Manager/Excavation Director, archaeologist or Aboriginal cultural heritage consultant advises that work can recommence. Manage the process of the identification, protection and mitigation of impacts on the heritage item. Liaise with the Sydney Metro Project Manager, Environment Manager and Senior Heritage Advisor. Assist the Excavation Director, archaeologist or Aboriginal cultural heritage consultant with mitigation and statutory requirements. Complete Incident Report and review CEMP for any changes that may be required. Proposed amendments to the CEMP if any changes are required.
Contractor's Project Manager	Ensure all aspects of this Procedure are implemented. Advise the Contractor/Supervisor to recommence work if all applicable requirements have been satisfied and the Contractor Environmental Manager/ Excavation Director, archaeologist or aboriginal cultural heritage consultant has approved commencement of work.
Contractor's Excavation Director/ archaeologist or Aboriginal cultural heritage consultant	Provide expert advice to the Contractor and Sydney Metro Environment Manager on find identification, significance, mitigation, legislative procedures and requirements.
Environmental Representative	Ensure compliance with relevant approvals (new and existing) and the Construction Environment Management Plan.
Sydney Metro Environment Manager	Notify the Director Project Environment, Sustainability & Planning of find and help support Contractor with managing Incident Reporting.
Sydney Metro Director Project Environment, Sustainability & Planning	Notify the Executive Director Environment, Sustainability & Planning of the find and management actions.
Sydney Metro Senior Heritage Advisor	Provide expert advice to Sydney Metro Environment Manager and project as required.

5. Seeking advice

Advice on this Procedure should be sought from the Sydney Metro Environment Manager in the first instance. Contractors and delivery partners should ensure their own project environment managers are aware of and understand this Procedure.

Technical archaeological or heritage advice regarding an unexpected heritage item should be sought from a suitably qualified and experienced archaeologist/Aboriginal heritage consultant.

6. Related documents and references

Related documents and references

- [SM-20-00099495 Exhumation Management Procedure](#)
- [SM-17-00000096 Environmental Incident Classification and Reporting Procedure](#)
- [SM-21-00280658 Unexpected Heritage Find Recording Form](#)
- [SM-21-00280680 Archaeological Heritage Advice Checklist](#)
- [SM-21-00280708 Unexpected Heritage Discovery Notification Letter Template](#)
- 3TP-SD-015/7.0 Transport for NSW Guide to Environmental Control Map
- Roads and Maritime Services, November 2015, Unexpected Heritage Items Heritage Procedure 02
- [SM-17-00000203 Sydney Metro Glossary](#)
- Department of Environment, Climate Change and Water 2010, Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010
- Department of Environment, Climate Change and Water 2010, Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW
- Heritage Branch Department of Planning 2009, Assessing Significance for Historical Archaeological Sites and 'Relics'
- Heritage NSW 2022, [Notify discovery of a relic](#), <
https://www.environment.nsw.gov.au/topics/heritage/apply-for-heritage-approvals-and-permits/historical-archaeology/notify-discovery-of-a-relic#:~:text=Under%20Section%20146%20of%20the,section%2060%20approval%20in%20place>.

7. Superseded documents

Superseded documents

There are no documents superseded as a result of this document.

8. Document history

Version	Date of approval	Notes
1.1	June 2017	Incorporates Environmental Representative comments
1.2	-	Amends p13 step 8 reference to s146
1.3	-	Incorporates Planning Mods 1-4 including amended CoA E20
1.4	March 2018	Incorporates Environmental Representative comments
2.0	-	Removes SSI 15-7400 COA reference
3.0	-	Revises definitions
3.1	-	Revises procedure
3.2	-	Revises roles and responsibilities
3.3	-	Minor edits and corrections
4.0	16 August 2021	Revises definitions and procedure; references the Sydney Metro Exhumation Management Procedure v5 with amendments throughout for consistency with that document. Updates to related documents and references.
5.0	24 April 2023	Minor clarifications and updates to the process for the notification of the discovery of a relic under section 146 of the <i>Heritage Act 1977</i> to address a change in Heritage NSW's process.

Appendix A: Examples of unexpected heritage finds



Figure 2: Aboriginal stone artefacts found at the Wickham Transport Interchange, 2015



Figure 3: Aboriginal artefacts (shell material) found at the Wickham Transport Interchange, 2015



Figure 4: 1840s seawall and 1880s retaining wall uncovered at Balmain East, 2016



Figure 5: Sandstone pavers uncovered at Balmain East, 2016



Figure 6: Platform at Hamilton Station classified as a 'work' by the project archaeologist, Wickham Transport Interchange project, 2015



Figure 7: Sandstone flagging and cesspit, Wynyard Walk project, 2014



Figure 8: Chinese Ming Dynasty pottery and English porcelain/pottery dating back to the early nineteenth century, Wynyard Walk project, 2014



Figure 9: Pottery made by convict potter Thomas Ball during the early settlement period, Wynyard Walk project, 2014



Figure 10: 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)



Figure 11: Culturally modified stone discovered on Main Road 92, about two kilometres west of Sassafras. The remaining images shown 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 find recording form

Refer to [SM-21-00280658 Unexpected Heritage Find Recording Form](#).

Appendix C: Photographing unexpected heritage items

Photographs of unexpected finds in their current context (*in situ*) may assist archaeologists/Aboriginal heritage consultants 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 etc.) and a note describing the direction of the photograph.

C1: Context and detailed photographs

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

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

C2: Photographing distinguishing features



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

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



Figure 3: Ceramic bottle artefact with stamp.

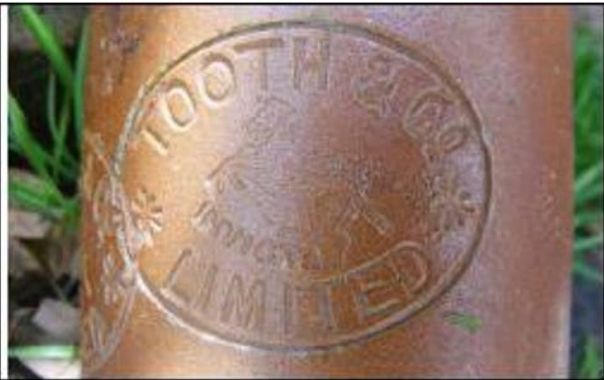


Figure 4: Detail of the stamp allows 'Tooth & Co Limited' to be made out. This is helpful to a specialist in gauging the artefact's origin, manufacturing date and likely significance.

C3: Photographing bones

The majority of bones found on site will be animal bones often requiring no further assessment (unless they are in archaeological context). However, if bones are human, the police must be contacted immediately (see [Appendix E](#) for detailed guidance). Taking quality photographs of the bones can often resolve this issue quickly. The project archaeologist can confirm if bones are human or non-human if provided with appropriate photographs.

Ensure that photographs of bones are not concealed by foliage (example below left, labelled 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 (example below right, labelled 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). The images below (labelled Figure 7, left and Figure 8, right) are examples of good photographs of bones that can easily be identified from the photograph alone. They show sufficient detail of the complete bone and the epiphysis.



Figure 7: Photograph showing complete bone.



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

Appendix D: Archaeological/heritage advice checklist

Refer to [SM-21-00280680 Archaeological Heritage Advice Checklist](#)



APPENDIX C CONSULTATION

CoA C5(e) Heritage Management Plan Consultation Phase 1 – Civils Works		
Government Agency/Stakeholder	Date consulted	Date of Response
Heritage NSW	31/08/2021	23/09/2021
SOPA	24/08/2021	03/09/2021
Place Management NSW	24/08/2021	13/09/2021
Burwood Council	24/08/2021	17/09/2021
City of Canada Bay Council	24/08/2021	30/08/2021
Inner West Council	24/08/2021	14/09/2021
Strathfield Council	24/08/2021	25/08/2021
City of Parramatta Council	24/08/2021	No response

CoA C5(e) Heritage Management Plan Consultation Phase 2 – Tunnelling Works		
Government Agency/Stakeholder	Date consulted	Date of Response
Sydney Olympic Park Authority	03/06/2022	17/06/2022
Inner West Council	03/06/2022	No response following reminder on: 24/6/2022 01/07/2022
City of Canada Bay Council	03/06/2022	09/06/2022
Burwood Council	03/06/2022	01/07/22
Strathfield Municipal Council	03/06/2022	No response following reminder on: 24/06/2022 01/07/2022
City of Parramatta Council	03/06/2022	No response following reminder on: 24/06/2022 01/07/2022
Heritage NSW	06/06/2022	07/06/2022
Place Management NSW	03/06/2022	08/06/2022

APPENDIX D COA C13(A) CONSULTATION

[REDACTED]

From: [REDACTED]
Sent: Friday, 8 October 2021 4:29 PM
To: [REDACTED]
Cc: [REDACTED] d [REDACTED]
Subject: RE: CTP Heritage Management Plan review

Thanks [REDACTED]

I confirm the heritage management approach in the CHMP is appropriate and is consistent with the heritage management documents that supported by the planning approval for the project.

Kind regards


[REDACTED]

[REDACTED]
Managing Director

ARTEFACT

Telephone: 9058 9660 **Mobile:** 0403565086
Address: Suite 56, Jones Bay Wharf, 26-32 Pirrama Rd, Pyrmont NSW 2009
Web: www.artefact.net.au

Cultural Heritage Management | Archaeology | Heritage Interpretation

 *We acknowledge the Traditional Custodians of Country in which we live and work, and pay our respects to them, their culture and their Elders past, present and future*

Notice: This message contains privileged and confidential information intended only for the use of the addressee. If you are not the intended recipient you must not disseminate, copy or take any action in reliance upon it. If you received this in error, please notify us immediately.

From: [REDACTED]
[REDACTED] Friday, 8 October 2021 2:33 PM
To: [REDACTED]
Subject: RE: CTP Heritage Management Plan review

Hi [REDACTED]

Please see attached with comments addressed as discussed earlier today.

Thanks,

[REDACTED]
Environmental Consultant, Land Air Water Environmental Management
Ph: 0432 089 430

