



Australian Government



**Sydney Metro –
Western Sydney Airport**

Appendix I

Aboriginal Cultural Heritage Management Plan

Sydney Metro – Western Sydney Airport

Aboriginal Cultural Heritage Management Plan

April 2021

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April 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	<i>Aboriginal and Torres Strait Islander Heritage Protection Act 1984</i>
BNI	Blacktown Native Institution

Term	Definition
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 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	<i>Environmental Planning and Assessment Act 1979</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
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

Term	Definition
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. 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	<i>National Parks and Wildlife Act 1974</i>
NTA	<i>Native Title Act 1993</i>
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	<i>State Environmental Planning Policy (State and Regional Development) 2011</i>
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

Term	Definition
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 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.

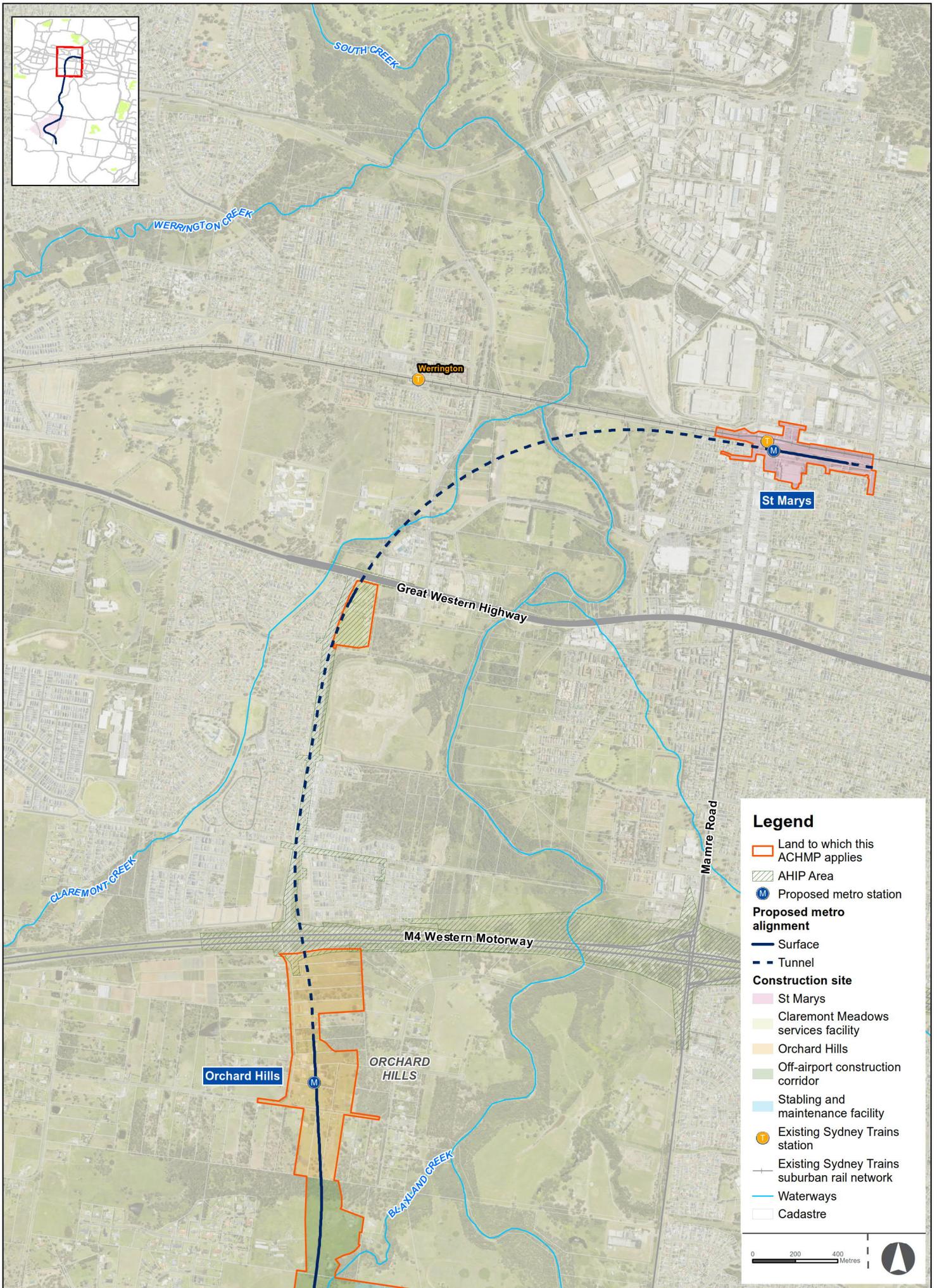
1.3 Land to which this ACHMP applies

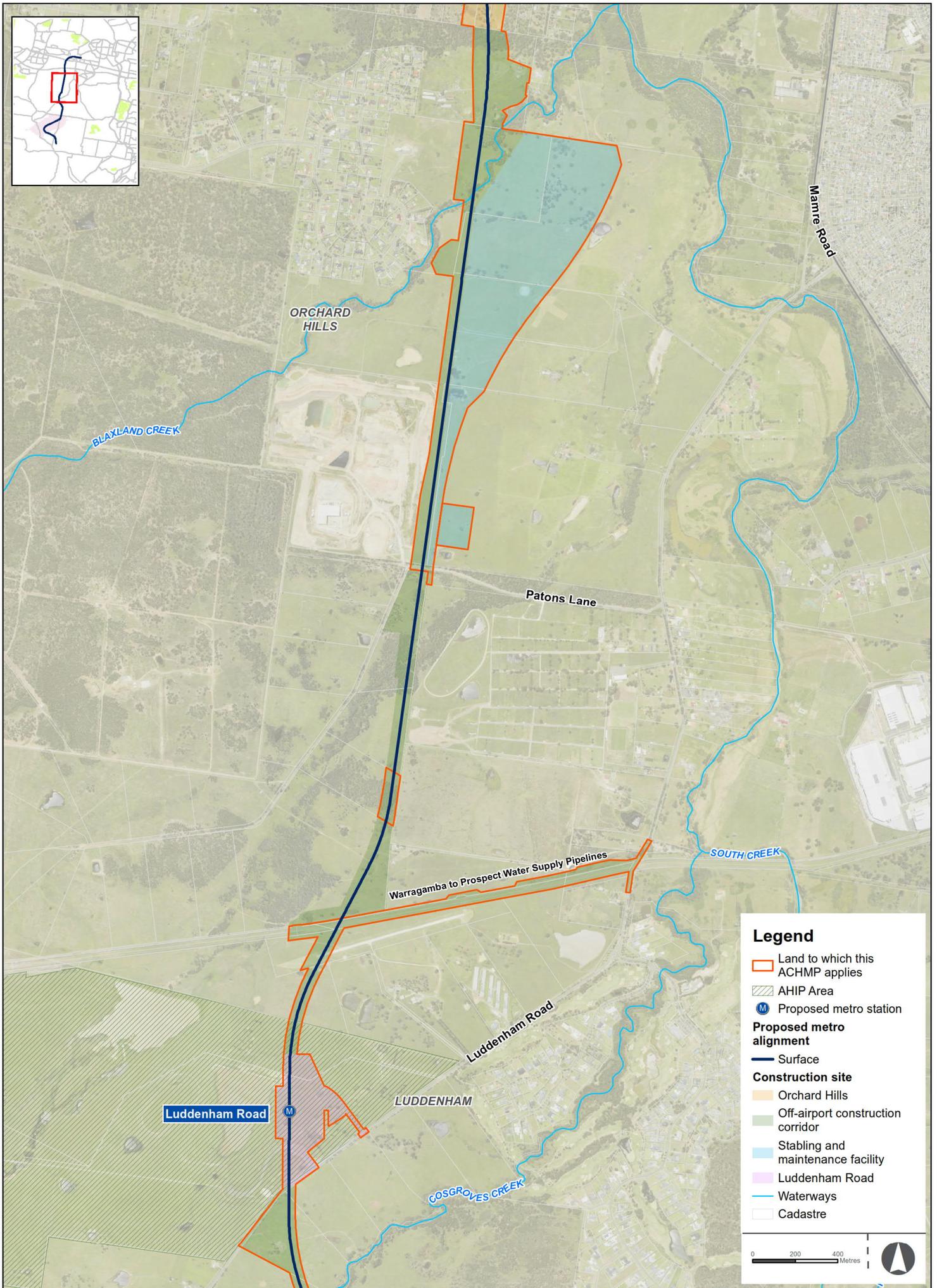
As indicated in Section 1.1, this ACHMP deals specifically with the management of Aboriginal heritage in the off-airport component of the construction footprint, excluding areas of Commonwealth land. Land to which this ACHMP applies is shown on Figure 1-1a to Figure 1-1d.

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 Chapter 4. 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 Chapter 4.

1.4 Works within existing approved AHIP areas

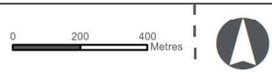
As per mitigation measure AH9, works within the bounds of existing Aboriginal Heritage Impact Permit (AHIP) areas, the locations of which are shown on Figure 1-1a to Figure 1-1d, will be undertaken in accordance with the conditions of those permits and with permission from the relevant AHIP holder.

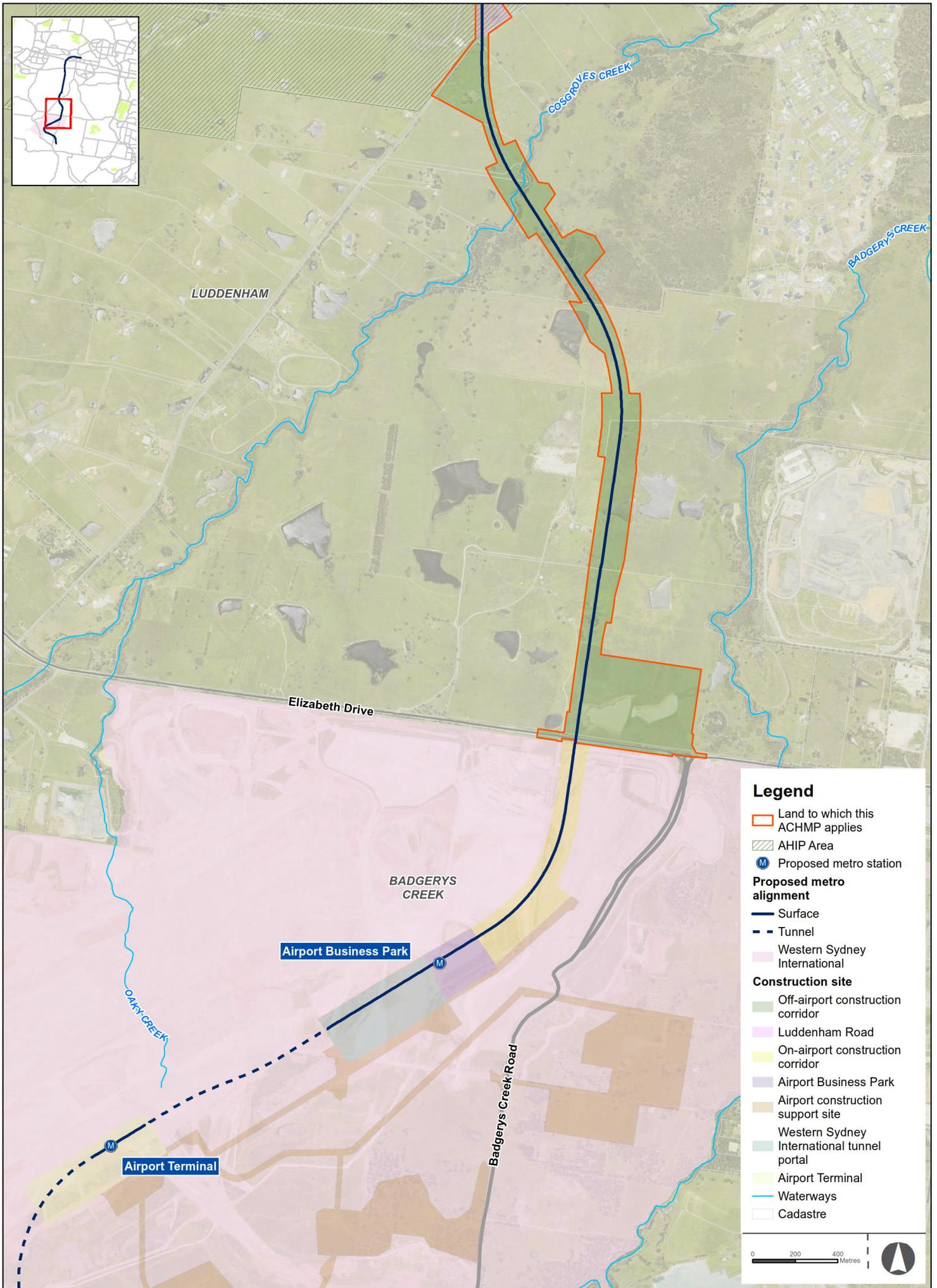




Legend

- Land to which this ACHMP applies
- AHIP Area
- M Proposed metro station
- Proposed metro alignment**
- Surface
- Construction site**
- Orchard Hills
- Off-airport construction corridor
- Stabling and maintenance facility
- Luddenham Road
- Waterways
- Cadastre





Legend

- Land to which this ACHMP applies
- AHIP Area
- M Proposed metro station

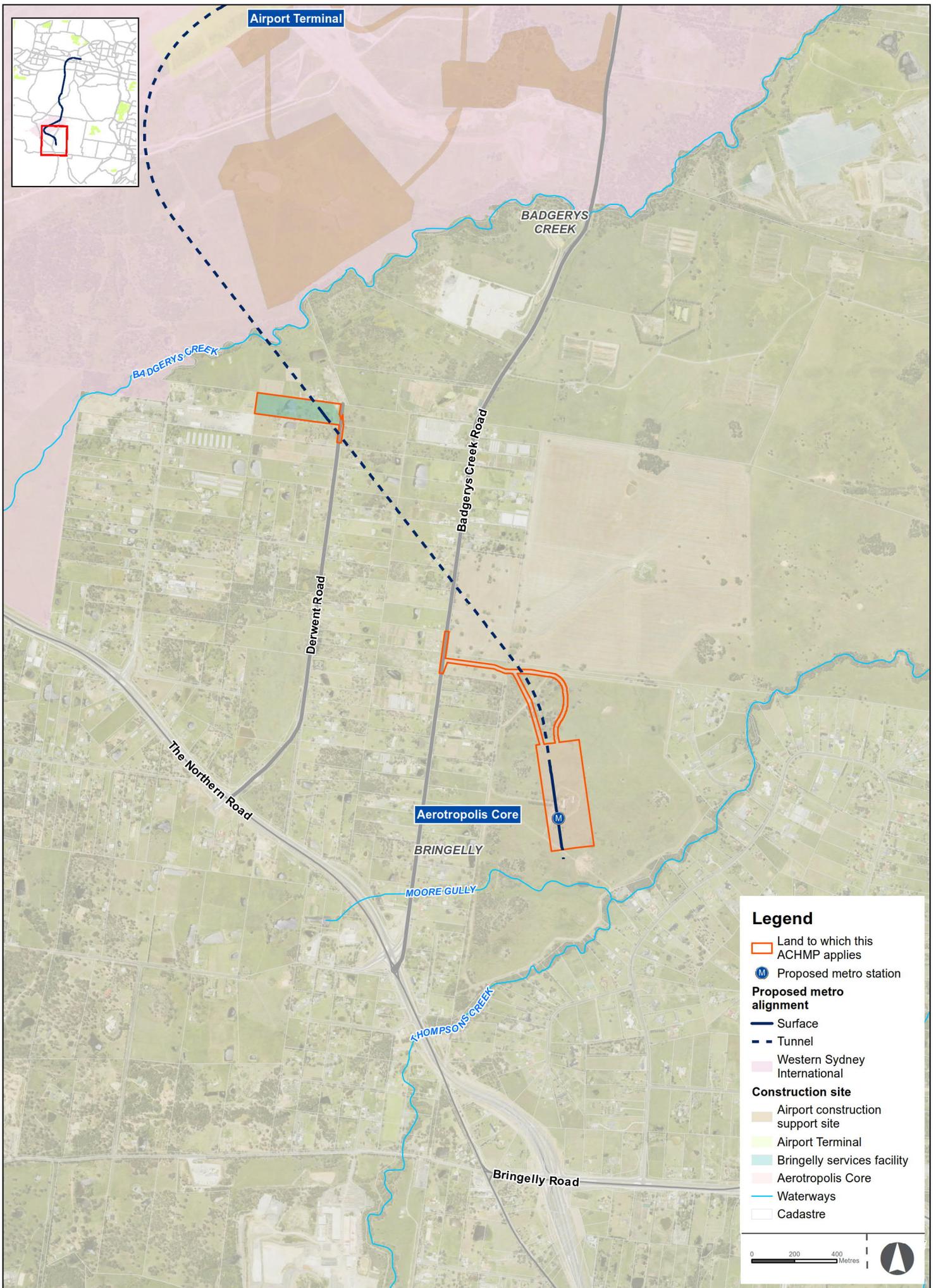
Proposed metro alignment

- Surface
- Tunnel

Construction site

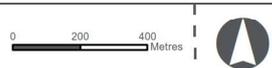
- Off-airport construction corridor
- Luddenham Road
- On-airport construction corridor
- Airport Business Park
- Airport construction support site
- Western Sydney International
- International tunnel portal
- Airport Terminal
- Waterways
- Cadastre

0 200 400 Metres ▲



Legend

- Land to which this ACHMP applies
- M Proposed metro station
- Proposed metro alignment**
- Surface
- Tunnel
- Western Sydney International
- Construction site**
- Airport construction support site
- Airport Terminal
- Bringelly services facility
- Aerotropolis Core
- Waterways
- Cadastre



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.

Compliance matrices for each element are detailed in Table 1-1, Table 1-2 and Table 1-3.

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>	<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.</p>	Construction	Section 4.2.2 Chapter 5 Chapter 6
	<p>Impacts on areas of archaeological sensitivity and significance are avoided or minimised, where practical.</p>	Construction	Chapter 5
	<p>The design of the project incorporates Aboriginal heritage interpretation and Aboriginal cultural design principles in consultation with Aboriginal knowledge holders.</p>	Operation	Chapter 6

Table 1-2 Compliance matrix for Revised mitigation measures

Ref	Mitigation measure	Relevant section (s) of this ACHMP
AH1	<p>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). 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)</p>	Section 3.1
AH2	<p>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</p>	Section 4.2

Ref	Mitigation measure	Relevant section (s) of this ACHMP
AH3	Not used 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.	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 4.1.1; 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 Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2010b) and the Aboriginal Cultural Heritage Standards & Guidelines Kit (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 4.4 Section 4.5

1.6 Key project features

Key operational features of the project are shown on Figure 1-2 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.

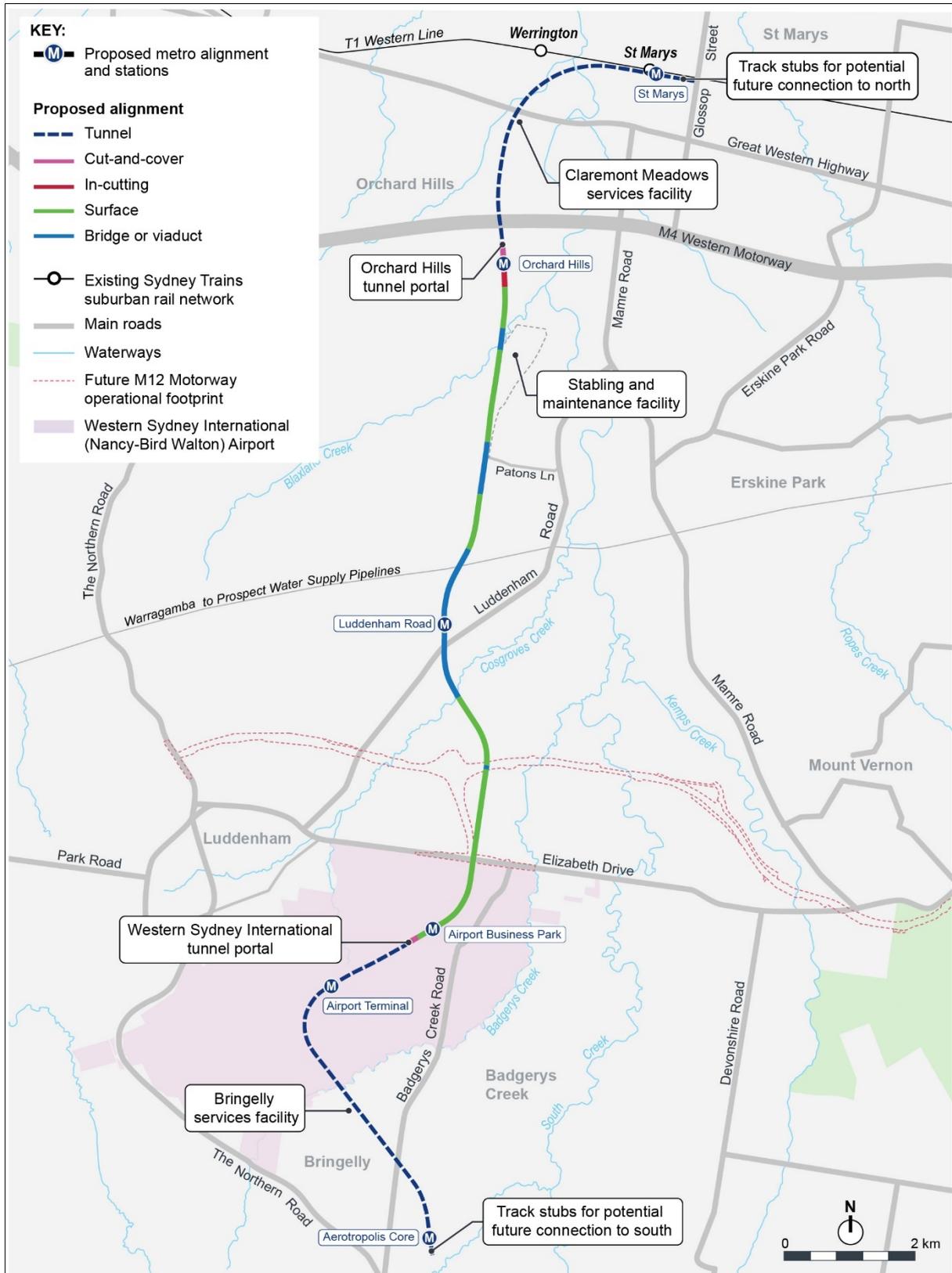


Figure 1-2 Project alignment and key features

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 Environmental Impact Statement.

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 1-3.



Figure 1-3 Indicative main construction program

1.8 ACHMP roles and responsibilities

Specific responsibilities for the implementation of this ACHMP and its associated management actions are presented in Table 1-4.

Table 1-4 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.

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. 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 should be 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 Murrin 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 Birrungal Boonunga Bullawaya Bulling Gang Cullendulla Curwur Murre Dharug Djanaba Gaxabara Djiringanj Elouera Eora Gadung Gangangarra Golangaya Goobah Gulla Gunar Gunyuu Kuringgai Minnamunnung Munyunga Murramarang Murrin Administrative Services Murrumbul Ngario Ngunawal Nundagurri Tharawal Thauaira Walgalu 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

RAP	Response to Revised ACHAR, AAR and ACHMP	Where considered in this ACHMP
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 excavations for the unverified areas and/or the salvage works.	Section 3.4 addresses RAP participation in 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,

RAP	Response to Revised ACHAR, AAR and ACHMP	Where considered in this ACHMP
		including salvage works.
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</p>

RAP	Response to Revised ACHAR, AAR and ACHMP	Where considered in this ACHMP
		<p>will be undertaken for the Project. 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>

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 should 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 should 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. Should the need for additional measures to manage and/or protect relevant cultural values be 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 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 public 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 1.5 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

4.1.2 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 February 2021, these areas 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 Chapter 4 and Chapter 5 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

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. 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 (<i>sensu</i> 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
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

Attribute	Definition	Recorded for
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 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

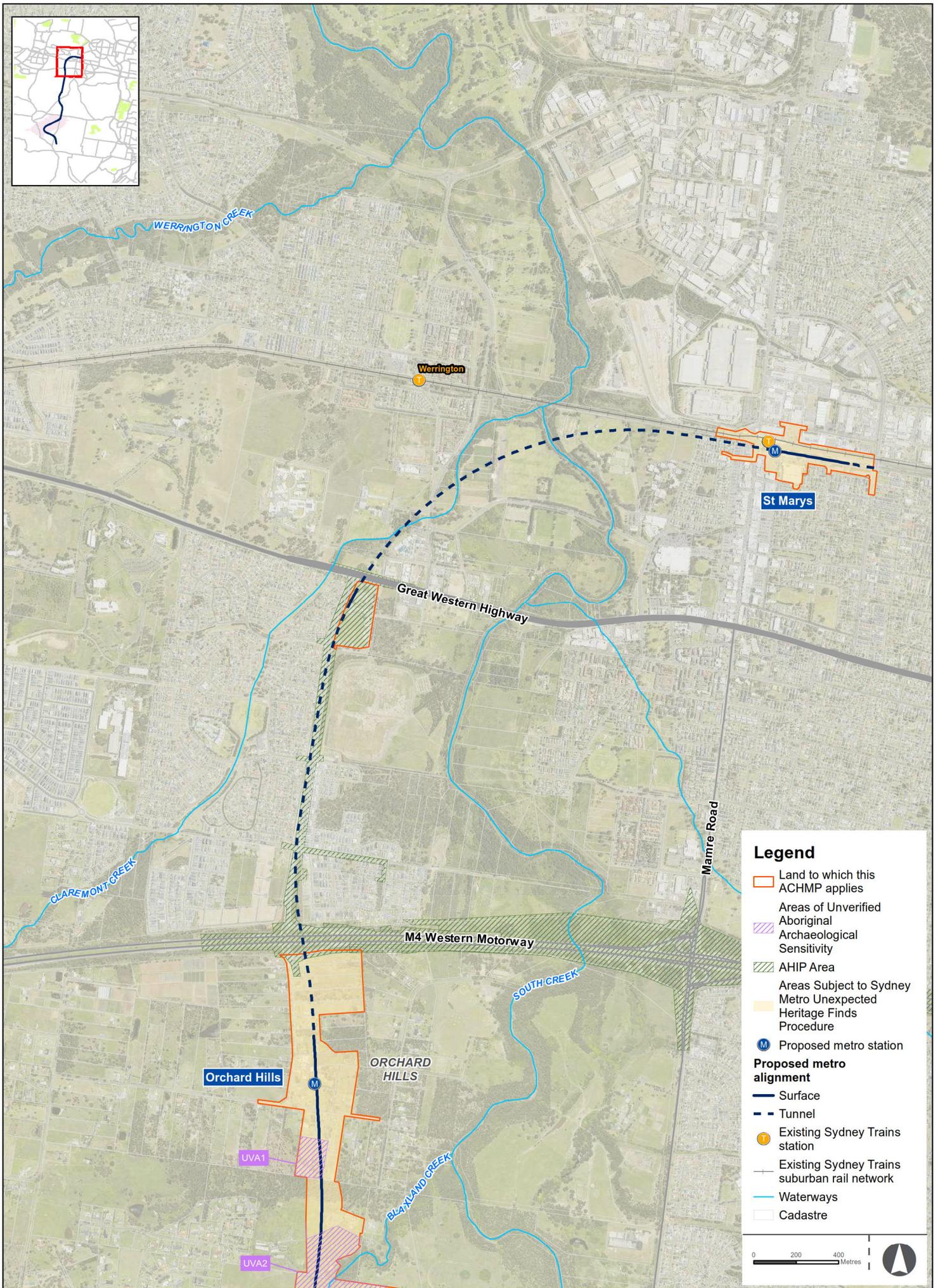
¹Site type: AS = artefact scatter; IA = isolated artefact

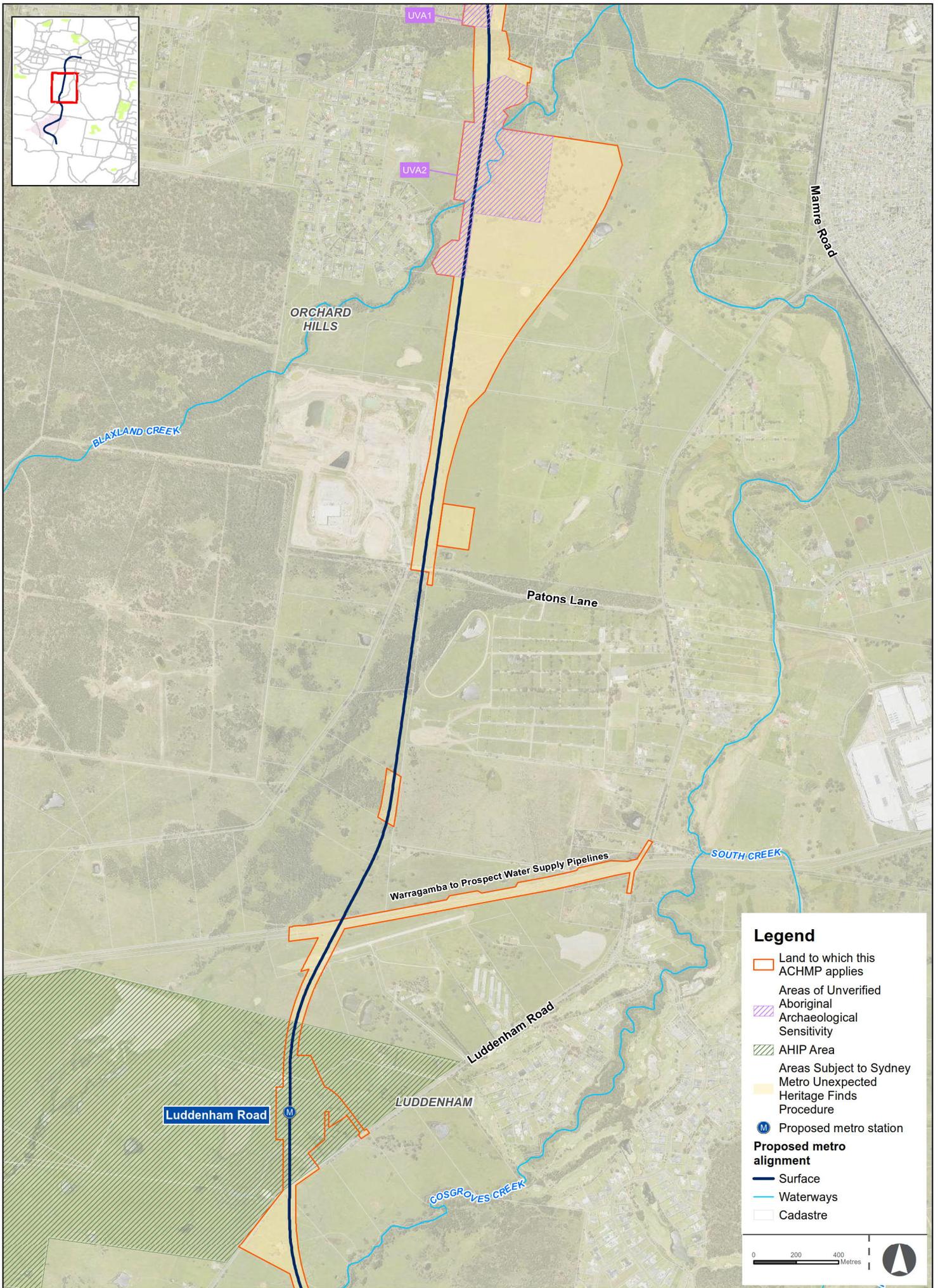
4.4 Unexpected finds (excluding suspected human skeletal remains)

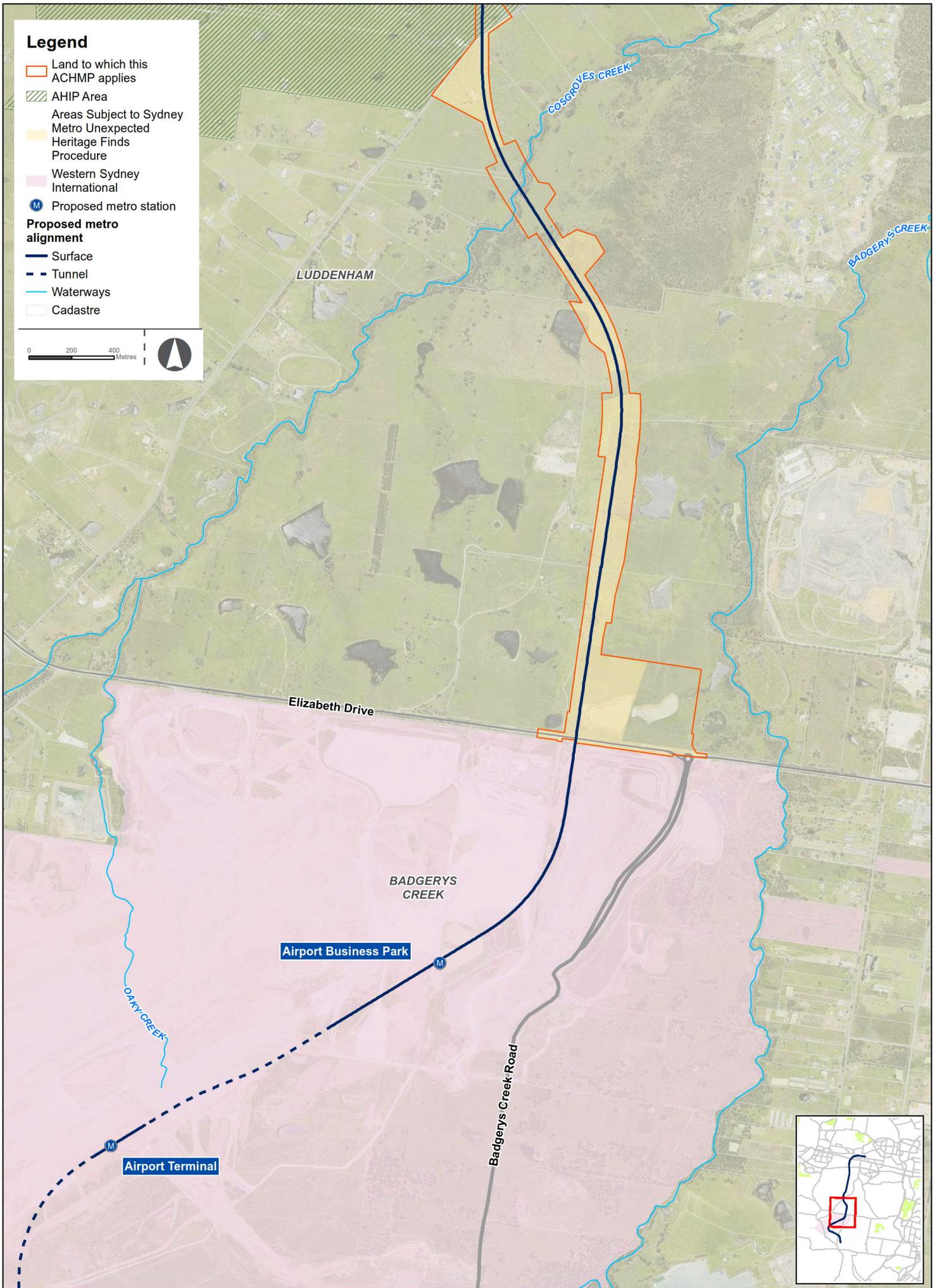
Unexpected Aboriginal heritage finds are to be managed in accordance with Section 6.24 of Sydney Metro's Unexpected Heritage Finds Procedure [SM-18-00105232]. This procedure, which applies to the areas shown on Figure 4-1a to Figure 4-1d, is included in Appendix A.

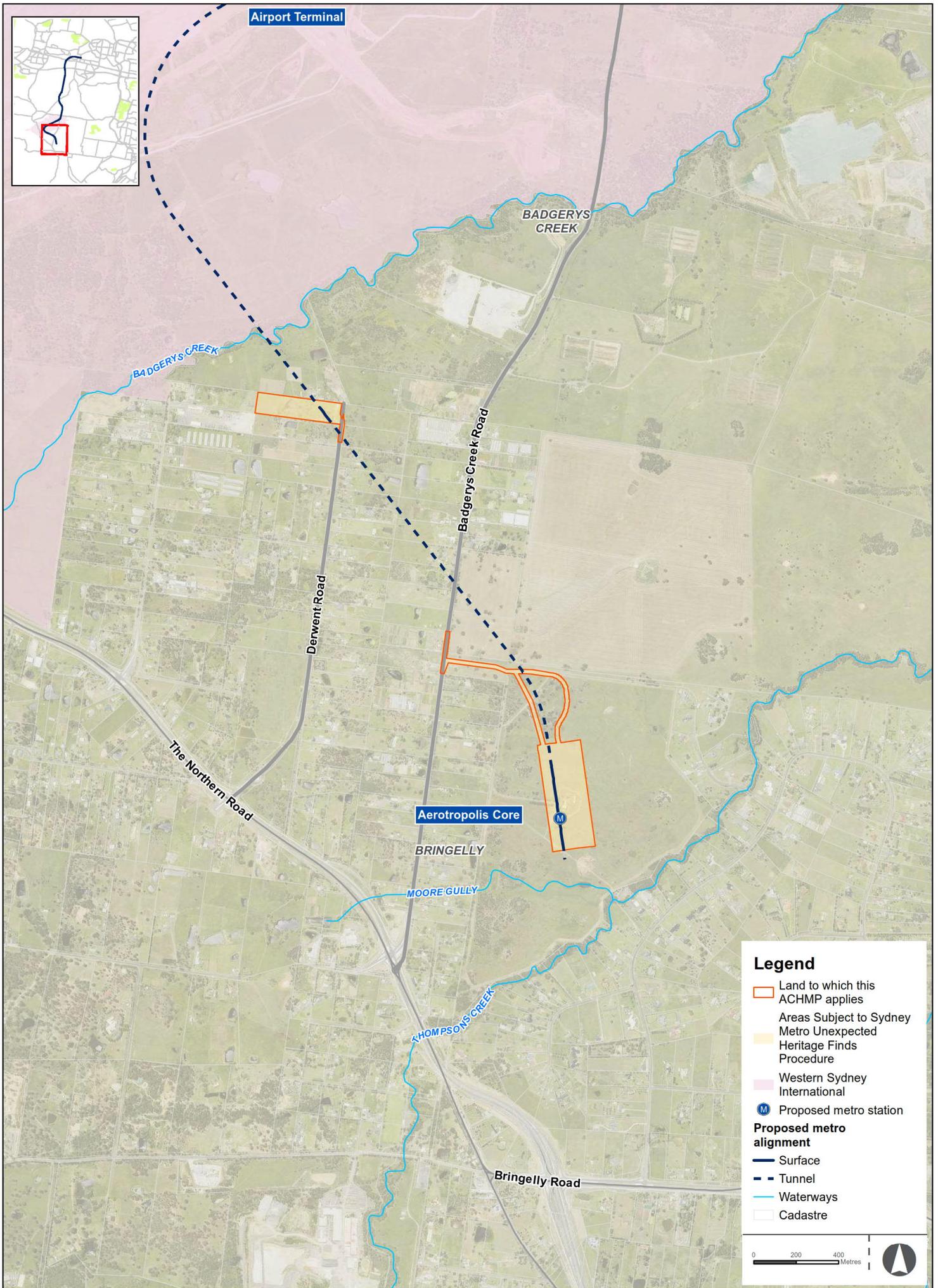
4.5 Human skeletal remains (including Aboriginal archaeological burials)

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, should be followed.









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 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 more accurately assess its origin, 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.

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 should 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 should 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 are summarised in Section 3.16 of the CEMF.

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 Independent 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, 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 effects are within site boundaries	Short-term and/or well-contained environmental effects. Minor remedial actions probably required	Impacts external ecosystem and considerable remediation is required	Long-term environmental impairment in neighbouring or valued ecosystems Extensive remediation required	Irreversible large-scale environmental impact with loss of valued ecosystems

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.

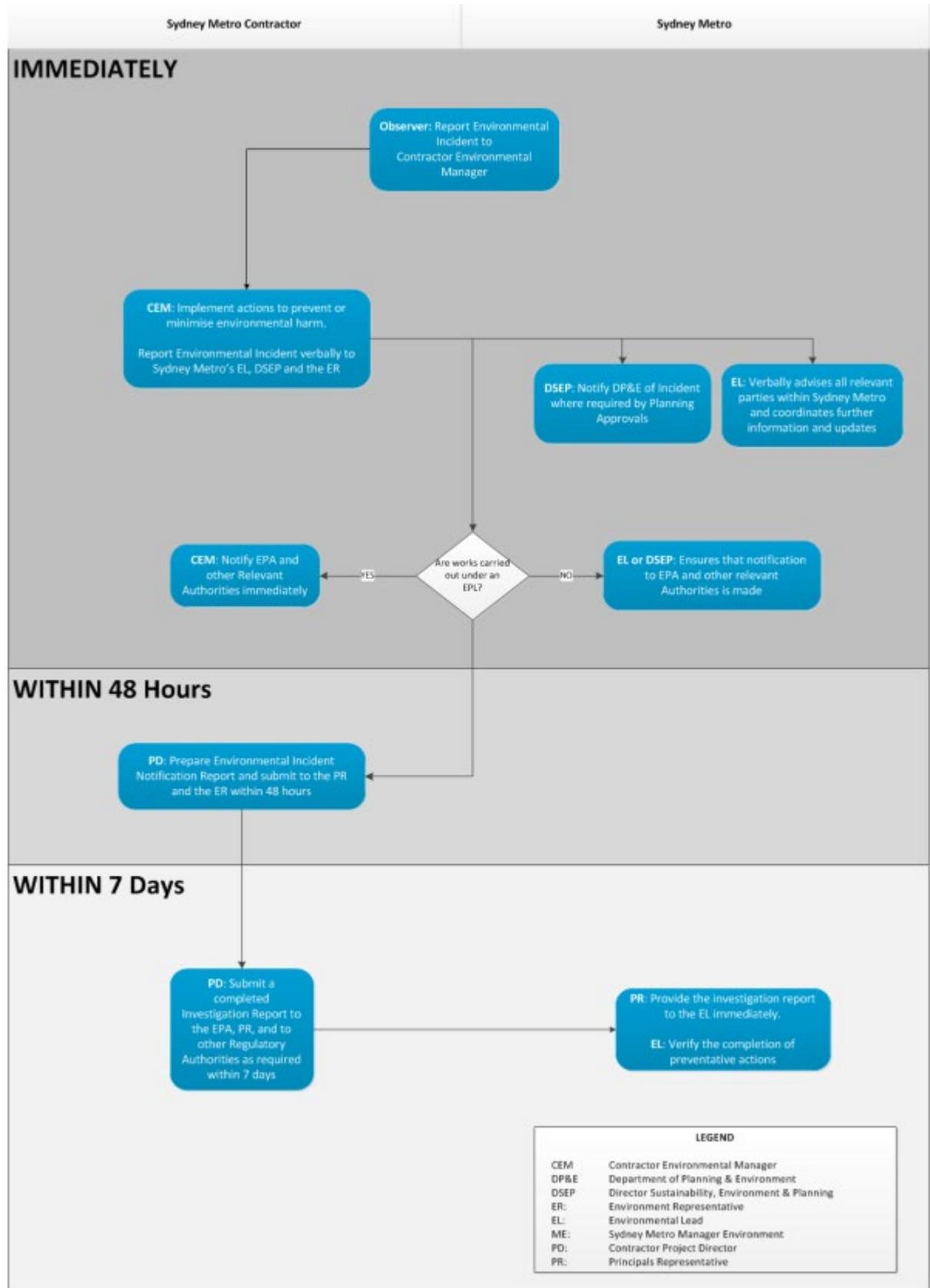


Figure 8-1 Notification process for environmental incidents

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
- 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 ER and Sydney Metro in accordance with Sydney Metro Environmental Incident and Non-compliance Reporting Procedure SM-17-00000096.

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 and the project's Overarching Community Communication Strategy.

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.

Revisions to this ACHMP, if required, must be authorised by the SMWSA Senior Environmental Officer. The Independent 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-18-00105232]

Sydney Metro Integrated Management System (IMS)

Applicable to:	Sydney Metro
Document Owner:	Author/Document owner
System Owner:	IMS element owner (generally a member of the Executive)
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1. Purpose

This procedure is applicable to the Sydney Metro program of works including major projects delivered under Critical State Significant Infrastructure Planning Approvals (CSSI), early CSSI minor and enabling works and works that are subject to the NSW Heritage Act (1977) including s57/139 and s60/140 exemptions and permit approvals.

This procedure has been prepared for Sydney Metro programs to provide a method for managing unexpected heritage items (both Aboriginal and non-Aboriginal) that are discovered during preconstruction (pre-Construction Heritage Manage Plan approval), construction phases (post Construction Heritage Manage Plan approval) and for works subject to the NSW Heritage Act (1977).

An ‘unexpected heritage find’ can be defined as any unanticipated archaeological discovery, that has not been previously assessed or is not covered by an existing approval under the Heritage Act 1977 (Heritage Act) or National Parks and Wildlife Act 1974 (NPW Act).

In NSW, there are strict laws to protect and manage heritage objects and relics. As a result, appropriate heritage management measures need to be implemented to minimise impacts on heritage values; ensure compliance with relevant heritage notification and other obligations; 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 and Environment.

Note that a Contractor must not amend the Sydney Metro Unexpected Finds Procedure without the prior approval of Sydney Metro.

It should be noted that this procedure must be read in conjunction with the relevant CSSI conditionals of approval (if applicable), the contract documents and other plans including the Sydney Metro Exhumation Management Plan and procedures developed by the contractor during the delivery of the Sydney Metro works.

1.1. Legislation that does not apply

The following authorisations are not required for Sydney Metro approved Critical State Significant Infrastructure (and accordingly the provisions of any Act that prohibits an activity without such an authority do not apply):

- Division 8 of Part 6 of the Heritage Act 1977 does not apply to prevent or interfere with the carrying out of approved State significant infrastructure.
- An approval under Part 4, or an excavation permit under section 139, of the Heritage Act 1977,
- An Aboriginal heritage impact permit under section 90 of the National Parks and Wildlife Act 1974,

This document provides relevant background information in Section 4, followed by the technical procedure in Sections 6 and 7. Associated guidance referred to in the procedure can be found in Appendices 1-6.

2. Scope

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

This procedure **applies to**:

- the discovery of any unexpected heritage item, relic or object, where the find is not anticipated in an approved Archaeological Assessment Design Report (AARD) or Archaeological Method Statements (AMS) that are prepared as part of the planning approval for that project.

This procedure must be followed by all Sydney Metro staff, contractors, subcontractors or any person undertaking works 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 Office of Environment and Heritage’s (OEH) *Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW 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 CSSI /CSSD planning approval;

3. Definitions

All terminology in this procedure is taken to mean the generally accepted or dictionary definition with the exception of the following terms which have a specifically defined meaning:

	Definitions
AHIP	Aboriginal Heritage Impact Permit
Aboriginal object	An Aboriginal object is any deposit, object or material evidence (not being a handicraft 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.
CEMP	Construction Environmental Management Plan
CoA	Conditions of Approval
CSSD	Critical State Significant Development
CSSI	Critical State Significant Infrastructure
EP&A Act	NSW Environmental Planning and Assessment Act 1979
Excavation	A person that complies with the Heritage Council of NSW’s Criteria for Assessment of

¹ An act carried out in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* as published by the Department in the Gazette on 24 September 2010 is excluded from the definition of **harm** an object or place in section 5 (1) of the NPW Act.

Director	Excavation Directors (July 2011) to oversee and advise on matters associated with historic archaeology. Note this applies to a specific project/program and requires consultation and/or approval by OEH.
Heritage Act	NSW <i>Heritage Act 1977</i>
NPW Act	NSW <i>National Parks and Wildlife Act 1974</i>
OEH	Office of Environment and Heritage
SM	Sydney Metro
Relic (non-Aboriginal heritage)	<p>A relic means any deposit, artefact, object or material evidence that:</p> <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. <p>A relic may include items such as bottles, utensils, remnants of clothing, crockery, personal effects, tools, machinery and domestic or industrial refuse.</p>
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 tracks, timber sleepers, kerbing, historic 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

4. Types of unexpected heritage items and corresponding statutory protections

The roles of project, field and environmental personnel (including construction contractors) are critical to the early identification and protection of unexpected heritage items.

Appendix 1 illustrates the wide range of heritage discoveries found on Sydney Metro projects and provides a useful photographic guide. Subsequent to confirmation of a heritage discovery it must then be identified and assessed by Excavation Director. An ‘unexpected heritage item’ means any unanticipated discovery of an actual or potential heritage item, for which Sydney Metro does not have approval to disturb² and/or have an existing management process in place.

These discoveries are categorised as either:

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

The relevant legislation that applies to each of these categories is described below and is also addressed in the Sydney Metro Exhumation Management Plan).

4.1. Aboriginal objects

The NPW Act protects Aboriginal objects which are defined as:

² Disturbance is considered to be any physical interference with the item that results in it being destroyed, defaced, damaged, harmed, impacted or altered in any way (this includes archaeological investigation activities).

“any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains”³.

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

IMPORTANT!

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

If any impact is expected to an Aboriginal object, an AHIP is usually required from OEH. Also, when a person becomes aware of an Aboriginal object they must notify the Director-General of OEH about its location⁴. Assistance on how to do this is provided in Section 7 (Step 5).

4.2. Historic heritage items

Historic (non-Aboriginal) heritage items may include:

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

4.2.1. Archaeological relics

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

“any deposit, artefact, object or material evidence that relates to the settlement of the area that comprises NSW, not being Aboriginal settlement; and is of State or local heritage significance”⁵.

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

IMPORTANT!

All relics are subject to statutory controls and protections.

If a relic is likely to be disturbed, a heritage approval is usually required from the NSW Heritage Council⁶. Also, when a person discovers a relic they must notify the NSW Heritage Council of its location⁷.

4.2.2. Other historic items

Some historic heritage items are not considered to be ‘relics’, but are instead referred to as works, buildings, structures or movable objects. Examples of these items that may be encountered include culverts, historic pavements, retaining walls, tramlines, rail tracks, timber sleepers, cisterns, fences, sheds, buildings and conduits. Although an approval under the Heritage Act may not be required to disturb these items, their discovery must be managed in accordance with this procedure.

³ Section 5(1) NPW Act.

⁴ This is required under section 89(A) of the NPW Act and applies to all Sydney Metro projects.

⁵ Section 4(1) Heritage Act.

⁷ This is required under section 146 of the Heritage Act and applies to all Sydney Metro projects.

As a general rule, an archaeological relic requires discovery or examination through the act of excavation. For an unexpected find an archaeological excavation permit under section 140 of the Heritage Act may be required to do this. In contrast, ‘other historic items’ either exist above the ground surface (e.g. a shed), or they are designed to operate and exist beneath the ground surface (e.g. a culvert).

4.3. Human skeletal remains

Also refer to Sydney Metro Exhumation Management Plan for a more detailed explanation of the approval processes.

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

As a simple example, a pre-European settlement archaeological Aboriginal burial would be protected under the NPW Act, while a historic (non-Aboriginal) archaeological burial within a cemetery would be protected under the Heritage Act. For a non-Aboriginal archaeological burial, the relevant heritage approval and notification requirement described in Section 3.1 would apply. In addition to the NPW Act, finding Aboriginal human remains also triggers notification requirements to the Commonwealth Minister for the Environment under section 20(1) of the Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Commonwealth).

IMPORTANT!

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

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

However, where it is suspected that less than 100 years has elapsed since death, the human skeletal remains come under the jurisdiction of the State Coroner and the Coroners Act 2009 (NSW). Such a case would be considered a ‘reportable death’ and under legal notification obligations set out in 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 old⁸ regardless of ancestry (i.e. both Aboriginal and non-Aboriginal remains). Public health controls may also apply.

Guidance on what to do when suspected human remains are found is provided in Appendix 5.

5. Legislative Requirements

Table 1 identifies some of the relevant legislation/regulations for the protection of heritage and the management of unexpected heritage finds in NSW. It should be noted that significant

⁸ Under section 19 of the *Coroners Act 2009*, the coroner has no jurisdiction to conduct an inquest into reportable death unless it appears to the coroner that (or that there is reasonable cause to suspect that) the death or suspected death occurred within the last 100 years.

penalties exist for breaches of the listed legislation as a result of actions that relate to unauthorised impacts on heritage items. Further, it is noted that heritage that has been assessed and is being managed in accordance with relevant statutory approvals(s) is exempt from these offences.

To avoid breaches of legislation, it is important that Sydney Metro and its contractors are aware of their statutory obligations under relevant legislation and that appropriate control measures are in place to ensure that unexpected heritage items are appropriately managed during construction. Contractors/Alliances will need to ensure that they undertake their own due diligence to identify any other legislative requirements that may apply for a given project.

Table 1 Legislation and guidelines for management of unexpected heritage finds

Relevant Requirement	Objectives and offences
<i>Environmental Planning and Assessment Act 1979 (EP&A Act)</i>	Section 115ZB Giving of approval by Minister to carry out a project.
<i>Environmental Planning and Assessment Act 1979 (EP&A Act)</i>	Requires heritage to be considered within the environmental impact assessment of projects. This guideline is based on the premise that an appropriate level of Aboriginal and non-Aboriginal cultural heritage assessment and investigations and mitigation have already been undertaken under the relevant legislation, including the EP&A Act, during the assessment and determination process. It also assumes that appropriate mitigation measures have been included in the conditions of any approval.
<i>Heritage Act 1977 (Heritage Act)</i>	The Heritage Act provides for the care, protection and management of heritage items in NSW. 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 the Heritage Division of the OEH. Under the Act, a relic is defined as: <i>‘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.’</i> A person must notify the Heritage Division of OEH, 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.

Relevant Requirement	Objectives and offences
<p>National Parks and Wildlife Act 1974 (NPW Act)</p>	<p>The NPW Act provides the basis for the care, protection and management of Aboriginal objects and places in NSW.</p> <p>An Aboriginal object is defined as: <i>‘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’.</i></p> <p>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).</p> <p>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.</p> <p>A person must notify OEHL if a person is aware of the location of an Aboriginal object.</p> <p>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).</p>

6. Unexpected heritage finds protocol

6.1. What is an unexpected heritage find?

An ‘unexpected heritage find’ can be defined as any unanticipated archaeological discovery that has not been identified during a previous assessment or is not covered by an existing permit under the Heritage Act. The find may have potential cultural heritage value, which may require some type of statutory cultural heritage permit or notification if any interference of the heritage item is proposed or anticipated.

The range of potential archaeological discoveries can include but are not limited to:

- remains of rail infrastructure including buildings, footings, stations, signal boxes, rail lines, bridges and culverts
- remains of other infrastructure including sandstone or brick buildings, wells, cisterns, drainage services, conduits, old kerbing and pavement, former road surfaces, timber and stone culverts, bridge footings and retaining walls
- artefact scatters including clustering of broken and complete bottles, glass, ceramics, animal bones and clay pipes
- Archaeological human skeletal remains.

6.2. Managing unexpected heritage finds

In the event that an unexpected heritage find (the find) is encountered on a Sydney Metro site, the flowchart in Figure 1 must be followed. There are eight steps in the procedure. These steps are summarised in Figure 1 and explained in detail in Table 2.

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

IMPORTANT!

Sydney Metro may have approval to impact on 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** works and follow this procedure.

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

Step	Task	Responsibility	Guidance and tools
1	Stop work, protect item and inform the Excavation Director		
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	Establish a 'no-go zone' around the item. Use high visibility fencing, where practical. No work is to be undertaken within this zone until further investigations are completed and, if required, appropriate approvals are obtained. Inform all site personnel about the no-go zone.	Project Manager/ Contractor/ Supervisor	
1.3	Inspect, document and photograph the item.	Archaeologist and or Excavation Director	Appendix 2 (Unexpected Heritage Item Recording Form) Appendix 3 (Photographing Unexpected Heritage items)
1.4	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 Plan If no , proceed to next step.	Excavation Director	Appendix 4 (Uncovering Bones)

Step	Task	Responsibility	Guidance and tools
1.5	Inform the Excavation Director of the item and provide as much information as possible, including photos and completed form (Appendix 2). Where the project has a Sydney Metro Environmental Manager, the Environmental Manager should be involved in the tasks/process.	Contractors Project Manager	
1.6	Can the works avoid further disturbance to the item? Project Manager to confirm with Sydney Metros Environment Manager. Complete the remaining tasks in Step 1.	Contractors Project Manager	
1.7	Excavation Director and Sydney Metro Environmental Manager to advise the Project Manager whether Sydney Metro has approval to impact on the 'item'. Does Sydney Metro have an approval or permit to impact on the item? If yes , work may recommence in accordance with that approval or permit. There is no further requirement to follow this procedure. If no , continue to next step.	Contractors Project Manager	
1.8	Has the 'find' been damaged or harmed? If yes , record the incident in the Incident Management System Implement any additional reporting requirements related to the planning approval and CEMP, where relevant.	Contractors Project Manager, Excavation Director	
2	Contact and engage an archaeologist and/or an Aboriginal heritage consultant		
2.1	If an archaeologist and/or Aboriginal heritage consultant has been previously appointed for the project, contact them to discuss the location and extent of the item and arrange a site inspection, if required. The project CEMP may contain contact details of the archaeologist/Aboriginal heritage consultant. Where there is no project archaeologist engaged for the works engage a suitably qualified consultant to assess the find: if the find is a non-Aboriginal deposit, engage a suitably qualified and experienced archaeological consultant if the find is likely to be an Aboriginal object, engage an Aboriginal heritage consultant to assess the find.	Contractors Project Manager, Excavation Director	
2.2	If requested, provide photographs of the item taken during Step 1.3 to the archaeologist or Aboriginal heritage consultant.	Contractors Project Manager, Excavation Director	Appendix 3 (Photographing Unexpected Heritage items)

Step	Task	Responsibility	Guidance and tools
3	Preliminary assessment and recording of the find		
3.1	In a minority of cases, the archaeologist/Aboriginal heritage consultant may determine from the photographs that no site inspection is required because no heritage constraint exists for the project (e.g. the item is not a 'relic', a 'heritage item' or an 'Aboriginal object'). Any such advice should be provided in writing (e.g. via email or letter with the consultant's name and company details clearly identifiable) to the Sydney Metro Project Manager.	Archaeologist/ Aboriginal heritage consultant/ Excavation Director	Proceed to Step 8
3.2	Arrange site access for the archaeologist/Aboriginal heritage consultant to inspect the item as soon as practicable. In the majority of cases a site inspection is required to conduct a preliminary assessment.	Contractors Project Manager, Excavation Director	
3.3	Subject to the archaeologist/Aboriginal heritage consultant's assessment, work may recommence at a set distance from the item. This is to protect any other archaeological material that may exist in the vicinity, which may have not yet been uncovered. Existing protective fencing established in Step 1.2 may need to be adjusted to reflect the extent of the newly assessed protective area. No works are to take place within this area once established.	Archaeologist/ Aboriginal heritage consultant Contractors Project Manager, Excavation Director	
3.4	The archaeologist/Aboriginal heritage consultant may provide advice after the site inspection and preliminary assessment that no heritage constraint exists for the project (e.g. the item is not a 'relic' or a 'heritage item' or an 'aboriginal item'. Any such advice should be provided in writing (e.g. via email or letter with the consultant's name and company details clearly identifiable) to the Metro Project Manager. Note that : a relic is evidence of past human activity which has local or State heritage significance. It may include items such as bottles, utensils, remnants of clothing, crockery, personal effects, tools, machinery and domestic or industrial refuse an Aboriginal object may include a shell midden, stone tools, bones, rock art or a scarred tree a "work", building or standing structure may include tram or train tracks, kerbing, historic road pavement, fences, sheds or building foundations.	Archaeologist/ Aboriginal heritage consultant/ Contractors Project Manager, Excavation Director	Proceed to Step 8 Refer to Appendix 1 (Identifying heritage items)

Step	Task	Responsibility	Guidance and tools
3.5	Where required, seek additional specialist technical advice (such as a forensic or physical anthropologist to identify skeletal remains). The archaeologist/Aboriginal heritage consultant can provide contacts for such specialist consultants.	Excavation Director Archaeologist	
3.6	Where the item has been identified as a 'relic' or 'heritage item' or an 'Aboriginal object' the archaeologist should formally record the item.	Archaeologist/ Aboriginal heritage consultant	
3.7	OEH (Heritage Division for non-Aboriginal relics and Planning and Aboriginal Heritage Section for Aboriginal objects) can be notified informally by telephone at this stage by the Sydney Metro Environmental Manager Any verbal conversations with regulators must be noted on the project file for future reference.	Contractors Project Manager, Excavation Director	
4	Section 4 not used		
5	Notify the regulator, if required.		
5.1	Based on the findings of the archaeological or heritage management plan and corresponding legislative requirements, is the find required to be notified to OEH and the Secretary? If no , proceed directly to Step 6 If yes , proceed to next step.	Sydney Metro Environmental Manager Excavation Director	
5.2	If notification is required, complete the template notification letter, including the archaeological/heritage management plan and other relevant supporting information and forward to the Sydney Metro Principal Manager Sustainability Environment and Planning (Program) for signature.	Sydney Metro Environmental Manager Excavation Director	Appendix 6 (Template Notification Letter)
5.3	Forward the signed notification letter to OEH and the Secretary. Informal notification (via a phone call or email) to OEH prior to sending the letter is appropriate. The archaeological or heritage management plan and the completed site recording form (Appendix 2) must be submitted with the notification letter (for both Aboriginal objects and non-Aboriginal relics). For Part 5.1 projects, the Department of Planning and Environment must also be notified.		

Step	Task	Responsibility	Guidance and tools
5.4	A copy of the final signed notification letter, archaeological or heritage management plan and the site recording form is to be kept on file and a copy sent to the Sydney Metro Project Manager.	Contractors Project Manager, Excavation Director	
6	Implement archaeological or heritage management plan		
6.1	Modify the archaeological or heritage management plan to take into account any additional advice resulting from notification and discussions with OEH.	Contractors Project Manager, Excavation Director	
6.2	Implement the archaeological or heritage management plan. Where impact is expected, this may include a formal assessment of significance and heritage impact assessment, preparation of excavation or recording methodologies, consultation with Registered Aboriginal Parties, obtaining heritage approvals etc., if required.	Contractors Project Manager, Excavation Director	
6.3	Where heritage approval is required contact the Sydney Metro Environment Manager for further advice and support material. Please note there are time constraints associated with heritage approval preparation and processing.	Contractors Project Manager, Excavation Director	
6.4	Assess whether heritage impact is consistent with the project approval or if project approval modification is required from the Department of Planning and Environment.	, Excavation Director/Sydney Metro Environmental Manager	
6.5	Where statutory approvals (or project approval modification) are required, impact upon relics and/or Aboriginal objects must not occur until heritage approvals are issued by the appropriate regulator.	Contractors Project Manager, Excavation Director	
6.6	Where statutory approval is not required but where recording is recommended by the archaeologist/Aboriginal heritage consultant, sufficient time must be allowed for this to occur.	Contractors Project Manager, Excavation Director	
6.7	Ensure short term and permanent storage locations are identified for archaeological material or other heritage material removed from site, where required. Interested third parties (e.g. museums, local Aboriginal land councils, or local councils) should be consulted on this issue. Contact the archaeologist or Aboriginal heritage consultant for advice on this matter, if required.	Contractors Project Manager, Excavation Director	
7	Section 7 Not Used		

Step	Task	Responsibility	Guidance and tools
8	Resume work		
8.1	Seek written clearance to resume project work from the project Excavation Director/Archaeologist/Aboriginal heritage consultant. Clearance would only be given once all archaeological excavation and/or heritage recommendations and approvals (where required) are complete. Resumption of project work must be in accordance with the all relevant project/heritage approvals/determinations.	Contractors Project Manager, Excavation Director	
8.2	If required, ensure archaeological excavation/heritage reporting and other heritage approval conditions are completed in the required timeframes. This includes artefact retention repositories, conservation and/or disposal strategies.	Contractors Project Manager, Excavation Director	
8.3	Deleted		
8.4	If additional unexpected items are discovered this procedure must begin again from Step 1.	All	

7. Responsibilities

Table 3 Roles and Responsibilities

Role	Responsibility or role under this guideline
Contractor / Supervisor	Stop work immediately when an unexpected heritage find is encountered. Cordon off area until Environmental Manager /Excavation Director advises that work can recommence.
Contractor or Environment Manager	Manage the process of identifying, protecting and mitigating impacts on the 'find'. Liaise with Sydney Metro Project Manager and Environment Manager and assist the archaeologist/Aboriginal heritage consultant with mitigation and regulatory requirements. Complete Incident Report and review CEMP for any changes required. Propose amendments to the CEMP if any changes are required.
Contractor's or Project Heritage Advisor or Consultant	Provide expert advice to the Sydney Metro Environment Manager on 'find' identification, significance, mitigation, legislative procedures and regulatory requirements.
Environmental Representative	Independent environmental advisor engaged by Sydney Metro Ensures compliance with relevant approvals (new and existing).
Heritage Division of OEH	Regulate the care, protection and management of relics (non-Aboriginal heritage). Delegated authority for Heritage Council Issue excavation permits.

Role	Responsibility or role under this guideline
Registered Aboriginal Parties (RAPs)	Aboriginal people who have registered with Sydney Metro to be consulted about a proposed project or activity in accordance with the OEH <i>Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010</i> .
Sydney Metro Environment Manager	Notify the Sydney Metro Principal Manager, Environmental Management of 'find' and manage Incident Reporting once completed by Environmental Manager.
Contractors Project Manager	Ensures all aspects of this procedure are implemented. Advise Contractor / Supervisor to recommence work if all applicable requirements have been satisfied and the Excavation Director /Project Archaeologist has approved recommend of work.

8. Seeking Advice

Advice on this procedure should be sought from the Sydney Metro Environment a Manager in the first instance. Contractors and alliance 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.

9. Related documents and references

- Environmental Incident Classification and Reporting – 9TP-PR-105
- Guide to Environmental Control Map – 3TP-SD-015
- NSW Heritage Office (1998), *Skeletal remains: guidelines for the management of human skeletal remains*.
- Roads and Maritime Services (2015), *Standard Management Procedure Unexpected Heritage Items*.
- Department of Environment and Conservation NSW (2006), *Manual for the identification of Aboriginal remains*.
- Sydney Metro Exhumation Management Plan

10. List of appendices

The following appendices are included to support this procedure:

- Appendix 1: Examples of finds encountered during construction works
- Appendix 2: Unexpected Heritage Item Recording Form
- Appendix 3: Photographing Unexpected Heritage Items
- Appendix 4: Uncovering Bones
- Appendix 5: Archaeological Advice Checklist
- Appendix 6: Template Notification Letter

11. Document history

Version	Date of approval	Notes
1.1		Incorporates ER comments 21/06/17
1.2		Amends p13 step 8 reference to s146 added
1.3		Incorporates Planning Mods 1-4 including amended CoA E20
1.4		Incorporates ER comments 21/03/18
2.0		Removes SSI 15-7400 COA reference

Appendix 1: Examples of finds encountered during construction works



Photo 1 - Aboriginal artefacts found at the Wickham Transport Interchange, 2015



Photo 2 – Aboriginal artefacts (shell material) found at the Wickham Transport Interchange, 2015



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



Photo 4 Sandstone pavers uncovered at Balmain East, 2016



Photo 5 - Platform structure at Hamilton Railway Station classified as a 'work' by the project archaeologist - Wickham Transport Interchange project, 2015

Photo 6 - Platform structure at Hamilton Railway Station classified as a 'work' by the project archaeologist - Wickham Transport Interchange project, 2015



Photo 7 - Sandstone flagging and cesspit - Wynyard Walk project, 2014



Photo 8 - Chinese Ming Dynasty pottery and English porcelain/pottery dating back to early 19th century - Wynyard Walk project, 2014



Photo 9 - 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' *Standard Management Procedure for Unexpected Heritage items 2015*, can be used to assist in the preliminary identification of potential unexpected items during construction and maintenance works.



Photo 10 - Top left hand picture continuing clockwise: Stock camp remnants (Hume Highway Bypass at Tarcutta); Linear archaeological feature with post holes (Hume Highway Duplication), Animal bones (Hume Highway Bypass at Woomargama); Cut wooden stake; Glass jars, bottles, spoon and fork recovered from refuse pit associated with a Newcastle Hotel (Pacific Highway, Adamstown Heights, Newcastle area) (RMS, 2015).



Photo 11 - 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) (RMS, 2015).

Appendix 2 - Unexpected heritage item recording form

Example of unexpected heritage item recording form:

This form is to be completed Excavation Director on the discovery of an archaeological heritage item 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 <i>(What type of item is it likely to be? Tick the relevant boxes).</i>			
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 <i>(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).</i>			

(Uncontrolled when printed)

<p>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></p>			
<p>Action taken (Tick either A or B)</p>			
<p>A. Unexpected item would not be further impacts on by the works</p>	<input type="checkbox"/>	<p>Describe how works would avoid impact on the item. (E.g. the rail tracks would be left in situ and recovered with paving).</p>	
<p>B. Unexpected item would be further impacted by the works</p>	<input type="checkbox"/>	<p>Describe how works would impact on the item. (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.)</p>	
<p>Excavation Director</p>		<p>Signature</p>	
		<p>Signature</p>	

Important

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

Approvals may also be required to impact on certain works.

Appendix 3 - Photographing unexpected heritage items

Photographs of unexpected items 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.



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

Figure 1: Telford road uncovered on the Great Western Highway (Leura) in 2008 (RMS, 2015).

Photographing distinguishing features

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 those of be recently deceased 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 6 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 - Uncovering bones

This appendix provides advice regarding:

- what to do on first discovering bones
- the range of human skeletal notification pathways
- additional considerations and requirements when managing the discovery of human remains.

1. First uncovering bones

Refer to the Sydney Metro Exhumation Management Plan

Stop all work in the vicinity of the find. All bones uncovered during project works should be **treated with care and urgency** as they have the potential to be human remains. The bones must be identified as either human or non-human as soon as possible by a qualified forensic or physical anthropologist.

On the very rare occasion where it is immediately obvious from the remains that they are human, the Project Manager (or a delegate) should **inform the police by telephone** prior to seeking specialist advice. It will be obvious that it is human skeletal remains where there is no doubt, as demonstrated by the example in Figure 1⁹. Often skeletal elements in isolation (such as a skull) can also clearly be identified as human. Note it may also be obvious that human remains have been uncovered when soft tissue and/or clothing are present.

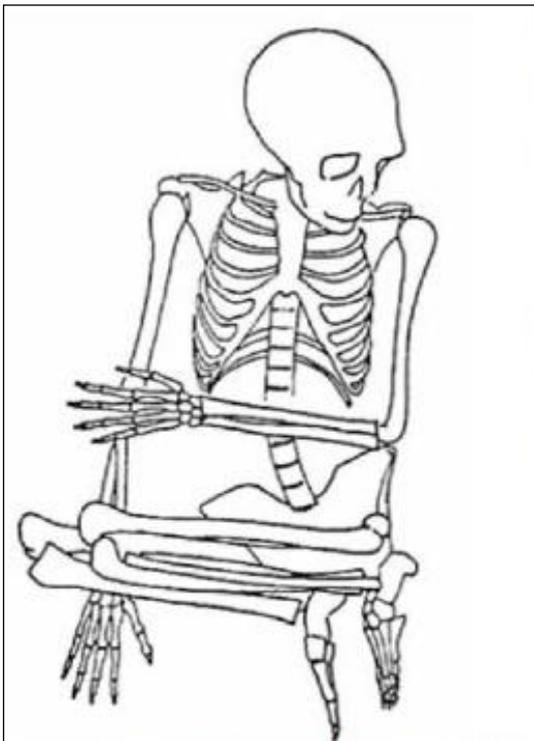


Figure 1: Schematic of a complete skeleton that is 'obviously' human¹².



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

⁹ After Department of Environment and Conservation NSW (2006), *Manual for the identification of Aboriginal Remains*: 17

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

Where it is not immediately obvious that the bones are human (in the majority of cases, illustrated by Figure 2), specialist assessment is required to establish the species of the bones. Photographs of the bones can assist this assessment if they are clear and taken in accordance with guidance provided in Appendix 3. Good photographs often result in the bones being identified by a specialist without requiring a site visit; noting they are nearly always non-human. In these cases, non-human skeletal remains must be treated like any other unexpected archaeological find.

If the bones are identified as human (either by photographs or an on-site inspection) a technical specialist must determine the likely ancestry (Aboriginal or non-Aboriginal) and burial context (archaeological or forensic). This assessment is required to identify the legal regulator of the human remains so **urgent notification** (as below) can occur.

Preliminary telephone or verbal notification by the archaeologist to the Sydney Metro Principal Manager Sustainability Environment and Planning (Program) is appropriate. This must be followed up later by a formal letter notification to the relevant regulator when a management plan has been developed and agreed to by the relevant parties.

2. Range of human skeletal notification pathways

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

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

Action

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

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

Action

The OEH (Planning and Aboriginal Heritage Section) must be notified immediately. The Aboriginal Cultural Heritage Advisor must contact and inform the relevant Aboriginal community stakeholders who may request to be present on site.

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

Action

The OEH (Heritage Division) must be notified immediately

Figure 3 summarises the notification pathways on finding bones.

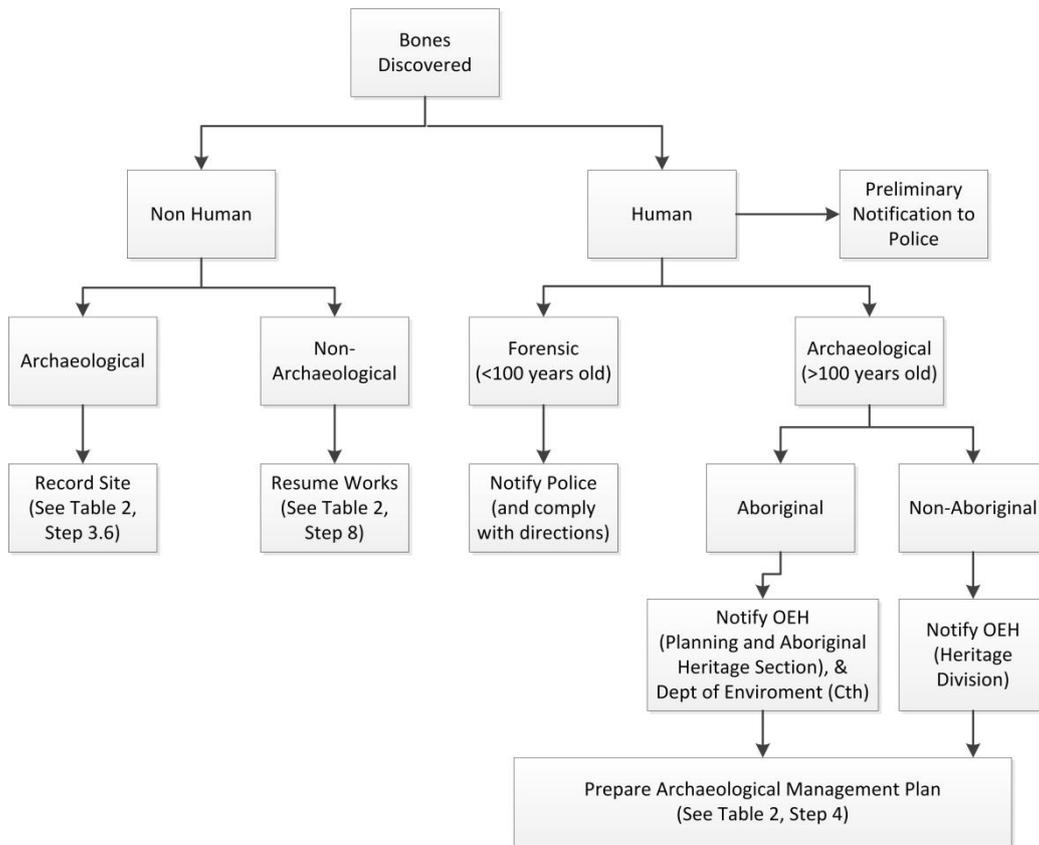


Figure 3 Overview of steps to be undertaken on the discovery of bones

After the appropriate verbal notifications (as described in 2B and 2C above), the Project Manager must proceed through the *Unexpected Heritage Items Exhumation Management Plan* (Step 4). It is noted that no *Exhumation Management Plan* is required for forensic cases (2A), as all future management is a police matter. Non-human skeletal remains must be treated like any other unexpected archaeological find and so must proceed to record the find as per Step 3.6.

3. Additional considerations and requirements

Uncovering archaeological human remains must be managed intensively and needs to consider a number of additional specific issues. These issues might include facilitating culturally appropriate processes when dealing with Aboriginal remains (such as repatriation and cultural ceremonies). Project Managers may need to consider overnight site security of any exposed remains and may need to manage the onsite attendance of a number of different external stakeholders during assessment and/or investigation of remains.

Project Managers may also be advised to liaise with local church/religious groups and the media to manage community issues arising from the find. Additional investigations may be required to identify living descendants, particularly if the remains are to be removed and relocated.

If exhumation of the remains (from a formal burial or a vault) is required, Project Managers should also be aware of additional approval requirements under the *Public Health Act 1991* (NSW). Specifically, Sydney Metro may be required to apply to the Director General of NSW

Department of Health for approval to exhume human remains as per Clause 26 of the *Public Health (Disposal of Bodies) Regulation 2002 (NSW)*¹⁰.

Further, the exhumation of such remains needs to consider health risks such as infectious disease control, exhumation procedures and reburial approval and registration. Further guidance on this matter can be found at the NSW Department of Health website.

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

¹⁰ This requirement is in addition to heritage approvals under the *Heritage Act 1977*.

Appendix 5 - Archaeological/heritage advice checklist

The archaeologist/Aboriginal heritage consultant must advise the Sydney Metro Principal Manager Sustainability Environment and Planning (Program) of an appropriate archaeological or heritage management plan as soon as possible after an inspection of the site has been completed (see Step 4). An archaeological or heritage management plan can include a range of activities and processes, which differ depending on the find and its significance.

In discussions with the archaeologist/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 etc.	Yes/No	
• Regulator relics/objects notification	Yes/No	
• Notification to Sydney Trains for s170 heritage conservation register	Yes/No	
• Compliance with CEMP or other project heritage approvals	Yes/No	
Stakeholder consultation		
• Aboriginal stakeholder consultation	Yes/No	
Artefact/heritage item 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 6 - Template notification letter

Insert on TfNSW letterhead
Select and type date]
[Select and type reference number]

XXX

Manager, Conservation
Heritage Division, Office of Environment and Heritage
Locked Bag 5020
Parramatta NSW 2124

[Select and type salutation and name],

Re: Unexpected heritage item discovered during Sydney Metro activities.

I write to inform you of an unexpected [select: relic, heritage item or Aboriginal object] found during Sydney Infrastructure and Services construction works at [insert location] on [insert date] in accordance with the notification requirement under select: 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 strategy). Also include preliminary justification of such heritage impact with regard to project design constraints and delivery program].

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

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 (02) XXXX XXXX.

Yours sincerely

[Sender name]

Sydney Metro Principal Manager Sustainability Environment and Planning (Program) [Attach the archaeological/heritage management plan and site recording form]

