

Sydney Metro – Western Sydney Airport

Aboriginal Cultural Heritage Management Plan

August 2021

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Sydney Metro Unexpected Finds Procedure

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Glossary and terms and abbreviations

Term	Definition
AAR	Aboriginal Archaeological Report
Aboriginal archaeological potential	Area retains potential for the presence of surface and/or subsurface Aboriginal archaeological deposits. Areas of Aboriginal archaeological sensitivity, when compared to areas of low potential, will be expected to have higher artefact counts, densities and more complex assemblages. Archaeological features such as knapping floors and hearths are also more likely to occur in these areas. The integrity of deposit(s) will be dependent on the nature of localised land disturbance activities and geomorphic phenomena.
Aboriginal cultural heritage	The tangible (objects) and intangible (dreaming stories, song lines and places) cultural practices and traditions associated with past and present day Aboriginal communities
Aboriginal object	Any deposit, object or material evidence (not being a handicraft made for sale), including Aboriginal remains, relating to the Aboriginal habitation of NSW
Aboriginal place	Any place declared to be an Aboriginal place under Section 94 of the <i>National Parks and Wildlife Act 1974</i> (NSW)
ACHAR	Aboriginal Cultural Heritage Assessment Report
ACHMP	Aboriginal Cultural Heritage Management Plan
AEPR	Airports (Environment Protection) Regulations 1997
AHD	Australian Height Datum
AHIMS	Aboriginal Heritage Information Management System - a register of New South Wales (NSW) Aboriginal heritage information maintained by Environment, Energy and Science (EES), which is a group within the NSW Department of Planning, Industry and Environment
AHIP	Aboriginal Heritage Impact Permit
Artefact scatter	Artefact scatters are surface or subsurface manifestations of past Aboriginal activity at a given location. Flaked stone artefacts dominate archaeological assemblages from this site type. However, materials such as complete and fragmentary groundstone implements, charcoal, animal bone, shell and ochre may also occur. Artefact scatters contain more than one Aboriginal object.
ASIR	Aboriginal Site Impact Recording Form
ASR	Archaeological Salvage Report
ATSI	Aboriginal and Torres Strait Islander
ATSIHP Act	Aboriginal and Torres Strait Islander Heritage Protection Act 1984
BNI	Blacktown Native Institution
BP	Before Present is a term used by archaeologists and geologists referring to dates obtained by radiocarbon dating. The “present” in this case is not the present day, which is constantly changing and therefore is unable to be used as a

Term	Definition
	consistent point from which to measure. Instead the year 1950 was chosen to be used as the “present” for this term
CBD	Central Business District
CEMF	Construction Environmental Management Framework
CEMP	Construction Environmental Management Plan
CHL	Commonwealth Heritage List
CMA	Catchment Management Authorities
CMP	Conservation Management Plan
Construction footprint	The total extent of land required for the construction of the project, including ancillary facilities, services and land temporarily required for construction (incorporating construction elements such as compounds, access tracks and worksites)
CSSI	Critical State Significant Infrastructure
DEOH	Defence Establishment Orchard Hills
DPC	Department of Premier and Cabinet
DPIE	NSW Department of Planning, Industry and Environment. As of 1 July 2020 management of Aboriginal Cultural Heritage in NSW moved from DPIE to Heritage NSW in the Department of Premier and Cabinet (DPC)
Earthworks	All operations involved in loosening, excavating, placing, shaping and compacting soil or rock
EES	Environment, Energy and Science, which is a division within the NSW Department of Planning, Industry and Environment (DPIE). As of 1 July 2020 management of Aboriginal Cultural Heritage in NSW moved from DPIE to Heritage NSW in the Department of Premier and Cabinet (DPC)
EP&A Act	Environmental Planning and Assessment Act 1979
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
EPI	Environmental Planning Instruments
Erosion	A natural process where wind or water detaches a soil particle and provides energy to move the particle
Floodplain	An area of land which is inundated by floods up to and including the probable maximum flood event (i.e., flood prone land)
GPS	Global Positioning System
GSV	Ground Surface Visibility
Heritage item	Any place, building or object listed on a statutory heritage register
HHMP	Historical Heritage Management Plans
HMP	Heritage Management Plan
ILUA	Indigenous Land Use Agreements
Isolated artefact	A single Aboriginal object in a surface or subsurface context. More often than not, these comprise flaked stone artefacts.

Term	Definition
	However, groundstone implements (i.e., edge-ground hatchet heads axes, grindstones) and hammerstones are also common.
Impact	Influence or effect exerted by the project or other activity on the natural, built and community environment
Knowledge holders	For the purposes of this document, Aboriginal knowledge holders are those Aboriginal people who hold cultural knowledge in accordance with Fact Sheet 1 <i>What is Aboriginal cultural knowledge? Consultation requirements for proponents Part 6 National Parks and Wildlife Act 1974</i> . Knowledge holders can include organisations, individuals and Registered Aboriginal Parties and may hold knowledge about a range of issues related to Aboriginal culture, practice and heritage
LALC	Local Aboriginal Land Council
LEP	Local Environmental Plan
LGA	Local Government Area
NHL	National Heritage List
NNTT	National Native Title Tribunal
NPW Act	National Parks and Wildlife Act 1974
NTA	Native Title Act 1993
OEH	Office of Environment and Heritage
PAD	Potential Archaeological Deposit
Paleochannel	Ancient river systems eroded deeply into the landscape and infilled with saturated alluvial sediments
RAP	Registered Aboriginal Party
RNE	Register of the National Estate
road reserve	A legally defined area of land within which facilities such as roads, footpaths and associated features may be constructed for public travel
SEARs	Secretary's Environmental Assessment Requirements
SEPP SRD	State Environmental Planning Policy (State and Regional Development) 2011
SSI	State Significant Infrastructure
Sydney Metro - Western Sydney Airport (the project)	The Sydney Metro - Western Sydney Airport between St Marys and Western Sydney Aerotropolis comprises a new north-south metro railway around 23 kilometres in length, creating passenger rail access to Western Sydney Airport, the Aerotropolis and a connection with the T1 Western Line
Western Sydney Aerotropolis	This includes the land surrounding Western Sydney International (including Bringelly, Luddenham, Kemps Creek, Badgerys Creek and Rossmore) where commercial and residential property development is proposed, supported by key infrastructure. This will include commercial and industrial precincts, and agricultural land, as well as transport corridors
Western Sydney Airport	The Australian government-owned organisation responsible for delivering and operating Western Sydney International

1. Introduction

1.1 Scope and objectives of ACHMP

The Greater Sydney Region Plan (Greater Sydney Commission, 2018a) sets the vision and strategy for Greater Sydney to become a global metropolis of three unique and connected cities; the Eastern Harbour City, the Central River City and the Western Parkland City. The Western Parkland City incorporates the future Western Sydney International (Nancy-Bird Walton) Airport (hereafter referred to as Western Sydney International) and Western Sydney Aerotropolis (hereafter referred to as the Aerotropolis).

Sydney Metro – Western Sydney Airport (the project) is identified in the Greater Sydney Region Plan as a key element to delivering an integrated transport system for the Western Parkland City. The project will be located within the Penrith and Liverpool Local Government Areas (LGAs) and will involve the construction and operation of a new metro railway line around 23 kilometres in length between the T1 Western Line at St Marys in the north and the Aerotropolis in the south (the area to be called Bradfield). This will include a section of the alignment which passes through and provides access to Western Sydney International.

The project is characterised into components that are located outside Western Sydney International (off-airport) and components that are located within Western Sydney International (on-airport), to align with their different planning approval pathways required under State and Commonwealth legislation.

This ACHMP deals specifically with the management of Aboriginal heritage in the off-airport component of the construction footprint, excluding areas of Commonwealth land, and has been compiled with reference to Section 9.2 of the Sydney Metro-Western Sydney Airport Construction Environmental Management Framework (CEMF), which stipulates the minimum content requirements for project-related Heritage Management Plans (HMPs). It must be implemented for the duration of salvage activities and construction. It has been prepared to address:

- the Mitigation Measures (MMs) and Performance Outcomes (POs) detailed in the revised Aboriginal Cultural Heritage Assessment Report (ACHAR) for the project
- the requirements of Section 9.3 of the CEMF
- reflect the outcomes of consultation with Registered Aboriginal Parties (RAPs), the Department of Planning, Industry and Environment (DPIE) and Heritage NSW.

The primary objectives of this ACHMP are to:

- define procedures for the management of the known and potential Aboriginal heritage values of land within the off-airport component of the construction footprint, including mitigation measures for known sites
- identify further investigation requirements for identified areas of unverified Aboriginal archaeological sensitivity
- define responsibilities for the implementation of this ACHMP
- outline a risk management procedure for staff and contractors engaging in day-to-day operational activities that may bring them in to contact with Aboriginal cultural heritage
- define communication and decision-making processes relevant to the management of Aboriginal cultural heritage within the off-airport component of the construction footprint, including protocols for ongoing consultation with RAPs
- detail monitoring and reporting requirements for archaeological salvage and ongoing management.

1.2 Background

A Revised Aboriginal Cultural Heritage Assessment Report (ACHAR) for the project was finalised in April 2021. The ACHAR was prepared in accordance with relevant statutory guidelines including

Heritage NSW's *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011), *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW, 2010b) and *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010a). The ACHAR describes the Aboriginal cultural heritage values of the construction footprint, both tangible and intangible, and includes a series of mitigation measures for project-related impacts to these values. This ACHMP sets out how these mitigation measures are to be implemented for the off-airport component of the construction footprint, excluding areas of Commonwealth land.

Procedures for the management of Aboriginal cultural heritage within the on-airport component of the construction footprint are not covered by this plan. Sydney Metro will be preparing an Aboriginal Cultural Heritage Construction Environmental Management Plan (CEMP) for on-airport works in consultation with Western Sydney Airport, for approval by the Commonwealth. It is expected that this plan will be prepared pre-construction.

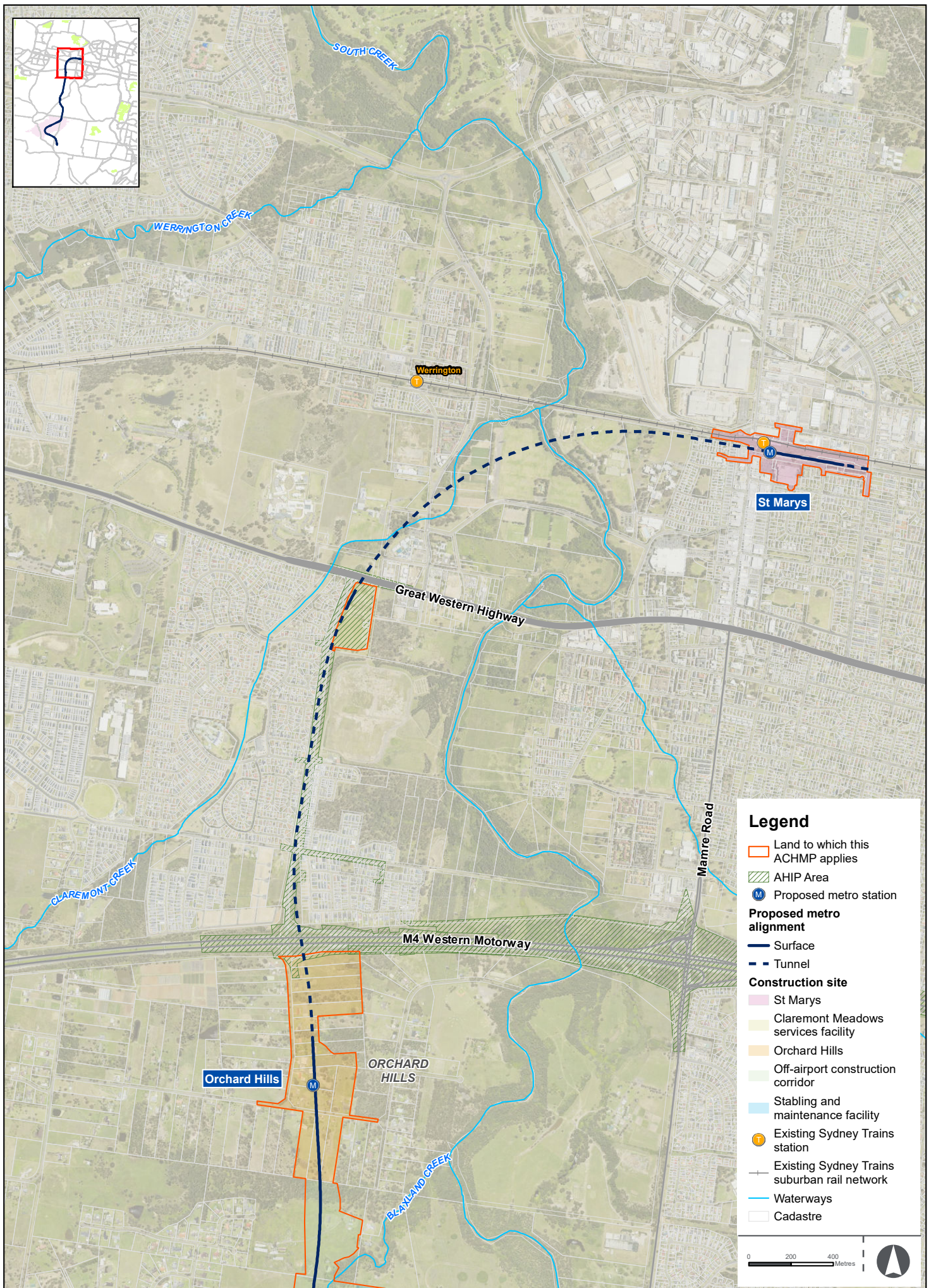
1.3 Land to which this ACHMP applies

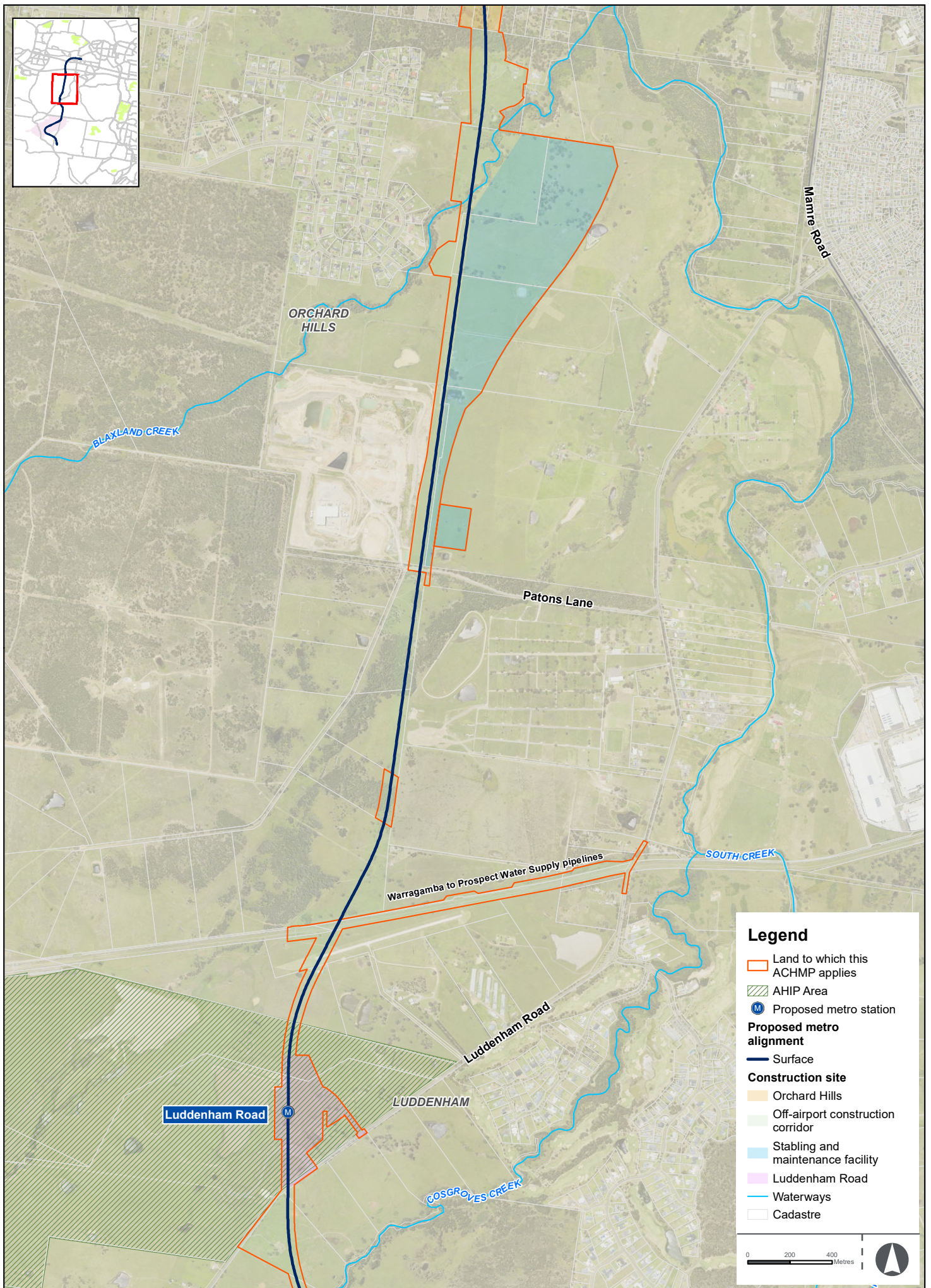
As indicated in Section 1.1, this ACHMP deals specifically with the management of Aboriginal heritage in the off-airport component of the construction footprint, excluding areas of Commonwealth land. Land to which this ACHMP applies is shown on Figure 1-1a to Figure 1-1d. The construction boundaries shown are indicative only and are subject to construction planning and detailed design. Any changes as a result of construction planning and/or detailed design will trigger a review of this ACHMP, in accordance with Section 8.5 of this plan.

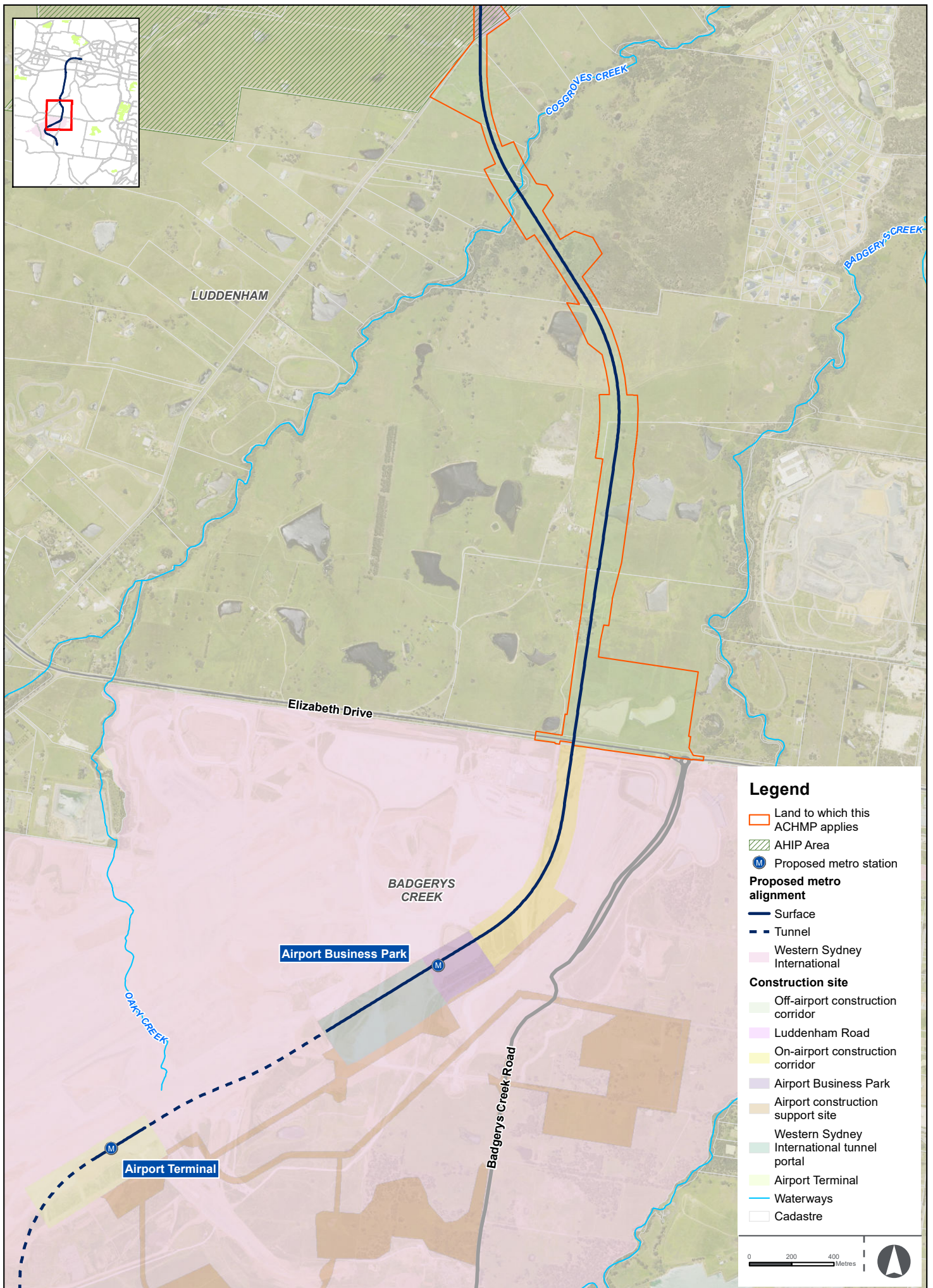
Known Aboriginal sites and areas of unverified Aboriginal archaeological sensitivity identified within the off-airport component of the construction footprint (as at February 2021, excluding areas of Commonwealth land) are discussed in Section 4.0. This ACHMP focuses on project-related impacts to these features. Land with no known Aboriginal heritage constraints (as at February 2021) but subject to the Sydney Metro Unexpected Heritage Finds Procedure is also discussed in Section 4.0.

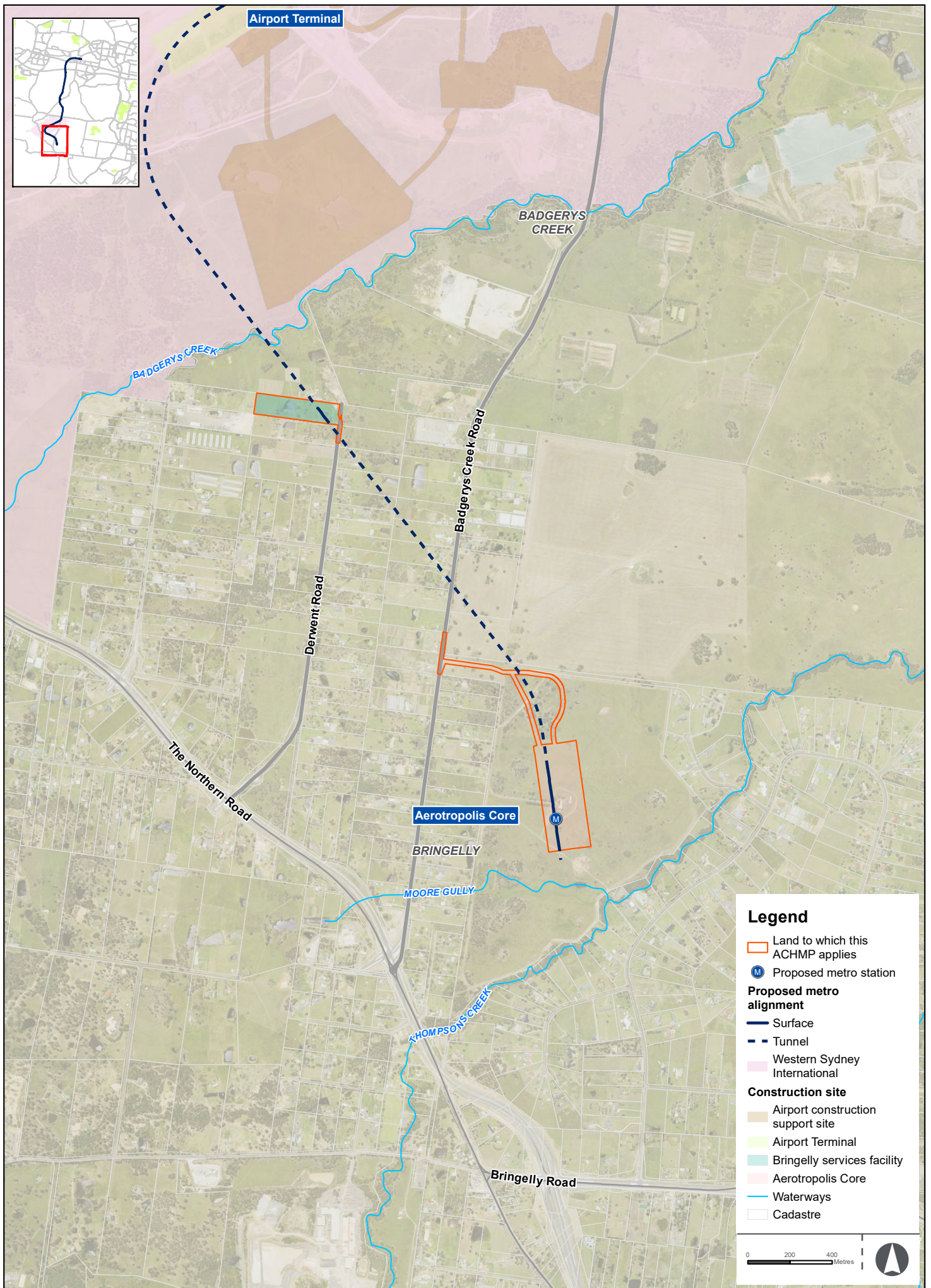
1.4 Works within existing approved AHIP areas

As per mitigation measure AH9, works within the bounds of existing Aboriginal Heritage Impact Permit (AHIP) areas, the locations of which are shown on Figure 1-1a to Figure 1-1d, will be undertaken in accordance with the conditions of those permits and with permission from the relevant AHIP holder.









Land to which this ACHMP applies

Figure 1-1d

Indicative only, subject to design development

1.5 Compliance matrices

As indicated in Section 1.1, this ACHMP has been prepared to address the MMs and POs detailed in the Revised ACHAR for the project, as well as the requirements outlined in Section 9.2 of the project CEMF. As the ACHMP will be implemented during the construction phase of the project, the wording of each mitigation measure has been amended to ensure committed language is used. This ACHMP also addresses the relevant CSSI conditions of approval from Application No. SSI 10051, as approved on 23 July 2021.

Compliance matrices for each element are detailed in Table 1-1, Table 1-2 and Table 1-3. Compliance with the relevant CSSI conditions of approval are detailed in Table 1-4.

Table 1-1 Compliance matrix for Revised performance outcomes

SEARS desired performance outcome	Project performance outcome	Timing	Relevant section (s) of this ACHMP
<p>The design, construction and operation of the project facilitates, to the greatest extent possible, the long term protection, conservation and management of the heritage significance of Aboriginal objects and places.</p> <p>The design, construction and operation of the project avoids or minimises impacts, to the greatest extent possible, on the heritage significance of Aboriginal objects and places.</p>	The heritage significance of Aboriginal objects and places are protected, conserved and/or managed in order to ensure the project does not diminish the story and cultural understanding associated with the objects and places of Aboriginal people in New South Wales.	Construction	Section 4.2.2 Chapter 5 Chapter 6
	Impacts on areas of archaeological sensitivity and significance are avoided or minimised, where practical.	Construction	Chapter 5
	The design of the project incorporates Aboriginal heritage interpretation and Aboriginal cultural design principles in consultation with Aboriginal knowledge holders.	Operation	Chapter 6

Table 1-2 Compliance matrix for Revised mitigation measures

Ref	Mitigation measure	Relevant section (s) of this ACHMP
AH1	Aboriginal stakeholder consultation will continue to be carried out in accordance with the <i>Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010</i> (NSW Office of Environment and Heritage, 2010). Registered Aboriginal Parties will be provided with opportunities to participate in survey and testing in unverified areas of Aboriginal archaeological sensitivity, archaeological salvage works and unexpected find assessments (if required)	Section 3.1
AH2	Areas of unverified Aboriginal archaeological sensitivity will be subject to archaeological survey, if required, and test excavation prior to construction in accordance with the Aboriginal Cultural Heritage Management Plan	Section 4.2
AH3	Not used	Not used

Ref	Mitigation measure	Relevant section (s) of this ACHMP
	Note: this mitigation measure was included in the exhibited EIS and required test excavation to be undertaken in ground-truthed areas. This has now been completed and the mitigation measure ID is now shown as not used.	
AH4	Not used Note: this mitigation measure was included in the exhibited EIS and required the preparation of an Aboriginal Cultural Heritage Management Plan following test excavation. This plan addresses this requirement and the mitigation measure ID is now shown as not used.	Not used
AH5	All Aboriginal objects recovered from the construction footprint as a result of test excavation and salvage works will be appropriately secured and under the care of the archaeological consultant while options for their long-term management, as determined through consultation with Registered Aboriginal Parties, are being investigated	Section 5.6
AH6	Aboriginal Heritage Information Management System site cards will be produced for all newly identified sites other than those identified on Commonwealth land. These will be submitted to the Aboriginal Heritage Information Management System Registrar as soon as practicable within one month of being identified. Newly identified sites within the revised boundaries of Defence Establishment Orchard Hills (Commonwealth land) will be reported to the Department of Defence to be managed in accordance with the relevant provisions of the <i>Defence Establishment Orchard Hills Heritage Management Plan</i>	Section 4.2
AH7	Aboriginal Site Impact Recording forms for sites subject to archaeological salvage will be submitted to the Aboriginal Heritage Information Management System register within one month of the completion of salvage works within their bounds	Section 5.7
AH8	Not relevant to this plan Note: this mitigation measure has been excluded from this plan as it applies to the management of suspected human remains and unexpected Aboriginal cultural heritage objects within the on-airport component of the construction footprint. Procedures for the management of such finds within the off-airport component of the construction footprint are addressed within this plan.	Not relevant to this plan
AH9	Works within the bounds of existing Aboriginal Heritage Impact Permit areas will be undertaken in accordance with the conditions of those permits and with permission from the relevant Aboriginal Heritage Impact Permit holder. Works undertaken within the revised boundaries on Defence Establishment Orchard Hills (Commonwealth land) will be undertaken in accordance with the <i>Defence Establishment Orchard Hills Heritage Management Plan</i>	Section 1.4
AH10	Impacted Aboriginal Sites will be managed in accordance with the Aboriginal Cultural Heritage Management Plan	Section 4.1.2; Chapter 5
AH11	Measures will be implemented to ensure that Aboriginal sites located outside of the construction footprint, but within 100m of it, will not be affected by construction activities	Section 4.2.2

Ref	Mitigation measure	Relevant section (s) of this ACHMP
AH12	An Archaeological Salvage Report detailing the results of the archaeological salvage program (including the results of any post-excavation analyses) will be completed within two years of the completion of the fieldwork component of the program. The Archaeological Salvage Report will be consistent with the best practice guidelines suggested by the <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW</i> (DECCW 2010b) and the <i>Aboriginal Cultural Heritage Standards & Guidelines Kit</i> (NSW NPWS 1997)	Section 5.5
AH13	Measures to manage and protect the identified cultural values will be developed collaboratively through a consultation process with knowledge holders to inform construction planning and design development	Section 3.1.3
OAH1	A heritage interpretation strategy will be prepared for the project in consultation with Aboriginal knowledge holders. Aboriginal heritage interpretation will be developed with reference to the findings of the Aboriginal Cultural Heritage Assessment Report and Aboriginal Archaeological Report, to promote understanding and awareness of cultural heritage values	Section 6

Table 1-3 Compliance matrix for CEMF requirements

CEMF reference	Requirement	Relevant section (s) of this ACHMP
Section 9.2 a. i	Evidence of consultation with Registered Aboriginal Parties	Section 2.2.2
Section 9.2 a.ii	Identify initiatives that will be implemented for the enhancement of heritage values and minimisation of heritage impacts, including procedures and processes that will be used to implement and document heritage management initiatives	This Plan
Section 9.2 a. iii	The heritage mitigation measures as detailed in the planning approval documentation	See Table 1-2 for where EIS mitigation measures are addressed
Section 9.2 a. iv	The responsibilities of key project personnel with respect to the implementation of the plan	Section 1.8
Section 9.2 a v	Procedures for interpretation of heritage values uncovered through salvage or excavation during detailed design	Chapter 3 Chapter 5 Heritage Interpretation Strategy
Section 9.2 a vi	Procedures for undertaking salvage or excavation of heritage relics or sites (where relevant), consistent with and any recordings of heritage relics prior to works commencing that would affect them	Chapter 4
Section 9.2 a vii	Details for the short and / or long term management of artefacts or movable heritage	Section 4.6
Section 9.2 a viii	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)	This Plan

CEMF reference	Requirement	Relevant section (s) of this ACHMP
Section 9.2 a ix	Procedures for unexpected heritage finds, including procedures for dealing with human remains	Section 3.4 Section 3.5
Section 9.2 a x	Heritage monitoring requirements;	Chapter 7
Section 9.2 a xi	Compliance record generation and management.	Chapter 7
Section 9.2 b	The Contractor's regular inspections will include checking of Aboriginal heritage mitigation measures.	Section 7.1
Section 9.2 c i	Inspections undertaken in relation to heritage management measures;	Section 7.1
Section 9.2 c ii	Archival recordings undertaken of any heritage item	Section 3.2.2 – recording following survey Section 4.7 - Aboriginal Site Impact Recording
Section 9.2 c iii	Unexpected finds and stop work orders	Section 3.4 Section 3.5
Section 9.2 c iv	Records of any impacts avoided or minimised through design or construction methods	
Section 9.3 a i	Induction courses for site workers will include training in the identification of Aboriginal artefacts and management of Aboriginal heritage values	Section 7.1
Section 9.3 a ii	Any heritage item not affected by the works will be retained and protected throughout construction	Section 4.2.2
Section 9.3 a iii	During construction undertake professional archaeological investigation, excavation, and reporting of any historical Indigenous heritage sites of state significance which will be affected. Reporting may be completed as construction progresses	Chapter 5
Section 9.3 a iv	Undertake archival recordings of all non-Indigenous heritage items affected by the works prior to commencement of works; and	Not applicable
Section 9.3 a v	Implement unexpected heritage find procedures for Indigenous and non-Indigenous heritage items	Section 4.5 Section 4.6

Table 1-4 Compliance with relevant CSSI conditions of approval

Reference	CSSI Condition of Approval	Relevant section (s) of this ACHMP
E28	All reasonable steps must be taken so as not to harm, modify or otherwise impact Aboriginal objects or places of cultural significance except as authorised by this approval.	Chapter 4
E29	The Registered Aboriginal Parties (RAPs) must be kept regularly informed about the CSSI. The RAPs must continue to be provided with the opportunity to be consulted about the Aboriginal cultural heritage management requirements of the CSSI throughout construction.	Section 3.2
E30	The Aboriginal Cultural Heritage Management Plan included in the documents listed in Condition A1 must be updated to include: (a) a methodology for the completion of pedestrian surveys for all areas within the project footprint yet to be surveyed;	Section 4.2.2

Reference	CSSI Condition of Approval	Relevant section (s) of this ACHMP
	<p>(b) procedures for undertaking further test excavation and, if necessary, salvage excavations prior to the commencement of works in areas subject to further test excavation;</p> <p>(c) mapping that clearly outlines all areas yet to be subject to survey, test excavations, and salvage excavations;</p> <p>(d) a procedure to update mapping following the completion of survey, test excavations, and salvage excavations that detail the archaeological works conducted across the project footprint;</p> <p>(e) a procedure for updating the predictive model following the identification of new Aboriginal heritage items; and</p> <p>(f) a procedure to report and update the effectiveness of the Aboriginal Cultural Heritage Management Plan following the completion of survey, test excavation activities or significant artefact finds.</p> <p>The updated Plan must be submitted to the Planning Secretary for information prior to works in areas identified for further test excavations. Note: Salvage excavations in the areas identified for salvage in documents in Condition A1, may occur prior to additional test excavations occurring.</p>	<p>Sections 4.2.3 and 4.3</p> <p>Figures 4-1a to 4-1d</p> <p>Section 5.8</p> <p>Section 5.8</p> <p>Section 8.5</p>
E31	The updated Aboriginal Cultural Heritage Management Plan must be implemented for the duration of salvage activities and construction.	Section 1.1
E32	<p>At the completion of Aboriginal cultural heritage test and salvage excavations, an Aboriginal Cultural Heritage Excavation Report(s) must be prepared by a suitably qualified person. The Aboriginal Cultural Heritage Excavation Report(s) must:</p> <p>(a) be prepared in accordance with the <i>Guide to Investigation, assessing and reporting on Aboriginal cultural heritage in NSW</i>, OEH 2011 and the <i>Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales</i>, DECCW 2010; and</p> <p>(b) document the results of the archaeological test excavations and any subsequent salvage excavations (with artefact analysis and identification of a final repository for finds).</p> <p>The RAPs must be given a minimum of 28 days to consider the report(s) and provide comments before the report(s) is finalised. The final report(s) must be provided to the Planning Secretary, Heritage NSW, the relevant Councils, Gandangara LALC and Deerubbin LALC, the RAPs and local libraries within 24 months of the completion of the Aboriginal archaeological excavations (both test and salvage).</p>	Section 5.8
E33	Where previously unidentified Aboriginal objects or places of cultural significance are discovered, all work must immediately stop in the vicinity of the affected area. Works potentially affecting the previously unidentified objects or places must not recommence until Heritage NSW has been informed. The measures to consider and manage this process must be specified in the Unexpected Heritage Finds and Human Remains Procedure required by Condition E34 and include registration in the Aboriginal Heritage Information Management System (AHIMS), where required.	<p>Section 4.5</p> <p>Section 4.6</p>
E34	An Unexpected Heritage Finds and Human Remains Procedure must be prepared to manage unexpected heritage finds (heritage	<p>Section 4.5</p> <p>Section 4.6</p>

Reference	CSSI Condition of Approval	Relevant section (s) of this ACHMP
	items and values) in accordance with any guidelines and standards prepared by the Heritage Council of NSW or Heritage NSW.	
E35	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 4.5 Section 4.6

1.6 Key project features

Key operational features of the project are shown on Figure 1-3 and will include:

- around 4.3 kilometres of twin rail tunnels (generally located side by side) between St Marys (the northern extent of the project) and Orchard Hills
- a cut-and-cover tunnel around 350 metres long (including tunnel portal), transitioning to an in-cutting rail alignment south of the M4 Western Motorway at Orchard Hills
- around 10 kilometres of rail alignment between Orchard Hills and Western Sydney International, consisting of a combination of viaduct and surface rail alignment
- around two kilometres of surface rail alignment within Western Sydney International
- around 3.3 kilometres of twin rail tunnels (including tunnel portal) within Western Sydney International
- around three kilometres of twin rail tunnels between Western Sydney International and the Aerotropolis Core (the area to be called Bradfield)
- six new metro stations:
 - four off-airport stations:
 - St Marys (providing interchange with the T1 Western Line)
 - Orchard Hills
 - Luddenham Road
 - Aerotropolis Core
 - two on-airport stations:
 - Airport Business Park
 - Airport Terminal
- grade separation of the track alignment at key locations including:
 - where the alignment interfaces with existing infrastructure such as the Great Western Highway, M4 Western Motorway, Lansdowne Road, Patons Lane, the Warragamba to Prospect Water Supply Pipelines, Luddenham Road, the future M12 Motorway, Elizabeth Drive, Derwent Road and Badgerys Creek Road
 - crossings of Blaxland Creek, Cosgroves Creek, Badgerys Creek and other small waterways to provide flood immunity for the project

- modifications to the existing Sydney Trains station and suburban rail network at St Marys (where required) to support interchange and customer transfer between the new metro station and the T1 Western Line
- a stabling and maintenance facility and operational control centre located to the south of Blaxland Creek and east of the proposed metro track
- new pedestrian, cycle, park-and-ride and kiss-and-ride facilities, public transport interchange infrastructure, road infrastructure and landscaping as part of the station precincts.

The project will also include:

- turnback track arrangements (turnbacks) at St Marys and Aerotropolis Core to allow trains to turn back and run in the opposite direction
- additional track stubs to the east of St Marys Station and south of the Aerotropolis Core Station to allow for potential future extension of the line to the north and south respectively without impacting future metro operations
- an integrated tunnel ventilation system including services facilities at Claremont Meadows and at Bringelly
- all operational systems and infrastructure such as crossovers, rail sidings, signalling, communications, overhead wiring, power supply, lighting, fencing, security and access tracks/paths
- retaining walls at required locations along the alignment
- environmental protection measures such as noise barriers (if required), on-site water detention, water quality treatment basins and other drainage works.

1.6.1 Off-airport project components

The off-airport components of the project will include the track alignment and associated operational systems and infrastructure north and south of Western Sydney International, four metro stations, the stabling and maintenance facility, two service facilities and a tunnel portal.

1.7 Project construction

The proposed construction activities that will be undertaken for the project include:

- enabling works
- main construction works including:
 - tunnelling and associated works
 - corridor and associated works
 - stations and associated works
 - ancillary facilities and associated works
- rail systems fitout
- finishing works and testing and commissioning.

These activities are described in more detail in the project EIS.

The indicative timeframe for the project is for main construction to commence in 2021 and take about five years to complete, subject to planning approval, with project opening anticipated to align with when Western Sydney International opens for passenger services. An indicative main construction program is provided in Figure 1-2.

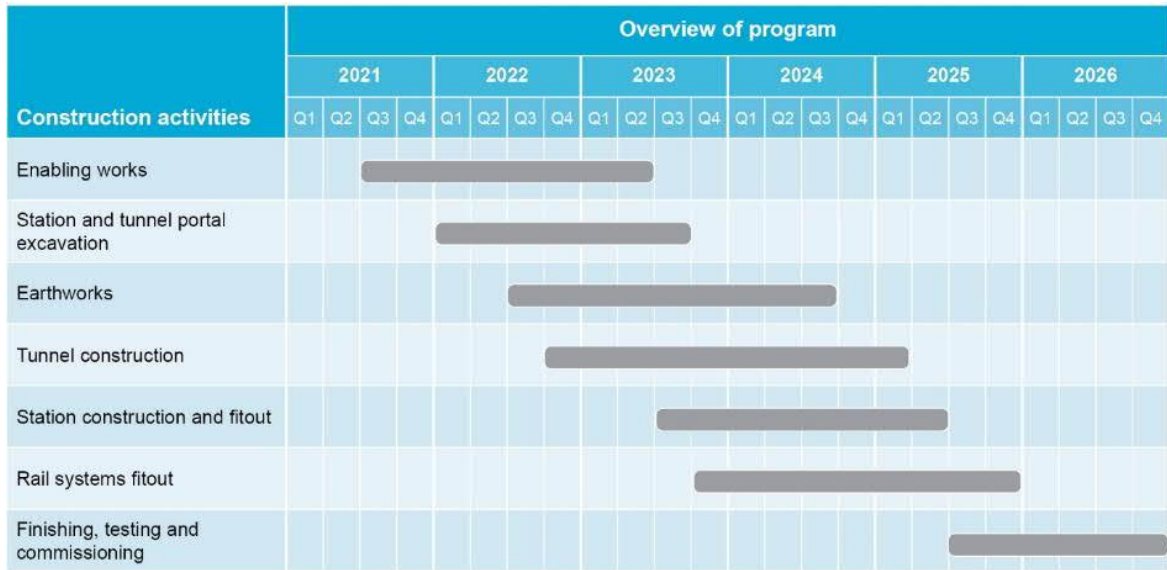


Figure 1-2 Indicative main construction program

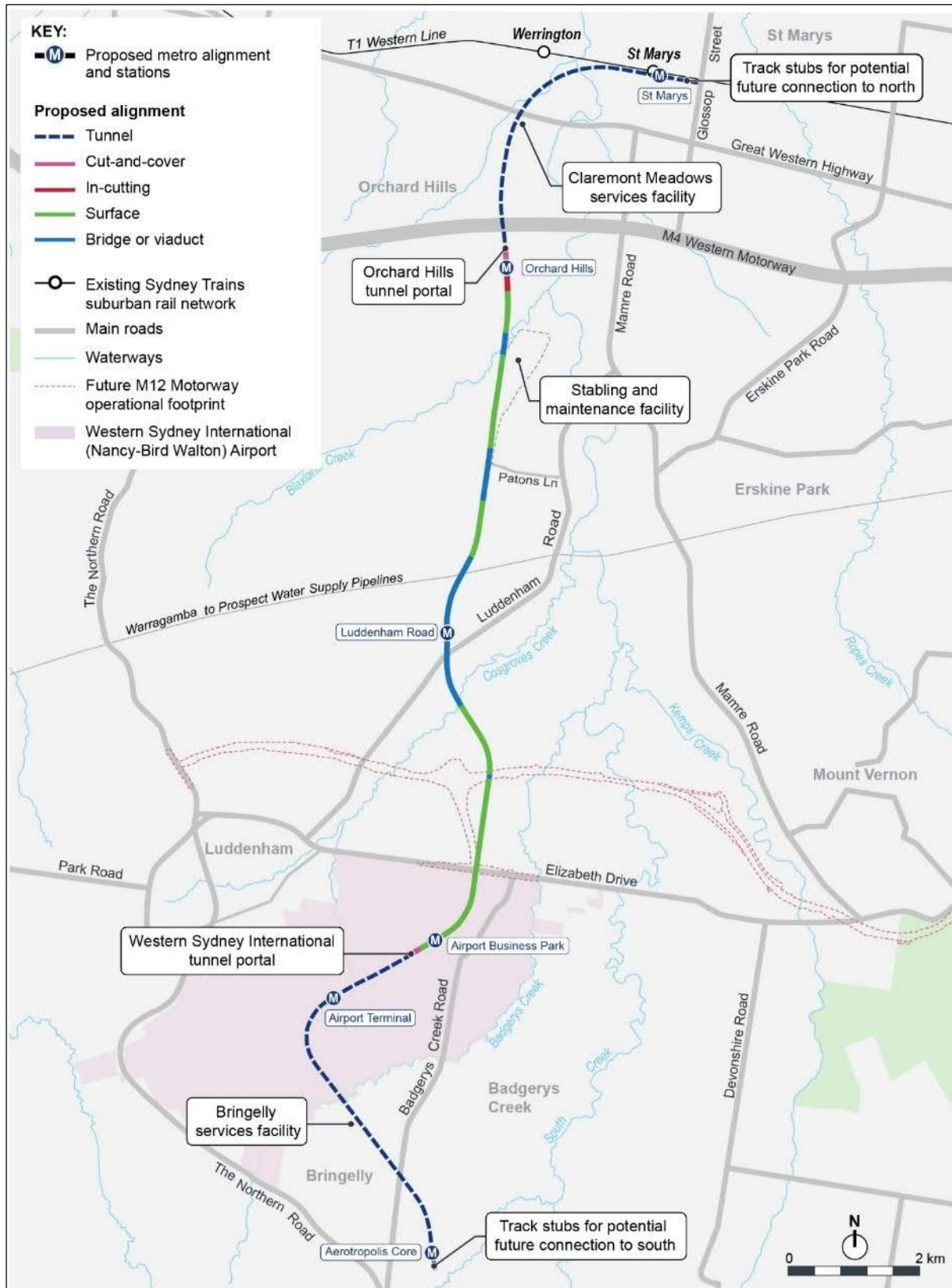


Figure 1-3 Project alignment and key features

1.8 ACHMP roles and responsibilities

Specific responsibilities for the implementation of this ACHMP and its associated management actions are presented in Table 1-5.

Table 1-5 ACHMP roles and responsibilities

Action	Personnel
Implementation of this ACHMP	Principal Contractor's Project Manager and Senior Environmental Officer
Protective Fencing and Signage	Principal Contractor's Senior Environmental Officer and Cultural Heritage Advisor
Further investigations (survey and test excavation within areas of unverified Aboriginal archaeological sensitivity)	Principal Contractor's Senior Environmental Officer, Cultural Heritage Advisor and RAPs
Reporting for further investigations	Principal Contractor's Cultural Heritage Advisor
Salvage Works including: <ul style="list-style-type: none"> • Surface Collection • Salvage Excavations • Geomorphological Assessment 	Principal Contractor's Senior Environmental Officer, Cultural Heritage Advisor and RAPs
Reporting for Archaeological Salvage Program	Principal Contractor's Cultural Heritage Advisor
Care and Control Agreement	Principal Contractor's Senior Environmental Officer, Cultural Heritage Advisor and RAPs
Management of Previously Unrecorded Aboriginal Objects	Principal Contractor's Senior Environmental Officer, Cultural Heritage Advisor and RAPs
Aboriginal Heritage Awareness Training	Principal Contractor's Senior Environmental Officer, Cultural Heritage Advisor and RAPs
ACHMP Review and Update (if required)	Principal Contractor's Project Manager and Senior Environmental Officer

2. Legislative, planning and policy context

This section describes legislation, planning instruments and policy documents considered during the development of this ACHMP.

2.1 Off-airport legislative and policy context

2.1.1 Commonwealth legislation and policy

Environment Protection and Biodiversity Conservation Act 1999

The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) took effect on 16 July 2000. Under Part 9 of the EPBC Act, any action that is likely to have a significant impact on a matter of national environmental significance may only progress with approval of the Commonwealth Minister for the Environment. An action is defined as a project, development, undertaking, activity, series of activities, or alteration. An action will also require approval if:

- It is undertaken on Commonwealth land and will have or is likely to have a significant impact
- It is undertaken outside Commonwealth land and will have or is likely to have a significant impact on the environment on Commonwealth land
- It is undertaken by the Commonwealth and will have or is likely to have a significant impact.

The EPBC Act defines ‘environment’ as incorporating both natural and cultural environments and therefore includes Aboriginal heritage items. Under the EPBC Act, protected heritage items are listed on the National Heritage List (NHL) (items of significance to the nation) or the Commonwealth Heritage List (CHL) (items belonging to the Commonwealth or its agencies). These two lists replaced the Register of the National Estate (RNE). Statutory references to the RNE in the EPBC Act were removed on 19 February 2012. However, the RNE remains an archive of over 13,000 heritage places throughout Australia.

A search of the Australian Heritage Database, which includes places listed on the World Heritage List (WHL), National Heritage List (NHL), Commonwealth Heritage List (CHL), Register of the National Estate (RNE) and List of Overseas Places of Historic Significance to Australia, was undertaken in February 2021, with no relevant listings identified for the land covered by this ACHMP.

Aboriginal and Torres Strait Islander Heritage Protection Act 1984

The *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (the ATSIHP Act) provides for the preservation and protection of places, areas and objects of particular significance to Aboriginal Australians. The stated purpose of the ATSIHP Act is the “*preservation and protection from injury or desecration of areas and objects in Australia and in Australian waters, being areas and objects that are of particular significance to Aboriginals in accordance with Aboriginal tradition*” (Part I, Section 4).

Under the Act, ‘*Aboriginal tradition*’ is defined as “*the body of traditions, observances, customs and beliefs of Aboriginals generally or of a particular community or group of Aboriginals, and includes any such traditions, observances, customs or beliefs relating to particular persons, areas, objects or relationships*” (Part I, Section 3). A ‘*significant Aboriginal area*’ is an area of land or water in Australia that is of “*particular significance to Aboriginals in accordance with Aboriginal tradition*” (Part I, Section 3). A ‘*significant Aboriginal object*’, on the other hand, refers to an object (including Aboriginal remains) of like significance.

For the purposes of the ATSIHP Act, an area or object is considered to have been injured or desecrated if:

- a. In the case of an area:
 - i. it is used or treated in a manner inconsistent with Aboriginal tradition
 - ii. the use or significance of the area in accordance with Aboriginal tradition is adversely affected
 - iii. passage through, or over, or entry upon, the area by any person occurs in a manner inconsistent with Aboriginal tradition

b. in the case of an object:

i. it is used or treated in a manner inconsistent with Aboriginal tradition.

The ATSIHP Act can override State and Territory laws in situations where a State or Territory has approved an activity, but the Commonwealth Minister prevents the activity from occurring by making a declaration to protect an area or object. However, the Minister can only make a decision after receiving a legally valid application under the ATSIHP Act and, in the case of long-term protection, after considering a report on the matter. Before making a declaration to protect an area or object in a State or Territory, the Commonwealth Minister must consult the appropriate minister of that State or Territory (Part 2, Section 13).

No declarations relevant to the land covered by this ACHMP have been made under the ATSIHP Act.

Native Title Act 1993

The *Native Title Act 1993* (NTA) provides for the recognition and protection of native title for Aboriginal peoples and Torres Strait Islanders. The NTA recognises native title for land over which native title has not been extinguished and where persons able to establish native title are able to prove continuous use, occupation or other classes of behaviour and actions consistent with a traditional cultural possession of those lands. It also makes provision for Indigenous Land Use Agreements (ILUA) to be formed as well as a framework for notification of Native Title Stakeholders for certain future acts on land where Native Title has not been extinguished.

Searches of the *National Native Title Register*, *Register of Native Title Claims* and *Register of Indigenous Land Use Agreements* were undertaken in February 2021 for the Penrith and Liverpool LGAs. These searches returned no relevant native title claims, determinations or land use agreements.

2.1.2 State legislation and policy

Environmental Planning and Assessment Act 1979

The project is State Significant Infrastructure (SSI) under section 5.12 of the EP&A Act and was declared Critical State Significant Infrastructure (CSSI) under section 5.13 of the EP&A Act on 16 December 2020. Accordingly, the project is subject to assessment and approval by the NSW Minister for Planning and Public Spaces under Division 5.2 of the EP&A Act.

The Sydney Metro – Western Sydney Airport Environmental Impact Statement (Sydney Metro, 2020a) was prepared to support Sydney Metro's application for approval as State significant infrastructure to the Minister for Planning and Public Spaces under Section 5.15 of the EP&A Act. While the CSSI approval process excludes the on-airport project, the Environmental Impact Statement included an assessment of all project components (off-airport and on-airport).

The Environmental Impact Statement was placed on public exhibition by the NSW Department of Planning, Industry and Environment (DPIE) for a period of six weeks from 21 October 2020 to 2 December 2020. The Submissions Report was lodged on 19 April 2021 and CSSI approval was granted on 23 July 2021 (Application No. SSI 10051).

Pursuant to Division 5.2, Subdivision 4, Section 5.23(1)(d) of the EP&A Act, AHIPs are not required for approved SSI projects, although pre-existing AHIPs are referred to in the mitigation measures in this document, under AH9 in Table 1-2. Impacts to Aboriginal heritage values associated with approved SSI projects are typically managed under ACHMPs. This ACHMP will be statutorily binding upon Project Approval.

National Parks and Wildlife Act 1974

The *National Parks and Wildlife Act 1974* (NPW Act), administered by Heritage NSW, is the primary legislation for the protection of Aboriginal cultural heritage in NSW. The NPW Act gives the Secretary of the Department of the Premier and Cabinet (DPC) responsibility for the proper care, preservation and protection of 'Aboriginal objects' and 'Aboriginal places', defined under the Act as follows:

- an *Aboriginal object* is any deposit, object or material evidence (that is not a handicraft made for sale) relating to Aboriginal habitation of NSW, before or during the occupation of that area by persons of non-Aboriginal extraction (and includes Aboriginal remains)

- an *Aboriginal place* is a place declared so by the Minister administering the NPW Act because the place is or was of special significance to Aboriginal culture. It may or may not contain Aboriginal objects.

Part 6 of the NPW Act provides specific protection for Aboriginal objects and places by making it an offence to harm them and includes a 'strict liability offence' for such harm. A 'strict liability offence' does not require someone to know that it is an Aboriginal object or place they are causing harm to in order to be prosecuted. Defences against the 'strict liability offence' in the NPW Act include the carrying out of certain 'Low Impact Activities', prescribed in Clause 80B of the *National Parks and Wildlife Amendment Regulation 2010* (NPW Regulation), and the demonstration of due diligence.

An Aboriginal Heritage Impact Permit (AHIP) issued under Section 90 of the NPW Act is required if impacts to Aboriginal objects and/or places cannot be avoided. An AHIP is a defence to a prosecution for harming Aboriginal objects and places if the harm was authorised by the AHIP and the conditions of that AHIP were not contravened. However, as indicated above, pursuant to Division 5.2, Subdivision 4, Section 5.23(1)(d) of the EP&A Act, AHIPs are not required for approved SSI projects.

Penrith Local Environmental Plan (LEP) 2010 and Liverpool LEP 2008

The project crosses the Penrith and Liverpool LGAs. The relevant Environmental Planning Instruments (EPIs) for these LGAs are the Penrith LEP 2010 and the Liverpool LEP 2008.

Schedule 5 of the Penrith LEP 2010 and the Liverpool LEP 2008 provide lists of heritage items within each LGA. No Aboriginal sites are listed within the off-airport component of the construction footprint within either schedule. It is noted that approved CSSI and SSI projects are exempt from the provisions of LEPs.

Heritage NSW *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010a)

The purpose of Heritage NSW's *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (the Consultation Requirements) is to establish the requirements for Aboriginal community consultation as part of the Aboriginal heritage assessment process in NSW. The Consultation Requirements are based on the guiding principles that Aboriginal people:

- are the primary source of information about the value of their heritage and how this is best protected and conserved
- must have an active role in any Aboriginal cultural heritage planning process
- must have early input into the assessment of the cultural significance of their heritage and its management so they can continue to fulfil their obligations towards their heritage
- must control the way in which cultural knowledge and other information relating specifically to their heritage is used, as this may be an integral aspect of its heritage value.

The Consultation Requirements have been developed to ensure that Aboriginal people have the opportunity to improve assessment outcomes by:

- providing relevant information about the cultural significance and values of the Aboriginal object(s) and/or place(s)
- influencing the design of the method to assess cultural and scientific significance of Aboriginal object(s) and/or place(s)
- actively contributing to the development of cultural heritage management options and recommendations for any Aboriginal object(s) and/or place(s) within the proposed project area
- commenting on draft assessment reports before they are submitted by the proponent to Heritage NSW.

Under the Consultation Requirements, proponents are expected to comply with and progress through four stages of consultation, the key objectives of which are to:

1. Identify, notify and register Aboriginal people who hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects and/or places in the area of the proposed project (*Stage 1 - notification if project proposal and registration of interest*)
2. Inform Aboriginal people about the nature and scope of the proposal (*Stage 2 -presentation of information about the proposed project*)
3. Understand the cultural values of the area and develop appropriate management/mitigation options (*Stage 3 -gathering information about cultural significance*)
4. Prepare and finalise an ACHAR with input from RAPs (*Stage 4 – review of draft cultural heritage assessment report*).

2.1.3 Project-specific policy

Sydney Metro-Western Sydney Airport Construction Environmental Management Framework (project CEMF)

The project CEMF is a Sydney Metro project framework that has been adapted specifically to set out the environmental, stakeholder and community management requirements for construction of the project. It provides a linking document between the planning approval documentation and the construction environmental management documentation to be developed by the Principal Contractors relevant to their scope of works.

Sydney Metro Principal Contractors for Sydney Metro Western Sydney Airport (SMWSA) will be required to implement and adhere to the requirements of the project CEMF. The project CEMF will form part of the planning approval documentation and will be included as a contract document in all design and construction contracts for the project.

Section 9 of the CEMF provides a framework for the management of project-related interactions with Aboriginal and European heritage values, both in on-airport and off-airport contexts. As indicated in Section 1.1, this ACHMP has been compiled with reference to Section 9.2 of the CEMF, which details the minimum content requirements for project-related HMPs.

Overarching Community Communication Strategy

The Overarching Community Communication Strategy (OCCS) has been prepared to guide Sydney Metro's approach to stakeholder and community liaison including engagement with communities, stakeholders and businesses. The plan is intended to be used as a framework for community engagement across all Sydney Metro projects and contracts. The OCCS considers all work activities and packages for Sydney Metro and its projects for the duration of work, and 12 months following the completion of construction. Sydney Metro is responsible for the development and implementation of the OCCS to ensure there is a coordinated approach to stakeholder, business and community liaison across the entire program of work for Sydney Metro.

The OCCS outlines Sydney Metro's proposed approach to working with Aboriginal and Torres Strait Islander (ATSI) communities and has been developed to align with the Transport for NSW's Reconciliation Action Plan (TfNSW's RAP). As stipulated in the OCCS, Sydney Metro are committed to working collaboratively and respectfully with ATSI communities to improve accessibility and outreach, and to deliver meaningful outcomes for these communities.

DPIE Environmental Management Plan Guideline

DPIE's Environmental Management Plan Guideline identifies the information that should be included in Environmental Management Plans (EMPs) prepared for state significant projects. Section 3 of the guideline outlines the minimum content required for an EMP and links to an 'EMP preparation checklist', provided in Appendix A of the same document.

This ACHMP has been compiled with reference to both components of DPIE's EMP Guideline.

3. Community and stakeholder engagement

In accordance with AH1, Aboriginal stakeholder consultation will continue to be carried out in accordance with the Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (NSW Office of Environment and Heritage, 2010). The ways in which this will be implemented are discussed below.

3.1 Aboriginal community consultation

3.1.1 Consultation process for the EIS

Aboriginal community consultation for the project EIS was initiated in May 2019 and undertaken in accordance with Heritage NSW's *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010a). A total of 68 Aboriginal parties registered their interest in being consulted for the project.

Key consultation activities for the Environmental Impact Statement, detailed in the Revised ACHAR for the project, included:

- Registered Aboriginal Party (RAP) review of the project's draft assessment methodology
- RAP participation in archaeological field investigations
- in-field discussions regarding cultural heritage values
- phone and email discussions regarding cultural heritage values
- RAP reviews of the Revised ACHAR and Aboriginal Archaeological Report (AAR), including proposed mitigation measures.

3.1.2 Consultation process for this ACHMP

A draft of this ACHMP, along with drafts of the project's Revised ACHAR and AAR, was provided to all RAPs for comment on 17 February 2021. A total of 13 responses were received from RAPs, although one of these was relevant for 42 RAPs operating under Murrumbidgee Administrative Services. RAP responses are summarised in Table 3-1, with relevant sections of the ACHMP cited where appropriate. Comments provided relate to all three documents. Full responses are provided in Appendix H of the Revised ACHAR.

Twelve RAP respondents indicated that they supported the draft ACHMP, as well as the Revised ACHAR and AAR. The thirteenth respondent provided comments on the documents but did not directly address this point.

Two RAPs raised concerns over the issue of the draft ACHMP's wording around Welcomes to Country, with one advising that the ACHMP should not mandate that these must be undertaken by LALCs and the other expressing the view that more options should be included. In response, the relevant section of this plan (Section 3.1.5) has been updated to include the statement that Welcomes to Country can be arranged through any of the RAPs listed in Section 3.1.1 of this plan. Further, Section 3.1.5 has been updated to read that the Deerubbin and Gandangara LALCs "may" be contacted for this purpose.

One RAP indicated that the preferred option for Aboriginal objects recovered from the construction footprint will be on-site reburial in a non-impact area. The same RAP also expressed the view that all artefact sites listed in the draft ACHMP as requiring no further management should be collected (i.e., salvaged). However, on this issue, it is noted that the sites in question (listed in Table 4-1 in Section 4.1.1) comprise *subsurface* sites that have already been collected through test excavation.

Two RAP responses also raised the issue of who legitimate knowledge holders were and who should be consulted with and involved in ongoing fieldwork for the project. Section 3.1.3 of this plan outlines ongoing RAP consultation protocols for the project, including future archaeological investigations.

A further point was raised by one RAP noting that culturally appropriate art and language should be used on any interpretative signage for the project. Section 6.0 of this plan addresses the heritage interpretation strategy that is to be developed for the project. This section has been updated to include a statement to this effect.

Responses also restated what had already been expressed in previous consultation and documented in the existing text of the project's Revised ACHAR, that Aboriginal sites within the construction footprint are of significance to Aboriginal people, as is the larger connected cultural landscape that contains them.

Table 3-1 RAP responses to drafts of Revised ACHAR, AAR and ACHMP

RAP	Response to Revised ACHAR, AAR and ACHMP	Where considered in this ACHMP
Arugung Aboriginal Cultural Heritage Site Assessments	Response received by email on 12 March 2021 noting that Arugung reviewed the documents and agrees and supports all information stated, including proposed methodology, mitigation measures and Aboriginal cultural heritage values.	Comments noted
Walbunja Badu Biamanga Bidawal Bilinga Birringal Boonunga Bullawaya Bulling Gang Cullendulla Curwur Murre Dharug Djanaba Gaxabara Djiringanj Elouera Eora Gadung Gangangarra Golangaya Goobah Gulla Gunar Gunyu Kuringgai Minnamunnung Munyunga Murramarang Murrin Administrative Services Murrumbul Ngario Ngunawal Nundagurri Tharawal Thauaira Walgau Wandandian Wimbalaya Nura Wingikara Wirambie Yaxa Burra Yerramurra	Response received on 15 March 2021 from a Murrin representative, acting on behalf of 42 separate RAPs operating under RAPs operating under the Murrin Administrative Services. They provided verbal comment by phone that all three reports were endorsed. They also provided an email on 15 March 2021 noting that the reports and management plans were agreed, approved and endorsed.	Comments noted
Barraby Cultural Services	Response received by email on 15 March 2021 noting that they agreed with the documents and would like the opportunity to participate in the upcoming survey and test	Section 3.4 addresses RAP participation in

RAP	Response to Revised ACHAR, AAR and ACHMP	Where considered in this ACHMP
	excavations for the unverified areas and/or the salvage works.	further field investigations, including salvage works.
Individual registrant	Letter response received on 2 March 2021 which raised an issue that the ACHMP should not mandate that a Welcome to Country be undertaken by LALCs. Further, the letter stated that culturally appropriate art and language should be used on any interpretative signage for the project. The letter also raised issues regarding which RAPs they saw as legitimate knowledge holders.	Welcomes to, and Acknowledgements of, Country are addressed in Section 3.1.5. Section 3.1.5 has been updated to include the statement that: "Welcomes to Country can be arranged through any of the RAPs listed in Section 3.1.1 of this plan". Section 6.0 has been updated to include the statement that: "Culturally appropriate art and language should be used on any interpretative signage developed for the project".
Darug Custodian Aboriginal Corporation	Letter response received as email attachment on 15 March 2021. The letter noted that they support the recommendations set out in the reports. In addition to this, the letter restated that the identified sites were part of a connected cultural landscape. The letter also raised concerns that other RAPs consulted for the project do not contribute to, or represent the Aboriginal community of Western Sydney.	Section 4.1.2 addresses the identified Aboriginal cultural heritage values of the construction footprint and environs.
DNC	Email response provided on 18 February 2021 which noted that the DNC agrees with all of the documents.	Comment noted
Kamilaroi Yankuntjatjara Working Group	Email response received 15 March 2021 noting that the construction footprint area forms part of a highly significant cultural landscape, with waterways therein comprising focal, resource-rich features. Suggestions were made regarding the future interpretation for the project, including the use of native plantings in gardens, showcasing 3D replicas of the artefacts found on site and presenting the Aboriginal history of the area through signage and interpretation boards. The response also noted that the documents were supported, and that it is recommended more investigations of the surrounding areas be done in the way of salvage excavations.	Comments noted. Section 6.0 addresses the heritage interpretation strategy that is to be developed for the project. Section 3.4 addresses RAP participation in further field investigations, including salvage works.

RAP	Response to Revised ACHAR, AAR and ACHMP	Where considered in this ACHMP
Muragadi	Email response received 24 February 2021 which noted that they agreed with the recommendations in the documents.	Comment noted
Murra Bidgee Mullangari Aboriginal Corporation	Email response received 9 March 2021 which noted that they agreed with the recommendations in the documents.	Comment noted
Tharawal Local Aboriginal Land Council	Email response received 16 March 2021 noting that as the study is outside of Tharawal Local Aboriginal Land Council boundaries, they have no comment at this time.	Comment noted
Tocomwall	Verbal comments received on 15 March 2021 noting that they are happy with the recommendations provided in the reports and agree with the ACHMP.	Comment noted
Wailwan Aboriginal Group	Verbal comments received on 9 March 2021 noting that they agree with the recommendations provided in the reports.	Comment noted
Cubbitch Barta	<p>Email response received on 22 March 2021, as follows:</p> <ol style="list-style-type: none"> 1. Cubbitch Barta disagree with Kohen's interpretation of Darug country, as presented in the Revised ACHAR. Kohen extends the boundary extends the Darug Country boundary to Appin in the south. Cubbitch Barta note that land south of Bringelly is, in fact, Dharawal Country. 2. The preferred option for the management of Aboriginal objects recovered from the construction footprint is on-site reburial of artefacts in a non-impact area, with the reburial location to be recorded on AHIMS. 3. The cumulative impacts of developments such as the airport, Sydney Metro and the Aerotropolis will leave no Aboriginal heritage in the area and thus no intergenerational equity for future generations. 4. Current Aboriginal heritage legislation in NSW does not allow Aboriginal people to be a part of the planning process up front in order to have better conservation outcomes. 5. With regards to organising a Welcome to Country through Deerubbin LALC, Cubbitch Barta do not believe this is possible given that the LALC does not recognise the traditional custodians of the Country. More options are required. 6. Artefact sites that are not to be salvaged should be collected. They noted that it makes no difference whether the scientific significance is high low or medium, all artefacts all culturally significant. Cubbitch Barta recommend that all sites listed as having low significance in ACHAR should be collected. 	<p>Comments 1 and 4 are noted.</p> <p>Welcomes to, and Acknowledgements of, Country are addressed in Section 3.1.5. Section 3.1.5 has been updated to include the statement that: "Welcomes to Country can be arranged through any of the RAPs listed in Section 3.1.1 of this plan".</p> <p>Section 5.6 addresses the care and control of Aboriginal objects recovered from the construction footprint as a result of test excavation and salvage works. This section has been updated to include on-site reburial as a potential long term management option.</p> <p>Chapter 5 details the archaeological salvage program that will be undertaken for the Project.</p>

RAP	Response to Revised ACHAR, AAR and ACHMP	Where considered in this ACHMP
		<p>Excluding subsurface examples, all open artefact sites of low scientific significance will be salvaged. Where test excavation has already occurred, recovered Aboriginal objects will be managed in accordance with Section 5.6 of this plan.</p> <p>Regarding point 4, a cumulative assessment is presented in the Revised ACHAR. For future development, those developments would consider cumulative impacts with the project.</p>

Condition of Approval E29 refers to consultation, stating that RAPs must be kept regularly informed about the CSSI and continue to be consulted about management requirements throughout construction. The implementation of ongoing consultation requirements are detailed in Sections 3.2, 3.3, 3.4 and 3.5.

3.1.3 Ongoing consultation protocols

Principals of RAP engagement

Sydney Metro is committed to improving accessibility and outreach with Aboriginal and Torres Strait Islander communities by working collaboratively and respectfully with our Aboriginal and Torres Strait Islander staff, Aboriginal Peak Bodies, and with the communities in which operations occur.

Sydney Metro recognises the importance of cultural protocols in the engagement of RAPs and the Aboriginal community more broadly. As such, Sydney Metro has adopted the principals outlined in the Australian Heritage Commission's *Ask First* guidelines (Australian Heritage Commission, 2002). These principals require that all parties concerned with identifying, conserving and managing Aboriginal heritage must acknowledge, accept and act on the principles that Aboriginal people:

- are the primary source of information on the value of their heritage and how this is best conserved
- must have an active role in any Aboriginal heritage planning process
- must have input into primary decision-making in relation to Aboriginal heritage so they can continue to fulfil their obligations towards this heritage
- have a right to retain control of their cultural knowledge, including intellectual property and other information relating specifically to their heritage.

Welcome to Country / Acknowledgment of Country

A Welcome to Country is a formal welcome to Aboriginal land given by an Elder or person from the Country the meeting/event is taking place on. It is commonly in the form of a short speech, but also may include a performance.

An Acknowledgement of Country can be given by an Indigenous or non-Indigenous person and is a way of paying respect to the Traditional Owners of the Country the meeting/event is taking place on. An example of an Acknowledgement of Country is provided below:

“Before we begin proceedings, I would like to acknowledge the Traditional Owners of the land on which we meet today, the Gandangara people. I would like to pay my respects to the Elders past, present, emerging and future and pay my respects to all Aboriginal People here today, wherever you may come from.”

Welcomes to Country and Acknowledgements of Country are important practices because they continue the longstanding tradition of formally recognising Aboriginal (and Torres Strait Islander) Traditional Ownership and Connection to Country (NTSCORP Limited, 2013).

All internal meetings and events associated with the project will begin with an Acknowledgement of Country. Consideration will always be given to provide Knowledge Holders the opportunity to undertake a Welcome to Country at public events.

For areas north of Elizabeth Drive, the Deerubbin Local Aboriginal Land Council (LALC) may be invited to present a Welcome to Country. For areas south of Elizabeth Drive, the Gandangara (LALC) may be invited to present a Welcome to Country.

Details for both organisations are included below.

Deerubbin Local Aboriginal Land Council
PHONE: (02) 4724 5600
FAX: (02) 4722 9713
EMAIL: Reception@deerubbin.org.au
STREET ADDRESS: Level 1, Suite 3, 295 High Street Penrith NSW 2750
POSTAL ADDRESS: PO Box 40, Penrith, NSW 2751

Gandangara Local Aboriginal Land Council
PHONE: 02 9602 5280
FAX: 02 9602 2741
EMAIL: Reception@glalc.org.au
STREET ADDRESS: 64 Macquarie Street NSW 2170
POSTAL ADDRESS: PO Box 1038 LIVERPOOL BC NSW

Welcomes to Country could also be arranged through any of the RAPs listed in Section 3.1.1 of this plan.

Consultation to inform construction planning and design development

In accordance with mitigation measure AH13, if further information on cultural values is received during ongoing construction planning and design development it will be considered by the project team. If the need for additional measures to manage and/or protect relevant cultural values is identified, these will be determined in collaboration with relevant knowledge holders and implemented by the Principal Contractor.

3.2 Dissemination of project and ACHMP-related information

Sydney Metro uses a range of communication and engagement tools to ensure project information reaches relevant stakeholders, as detailed in Section 6 of the OCCS. During construction, RAPs will be provided with general project updates via Sydney Metro's existing project notification system. Where required, notifications specific to this ACHMP will be provided to RAPs verbally and/or in writing. This includes the requirement to notify RAPs of any substantive revisions to this ACHMP, as detailed in Section 8.5. ACHMP-related notifications will be the responsibility of SMWSA's Senior Environmental Officer.

3.3 Aboriginal community access

Aboriginal community members may wish to access the construction footprint on an ad hoc basis for cultural purposes (e.g., education, ceremony). Sydney Metro is committed to facilitating such access wherever possible. Aboriginal community members wishing to access the construction footprint will be asked to contact the Principal Contractor's Project Manager and/or Senior Environmental Officer in writing or register a verbal request, at least 14 days prior to their preferred date of access. Requests for access will be assessed by Sydney Metro. Where granted, access will be subject to relevant operational and safety considerations. Access to some areas may be restricted during construction.

3.4 RAP participation in further field investigation works

RAPs will be given the opportunity to participate in the following activities:

- archaeological survey and test excavation works within unverified areas of Aboriginal archaeological sensitivity (refer to Section 4.2)
- archaeological salvage works (i.e., surface collection and salvage excavation) at relevant impacted Aboriginal archaeological sites (refer to Section 5.1)
- unexpected finds assessments, if required.

For verification and salvage works, a maximum of eight RAP field representatives per day is proposed. For unexpected finds assessments, a minimum of one RAP field representative is proposed.

3.5 Meeting requests

Throughout the construction phase of the project, should RAPs make a reasonable request to meet with Sydney Metro to discuss any aspect of this ACHMP or cultural heritage values/sites within the construction footprint, this will be facilitated. For the purposes of this ACHMP, a reasonable request is defined as one provided to Sydney Metro verbally and/or in writing at least 10 working days prior to requested meeting date.

4. Aboriginal heritage values

4.1 Verified Aboriginal heritage values

4.1.1 Process of verification

The process to investigate and verify Aboriginal archaeological sites and cultural values is described in detail in the Revised ACHAR and AAR. A summary of the process is provided below, which is a process consistent with methodology presented to RAPs and detailed in the Revised ACHAR:

1. **Desktop research** – to identify previously recorded sites, existing AHIPs, past disturbance and areas of archaeological potential
2. **Field survey** – to ground truth previously recorded sites, record any new sites identified in surface expressions, verify areas of past disturbance where no further investigation is required and define areas of sensitivity where further investigation through test excavation is warranted
3. **Test excavation** – undertaken in areas of identified archaeological potential to gain an understanding of subsurface deposits and determine if salvage works are warranted
4. **RAP consultation** – undertaken throughout the above three steps, to identify Aboriginal cultural values and if further investigation works (survey, test excavation and salvage) are culturally appropriate at identified sites.

At the end of this process, there were two areas within the construction footprint that had not yet been accessed. These were classified UVA1 and UVA2 and recommended for survey and test excavation when access was possible. The other identified sites and the management measures associated with them are outlined below in Section 4.1.2. The UVA1 and UVA2 locations are shown with the defined site areas on Figure 4-1a to 4-1d (note: verified areas of Aboriginal sensitivity are not shown in the redacted version of this report). The further works that are required (survey, test excavation and salvage) are shown on Figure 5-1a to 5-1d (note: this figure is not included in the redacted version of this report as it displays areas of Aboriginal sensitivity).

4.1.2 Aboriginal archaeological sites

A total of 12 Aboriginal archaeological sites, consisting of nine artefact scatters (two surface, seven subsurface) and three isolated artefacts (all subsurface), are recognised within the off-airport component of the construction footprint. Of these, ten are located wholly within the construction footprint, with the remaining two sites located partially within it. These sites are summarised in Table 4-1 below, with site locations shown on Figure 4-1a to 4-1d (note: verified areas of Aboriginal sensitivity are not shown in the redacted version of this report). Management measures for each site are also provided in Table 4.1. Further discussion on these management measures is included in Section 4.3 and Chapter 5.

Table 4-1 Aboriginal archaeological sites within the off-airport construction footprint (excluding areas of Commonwealth land)

Name	AHIMS	Site type	AHIMS Feature(s)	Scientific significance	Surface or subsurface site	Management measure(s)	Location relative to construction footprint
B22	45-5-2640	Artefact scatter	AFT	Low	Surface	Surface collection	Wholly within
BWB	45-5-5298	Artefact scatter	AFT	Moderate	Subsurface	Salvage excavation (construction footprint only); Temporary protective fencing of site along construction footprint boundary	Partially within
CCE T3	45-5-5297	Artefact scatter	AFT	Low	Subsurface	No further management for impacted portion of site; Temporary protective fencing of site along construction footprint boundary	Partially within
SMWSA-AS2	TBA	Artefact scatter	AFT	Moderate	Subsurface	Salvage excavation	Wholly within
SMWSA-AS3	TBA	Artefact scatter	AFT	Moderate	Subsurface	Salvage excavation	Wholly within
SMWSA-AS4	TBA	Artefact scatter	AFT	Low	Subsurface	No further management	Wholly within
SMWSA-AS6	TBA	Artefact scatter	AFT	Low	Surface	Surface collection	Wholly within
SMWSA-AS7	TBA	Artefact scatter	AFT	Moderate	Subsurface	Salvage excavation	Wholly within

Name	AHIMS	Site type	AHIMS Feature(s)	Scientific significance	Surface or subsurface site	Management measure(s)	Location relative to construction footprint
SMWSA-AS8	TBA	Artefact scatter	AFT	Low	Subsurface	No further management	Wholly within
SMWSA-IA1	TBA	Isolated artefact	AFT	Low	Subsurface	No further management	Wholly within
SMWSA-IA2	TBA	Isolated artefact	AFT	Low	Subsurface	No further management	Wholly within
SMWSA-IA3	TBA	Isolated artefact	AFT	Low	Subsurface	No further management	Wholly within

4.1.3 Aboriginal cultural heritage values

The construction footprint lies within a broader cultural landscape that holds significant traditional and contemporary cultural values for the Aboriginal people of the region. Within this broader cultural landscape there are a range of specific locations and pathways that are known to the contemporary Aboriginal community. Blaxland Creek, South Creek tributary, Cosgroves Creek, Badgerys Creek, Moore Gully, Thompsons Creek and other unnamed waterways were noted during consultation to be past pathways and resource areas for Aboriginal people of the area.

The cultural significance of the broader cultural landscape in which the construction footprint is located is a result of the intersection of traditional usage, cultural knowledge, historical connection and contemporary cultural understandings. The cultural landscape is linked by Aboriginal sites, which have previously been recorded across the entire study area. The sites act as footprints in the landscape for Aboriginal people, attesting to past uses and linking the ancestors of the past to the present community.

4.2 Unverified Aboriginal heritage values

4.2.1 Areas of Aboriginal archaeological sensitivity

Existing archaeological data for the off-airport component of the construction footprint, detailed in the AAR for the project, support the identification of an additional two areas of unverified Aboriginal archaeological sensitivity within the construction footprint (see Figure 4-1a and Figure 4-1b and Table 4-2). These areas are assessed as potentially retaining moderate-to-high potential for the presence of Aboriginal objects in surface and subsurface contexts. As at July 2021, all other areas of the construction footprint have been investigated and these two areas are the only ones with sensitivity that have yet to be verified through archaeological survey and/or test excavation.

Procedures for archaeological investigation of these areas, to be undertaken prior to the commencement of construction works within their bounds are provided in Section 4.2.2 and Section 4.2.3 below and meet the requirement of mitigation measure AH2. They are consistent with those detailed in Section 3.4 of the Revised ACHAR for the project and Sections 4.0 and 5.0 of the AAR for the project.

As outlined in mitigation measure AH6, Aboriginal Heritage Information Management System (AHIMS) site cards will be produced for any newly identified sites within these areas and submitted to the AHIMS Registrar within one month of being identified.

Table 4-2 Unverified areas of Aboriginal archaeological sensitivity within off-airport component of the construction footprint (see Figure 4-1a and Figure 4-1b)

Area of sensitivity reference no.	Construction site	Size	Landform element(s)	Closest named watercourse
UVA1	Orchard Hills	2.4 hectares	Slope; drainage depression	Blaxland Creek
UVA2	Stabling & maintenance facility	24.4 hectares	Crest; slope; drainage depression; flat	Blaxland Creek

4.2.2 Survey methodology

The following survey methodology is for the completion of field surveys for the areas within the construction footprint yet to be surveyed, which have been defined as UVA1 and UVA2. As per the requirements of the CSSI Conditions of Approval these will be pedestrian surveys (i.e. undertaken on foot).

UVA1 and UVA2 will be subject to survey by a combined field team of qualified Aboriginal heritage specialists and RAP field representatives. All survey will be undertaken on foot using a series of linear transects. All accessible and non-severely disturbed portions of each area will be surveyed, with

particular attention paid to ground surfaces with higher visibility. All mature trees encountered during the survey will be inspected for cultural scarring. Outcropping sandstone bedrock, where intercepted, will be inspected for grinding grooves. The location of each transect completed during survey, including start and end points, will be recorded using a handheld differential GPS unit, with associated transect data (e.g., levels of visibility and exposure) entered directly into the same unit upon the completion of each transect.

Any Aboriginal archaeological sites identified during the survey will be recorded to the standard required by the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*. For each site located or re-visited, individual artefact locations will be captured by differential GPS. All sites will be comprehensively photographed following recording.

4.2.3 Test excavation methodology

Archaeological test excavations will be undertaken across UVA1 and UVA2 using a systematic sampling design, as informed by the results of the pedestrian survey described in Section 4.2.2. Test pits in both areas will be placed on underlying 50 m grids. If identified in-field, areas of severely disturbed terrain will be excluded from the sampling universe.

In accordance with the Code of Practice, all test pits will be hand excavated as 50 x 50 cm units (0.25 m²), with 5 cm spits employed during the excavation of the first excavated test pit and 10 cm spits thereafter. All test pits will be excavated to culturally sterile horizons. All excavated sediment will be dry-sieved on-site through three millimetre wire-mesh sieves. All definite and potential cultural lithic items will be collected at the sieves and bagged by square and spit.

Representative profiles in all test pits will be drawn and photographed, with test pit stratigraphy recorded on pro forma test pit recording sheets using standard sedimentological terms and criteria (after McDonald & Isbell, 2009). All pits will be backfilled after excavation.

Stone artefact recording, if required, will be consistent with the project AAR. Attributes to be recorded for any stone artefacts recovered through the test excavation program are listed and defined in Table 4-3.

Table 4-3 Stone artefact attributes

Attribute	Definition	Recorded for
Type	Primary artefact type: flake, flake shatter (sensu Andrefsky (2005), core, retouched flake, flaked piece, hammerstone, edge-ground hatchet head, grindstone and muller	All artefacts
Raw material	Lithic raw material on which the artefact was made (e.g., silcrete, silicified tuff, chert, quartz, FGS)	All artefacts
Colour	Generic description of rock colour following Jo McDonald CHM (2001: 39) (e.g., red, pink, yellow-red, yellow, grey)	All artefacts recovered from test pits
Weight	Weight to nearest 0.1 g, measured using an electronic scale	All artefacts
Maximum linear dimension	Maximum linear dimension of artefact in millimetres	All artefacts
Cortex	Presence/absence of cortex	All artefacts
Heating	Presence/absence of evidence for thermal alteration	All artefacts & non-diagnostic lithic items recovered from test pits
Flake type	Flake sub-type: complete flake, proximal flake and split flake	All flakes
Tool type	Formal implement type, as defined by Holdaway and Stern (2004)	All retouched flakes and edge-ground implements

Attribute	Definition	Recorded for
Flake length (mm)	Distance between the point of percussion and the furthest distal point of the flake (i.e., length to the most distal point) (after Holdaway and Stern 2004: 138)	All complete flakes
Flake width (mm)	Longest line that can be drawn at right angles to the length dimension (i.e., maximum width) (after Holdaway and Stern 2004: 139)	All complete flakes
Flake thickness (mm)	Maximum distance from dorsal to ventral face (i.e., maximum thickness) (after Holdaway and Stern 2004: 140)	All complete flakes
Platform surface	Nature of the platform surface on complete and proximal flakes: single scar, multiple scar, flaw/crenated, faceted, cortical and crushed/collapsed	All complete and proximal flakes recovered from test pits
Platform width (mm)	Maximum distance between the two lateral margins of a flake, measured across the platform surface	All complete and proximal flakes recovered from test pits
Platform thickness (mm)	Maximum distance between the ventral and dorsal surfaces of a flake	All complete and proximal flakes recovered from test pits
Dorsal cortex	Amount of cortex on dorsal surface of flake: none, 1-50%, 51-99% and 100%	All complete flakes
Flake termination	Shape of the distal end of complete flakes and distal flake fragments: feather, hinge, step and plunging	All complete and distal flakes recovered from test pits
Core type	Core type: unidirectional, multidirectional, bidirectional, bifacial, bipolar and tranchet	All complete cores
Core blank	Stone package on which the core was made: cobble/pebble, flake, heat shatter fragment and indeterminate	All complete cores
Cortex (core)	Amount of cortex remaining on core at discard: none, 1-50%, 51-99% and 100%	All complete cores
Longest flake scar	Length of longest complete flake scar preserved on core	All complete cores
Number of striking platforms	Number of striking platforms preserved on core at discard	All complete cores
Number of removals	Number of complete and partial flake scars (>15 mm) preserved on core	All complete cores
Core length (mm)	Maximum linear dimension of core	All complete cores
Core width (mm)	Width at mid-point of maximum dimension	All complete cores
Core thickness (mm)	Thickness at mid-point of maximum dimension	All complete cores
Tool state	Complete or broken	All tools
Tool length (mm)	Maximum linear dimension of tool	All complete tools
Tool width (mm)	Width at mid-point of maximum dimension	All complete tools
Tool thickness (mm)	Thickness at mid-point of maximum dimension	All complete tools

4.3 Further works for sites identified within unverified areas of Aboriginal archaeological sensitivity during survey and/or test excavation

If sites are identified within UVVA1 and UVA2 during survey and/or test excavation, they are to be subject to scientific significance assessment and impact assessment by the archaeologist to determine what further works are appropriate in relation to archaeology, such as salvage works like open area excavation and subjecting soil samples to laboratory testing to determine date ranges. If existing sites are found to extend across a larger geographical area, the survey and test excavation results must be used to inform a reassessment of the archaeological and cultural significance of the entire site (i.e. a combination of the previously identified plus the extended area). These results must then be used to inform management measures. The archaeologist must also discuss cultural values of any newly identified sites with RAPs to determine appropriate further works in relation to any identified cultural values.

Both new sites and sites that are found to extend within UVA1 and UVA2, would be managed according to significance consistent with the recommended management for known sites. Surface sites which are identified and assessed as having low scientific significance would be subject to surface collection. Subsurface sites identified as having low scientific significance would be mitigated by the artefacts being collected during test excavation and require no further management.

Any sites assessed as being of high or moderate scientific significance are to have the impact of the project on these sites mitigated by salvage excavations being undertaken within their bounds.

The details of archaeological salvage are defined in full in Section 5.

4.4 Aboriginal sites within 100 m of construction footprint

Aboriginal sites located wholly outside, but within 100 m, of the construction footprint (excluding areas of Commonwealth land and approved AHIP areas) are listed in Table 4-4. While physical impacts to these sites are not anticipated, as a precautionary measure, all are to be actively protected during construction via temporary fencing and/or signage along the construction boundary, as per mitigation measure AH11. Decisions regarding the use and placement of fencing and/or signage will be determined by the Principal Contractor's Cultural Heritage Advisor on the basis of both a visual inspection of the registered AHIMS site location and critical review of relevant existing data sources (e.g. associated site cards and assessment reports). All relevant staff and contractors are to be made aware of the nature and locations of these sites as part of standard site inductions. All sites listed in Table 4-4 must be identified on relevant site plans (e.g., Environmental Control Maps).

Table 4-4 Aboriginal archaeological sites located wholly outside, but within 100m, of the construction footprint

Site name	AHIMS	Site type ¹	Closest construction site	AHIMS Feature(s)	Surface or sub-surface site	Management measure(s)
SMWSA-AS5	TBA	AS	Off-airport construction footprint	AFT	Surface	Temporary protective fencing
Roughwood Park 2	45-5-3191	AS	Stabling & maintenance facility	AFT	Surface	Temporary protective fencing
Roughwood Park 1	45-5-3190	AS	Stabling & maintenance facility	AFT	Surface	Temporary protective fencing
Orchard Hills ISO2	45-5-3776	IA	Off-airport construction footprint	AFT	Surface	Temporary protective fencing
Luddenham Road 1	45-5-3773	IA	Off-airport construction footprint	AFT	Surface	Temporary protective fencing
B106	45-5-2784	IA	Bringelly services facility	AFT	Surface	Temporary protective fencing
B23	45-5-2641	AS	Aerotropolis Core	AFT	Surface	Temporary protective fencing
B57	45-5-2706	AS	Bringelly services facility	AFT	Surface	Temporary protective fencing

¹Site type: AS = artefact scatter; IA = isolated artefact

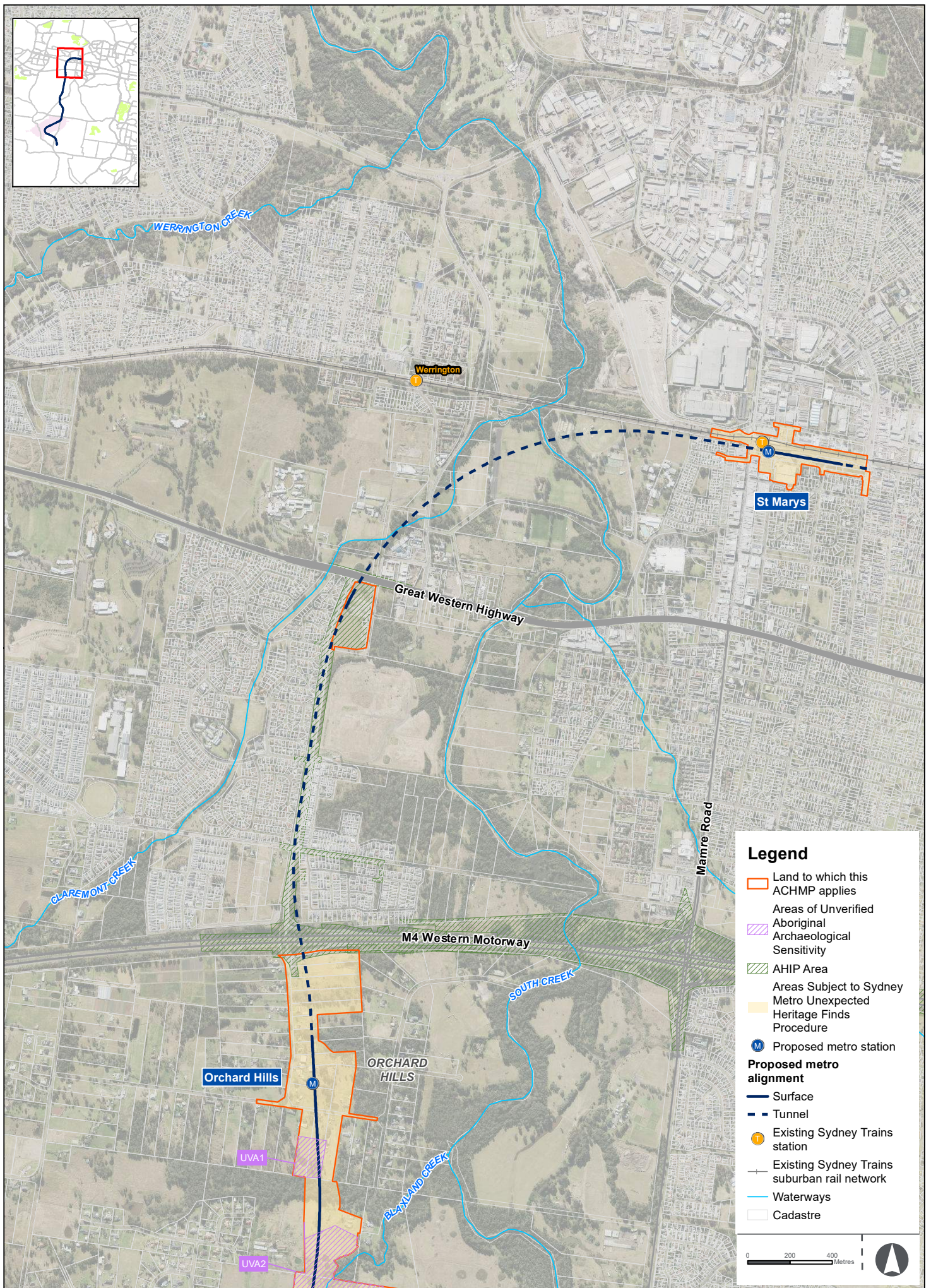
4.5 Unexpected finds (excluding suspected human skeletal remains)

Conditions of Approval E34 and E35 state that an Unexpected Heritage Finds and Human Remains Procedure must be prepared to manage unexpected heritage finds (heritage items and values). These procedures are to be prepared in accordance with any guidelines and standards prepared by the Heritage Council of NSW or Heritage NSW. A suitably qualified and experienced heritage specialist must prepare them in accordance with the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales and submitted to the Planning Secretary for information no later than one month before the commencement of construction.

To meet these requirements, unexpected Aboriginal heritage finds are to be managed in accordance with Section 6.24 of Sydney Metro's Unexpected Heritage Finds Procedure [SM-18-00105232]. This procedure, which applies to the areas shown on Figure 4-1a to Figure 4-1d, has recently been updated and is included in Appendix A.

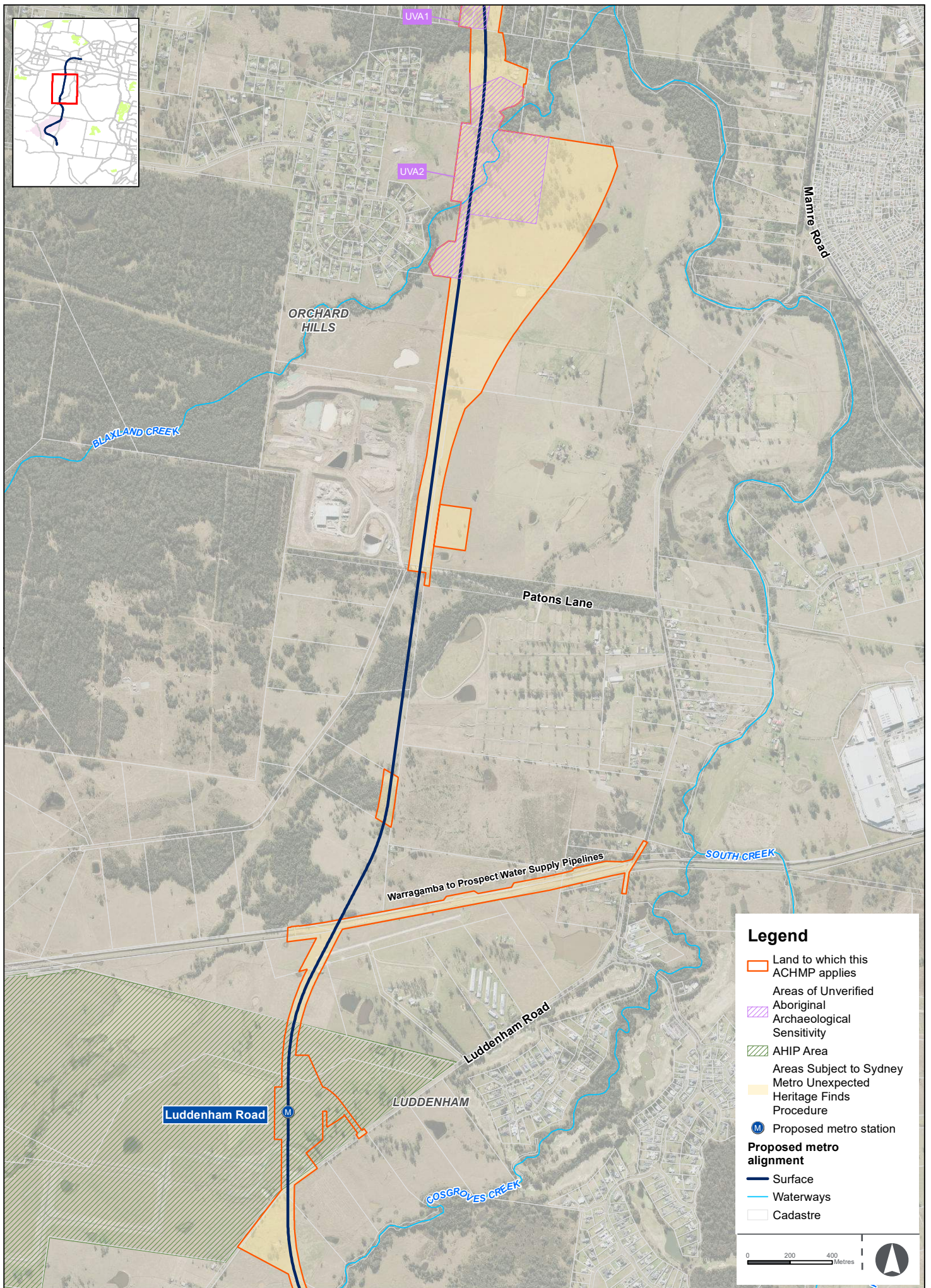
4.6 Human skeletal remains (including Aboriginal archaeological burials)

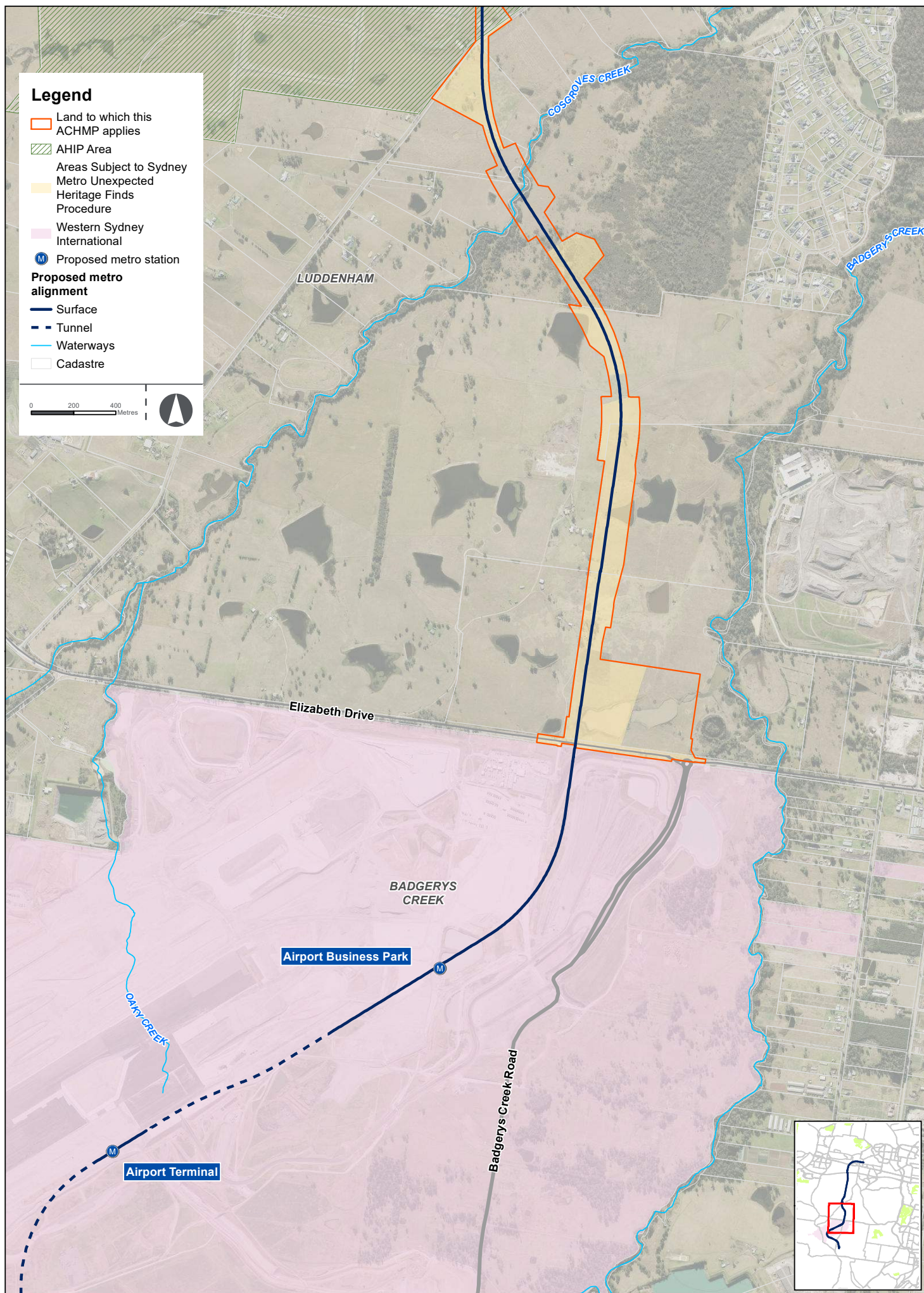
In the event that suspected human skeletal material is exposed within the off-airport component of the construction footprint, the steps outlined in Appendix 4 of Sydney Metro's Unexpected Heritage Finds Procedure [SM-18-00105232], attached as Appendix A, will be followed. The Sydney Metro Exhumation Management Procedure [SM ES-PW-315/5.0] must be used if exhumation is required (see Appendix B).

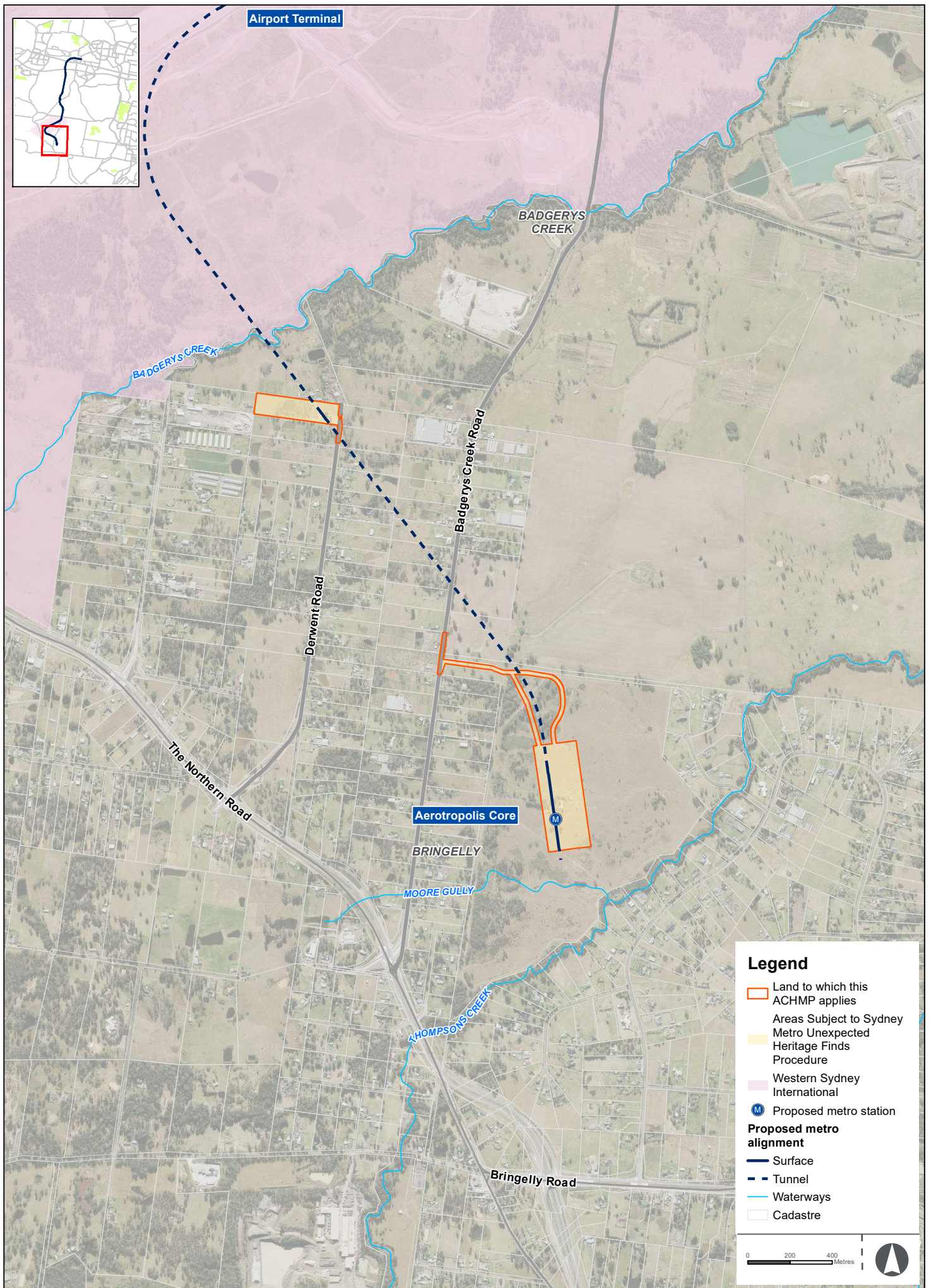


Aboriginal heritage values

Figure 4-1a







5. Archaeological salvage program

Impacts to known Aboriginal archaeological sites within the off-airport component of the construction footprint (excluding areas of Commonwealth land) will be mitigated through the archaeological salvage program detailed in this section. Salvage will be undertaken by a combined field team of suitably qualified archaeologists and RAP field representatives, led by the Principal Contractor's Cultural Heritage Advisor.

5.1 Impacts to known Aboriginal sites

Ground disturbance activities within the off-airport component of the construction footprint (excluding areas of Commonwealth land) are expected to impact all 12 of the Aboriginal archaeological sites identified within this area, resulting in a total loss of value for ten sites and a partial loss of value for two sites.

Moderate scientific significance

Impacted subsurface artefact scatter sites SMWSA-AS2, SMWSA-AS3, SMWSA-AS7 and BWB (partial) (45-5-5298) have been assessed as being of moderate scientific significance. To mitigate the impact of the project on these sites, salvage excavations will be undertaken within their bounds.

Low scientific significance

Impacted surface artefact scatter sites B22 (45-5-2640) and SMWSA-AS6 have been assessed as being of low scientific significance. To mitigate the impact of the project on these sites both will be subject to surface collection.

Impacted subsurface artefact scatter sites CCE T3 (partial) (45-5-5297), SMWSA-AS4, SMWSA-AS8, SMWSA-IA1, SMWSA-IA2 and SMWSA-IA3 have likewise been assessed as being of low scientific significance. As subsurface sites, no further management is required for these sites.

A summary of proposed management for impacted sites within the off-airport component of the construction footprint is provided in Table 5-1.

Table 5-1 Management of impacted sites within off-airport component of construction footprint

Site Name	AHIMS Id(s)	Site type	Construction site	Type of harm	Degree of harm	Consequence of harm	Scientific significance rating	Management measure(s)
B22	45-5-2640	Artefact scatter (surface)	Aerotropolis Core	Direct	Total	Total loss of value	Low	Surface collection
BWB	45-5-5298	Artefact scatter (subsurface)	Off-airport construction corridor	Direct	Partial	Partial loss of value	Moderate	Salvage excavation (construction footprint only); Temporary protective fencing of site along construction footprint boundary
CCE T3	45-5-5297	Artefact scatter (subsurface)	Off-airport construction corridor	Direct	Partial	Partial loss of value	Low	No further management for impacted portion of site; Temporary protective fencing of site along construction footprint boundary
SMWSA-AS2	TBA	Artefact scatter (subsurface)	Stabling & maintenance facility	Direct	Total	Total loss of value	Moderate	Salvage excavation
SMWSA-AS3	TBA	Artefact scatter (subsurface)	Off-airport construction corridor	Direct	Total	Total loss of value	Moderate	Salvage excavation
SMWSA-AS4	TBA	Artefact scatter (subsurface)	Off-airport construction corridor	Direct	Total	Total loss of value	Low	No further management
SMWSA-AS6	TBA	Artefact scatter (surface)	Off-airport construction corridor	Direct	Total	Total loss of value	Low	Surface collection
SMWSA-AS7	TBA	Artefact scatter (subsurface)	Off-airport construction corridor	Direct	Total	Total loss of value	Moderate	Salvage excavation

Site Name	AHIMS Id(s)	Site type	Construction site	Type of harm	Degree of harm	Consequence of harm	Scientific significance rating	Management measure(s)
SMWSA-AS8	TBA	Artefact scatter (subsurface)	Off-airport construction corridor	Direct	Total	Total loss of value	Low	No further management
SMWSA-IA1	TBA	Isolated artefact (subsurface)	Off-airport construction corridor	Direct	Total	Total loss of value	Low	No further management
SMWSA-IA2	TBA	Isolated artefact (subsurface)	Off-airport construction corridor	Direct	Total	Total loss of value	Low	No further management
SMWSA-IA3	TBA	Isolated artefact (subsurface)	Off-airport construction corridor	Direct	Total	Total loss of value	Low	No further management

5.2 Objectives of salvage program

As detailed in Table 5-1, four subsurface artefact scatter sites (SMWSA-AS2, SMWSA-AS3, SMWSA-AS7 and BWB (partial) (45-5-5298)) will be directly impacted by the project, with impacts managed through salvage excavations within their bounds. Impacts to surface sites B22 (45-5-2640) and SMWSA-AS6 will be managed through surface collection. No further management is required for the remaining subsurface sites.

Salvage of surface sites B22 (45-5-2640) and SMWSA-AS6, assessed as being of low scientific significance, relates to their identified cultural values, while salvage of SMWSA-AS2, SMWSA-AS3, SMWSA-AS7 and BWB (partial) (45-5-5298), relates to both their archaeological (scientific) and cultural values.

5.2.1 Salvage objectives - surface sites B22 and SMWSA-AS3

For surface sites B22 and SMWSA-AS3, the primary objectives of the salvage program are to:

- to record and collect all visible surface artefacts within these sites
- to analyse, describe and document the nature of these artefacts

5.2.2 Salvage objectives - subsurface sites SMWSA-AS2, SMWSA-AS3, SMWSA-AS7 and BWB (partial) (45-5-5298)

For subsurface artefact scatter sites SMWSA-AS2, SMWSA-AS3, SMWSA-AS7 and BWB (partial) (45-5-5298) the primary objectives of the salvage program are as follows:

- to salvage statistically viable subsurface assemblages of flaked stone artefacts from each site
- to analyse, describe and document the nature of the artefacts recovered from each site
- to characterise the stone artefact technology employed by Aboriginal knappers within these sites
- to contextualise the subsurface lithic assemblage recovered from these sites via a comparative regional analysis of assemblage size and composition
- to establish a chronological framework for Aboriginal occupation of these sites
- to examine variability in the location of features and activity areas across these sites
- to investigate the effects of geomorphic processes on the nature and integrity of the archaeological deposits across these sites.

5.3 Research questions for salvage excavations at SMWSA-AS2, SMWSA-AS3, SMWSA-AS7 and BWB (partial) (45-5-5298)

The following research questions will be used to guide the post-excavation analysis components of the salvage excavations undertaken at SMWSA-AS2, SMWSA-AS3, SMWSA-AS7 and BWB (partial) (45-5-5298):

- How long have Aboriginal people used these sites?
- What, if any, evidence exists to suggest that Aboriginal people were occupying these sites prior to the mid-to-late Holocene?
- What lithic raw materials were used for stone artefact production at each site and where did they come from?
- What, if any, evidence of deliberate heat treatment exists at these sites?
- What, if any, evidence of economising behaviour is evident in the lithic assemblages from these sites?
- What knapping techniques/strategies were used to reduce raw material packages and produce tools at these sites?

- What types of implements were produced at these sites and what were they used for?
- Do site-specific assemblages differ in typological/technological terms and/or their spatial characteristics? If so, how and what might these differences signal in behavioural terms?
- What technological and/or typological similarities/differences are apparent between the excavated stone artefact assemblages and those from other local/subregional contexts?
- To what extent can subregional variability in observed lithic distributions and assemblage composition be attributed to the key landscape variables of landform and stream order?
- Are near-surface Quaternary valley-fill sediments within these sites generally consistent with those described for associated soil landscapes? If not, how do they differ?
- Do site-specific soils and soil profiles differ from one another? If so, in what ways and why?
- How old are near-surface Quaternary valley-fill sediments within these sites and to what extent have they been affected by post-European settlement land use practises and/or flood events?

5.4 Salvage methodology

5.4.1 Surface collection of B22 and SMWSA-AS6

The field methodology for surface collection at B22 and SMWSA-AS6 will be as follows:

- site will be inspected by a combined field team of qualified archaeologists and RAP field representatives, led by the Principal Contractor's Cultural Heritage Advisor.
- all visible Aboriginal objects within and immediately surrounding the mapped boundaries of the site will be flagged
- a detailed photographic recording of the collection area will be made
- individual artefact locations will be recorded using a hand-held differential GPS
- identified artefacts will be collected and bagged.

All surface collected artefacts will be assigned Unique Reference Numbers (URNs) for accessioning and data analysis purposes.

5.4.2 Salvage excavations within SMWSA-AS2, SMWSA-AS3, SMWSA-AS7 and BWB (partial) (45-5-5298)

Salvage excavations within SMWSA-AS2, SMWSA-AS3, SMWSA-AS7 and BWB (partial) (45-5-5298) will be undertaken in three phases.

Phase One

Phase 1 will involve the excavation of a series of dispersed 1 m² pits across each site, with pits to be placed on transects or systematic grids depending on their respective sizes and shapes. All pits will be hand excavated in 10 centimetre spits to the base of extant A soil horizons.

Phase Two

In Phase 2, open area salvage excavations will be undertaken around selected Phase 1 pits (i.e., those found to contain high to very high artefact densities and/or features such as hearths, ground ovens and heat treatment pits).

Open area excavations within each site will not collectively exceed 100 m² in area. In all open area excavations, excavation extent will be driven by observed lithic yields and the presence/absence of archaeological features such as hearths and heat treatment pits. Excavation within any single open area excavation will cease if 25 m² of excavation reveals uniformly low (i.e., ≤20 artefacts/m²) lithic densities. The following standard excavation methodology is proposed for open area salvage excavations:

- all excavation will be carried out manually using trowels, shovels and mattocks
- excavation will proceed in 1 m² units, each of which will be assigned an alpha-numeric identifier

- all excavation units will be excavated in 10 centimetres spits to the base of extant A soil horizons
- test pit stratigraphy for each excavation unit will be recorded on pro-forma recording sheets using standard sedimentological terms and criteria
- should a feature, such as a possible hearth, ground oven or heat treatment pit be identified, the surface of the feature will initially be cleared by hand to define its extent. Excavation of surrounding units will be undertaken as required to achieve this. The surface of the feature will be planned and photographed to record the upper cut and then half-sectioned to assess its origin more accurately, with excavation proceeding stratigraphically. All definite and suspected archaeological features will be photographed in cross-section. Cross-sections will also be drawn to scale. Upon completion of cross-section excavation and recording, features will be excavated in their entirety. All associated cultural materials will be retained for additional analysis (e.g., radiometric dating, lipid/pollen analysis)
- should suspected human remains be identified (either single bones or a burial), the relevant provisions of Sydney Metro's *Unexpected Heritage Finds Procedure* (Appendix A) will apply. Human skeletal remains can be identified as either an Aboriginal object or non-Aboriginal relic depending on ancestry of the individual (Aboriginal or non-Aboriginal) and burial context (archaeological or non-archaeological). Remains are considered to be archaeological when the time elapsed since death is suspected of being 100 years or more. Depending on ancestry and context, different legislation applies. Where it is suspected that less than 100 years has elapsed since death, the human skeletal remains come under the jurisdiction of the State Coroner and the Coroners Act 2009 (NSW). Such a case will be considered a 'reportable death' and under legal notification obligations set out in section 35(2), a person must report the death to a police officer, a coroner or an assistant coroner as soon as possible. This applies to all human remains less than 100 years old regardless of ancestry (i.e., both Aboriginal and non-Aboriginal remains). Aboriginal archaeological burials are protected under the NPW Act, while historic (non-Aboriginal) archaeological burials are protected under the Heritage Act. If confirmed as such, both types of burial must be reported to Heritage NSW immediately.
- if encountered, charcoal and/or other organic materials deemed suitable for radiocarbon dating will be collected using best practice guidelines (e.g., Burke and Smith 2004: 154)
- soil samples from all identified soil horizons will be retained for pH testing and other laboratory-based analyses (e.g., Particle Size Analysis (PSA), loss on ignition, magnetic susceptibility)
- soil samples for Optically Stimulated Luminescence (OSL) dating will be collected from selected strata using best practice guidelines (e.g., United States Geological Survey 2015)
- soil samples for pollen analysis, if required, will be collected using best practice guidelines (e.g., English Heritage, 2011)
- all excavated soils will be wet-sieved through 2.5 mm gauge sieves
- artefacts recovered from sieving will be retained in plastic zip-lock bags and labelled with appropriate provenance data
- representative and otherwise notable soil profiles will be photographed and drawn to scale as the excavation progresses
- once complete, a photographic record of the all open area excavations will be made and overall site plan produced.

Phase Three

The third and final phase of salvage works at each site will comprise a geomorphological assessment. The assessment will be undertaken by a qualified geomorphologist or geoarchaeologist under the supervision of the Principal Contractor's Cultural Heritage Advisor and will involve the following:

- a desktop review of existing environmental data and historical aerials
- a visual inspection of exposed soil profiles

The principal aims of the assessment will be to:

- record and describe extant soils and soil profiles using standard sedimentological techniques and terminology
- to provide an interpretation of the geomorphic history of the site
- to provide an interpretation of the implications of observed soil units and historical land use practices for the spatial integrity and chronology of recovered artefactual materials.

Soil sampling for the purposes of radiometric dating and other laboratory-based analyses (e.g., Loss on Ignition, magnetic susceptibility and pollen analysis) will be determined by the project geomorphologist/geoarchaeologist

If required, the engaged geomorphologist/geoarchaeologist will provide a standalone report detailing the results of their assessment.

5.5 Post-excavation analyses and reporting

All stone artefacts recovered during the salvage program will be subject to detailed technological analysis by a qualified lithic specialist. Artefacts will be analysed to a level comparable to that achieved in previous analyses of excavated lithic assemblages from Sydney's Cumberland Plain so as to facilitate a meaningful comparative analysis of regional assemblage size and composition. Microscopic use-wear and/or residue analysis of a sample of finished tools and other items will also be undertaken for the purposes of determining individual task associations and functions.

Any soil/stone/organic samples selected for radiometric dating will be submitted to appropriate commercial dating facilities for processing. All resulting analytical outputs/reports will be attached to the main archaeological salvage report as standalone appendices.

Any soil samples selected for PSA and/or soil chemistry analysis will be submitted to an appropriate commercial soil testing facility for analysis. All resulting analytical outputs/reports will be attached to the main archaeological salvage report as a standalone appendix.

Any soil samples selected for pollen/lipid analysis will be submitted to an appropriate specialist for analysis. All resulting analytical outputs/reports will be attached to the main archaeological salvage report as a standalone appendix.

As set out in mitigation measure AH12, an Archaeological Salvage Report (ASR) detailing the results of the salvage program (including the results of any post-excavation analyses) will be completed within two years of the completion of the fieldwork component of the program. The ASR will be consistent with the best practice guidelines suggested by the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2010b) and the Aboriginal Cultural Heritage Standards & Guidelines Kit (NSW NPWS 1997)

Copies of the final ASR will be provided to all RAPs and Heritage NSW within one month of finalisation.

5.6 Care and control of recovered Aboriginal objects

As per mitigation measure AH5, all Aboriginal objects recovered from the construction footprint as a result of test excavation and salvage works will be appropriately secured and under the care of the Principal Contractor's Cultural Heritage Advisor while options for their long-term management, as determined through consultation with RAPs, are being investigated.

Two long term management options for recovered objects include:

1. Reburial in a non-impact area (including appropriate ceremonial activities)
2. Placement in a dedicated keeping place under a Care Agreement.

5.7 Aboriginal Site Impact Recording (ASIR) forms

In accordance with mitigation measure AH7, Aboriginal Site Impact Recording (ASIR) forms for all sites subject to archaeological salvage will be submitted to the AHIMS Registrar within one month of the completion of salvage works within their bounds.

5.8 Updates following new discoveries

Additional reporting will be produced to document new discoveries that are made as a result of survey, test excavation and salvage works. This is to include updated mapping delineating any new site areas that are identified, including if existing site areas require expansion following new finds. Updated maps are to be provided to Sydney Metro for distribution to the Environmental Representative, Principal Contractor representatives as soon as is practicable following the completion of works.

The reporting is to consist of Aboriginal Cultural Heritage Excavation Report(s), produced in accordance with the *Guide to Investigation, assessing and reporting on Aboriginal cultural heritage in NSW* and the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*. Draft reports must be provided to RAPs, who will be given 28 days to provide comment and feedback, prior to report finalisation. The reporting must document as appropriate any cultural heritage values identified by RAPs through consultation during the additional works. The final report(s) must be provided to the Planning Secretary, Heritage NSW, relevant Councils, relevant Local Aboriginal Land Councils, the RAPs and local libraries within 24 months of the completion of the Aboriginal archaeological works.

The results of new discoveries should be compared to the predictions made in Section 3.3 of the AAR, with the results of the comparison to be captured in the additional reporting, along with an updated predictive model, if warranted. These predictions were based on a review of the existing environment and archaeological data. New discoveries must be tested against the predictions to determine if they fall within the established pattern of known sites, locations and assemblages. The predictions made in the AAR are as follows:

1. The construction footprint contains a range of landforms, varying from alluvial flats and gently inclined slopes, to ridges and flat-topped terraces. The distribution and density of archaeological material associated with past Aboriginal peoples moving through this varied landscape are likely to have been influenced by the suitability of landforms for campsites. Areas considered to have the highest archaeological sensitivity are predominantly undisturbed terraces and flats, especially when elevated and well-drained
2. Prior to European occupation, the permanency of potable water sources is likely to have played an important role influencing the nature and duration of Aboriginal activity in their vicinity. More permanent watercourses (e.g., South Creek, Badgerys Creek and Blaxland Creek) are likely to have attracted more intensive or longer-term occupation activity; while lower order streams may have attracted short term or single activity occupation
3. The availability of raw lithic material (e.g., silcrete boulders observed in South Creek) is also likely to have influenced the nature of activities at the site and may be correlated with higher artefact densities and evidence of tool manufacture
4. Archaeological deposits may have been preserved at depth in alluvial contexts
5. Original native vegetation has been cleared from the construction footprint as a result of European land use practices, including farming and grazing. As old growth trees with the potential for cultural modification have been removed during the past clearance activities, it is unlikely that scarred or carved trees will be present within the construction footprint, with the possible exception of the small sections of riparian corridors
6. The construction footprint has been subject to a range of historic and recent land use impacts including: native vegetation clearance, pastoral activities (e.g., grazing, fencing and dam excavation), the construction of residential and commercial structures, as well as scientific and industrial facilities with their associated subsurface infrastructure services. Key archaeological implications of these activities include the destruction, in areas of grossly modified terrain, of pre-existing sites and deposit(s); the disturbance of pre-existing sites and deposit(s) through both

direct and indirect (e.g., erosion) means, resulting in a loss of archaeological integrity, the removal of culturally modified trees and an increase, in areas affected by erosion, of archaeological site visibility.

Note: This figure is not shown in the redacted version of this report as it displays sensitive site information.

Figure 5-1 Aboriginal archaeological works within the construction footprint

Note: This figure is not shown in the redacted version of this report as it displays sensitive site information.

Figure 5-1b Aboriginal archaeological works within the construction footprint

Note: This figure is not shown in the redacted version of this report as it displays sensitive site information.

Figure 5-1c Aboriginal archaeological works within the construction footprint

Note: This figure is not shown in the redacted version of this report as it displays sensitive site information.

Figure 5-1d Aboriginal archaeological works within the construction footprint

6. Heritage interpretation strategy

In accordance with mitigation measure OAH1, Aboriginal cultural heritage will be integrated into the project's broader heritage interpretation strategy. Aboriginal heritage components of the strategy must be developed with reference to the findings of the Revised ACHAR and AAR, to promote understanding and awareness of Aboriginal cultural heritage values.

6.1 Objectives of Sydney Metro Heritage Interpretation Strategy

The aims of the Sydney Metro Heritage Interpretation Strategy are to:

- Create a cohesive interpretive framework for detailed content development at each station at a later date
- Build a narrative along each metro route which can be experienced both through travel and at individual stations
- Avoid potential repetition of stories and information between stations
- Explore and identify potential interpretive media at each station including signage, installations, artwork, landscape and design responses, community events
- Identify the appropriate use of Aboriginal language including an approach to agreeing language use and seeking cultural permissions for its use
- Identify opportunities for contributing to individual station identities through interpretive media.

6.2 Principles for heritage interpretation

The principles to underpin the project's heritage interpretation strategy must mirror those specified in the document *Interpreting Heritage Places and Items Guidelines* (NSW Heritage Office, 2005). These principles or 'ingredients for best practice in interpretation' include:

- respect for the special connections between people, items and places
- understand the item and convey its significance
- use existing records of the item, research additional information, and make these publicly available (subject to security and cultural protocols)
- explore, respect and respond to the identified audience
- make reasoned choices about themes, stories and strategies
- stimulate thought and dialogue, provoke response and enhance understanding
- research the physical, historical, spiritual and contemporary context of the item, including related items, and respect local amenity and culture
- develop interpretation methods and media that sustain the significance of the items, their character and authenticity
- integrate interpretation in conservation planning, and in all stages of the project
- include interpretation in the ongoing management of an item; provide for regular maintenance, evaluation and review
- involve people with relevant skills, knowledge and experience
- collaborate with Aboriginal organisations, individuals, knowledge holders and the local community.

7. Aboriginal heritage awareness

7.1 Aboriginal heritage induction and toolboxes

A project-specific Aboriginal Heritage Induction will be prepared and implemented for the project. The induction will consist of a short presentation to be delivered as part of the standard project induction and utilised throughout the life of the project. A register of all persons having completed the induction will be maintained throughout the life of the project.

The induction is mandatory for all staff and contractors whose roles may reasonably bring them into contact with Aboriginal sites and/or involve consultation with local Aboriginal community members. At a minimum, the induction will outline current protocols and responsibilities with respect to the management of Aboriginal cultural heritage within the off airport component of the construction footprint, provide an overview of the sites identified within this area, diagnostic features of potential Aboriginal site types (e.g., stone artefacts, scarred trees) and procedures for reporting the identification of Aboriginal archaeological sites and suspected skeletal remains.

Aboriginal heritage constraints will also form a component of daily toolbox talks, where needed and/or relevant.

8. Compliance and complaints management

Monitoring, inspection and auditing will be undertaken to measure effectiveness and facilitate continuous improvement of Aboriginal cultural heritage management and mitigation. General environmental monitoring, inspection and auditing requirements will be undertaken in accordance with Section 3.16 of the CEMF and as detailed in this plan.

8.1 Site inspections

Project activities will be regularly reviewed to ensure compliance with this plan. A regular inspection program will be conducted, including:

- Daily inspections undertaken by the Principal Contractor's Site Supervisor which will be logged in their respective site diaries
- Routine weekly inspections will be conducted to monitor heritage management and implementation of this ACHMP at active worksites. Weekly inspections will be documented to maintain compliance and effectiveness of controls
- Items that require action will be documented on the site environmental inspection
- Items that require specific and detailed action will be recorded on the Project's Corrective Action Register, maintained by the Principal Contractor's Environmental Manager.

The findings of site inspections will be recorded on a Site Environmental Inspection Checklist.

Regular site inspections will be completed by the Environmental Representative, Principal Contractor and Sydney Metro representatives. These will be conducted at a frequency to be agreed with by all parties.

8.2 Auditing

Auditing will be undertaken in accordance with Section 3.16 of the CEMF and Conditions of Approval A36 – A40, including Sydney Metro audits, independent audits and audits to be undertaken by contractors.

8.3 Incidents and non-compliances

8.3.1 Incidents

Environmental incidents are classified into three classes that are based upon the consequence descriptors for environmental risks in the Sydney Metro Risk Matrix (refer to Sydney Metro Risk Management Standard). These classifications trigger a variety of management actions and/or legislative requirements depending on the severity of the consequence described where Class 3 represents minor consequences and Class 1 represents major consequences.

This matrix is further sub-divided into consequence ratings ranging from C6 (low impact) to C1 (high impact). An incident transitions between a Class 3 to a Class 2 incident once material harm has been caused, and transitions into a Class 1 incident once it is determined that the Environmental Harm caused in large-scale and cannot be remediated **Table 8-1**.

Table 8-1 Classification System for Environmental Incidents

Class 3			Class 2	Class 1	
C6	C5	C4	C3	C2	C1
No appreciable changes to environment and/or highly localised event	Change from normal conditions within environmental regulatory limits and environmental	Short-term and/or well-contained environmental effects. Minor remedial actions	Impacts external ecosystem and considerable remediation is required	Long-term environmental impairment in neighbouring or valued ecosystems	Irreversible large-scale environmental impact with loss of valued ecosystems

Class 3			Class 2	Class 1	
	effects are within site boundaries	probably required		Extensive remediation required	

All incidents and complaints (including potential incidents) must be reported so that they can be investigated and prevented from recurring. An Incident Notification Report shall be completed and issued to the Principal Contractor's Project Director for all Potential or Actual Class 1 or Class 2 incidents. The completion Incident Notification Report for Class 3 incidents is at the discretion of the Principal Contractor's Project Director, however, it is expected that the person responsible for completing the Incident Notification Report makes appropriate enquiries to determine the likely causal factors involved and assigns effective corrective actions. Notwithstanding Class 1, Class 2 and Class 3 incidents are to be recorded.

When an environmental incident occurs which causes environmental harm, in all cases both verbal and written communication of the incident must be carried out immediately and within 48 hours respectively. For Class 1 and 2 Incidents the notification process shown in Figure 8-1 must be followed. Incident Notification Reports satisfy the requirement for written communication to Sydney Metro and are to be completed using the Environmental Incident and Non-compliance Notification Report (SM ES-FT-403) or a similar and consistent form approved by Sydney Metro.

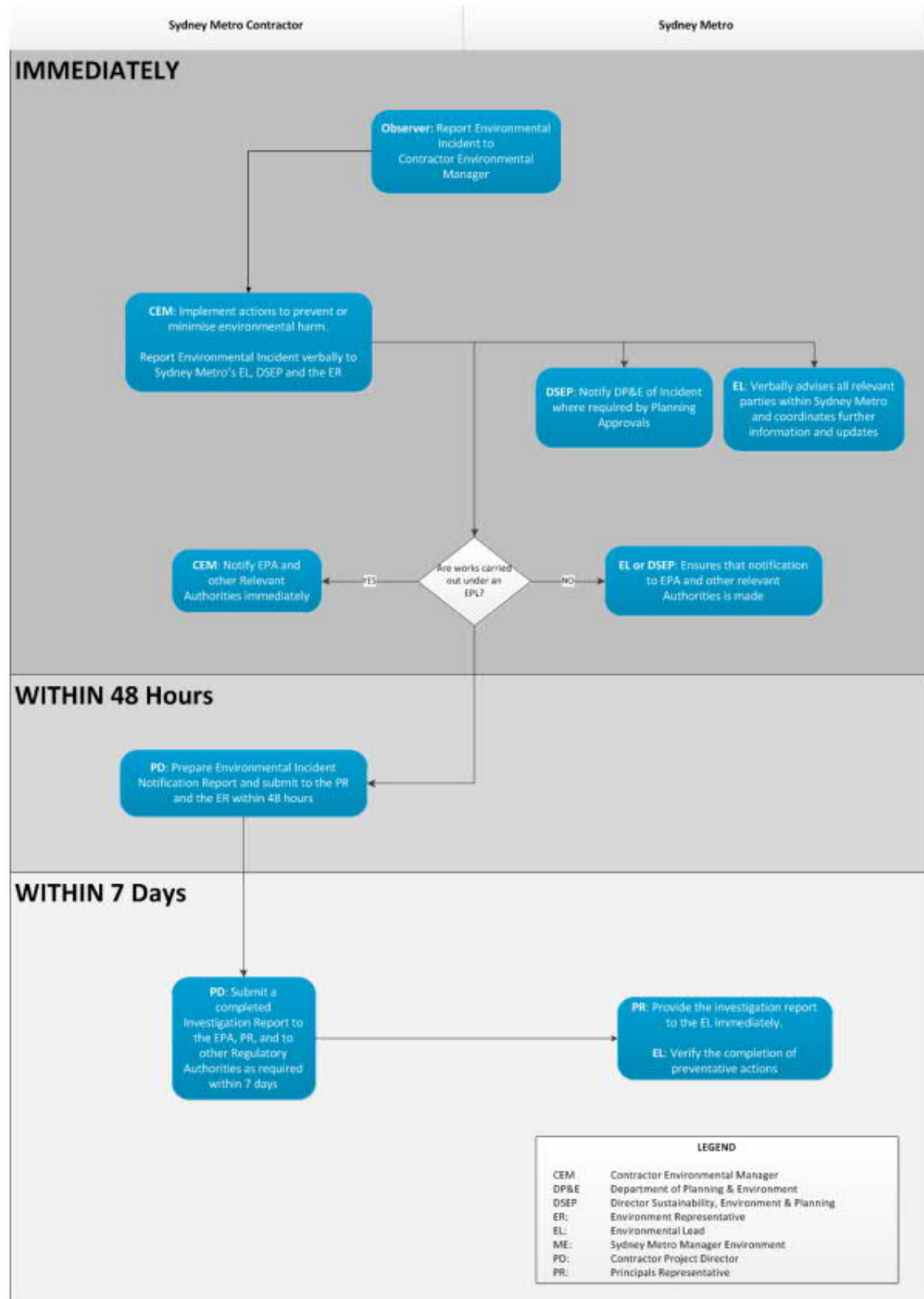


Figure 8-1 Notification process for environmental incidents

8.3.2 Non-compliances

An environmental non-compliance is a breach of an environmental requirement originating from Planning Approvals, Environment Protection Licenses, lease agreements, and other requirements documented in environmental management plans. Whether an event is classified as a Non-compliance or an Incident the process behind managing the event remains the same, with the following exceptions:

- Non-compliances are not notifiable to Regulatory Authorities under the POEO Act;
- Non-compliances are reported to have occurred on the day the breach was raised as opposed to the date when the requirement was breached;
- Non-compliances are not divided into severity classes;
- Non-compliances do not have the potential to trigger crisis or emergency management processes; and
- There is an informal notification process in the immediate timeframe following a Non-compliance being raised.

When an Environmental Event occurs that causes Environmental Harm and also breaches one or more Environmental Requirements, then an Incident Notification Report will be created which records what requirements were breached.

If a Non-compliance is identified then it must be raised using the Environmental Incident and Non-compliance Report Form within 48 hours by the party responsible for the breach.

8.3.3 Reporting of incidents and non-compliances

All incidents and non-compliances must be reported to the Environmental Representative and Sydney Metro in accordance with Sydney Metro Environmental Incident and Non-compliance Reporting Procedure SM-17-00000096. Sydney Metro will be responsible for reporting incidents and notifications to the Planning Secretary and other regulatory agencies as required, under Conditions of Approval A41 and A44.

All incidents and non-compliances must also be reported to the relevant regulatory authorities, including DPIE and EPA, within the timeframes specified in any conditions of approval and legislative requirements.

8.4 Complaints management

Community liaison and complaints handling for the off-airport component of the project will be undertaken in accordance with Section 4.2 of the CEMF, the project's Overarching Community Communication Strategy and Conditions of Approval B2-B10.

8.5 Periodic review of ACHMP

A review of this ACHMP is to be conducted by a suitably qualified person in the following instances:

- at least every 12 months
- if recommended by an independent audit
- within one month of changes to Project Approval, license conditions or relevant legislation relating to Aboriginal heritage
- within one month of any reportable Aboriginal heritage related incidents within the Project's construction footprint.

The review will provide an opportunity to assess the effectiveness of the ACHMP. The review must consider the following:

- works undertaken since the last review, including any completed survey, test excavation and salvage activities

- the identification and management of any unexpected finds
- any incidents and non-compliances that have occurred
- if all relevant requirements of this plan have been met.

The review will be documented, and will rate the effectiveness of the ACHMP as a management tool against the above criteria. If the review finds effectiveness can be improved in any areas, this will be addressed in a revision to the ACHMP.

Revisions to this ACHMP, if required, must be authorised by the SMWSA Senior Environmental Officer. The Environmental Representative can approve minor changes to the ACHMP, where they are satisfied that the amendment to the ACHMP is necessary. Minor changes will typically include those that:

- are administrative in nature (e.g., staff and agency/authority name changes)
- do not noticeably increase the magnitude of impacts on the environment when considered individually or cumulatively
- are in response to audit findings or periodic reviews, subject to the significance of any audit or review findings
- do not compromise the ability of the Project to meet legislative requirements and are consistent with terms of the approval, and does not include any modifications to the terms of Project approval.

Where the SMWSA Senior Environmental Officer deems it necessary, the amended ACHMP will be forwarded to RAPs for review and comment if required and forwarded to the Planning Secretary for approval.

Revised versions of the ACHMP will be made available and distributed to RAPs through the processes described in Section 3.2. Changes will also be communicated through toolbox talks to existing onsite personnel and incorporated into environmental induction materials.

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Appendix A

Sydney Metro Unexpected Finds Procedure



Sydney Metro Unexpected Heritage Finds Procedure

SM-18-001105232

Metro Body of Knowledge (MBoK)

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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 non-Aboriginal 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 non-Aboriginal 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 includes Sydney Metro's heritage notification obligations under the Heritage Act, NPW Act and the *Coroner's Act 2009* and the requirements of the conditions of approval (CoA) issued by NSW Department of Planning, Industry and Environment.

Note that a Contractor must not amend the *Sydney Metro Unexpected Finds 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 the *Sydney Metro 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 heritage items as a result of investigations being undertaken in accordance with the *Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW*^{4376 2010}¹; an Aboriginal Heritage Impact Permit (AHIP) issued under the NPW Act; or a permit approval issued under the Heritage Act;
- the discovery and disturbance of heritage items 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 Significant Infrastructure (SSI) /State Significant Development (SSD) planning approval; or

- the discovery and disturbance of a heritage item of local significance, where the find is identified and anticipated to occur in an AMS or ARD.

Construction Environment Management Plans (CEMP) 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:

- any 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
- a find that has not been identified or assessed in a project assessment or document related to heritage
- a find that is not referenced in an archaeological research design (ARD) or archaeological method statement (AMS)
- a find that is not covered by an existing approval under the NPW Act or Heritage Act.

1.3.2. Abbreviations

All terminology in this document is taken to mean the generally accepted or dictionary definition. Other terms and jargon specific to this document are defined within the [SM-17-00000203 Sydney Metro glossary](#). Acronyms specific to this document are listed below.

	Definitions
AHIP	Aboriginal Heritage Impact Permit
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. An Aboriginal object may include a shell midden, stone tools, bones, rock art, Aboriginal-built fences and stockyards, scarred trees and the remains of fringe camps.
ARD	Archaeological Research Design
AMS	Archaeological Method Statement
CEMP	Construction Environmental Management Plan
CoA	Conditions of Approval
CSSI	Critical State Significant Infrastructure
EP&A Act	NSW <i>Environmental Planning and Assessment Act 1979</i>

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).
Excavation Director	A person that has been determined by the Heritage Council of NSW or delegate to meet the Criteria for Assessment of Excavation Directors (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>
NPW Act	NSW <i>National Parks and Wildlife Act 1974</i>
Heritage NSW	Formerly Office of Environment and Heritage (OEH). Now Heritage NSW as part of the Department of Premier and Cabinet NSW.
IMS	Integrated Management System (IMS)
Relic (non-Aboriginal heritage)	A relic means any deposit, artefact, object or material evidence that: <ul style="list-style-type: none"> 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
TfNSW	Transport for New South Wales
Work (non-Aboriginal heritage)	Archaeological features such as historic utilities or buried infrastructure that provide evidence of prior occupations such as former rail or tram track, timber sleepers, kerbing, road pavement, fences, culverts, historic pavement, buried retaining walls, cisterns, conduits, sheds or building foundations, but are also subject to assessment by the Excavation Director to determine its classification.

1.4. Accountabilities

The Director Environment, Sustainability and Planning is accountable for this document 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 document 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 document.

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 1 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 the Director-General of Heritage NSW about its location. Assistance on how to do this is provided in section 4 (Step 5).

2.2. Historic (non-Aboriginal) heritage items

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

- archaeological 'relics' as defined under the Heritage Act; and

- other items 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 items

Some historic heritage items are not considered to be 'relics', but are instead referred to as works, buildings, structures or movable objects. Examples of these items that may be encountered include culverts, historic pavements, retaining walls, tramlines, rail tracks, turn tables, timber sleepers, cisterns, fences, sheds, 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

The *Sydney Metro 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 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 appropriately protected and investigated, the relevant authorities notified and approvals received.

3. Unexpected heritage finds procedure

In the event that an unexpected find is encountered on a Sydney Metro project, the steps summarised in Figure 1 and detailed in Table 1 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

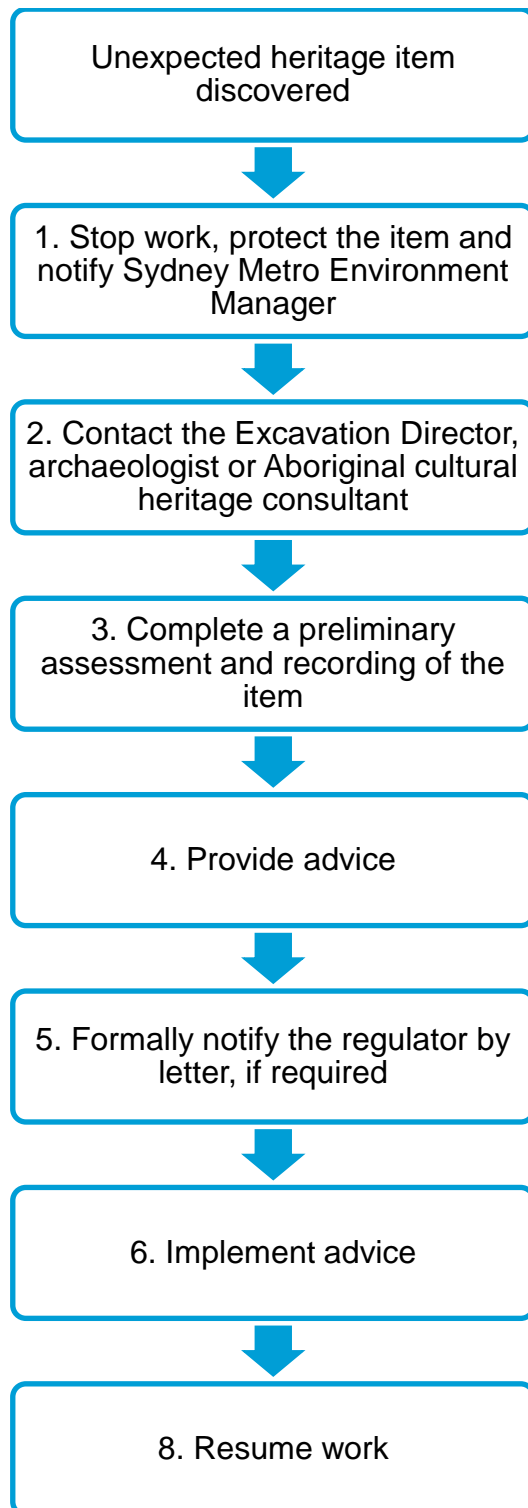


Table 1: Specific tasks to be implemented following the discovery of an unexpected heritage item

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 1 Identifying Unexpected Heritage Items
1.2	<p>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.</p> <p>Inform all on-site personnel about the no-go zone.</p>	Contractor's Project Manager or Supervisor	
2	Engage an archaeologist		
2.1	<p>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.</p> <p>Provide as much information as possible to the Excavation Director, archaeologist or Aboriginal cultural heritage consultant, including photographs of the item.</p> <p>Inform the Sydney Metro Environment Manager, and keep them involved in the process. The Environment Manager will inform the Sydney Metro Senior Heritage Advisor.</p>	Contractor's Project Manager	
2.2	<p>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.</p> <p>If the find is likely to be an Aboriginal object, engage a suitably qualified and experienced Aboriginal cultural heritage consultant.</p> <p>If the find is a non-Aboriginal heritage item, engage a suitably qualified and experienced historical archaeological consultant.</p>	Contractor's Project Manager	

Step	Task	Responsibility	Guidance and tools
3	Preliminary assessment and recording		
3.1	<p>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).</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
3.2	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.	Contractor's Project Manager / Excavation Director	
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. 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	

Step	Task	Responsibility	Guidance and tools
3.6	Record the item and complete the Unexpected Heritage Item Recording Form.	Excavation Director, archaeologist or Aboriginal cultural heritage consultant	Appendix 2 Unexpected Heritage Item Recording Form Appendix 3 Photographing Unexpected Heritage Items
3.7	Is the item likely to be bone? If yes, follow the steps in Appendix 4 'Uncovering bones'. Where it is obvious that the bones are human remains, you must notify the local police by telephone immediately. They may take command of all or part of the site. Also refer to the Sydney Metro Exhumation Management Procedure. If no, proceed to the next step.	Excavation Director, archaeologist or Aboriginal cultural heritage consultant	
3.8	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). 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
3.9	Where required, seek additional specialist technical advice (such as a forensic or physical anthropologist to identify skeletal remains). The Excavation Director, archaeologist or Aboriginal cultural heritage consultant can provide contacts for such specialist consultants.	Excavation Director, archaeologist or Aboriginal cultural heritage consultant	
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	Excavation Director, archaeologist or Aboriginal cultural heritage consultant	Appendix 4 Archaeological / heritage advice checklist Other references DECCW 2010, Aboriginal Cultural Heritage Consultation

Step	Task	Responsibility	Guidance and tools
	to other project approvals or management plans.		<p>Requirements for Proponents 2010</p> <p>DECCW 2010, Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW</p> <p>Heritage Branch 2009, Assessing Significance for Historical Archaeological Sites and 'Relics'</p>
4.2	<p>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).</p> <p>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.</p>	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	<p>Based on the advice and any statutory requirements, is notification to Heritage NSW and the Secretary required?</p> <p>If no, proceed directly to Step 6.</p> <p>If yes, proceed to next step.</p>	Sydney Metro Environment Manager / Sydney Metro Senior Heritage Advisor	

Step	Task	Responsibility	Guidance and tools
5.2	If notification is required, complete the template notification letter and forward with supporting documentation (including advice obtained at Step 4) to the Sydney Metro Environment Manager. The Environment Manager will seek the approval of the Sydney Metro Senior Heritage Advisor and the signature of the Director Project Environment, Sustainability & Planning or Director Environment, Sustainability & Planning	Sydney Metro Environment Manager	Appendix 5 Template Notification Letter
5.3	<p>Forward the signed notification letter to Heritage NSW once approved and cc Sydney Metro.</p> <p>Informal notification (via a phone call or email) to Heritage NSW prior to sending the letter is appropriate.</p> <p>The advice and completed Unexpected Heritage Item Recording Form (Appendix 2) must be submitted with the notification letter (for both Aboriginal objects and non-Aboriginal relics).</p> <p>If the item is an archaeological relic as defined under the Act, a section 146 notification form must also be completed and sent to Heritage NSW as part of the notification.</p>	Sydney Metro Environment Manager	Appendix 2 Unexpected Heritage Item Recording Form Appendix 5 Template Notification Letter
5.4	A copy of the final signed notification letter, archaeological or heritage management plan and the Unexpected Heritage Item Recording Form is to 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

Step	Task	Responsibility	Guidance and tools
			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	
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	Contractor's Project Manager	

Step	Task	Responsibility	Guidance and tools
	project work must be in accordance with all the relevant project and heritage approvals / determinations.		
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 2: Roles and responsibilities

Role	Responsibility
Contractor / Supervisor	<p>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.</p> <p>Manage the process of the identification, protection and mitigation of impacts on the heritage item.</p> <p>Liaise with the Sydney Metro Project Manager, Environment Manager and Senior Heritage Advisor.</p> <p>Assist the Excavation Director, archaeologist or Aboriginal cultural heritage consultant with mitigation and statutory requirements.</p> <p>Complete Incident Report and review CEMP for any changes that may be required. Proposed amendments to the CEMP if any changes are required.</p>
Contractor's Project Manager	<p>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 recommencement of work.</p>
Contractor's Excavation Director / archaeologist or Aboriginal cultural heritage consultant	<p>Provide expert advice to the Contractor and Sydney Metro Environment Manager on find identification, significance, mitigation, legislative procedures and requirements.</p>
Environmental Representative	<p>Ensure compliance with relevant approvals (new and existing) and the Construction Environment Management Plan.</p>
Sydney Metro Environment Manager	<p>Notify the Director Project Environment, Sustainability & Planning of find and help support Contractor with managing Incident Reporting.</p>
Sydney Metro Senior Heritage Advisor	<p>Provide expert advice to Sydney Metro Environment Manager and project as required.</p>

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 ES-PW-315/5.0 Sydney Metro Exhumation Management Procedure
- SM-17-00000096 Sydney Metro Environmental Incident Classification and Reporting
- 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'

7. Superseded documents

Superseded documents

Sydney Metro Unexpected Heritage Finds Procedure v3.3

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	April 2021	Revises definitions and procedure; references the Sydney Metro Exhumation Management Procedure v5 with amendments throughout for consistency with that document.
4.1	April 2021	Updates to related documents and references.

Appendix 1: Examples of unexpected heritage finds



Plate 1: Aboriginal stone artefacts found at the Wickham Transport Interchange, 2015



Plate 2: Aboriginal artefacts (shell material) found at the Wickham Transport Interchange, 2015



Plate 3: 1840s seawall and 1880s retaining wall uncovered at Balmain East, 2016



Plate 4: Sandstone pavers uncovered at Balmain East, 2016



Plate 5: Platform at Hamilton Station classified as a 'work' by the project archaeologist, Wickham Transport Interchange project, 2015



Plate 6: Sandstone flagging and cesspit, Wynyard Walk project, 2014



Plate 7: Chinese Ming Dynasty pottery and English porcelain / pottery dating back to the early nineteenth century, Wynyard Walk project, 2014



Plate 8: Pottery made by convict potter Thomas Ball during the early settlement, Wynyard Walk project, 2014

The following images, obtained from the Roads and Maritime Services Unexpected Heritage Items Heritage Procedure 02.



Plate 9: 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)



Plate 10: 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 2: Unexpected Heritage Find Recording Form

This form is to be completed by the Excavation Director on the discovery of an archaeological heritage find during construction or maintenance works

Date:		Recorded by: (include name and position)	
Project name:			
Description of works being undertaken:			
Description of exact location of item			
Description of item found (What type of item is it likely to be? Tick the relevant boxes).			
A. A relic	<input type="checkbox"/>	A 'relic' is evidence of a past human activity relating to the settlement of NSW with local or state heritage significance. A relic might include bottle, utensils, plates, cups, household items, tools, implements, and similar items	
B. A 'work', building or structure	<input type="checkbox"/>	A 'work' can generally be defined as a form infrastructure such as track or rail tracks, timber sleepers, a culvert, road base, a bridge pier, kerbing, and similar items	
C. An Aboriginal object	<input type="checkbox"/>	An 'Aboriginal object' may include stone tools, stone flakes, shell middens, rock art, scarred trees and human bones	
D. Bone	<input type="checkbox"/>	Bones can either be human or animal remains. Remember that you must contact the local police immediately by telephone if you are certain that the bone(s) are human remains.	
E. Other	<input type="checkbox"/>		
Provide a short description of the item (E.g. metal rail tracks running parallel to the rail corridor. Good condition. Tracks set in concrete, approximately 10 cm below the current ground surface).			

Sketch <i>(Provide a sketch of the item's general location in relation to other road features so its approximate location can be mapped without having to re-excavate it. In addition, please include details of the location and direction of any photographs of the item taken)</i>			
Action taken (Tick either A or B)			
<div style="display: flex; align-items: center;"> <div style="flex: 1;"> A. Unexpected item would not be further impacted on by the works </div> <div style="flex: 0.1; text-align: center;"> <input type="checkbox"/> </div> <div style="flex: 2;"> Describe how works would avoid impact on the item. <i>(E.g. the rail tracks would be left in situ and recovered with paving).</i> </div> </div>			
<div style="display: flex; align-items: center;"> <div style="flex: 1;"> B. Unexpected item would be further impacted by the works </div> <div style="flex: 0.1; text-align: center;"> <input type="checkbox"/> </div> <div style="flex: 2;"> Describe how works would impact on the item. <i>(E.g. milling is required to be continued to a depth of 200 mm depth to ensure the pavement requirements are met. Rail tracks would need to be removed.)</i> </div> </div>			
Excavation Director, archaeologist or Aboriginal cultural heritage consultant		Name	
		Signature	

IMPORTANT

It is a statutory offence to disturb Aboriginal objects or relics (including human remains) without an approval. All work affecting Aboriginal objects and relics must cease until an approval is sought.

Appendix 3: 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.

Context and detailed photographs

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

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

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 Figures 3 and 4 for examples.



Figure 3: Ceramic bottle artefact with stamp.



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

Photographing bones

The majority of bones found on site will 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 5 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 (Figure 5) as this makes it difficult to identify. Minor hand removal of foliage can be undertaken as long as disturbance of the bone does not occur. Excavation of the ground to remove bone(s) should not occur, nor should they be pulled out of the ground if partially exposed.

Where sediment (adhering to a bone found on the ground surface) conceals portions of a bone (Figure 6) ensure the photograph is taken of the bone (if any) that is not concealed by sediment.



Figure 5: Bone concealed by foliage.



Figure 6: Bone covered in sediment

Ensure that all close up photographs include the whole bone and then specific details of the bone (especially the ends of long bones, the *epiphysis*, which is critical for species identification). Figures 7 and 8 are examples of good photographs of bones that can easily

be identified from the photograph alone. They show sufficient detail of the complete bone and the epiphysis.



Figure 7: Photograph showing complete bone.



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

Appendix 4: Archaeological / heritage advice checklist

The archaeologist/Aboriginal heritage consultant must provide advice to the Sydney Metro Environment Manager and Senior Advisor Heritage as soon as possible after an inspection of the site has been completed. This advice can include a range of activities and processes, which differ depending on the find and its significance.

In discussions with the archaeologist/Aboriginal heritage consultant the following checklist can be used as a prompt to ensure all relevant heritage issues are considered when developing this plan. This will allow the project team to receive clear and full advice to move forward quickly. Archaeological and/or heritage advice on how to proceed can be received in a letter or email outlining all relevant archaeological and/or heritage issues.

	Required	Outcome/notes
Assessment and investigation		
• Assessment of significance	Yes/No	
• Assessment of heritage impact	Yes/No	
• Archaeological excavation	Yes/No	
• Archival photographic recording	Yes/No	
Heritage approvals and notifications		
• AHIP, section 140, section 139 exceptions, section 60, exemptions etc.	Yes/No	
• Regulator Aboriginal objects / relics notification	Yes/No	
• Notification to the appropriate agency for s170 heritage conservation register	Yes/No	
• Compliance with CEMP or other project heritage approvals	Yes/No	
Stakeholder consultation		
• Consultation with Registered Aboriginal Parties	Yes/No	
Management		
• Retention or conservation strategy (e.g. items may be subject to long conservation and interpretation)	Yes/No	
• Disposal strategy	Yes/No	
• Short term and permanent storage locations (interested third parties should be consulted on this issue).	Yes/No	
• Control Agreement for Aboriginal objects	Yes/No	

Appendix 5: Template notification letter

Note: Notification of the discovery of a relic is required under section 146 of the Heritage Act 1977. The notification should be submitted through the Heritage Management System (HMS).

Insert on Sydney Metro letterhead

[Name]

Heritage NSW

[Address]

[Select and type salutation and name],

Re: Unexpected heritage item discovered during Sydney Metro activities

I write to inform you of an unexpected [select: Aboriginal object / relic] found during Sydney Metro activities at [insert location] on [insert date] in accordance with the notification requirement under select: [NPW Act, section 146 of the *Heritage Act 1977* (NSW)]. [Where the regulator has been informally notified at an earlier date by telephone, this should be referred to here].

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

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

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

Based on the preliminary findings, Sydney Metro [or contractor] is proposing [provide a summary of the proposed archaeological/heritage approach (e.g. develop archaeological research design (where relevant), seek heritage approvals, undertake archaeological investigation or conservation, interpretation). Also include preliminary justification of such heritage impact with regard to project design constraints and delivery program].

The proposed approach will be further developed in consultation with a nominated Heritage NSW staff member.

Should you have any feedback on the proposed approach, or if you require any further information, please do not hesitate to contact [Environment and Planning Project Manager] on [add contact number].

Yours sincerely

[Name]

Sydney Metro Director, Environment, Sustainability & Planning

[Attach the advice from the Excavation Director, archaeologist or Aboriginal cultural heritage consultant, completed recording form and section 146 notification]

Appendix B

Sydney Metro Exhumation Management Procedure



Exhumation Management Procedure

SM ES-PW-315/5.0

Metro Body of Knowledge (MBoK)

Applicable to:	Sydney Metro
Document Owner:	Senior Heritage Advisor
System Owner:	Environment, Sustainability & Planning
Status:	Final
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1. Introduction

Sydney Metro has developed this Exhumation Management Procedure (ExMP) to provide guidance for managing the discovery of human skeletal remains during the course of works. The procedure is applicable to both unexpected skeletal finds and controlled archaeological investigations where human remains are anticipated to be uncovered. The procedure is applicable to any and all stages of any Sydney Metro project and to all staff and contractors.

Sydney Metro is Australia's biggest public transport project. In 2024, Sydney will have 31 metro stations and more than 66 km of new metro rail, revolutionising the way Australia's biggest city travels. When Sydney Metro is extended into the central business district (CBD) and beyond in 2024, metro will run from Sydney's booming North West region under Sydney Harbour, through new underground stations in the CBD and beyond to the south west (refer to Figure 1).

The purpose of this ExMP is to provide a clear and concise process to follow in the event of the discovery of potential human remains during Sydney Metro activities.

This ExMP will be reviewed as required and prior to any future Sydney Metro project that has potential to impact on known burials, graves, cemeteries or burial grounds. A review may require amending the ExMP to tailor additional controls or management procedures that are specific to the impacted cemetery or burial ground. In addition, the requirements of the relevant Planning Approval will be assessed during the review of this ExMP prior to its implementation.

This ExMP should be read in conjunction with the Sydney Metro Unexpected Finds Procedure.

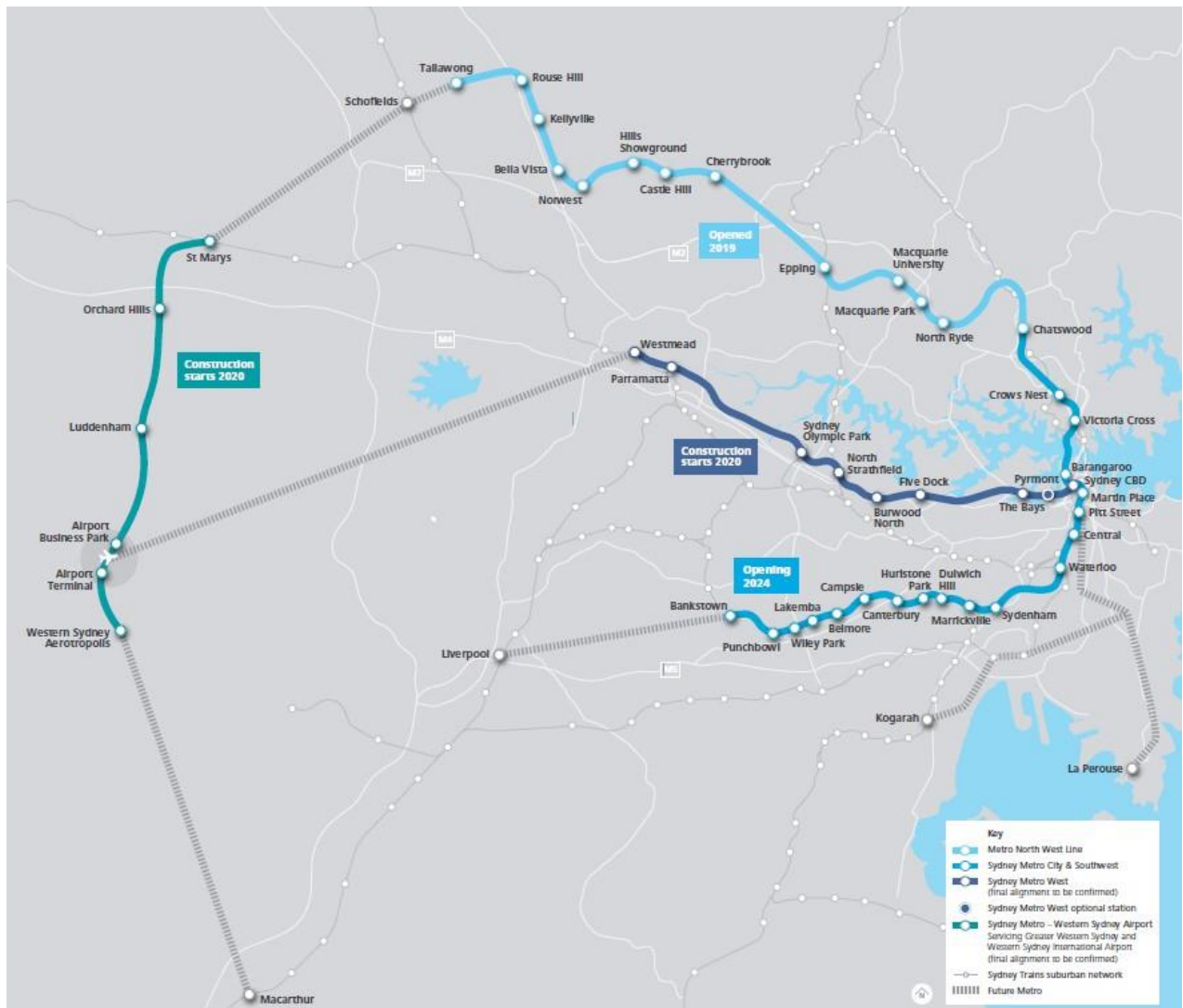


Figure 1 Sydney Metro project overview and station locations

1.1. Purpose and scope

This ExMP outlines the procedure for the management of the discovery of human remains within the Sydney Metro program. It includes:

- Overview of legislative requirements for dealing with human remains (e.g. *Coroners Act 2009*, *Heritage Act 1977*, *Guidelines for the Management of Human Skeletal Remains 1988*, and the *Public Health Regulations 2012*).
- A flow chart process to be followed when human remains are uncovered
- An archaeological methodology for the excavation of remains including processes for appropriately handling remains in accordance with the relevant guidelines (see section 2.3 and 2.4 below).
- Post-exhumation management processes including relocation, processing and long-term arrangements.

- Process for nomination of a physical anthropologist and temporary storage location.
- Process for additional analysis including DNA testing, isotope analysis and environmental sampling, and discussion on requirements for public involvement.

2. Overview of legislative requirements for dealing with human remains

The following section provides an overview of the legislation that would apply to the discovery, management and relocation of human remains. A discovery of suspected human remains may be subject to different Acts and requirements, thereby triggering different notification pathways based on the specific circumstances involved.

The first step will always be to notify the NSW Police. Confirmation of the age (antiquity) and nature of the skeletal remains as well as the reasons for the disturbance will dictate which Act and provisions will be applicable.

2.1. Discovery of human remains and forensic cases: NSW Coroners Act 2009

For a discovery of suspected human remains less than 100 years old, the remains would come under the jurisdiction of the State Coroner and the NSW *Coroners Act 2009*. Such a case would be considered a 'reportable death' and, under legal notification obligations set out in s35 (2); a person must report the death to a police officer, a coroner or an assistant coroner as soon as possible. This applies to all human remains less than 100 years old, regardless of ancestry (i.e. both Aboriginal and non-Aboriginal remains).

35 Obligation to report death or suspected death

- (1) *This section applies to any person who has reasonable grounds to believe that a death or suspected death of another person:*
 - (a) *is a reportable death or occurred in circumstances that would be examinable under Division 2 of Part 3.2, and*
 - (b) *has not been reported in accordance with subsection (2).*
- (2) *A person to whom this section applies must report the death or suspected death concerned to a police officer, a coroner or an assistant coroner as soon as possible after becoming aware of the grounds referred to in subsection (1).*

Maximum penalty (subsection (2)): 10 penalty units.

- (3) *A police officer to whom a death or suspected death is reported under this section is required to report the death or suspected death to a coroner or assistant coroner as soon as possible after the report is made.*
- (4) *An assistant coroner to whom a death or suspected death is reported under this section is required to report the death or suspected death to a coroner as soon as possible after the report is made.*
- (5) *A coroner to whom a death or suspected death is reported under this section is required to inform the State Coroner of the report as soon as practicable after the report is made.*

2.2. Historic human remains: *Heritage Act 1977 and Guidelines for the Management of Human Skeletal Remains under the Heritage Act 1977*

The *Heritage Act 1977* (Heritage Act) and *Guidelines for the Management of Human Skeletal Remains under the Heritage Act 1977*¹ (the Guidelines) apply to historic burials in New South Wales. It should be noted that the Guidelines are outdated in terms of the current statutory framework.

A relic is defined as an archaeological deposit or artefact that has heritage significance at a local or State level. The guidelines, *Assessing Significance for Historical Archaeological Sites and 'Relics'*², have been endorsed by the Heritage Council of NSW and should be used to assess the level of heritage or archaeological significance of the remains. With reference to burial grounds, objects such as headstones, grave enclosures and grave goods, as well as buried human remains, may be 'relics' under the Heritage Act.

Approval under the Heritage Act and the *National Parks and Wildlife Act 1974* (NPW Act), is not required if human remains are uncovered during a Critical State Significant Infrastructure (CSSI) project. However, notification to the Heritage Council under s146 of the Heritage Act, and notification of an Aboriginal object under the NPW Act is required if human remains are uncovered during archaeological or other project related investigations.

2.3. Aboriginal human remains: *National Parks and Wildlife Act 1974*

The NPW Act, administered by Heritage NSW, provides statutory protection for all Aboriginal 'objects' (consisting of any material evidence of the Aboriginal occupation of NSW) under Section 90 of the Act, and for 'Aboriginal Places' (areas of cultural significance to the Aboriginal community) under Section 84.

Discovery of Aboriginal burials and/or human remains would be addressed in the projects Aboriginal Cultural Heritage Assessment Report (ACHAR). ACHARs would be prepared in accordance with the following Heritage NSW guidelines:

- *Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation*³,
- *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW*⁴,
- *Aboriginal cultural heritage consultation requirements for proponents 2010*⁵,
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*⁶.

¹ NSW Heritage Office, 1998

² Heritage Branch of the Department of Planning, 2009

³ NSW Department of Environment and Conservation, 2005

⁴ Office of Environment and Heritage, 2011

⁵ Department of Environment, Climate Change and Water, 2010

⁶ Office of Environment and Heritage, 2010

If suspected human skeletal remains are uncovered at any time during the archaeological management program, the process outlined in this ExMP and detailed in the flow chart is to be followed. Management of the remains would be guided by consultation with the nominated Registered Aboriginal Parties (RAPs) for the project, in adherence to the ACHAR.

2.4. Exhumation of human remains: *Public Health Regulation 2012 (NSW)*

Public Health Regulation 2012 and the *NSW Health Policy Statement – Exhumation of human remains of the Public Health Regulation 2012* provides specific regulation for the exhumation of human remains in NSW.

Under Clause 70 of the Regulation, an application for approval to exhume the remains of a dead person may be made to the Director-General via an approved form to the Director of the Local Public Health Unit that acts on behalf of the Director-General of NSW Health. Exhumation is not to take place unless an authorised officer or a NSW Health member of staff is present at the exhumation (the grave may be excavated to the lid of the coffin but nothing must be disturbed until the arrival of the authorised officer) (Clause 72). An authorised officer must be present at the exhumation to ensure the correct interment procedure is followed and that all of the remains are exhumed, and to enforce the protection of public health should this be necessary.

2.5. NSW Ministry of Health Policy Statement – Exhumation of human remains (2013)

The NSW Ministry of Health *Policy Statement on the exhumation of human remains* provides the policy to be observed by Public Health Units located in Local Health Districts on receipt of an application to seek permission for approval of the exhumation of human remains under the *Public Health Regulation 2012*. Public Health Units (PHUs) of Local Health Districts (LHDs) in NSW facilitate the approval for an exhumation.

Under Clause 69 a person must not exhume a body unless the exhumation of the remains has been approved by the Director-General. An application for permission to exhume the remains of a deceased person is to be made to the Public Health Unit on the approved form which is available at the [NSW Health website](#) and included in Appendix 2.

Note that the title of Director General of Health was replaced with the Secretary of Health when the Public Health Act and Public Health Regulation were amended. However, the Policy Directive PD2013-046 has not been amended to reflect this change.

2.6. *Work Health and Safety Act 2011*

The *Work Health and Safety Act 2011* provisions apply to protect personnel involved in the exhumation procedure by creating and maintaining safe and healthy work practices and are enforced by WorkCover NSW. Graves, crypts and vaults could be considered to be confined spaces in some circumstances under health and safety legislation. More information on safe work practices is available at or by contacting SafeWork NSW via their website or directly.

Health and safety aspects of working with human remains should be considered. Generally, working with archaeological human skeletal remains requires no extra precautions to be taken beyond normal health and safety regulations. Once any necessary site health and safety precautions have been taken, the exhumation of human remains can proceed.

3. Sydney Metro procedure for the discovery and management of human remains

This procedure provides project managers, principal contractors and the Project Excavation Director with advice on the steps to follow when suspected human remains are uncovered. Information on the potential for burials and human remains where known would be included in the general project induction for all personnel. The general project induction would also include the procedure to manage human remains set out in this ExMP.

3.1. Initial discovery of bones: What do we do?

To avoid doubt, all suspected bone items must be treated as potential human skeletal remains, and work in the immediate vicinity must stop while they are protected and investigated as a matter of urgency.

Stop Work and preliminary notification

If bone is uncovered, all work in the vicinity of the find must stop to allow for a positive identification as either human or non-human bone.

The Project Excavation Director must be notified.

Preliminary notification must be made to the NSW Police in compliance with Section 35 of the *Coroners Act 2009* (also refer to special conditions for Central Station noted in section 4).

What?	When bones are uncovered at a site, all work in the area of the find must stop immediately and the site must be secured.
Who?	The discoverer will immediately notify machinery operators so that no further disturbance of the remains will occur, as well as notifying the foreman/site supervisor, principal contractor, project archaeologist/Excavation Director and Sydney Metro Environmental Manager. Preliminary notification to the NSW Police will be undertaken by the Excavation Director. Notification should provide verbal description of the remains and inform the police that consultation with technical specialists is being undertaken to confirm that the remains are human, as well as the burial context (archaeological or less than 100 years old, refer Step 2).
How?	Inform all site personnel of restricted access to the area of the discovery until further notice. Area must be fenced off (flagging or temporary exclusion fencing).
Actions	Notify site supervisor, principal contractor, Project Archaeologist / Excavation Director and Sydney Metro Environmental Manager of the find and protect the suspected remains until an initial assessment can be undertaken by a technical specialist. Preliminary notification to NSW Police by Sydney Metro Environmental Manager.

Confirm the remains are human

Skeletal remains could either be articulated and in a recognisable form of burial such as a coffin or common burial position of the body (e.g. supine, prone or flexed), or they could be disarticulated or fragmented remains. Within the boundaries of a known historic burial ground, there is a high probability of the remains being human. In a suspected forensic case (less than 100 years old), the remains may have clothing and/or human tissue. Disarticulated or fragmented bones are often uncovered and these may require specialist assessment to determine legal jurisdiction.

If suspected human remains are identified during the course of project works, preliminary notification must be made to the NSW Police in compliance with Section 35 of the *Coroners Act 1999* (refer Step 1). NSW Police would be contacted immediately upon receipt of confirmation of human provenance.

What?	Confirmation that the remains are human, their burial context - whether they are forensic (less than 100 years) or archaeological (older than 100 years) and suspected ancestry (Aboriginal or non-Aboriginal).
Who?	Excavation Director and or Forensic or physical anthropologist, or archaeologist with specialist skills such as an osteoarchaeologist. Notification to the NSW Police will be undertaken by the Sydney Metro Environmental Manager.
How?	Consultation could be undertaken as either an on-site inspection or via good quality photos sent to the nominated technical specialist of 1) the remains; and 2) the site general site location of the discovery.
Actions	Contact nominated technical specialists to confirm that the remains are: a) human, b) burial context (archaeological or forensic), and c) suspected ancestry (Aboriginal or non-Aboriginal). For the duration of the Sydney Metro project, the nominated technical specialists are: <ul style="list-style-type: none"> • Forensic Anthropologist – TBC by contractor for project area. • Nominated Excavation Director – TBC by contractor for project area. • Sydney Metro Environmental Manager to conduct and or oversee liaison with NSW Police. The archaeologist may be able to identify the nature of remains without input from the Forensic Anthropologist. The Forensic Anthropologist should be contacted as required.

Notification based on jurisdiction (forensic or archaeological)

Once confirmation is received from the technical specialist that the remains are of human origin, there are three possible statutory pathways to follow based on the assessment.

What?	<i>Forensic case:</i> remains are less than 100 years old
Who?	If it is determined by specialist assessment (Step 2) that the remains are forensic, the remains come under the jurisdiction of the State Coroner and the Coroners Act 2009.
How?	The NSW Police would likely secure the site and will advise on the procedure to be followed.
Actions	Environmental Manager to liaise with NSW Police

What?	<i>Archaeological – non-Aboriginal human remains</i> – more than 100 years old.
Who?	Follow the Archaeology Exhumation Methodology as set out in Step 4 below

How?	Follow the Archaeology Exhumation Methodology as set out in Step 4 below
Actions	Follow the Archaeology Exhumation Methodology as set out in Step 4 below

What?	<i>Archaeological – suspected Aboriginal human remains – more than 100 years old.</i>
Who?	Recording of Aboriginal ancestral remains must be undertaken by, or conducted under the direct supervision of a specialist with registered Aboriginal parties (RAPs) present.
How?	The RAPs must be present where it is reasonably suspected that Aboriginal burials or human remains have been encountered.
Actions	Notify RAPs and Heritage NSW and follow the Aboriginal cultural heritage assessment report (ACHAR). Follow the Archaeology Exhumation Methodology as set out in Step 4.

3.2. Archaeological exhumation methodology

The following section provides a broadly accepted archaeological methodology for exhumation and the appropriate handling of human remains.

Securing the site

The strategy for the excavation and removal of human remains must be sensitive to public opinion and ethics and exhumation activities should not be visible to the general public. The site may need to be screened off from public areas, not only with hoarding but also in some cases with a roof to screen the site off from overlooking buildings. At all times, human remains should be treated respectfully. The perimeter of the excavation site should be demarcated by plastic tape or flagging, with only technical staff allowed within this area for the duration of exhumation activities.

The site should be protected from the elements including flooding, contamination with dust or debris, and other disturbance. These measures would be formulated by the Excavation Director in consultation with the contractor and Sydney Metro where required and may differ from site to site.

Excavation Director

Archaeological investigations are to be managed by a suitably qualified Excavation Director with experience in the excavation and management of human remains. For sites with potential for locally significant remains, the Excavation Director should meet the NSW Heritage Council criteria for experience with locally significant archaeological sites. For sites with potential for State significant archaeology the Excavation Director should meet the Heritage Council of NSW criteria for experience with State significant archaeological sites.

Excavation and recording

Exhumation and recording is to be undertaken in accordance with best practice forensic and Heritage Council of NSW guidelines. Prior to removal, the remains should be fully recorded in situ to understand their surrounding archaeological context. This will include recording any disturbances to the burial and the identification of bones present. In some cases, the deposit

of bones may be a mixture of articulated and disarticulated remains. Care should be taken to distinguish articulated remains and to assess if they represent commingled individuals or disturbed remains belonging to one individual, and to record them accordingly.

Recording

- A standard context recording system is to be employed.
- Detailed survey and/or measured drawings are to be prepared and include location of remains within the overall site (position of the body, the direction of the burial, noting any stratigraphic relationships with other archaeological features).
- Any associated artefacts (potential grave goods, burial furniture) are to be recorded and collected by context for later analysis.
- Photographic record of all phases of work in accordance with 'Photographic Recording of Heritage Items Using Film and Digital Capture'. Photographs are to be in RAW format, using photographic scales and photo boards where appropriate.
- Registers of contexts, photos, samples and drawings are to be kept.

Excavation

- Detection of the extent of the grave/remains (if disarticulated).
- Surface soils removed in excavation units of 100mm (site dependent) using small hand tools.
- Expose remains with soft paint brushes and pedestal the remains.
- Record position and depth of remains.
- Soil removed is to be sieved through 3mm mesh to examine for teeth and bone fragments.
- Soil samples may be taken from the abdominal and/or chest areas of the body (articulated remains) to retrieve further evidence.
- Exhumation must be under the control of the Excavation Director, with the assistance of a Forensic Anthropologist if required. Exhumation permit/s, provided by NSW Ministry of Health may also require the presence of an authorised officer or a member of staff of the Ministry of Health.
- Further excavation of the bottom of the pit (grave) following removal to confirm the absence of further remains.

Relocation of bones

- Removal and collection of skeletal remains is to follow the standard forensic practice of labelling as follows:
 - Remove remains from the ground systematically and place in plastic bags according to anatomical areas of the body.
 - Bags should not be air-tight and should have ventilation holes to prevent deterioration of fragile skeletal material. Each bag should contain labels and the separate bags should then be placed in a large plastic bag, crate or box, labelled with the context information.
 - The remains should be placed in a sturdy, large cardboard box (approximately 600 x 300 x 200 mm) for relocation to off-site processing location.

3.3. Resume work

Construction work may only recommence upon receipt of clearance certificate from the Excavation Director and may require additional NSW Ministry of Health approval. If a forensic case, written authorisation from the NSW Police is required.

3.4. Reporting

A report would be prepared following the completion of the program of exhumation works, separate to the archaeological excavation report for the project. This report would include skeletal analysis catalogue, comprehensively describe the process of exhumation, detail the recording of the remains and synthesise the results of any further laboratory testing. An assessment of significance for the remains would be provided and interpreted within the context of the archaeological research design (response to research questions).

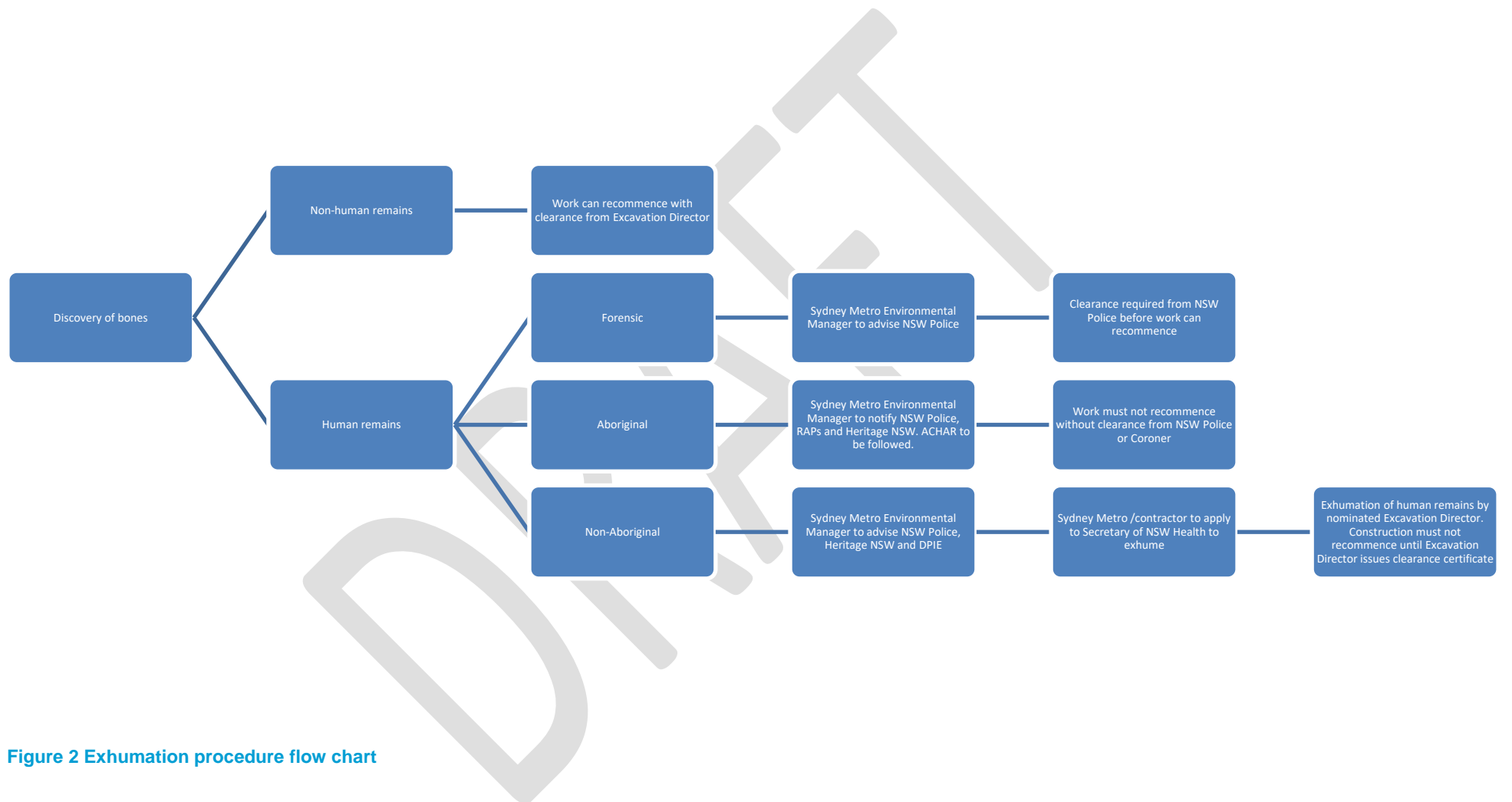


Figure 2 Exhumation procedure flow chart

4. Excavation and post-excavation tasks

All on-site management should be in accordance with the archaeological research design (ARD) and relevant archaeological method statement (AMS), and be overseen by the Excavation Director. The Excavation Director would nominate a Forensic Anthropologist where required.

4.1. Research questions

Research questions should be specific to the site and the site history. The research questions in the archaeological research design can be revised as new information emerges and new research questions can be investigated.

The following general research questions can be used to guide exhumations, should intact burials, disarticulated remain, burial cuttings or associated material culture be uncovered during work.

Social history and burial practices

- Does the location of the burial/burial cutting correspond with historic plans/descriptions?
- Is there evidence of exhumation?
- Do graves cut into older ones? What can this tell us about nineteenth century burial practices, and how does this compare to other excavated cemetery sites in the region?
- What is the distance between burials (if multiple burials uncovered)? Does this conform to known nineteenth century burial practices?
- What type of fill was used within grave cuttings? What can this tell us about the surrounding environment and burial practices at the time?
- What materials/tree species were used in the coffin manufacture? Can coffin manufacturing techniques or fastening methods (use of mortar, screws, nails, tacks) be identified? Does this match known burial practices of the time? If alternative methods are identified, what can this tell us about the manufacturer or economic/social landscape?
- Can the class or rank of the individual be identified via coffin materials, grave goods or clothing/shrouds?
- Which direction is the burial orientated? How does this correspond with the known/hypothesised location of denomination areas?
- If the burial is associated with more than one individual, can a familial relationship be assessed through DNA or other genetic markers identifiable within the skeletal remains?

Environmental factors and scientific analysis

- What is the condition of the bones? How does their condition compare to known or nearby burials of the same age? What environmental or human factors may have influenced the decomposition process?
- Can the health, nutrition, sex, race, stature or age be identified through the skeletal remains? Is there evidence of trauma on the bones? Is there evidence of pathology on the bones (e.g. syphilis, tuberculosis, tumours)?
- Can stable isotope analysis address any questions regarding diet, country of origin and nutrition?
- Can DNA testing address any questions not answerable by the skeletal remains themselves, such as sex, familial relationships (if buried with another individual/s) or

race?

- Is there potential for DNA to be tested against any individuals who may come forward as a descendant of the deceased?

4.2. Process for DNA testing, isotope analysis and environmental sampling

Pre-excavation

The Excavation Director, in consultation with the Forensic Anthropologist, will nominate a suitable laboratory prior to works commencing. Requirements for DNA testing, isotope analysis and environmental sampling will be identified in the archaeological research design and archaeological method statement.

Excavation

In order to prevent cross-contamination, the following sample collection and excavation process should be followed:

- The location, quantity and material (bone, teeth, hair, soil, wood) of samples will be determined by the Excavation Director or Forensic Anthropologist prior to its collection.
- Samples would be stored in a safe, secure and climate controlled location while excavations are in progress. This would be chosen by the Excavation Director or Forensic Anthropologist on site.
- Each collected sample would be given a unique catalogue number and a sample register would be recorded throughout the excavation;
- 'Clean excavation' procedures would be followed during the excavation of burials and during the sample collection process⁷. This would include:
 - Latex gloves would be worn by individuals excavating and/or handling bone or soil samples. Gloves would be changed for each bone and/or individual to prevent cross-contamination;
 - Excavation tools/brushes would be cleaned prior to and after the collection of each sample to prevent cross-contamination;
 - In some cases, a face mask would be worn when samples for DNA analysis are being collected;
 - Bone samples for DNA testing would be collected with surrounding in situ soil and should not be cleaned prior to bagging;
 - It may be necessary for individuals involved in sample collection to submit DNA for comparison in the event of cross-contamination; and
 - All bags containing samples for analysis would be bagged and labelled appropriately to prevent cross contamination and ensure they are handled and stored correctly.

Post-Excavation

⁷ Guidelines for 'clean excavation' are based on procedures outlined in: Yang, D. Y. & Watt, K. 2005. Contamination controls when preparing archaeological remains for ancient DNA analysis. *Journal of Archaeological Science*, vol. 32, pp. 331–336 and *Society for Historical Archaeology*, 2015-2017. Research and Analysis of Artefacts. Accessed online at: <https://sha.org/conservation-facts/faq/analysis/#C> on 25/5/2017.

On completion of excavations, samples will be transported to nominated laboratories for analysis. A record of their location will be kept.

4.3. Reporting

The results of the investigation of human remains and the exhumation will be included in the archaeological reporting for the project in accordance with the project ARD.

Once finalised, and where it is appropriate to do so as determined in consultation with RAPs and/or as may be required by the relevant Planning Approval obligations, archaeological and associated specialist reports should be submitted to:

- The relevant local Council and Library;
- Heritage NSW Library;
- The State Library of NSW; and
- Made available online for public access and educational purposes.

Further, if significant remains are identified during excavations, the results and findings would be published in academic journals and conference papers where feasible.

4.4. Public involvement

Archaeological excavations may uncover remains directly associated with early settlement and burial practices. Such remains are likely to generate public interest.

Public involvement may include:

- Media releases;
- Public Open Days;
- Preparation of brochures detailing the archaeological excavations;
- Interpretive signage and online blog posts or site diaries while excavations are taking place; and
- The preparation of a Heritage Interpretation Plan designed to provide interpretation of the site within the new development upon the completion of works.

Due to sensitive nature of human skeletal remains, these recommendations would be adapted and modified as appropriate under the direction of Sydney Metro and the Excavation Director.

Such recommendations would also be considered and require approval from relevant stakeholder groups such as known or potential descendants of the deceased, Heritage NSW/Heritage Council of NSW, local Council and interest groups.

4.5. Temporary storage and permanent repository or resting place for remains

Temporary storage

Upon the completion of archaeological excavations, skeletal remains should be boxed separately and temporarily stored within a safe, secure controlled environment to allow for further analysis of the remains. This location would be chosen by the Excavation Director and the Forensic Anthropologist and comply with NSW legislative requirements.

Permanent repository or resting place for remains

A permanent repository or resting place for remains is dependent on the nature and volume of skeletal remains. Final arrangements would be dictated by Sydney Metro, the Excavation Director, Forensic Anthropologist, identified descendants of the deceased, RAPs (if applicable) and/or other stakeholders upon the completion of excavations and subsequent analysis.

5. Definitions

All terminology in this document is taken to mean the generally accepted or dictionary definition. Other terms and jargon specific to this document are defined within the [SM-17-00000203 Sydney Metro glossary](#). Acronyms specific to this document are listed below.

	Definitions
IMS	Integrated Management System (IMS)
TfNSW	Transport for New South Wales
RAP	Registered Aboriginal party
ACHAR	Aboriginal cultural heritage assessment report
ARD	Archaeological research design
AMS	Archaeological method statement
OEH	Office of Environment and Heritage (now Heritage NSW)
PHU	Public Health Unit
ExMP	Exhumation Management Procedure (this Procedure)
ER	Environmental Representative (independent)

6. Accountabilities

The Director Environment, Sustainability and Planning is accountable for this document 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 document 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 document.

7. Related documents and references

Related documents and references

- SM-18-00105232 Sydney Metro Unexpected Heritage Finds Procedure
- 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

8. Superseded documents

Superseded documents

Exhumation Management Plan Version 1.1
 Exhumation Management Plan Version 2.0
 Exhumation Management Plan Version 2.1
 Exhumation Management Plan Version 2.2
 Exhumation Management Plan Version 3.0
 Exhumation Management Plan Version 4.0

9. Document history

Version	Date of approval	Notes
1.1	May 2017	New IMS document.
2.0	July 2017	Incorporates Stage 2 (section 3)
2.1	February 2019	Extended for Metro Program wide application, includes changes specific Central Station management, and incorporates comments received from the State Coroner's Office, NSW Police, NSW Health, and Sydney Metro Environmental, Environmental Representatives engaged on the Central site and the Office of Environment and Heritage (OEH).
2.2	February 2019	Incorporates comments received from Artefact Heritage and Dr Denise Donlon issued to Health and OEH Heritage Division for consultation.
3.0	May 2019	Incorporates Health, Coroner and OEH comments.
4.0	April 2020	Updates to remove specific references to City and South West and Central Station. Change of title to "Procedure". Update to references.
5.0	March 2021	Minor edits.
5.1	April 2021	Updates to related documents and references.

Appendix 1

NSW Health Policy Directive for Exhumation of Human Remains

CONDITIONS OF APPROVAL FOR EXHUMATION FROM GRAVE

1. The exhumation is to be carried out in the presence of a Public Health Unit's authorised officer or other authorised officer of the NSW Ministry of Health or Local Council authorised Officer and person appointed by Cemetery Authority.
2. At least 48 hours notice of the exhumation arrangements shall be given to the Public Health Unit.
3. Day and time of the exhumation shall be arranged by the participating parties and agreed to by the Public Health Unit.
4. The approval granted is valid for a period of three months and shall lapse on ____/____/____, unless a further approval is granted.
5. The presence of any relative of the deceased at the exhumation is strictly prohibited.
6. No animals are to be permitted within the exhumation site.
7. The cemetery authority and funeral director shall be responsible for the work health and safety of all persons involved in the exhumation and shall ensure that all NSW WorkCover requirements are complied with.
8. If, during the course of the exhumation, it is determined necessary to stop the exhumation by either the exhumation supervisor / cemetery manager or authorised Officer, for any valid reason e.g. work health and / or public health risk, then the exhumation must cease.
9. The remains of the deceased shall be enclosed in a body bag and placed into a new coffin with a name plate attached inscribed with the name of the deceased.
10. The remains of the original coffin are to be placed in the new coffin where possible. Where there is an excess of remains of the original coffin, these remains should be disposed in a sanitary and agreed manner.
11. Excavated soil should be back filled. The soil that was removed from immediately above and around the coffin should be replaced first.
12. If the exhumed remains are to be transferred to another cemetery, a funeral director shall be contracted to transfer the remains from the cemetery grounds or carry out preparatory work for the safe reinterment of the remains.
13. The exhumation will not proceed during or following a period of heavy rainfall within the preceding 24 hours of the appointed time of exhumation. The cemetery manager is to confirm that satisfactory conditions exist for the exhumation to proceed two hours prior to the commencement of the exhumation.
14. Used disposable protective equipment and materials are to be placed in a sealed plastic bag and disposed of in a sanitary manner.

CONDITIONS OF APPROVAL FOR EXHUMATION FROM ABOVE GROUND STRUCTURE

1. The exhumation is to be carried out in presence of a Public Health Unit authorised officer or other authorised officer of the NSW Ministry of Health or Local Council authorised Officer and person appointed by Cemetery Authority.
2. At least 48 hours notice of the exhumation arrangements shall be given to the Public Health Unit.
3. Date and time of the exhumation shall be arranged by the participating parties and agreed to by the Public Health Unit.
4. An approval granted is valid for a period of three months and shall lapse on ____/____/____, unless a further approval is granted.
5. The cemetery authority and funeral director shall be responsible for the work health and safety of all persons involved in the exhumation and shall ensure that all NSW WorkCover requirements are complied with.
6. If, during the course of the exhumation, it is determined necessary to stop the exhumation by either the exhumation supervisor / Cemetery Manager or authorised officer, if for any valid reason e.g. worker health and/or public health risks, then the exhumation must cease.
7. Used disposable protective equipment and materials are to be placed in a sealed plastic bag and disposed in a sanitary manner.



Health

APPLICATION TO EXHUME REMAINS

PUBLIC HEALTH REGULATION, 2012 Clause 70(2)

In accordance with the requirements of Clause 70 (2) of the Public Health Regulation 2012, I
(Full name of applicant)

..... of hereby
(Address)

apply for permission to exhume the remains of the late
(Name of deceased)

from Grave No:....., Section:, being a single

interment within the Cemetery, for the purpose of

I seek permission to exhume for the following reason/s:

The deceased: (cross out which is not applicable)

- was not known to be infected with a prescribed infectious disease as defined in clause 53 of the Public Health Regulation 2012; or
- was known to be infected with a prescribed infectious disease as defined in clause 53 of the Public Health Regulation 2012

I am entitled to make this application, because I am: (tick one)

1. ☐ The executor of the estate of the deceased; or
2. ☐ The nearest surviving relative of the deceased; or
3. ☐ If there is no such executor or relative available to make the application, another the proper person to make the application for the reasons set out below:

.....
(Full reasons for proper person to make application)

Attached is:

1. A certified copy of the death certificate of the deceased.
2. A statutory declaration as to:
 - My relationship to the deceased; and
 - the wishes of the deceased regarding the disposal of the body (if known);
 - the reasons why the Director-General may consider me the proper person in all the circumstances to make the application (if applicable)
3. The application fee of \$.....

The exhumation is to be supervised in strict accordance with the attached Plan of Management

by
employed with (Funeral Director/Cemetery)
in the capacity of

Signature: Date:
(Applicant)

Form C70

