



Australian Government

**Department of Infrastructure, Transport,
Regional Development and Communications**

File Reference: F21/3792-16

Ben Armstrong
Associate Director Environment Operations, Customer & Place Making
Sydney Metro
PO Box K659
Haymarket NSW 1240

Dear Mr Armstrong

European and Other Heritage Construction Environmental Management Plan (CEMP)

I write to notify you that, in accordance with Condition 39 of the Airport Plan, I have today approved the European and Other Heritage CEMP (Rev 5) submitted by Sydney Metro on 18 February 2022. This follows my recent approval of the Construction (Rail) Plan. Thank you for Sydney Metro's engagement with the department over the last few months as these plans were developed.

Now that the European and Other Heritage CEMP has been approved Sydney Metro is required:

- a. To take reasonable steps to ensure that each person involved in carrying out a development that is part of the Rail Development is informed of, and complies with, the approved European and Other Heritage CEMP (Condition 45(3) of the Airport Plan).
- b. To maintain accurate records demonstrating implementation of, and compliance with, the approved European and Other Heritage CEMP, and other applicable conditions contained in Section 3.11.6 of the Airport Plan. Records must be made available to the Infrastructure Department on request (Condition 46 of the Airport Plan).
- c. To publish information in a report about its compliance with the conditions set out in section 3.11.6 of the Airport Plan (Rail Conditions) and its implementation of the approved European and Other Heritage CEMP (Condition 47 of the Airport Plan).
- d. To ensure that an independent audit of its compliance with the conditions set out in section 3.11.6 (except Condition 44) and condition 46 of the Airport Plan (Rail Conditions) is conducted, by an approved independent auditor, in respect of the 12-month period commencing with commencement of Rail Construction Works. The independent audit report must be submitted to the Infrastructure Department, with a copy provided to the Environment Department, within six months of the end of the period in respect of which the audit was conducted (Condition 48 of the Airport Plan).
- e. Unless otherwise agreed by an Approver, to publish the approved European and Other Heritage CEMP on its website (Condition 50 of the Airport Plan).

If you have any queries in relation to this letter, please do not hesitate to contact me.

Yours sincerely

David Jansen
Assistant Secretary
Western Sydney Airport Regulatory Policy Branch

10 March 2022



Sydney Metro Western Sydney Airport European and Other Heritage Construction Environmental Management Plan

Sydney Metro Integrated Management System (IMS)

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Document Control

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Version Control

Revision	Date	Description
01	17 June 2021	Draft for Tender
02	17 August 2021	Draft for WSA review
03	1 November 2021	Issued to DITRDC
04	24 January 2022	Final to DITRDC
05	18 February 2022	Final

Terms and Definitions

Terms	Definitions
AARD	Archaeological Assessment and Research Design report
The Act	Airports Act 1996 (Cth) (Airports Act)
AEPR	Airports (Environment Protection) Regulations 1997
AEW	Advanced and Enabling Works
Airport	Western Sydney International (Nancy-Bird Walton) Airport (WSI) located at the Airport Site. Note: The Airport is referred to in the Act as Sydney West Airport and is commonly known as Western Sydney International (Nancy-Bird Walton) Airport
Airport Lease	An airport lease for the Airport granted under section 13 of the Act
Airport Lessee Company	The company that is granted a lease over the Airport Site
Airport Plan	Means the September 2021 approved Airport Plan which includes the Variation for the SM - WSA Rail Development on the WSI airport and which otherwise means airport plan for the Airport Site as determined by the Infrastructure Minister under section 96B of the Act in December 2016 as varied from time to time in accordance with the Airports Act.
Airport Site	The site for Sydney West Airport as defined by the Airports Act.
AS	Australian Standard
CCS	Community Communication Strategy
CEMF	Construction Environmental Management Framework
CEMP	Construction Environmental Management Plan
CIZ	Construction Impact Zone
CoA	Conditions of Approval
CSR	Combined Services Route
CSSI	Critical State Significant Infrastructure
CTMP	Construction Traffic Management Plan
Cwth	Commonwealth
DAWE	Department of Agriculture, Water and the Environment (Cwth)
DECC	NSW Department of Environment and Climate Change (Cwth)
DITRDC	Department of Infrastructure, Transport, Regional Development and Communications
DPIE	Department of Planning, Industry and Environment
ECM	Environmental Control Map
ECZ	Environmental Conservation Zone
EESG	NSW Environment, Energy and Science Group (formerly OEH)
EHCEMP	European and Other Heritage CEMP
EIS	Environmental Impact Statement
EP&A Act	Environment Planning and Assessment Act 1979 (NSW)
EPA	NSW Environment Protection Authority
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Cwth)
EPL	Environment Protection Licence under the POEO Act

Sydney Metro – Integrated Management System (IMS)

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Terms	Definitions
ER	Environmental Representative
EWMS	Environmental Works Method Statement
E&SMS	Environment and Sustainability Management System
HMP	Heritage Management Plan
ICNG	Interim Construction Noise Guideline
IMS	Sydney Metro Integrated Management System
Infrastructure Department	The department responsible for administering the Act, currently the Australian Government Department of Infrastructure, Transport Regional Development and Communications (DITRDC)
ISO	International Standardization Organisation
KPI	Key Performance Indicator
NVMF	Noise and Vibration Management Framework
OCCS	Overarching Community Communication Strategy
OEH	NSW Office of Environment and Heritage (formerly DECC)
OOHW	Out-of-Hour Works
Preparatory Activities	<p>Preparatory Activities mean the following:</p> <ol style="list-style-type: none"> a. day to day site and property management activities; b. site investigations, surveys (including dilapidation surveys), monitoring, and related works (e.g. geotechnical or other investigative drilling, excavation, or salvage); c. establishing construction work sites, site offices, plant and equipment, and related site mobilisation activities (including access points, access tracks and other minor access works, and safety and security measures such as fencing but excluding bulk earthworks); d. enabling preparatory activities such as: <ol style="list-style-type: none"> i. demolition or relocation of existing structures (including buildings, services, utilities and roads); ii. the disinterment of human remains located in grave sites identified in the European and other heritage technical report in volume 4 of the EIS; and iii. application of environmental impact mitigation measures; and e. any other activities which an Approver determines are Preparatory Activities for this definition
Project	The Sydney Metro Western Sydney Airport Construction and operation as approved by the EPBC and Airport Plan as the Action or Rail Development within the Rail Construction Impact Zone on-airport, being the WSI airport, in agreeance with the Deed between SM - WSA and WSA Co.
Proponent	The person or organisation identified as the proponent in Schedule 1 of the planning approval. In this case Sydney Metro Authority
RCIZ	Rail Construction Impact Zone
REMM	Revised Environmental Mitigation Measure
SBT	Station Boxes and Tunnelling
SCAW	Surface Civil & Alignment Works
Site Occupier	<p>Site Occupier means:</p> <ol style="list-style-type: none"> (a) before an Airport Lease is granted – the Commonwealth; and <p>Note: Where a condition specifies an activity to be carried out by the Commonwealth, the Infrastructure Department will be responsible for carrying out the activity on behalf of the Commonwealth (unless stated otherwise).</p>

Sydney Metro – Integrated Management System (IMS)

(Uncontrolled when printed)



Terms	Definitions
	(b) after an Airport Lease is granted – the ALC.
SCO	Sydney Coordination Office
SM	Sydney Metro
SM WSA	Sydney Metro Western Sydney Airport
SM WSA EIA	SMWSA (Formerly EIS Appendix J): EPBC Act Draft Environmental Impact Assessment of On-airport proposed action (EPBC 2019/8541)
SMP	Sustainability Management Plan
SPIR	Submissions and Preferred Infrastructure Report
SSI	State Significant Infrastructure
SSTOM	Stations Systems, Trains, Operations & Maintenance
SWMS	Safe Works Method Statement
TfNSW	Transport for New South Wales
WSA	Western Sydney Airport Co (ACN 618 989 272), the entity responsible for constructing and operating the Airport in accordance with the Airport Plan. For the purposes of the Airports Act 1996 (Cth), WSA is the “airport-lessee company” for WSI
WSI airport	Western Sydney International (Nancy-Bird Walton) (WSI) Airport

1. Introduction

1.1. Sydney Metro

Sydney Metro is Australia's biggest public transport project. Services between Rouse Hill and Chatswood started in May 2019 on the new stand-alone metro railway system. The Sydney Metro network and program of work includes the Metro North West Line (which opened in May 2019), Sydney Metro City & Southwest (which is currently under construction and due to open in 2024), Sydney Metro West (with construction due to start in 2020) and Sydney Metro – Western Sydney Airport (SM – WSA) (Project). Potential future extensions to Schofields/Tallawong in Rouse Hill in the north and to Macarthur in the south are under consideration and are being safeguarded but do not form part of the Project.

The project is shown in Figure 1-1 and will become the transport spine for Greater Western Sydney, connecting communities and travellers with the new Western Sydney International (Nancy-Bird Walton) Airport (referred to as Western Sydney International) (WSI airport) and the growing region.

The Project is being delivered under the Western Sydney City Deal, a partnership between the NSW Government, Australian Government and eight councils of the Western Parkland City. The NSW and Australian Governments have a shared objective of having the rail line operational when WSI airport is planned to open for passenger services.

The new railway line will service Greater Western Sydney and the new WSI airport. It will become the transport spine for the Western Parkland City's growth for generations to come, connecting communities and travellers with the rest of Sydney's public transport system with a fast, safe and easy metro service. The Project will link residential areas with job hubs from St Marys through to the new airport and the Western Sydney Aerotropolis.

It will provide a major economic stimulus for Western Sydney, supporting more than 14,000 jobs during construction for the NSW and national economies, including more than 250 new apprenticeships. The project comprises components that are located outside WSI airport (off-airport) and components that are located within WSI airport (on-airport).

The approval process for the off-airport and on-airport components of the project are different and are outlined below. One outcome of the on-airport approval is that a condition of working on the WSI airport site will require the Sydney Metro Western Sydney Airport project to produce and have approved, a series of Construction Environmental Management Plans (CEMP) prior to the SMWSA commencing construction on-airport. This European and Other Heritage CEMP (EHCEMP) (the plan) is one of a series of nine CEMPs for the Railway project which will be consistent with the WSI airport CEMPs and address all on-airport environmental components of the Project.

Sydney Metro – Integrated Management System (IMS)

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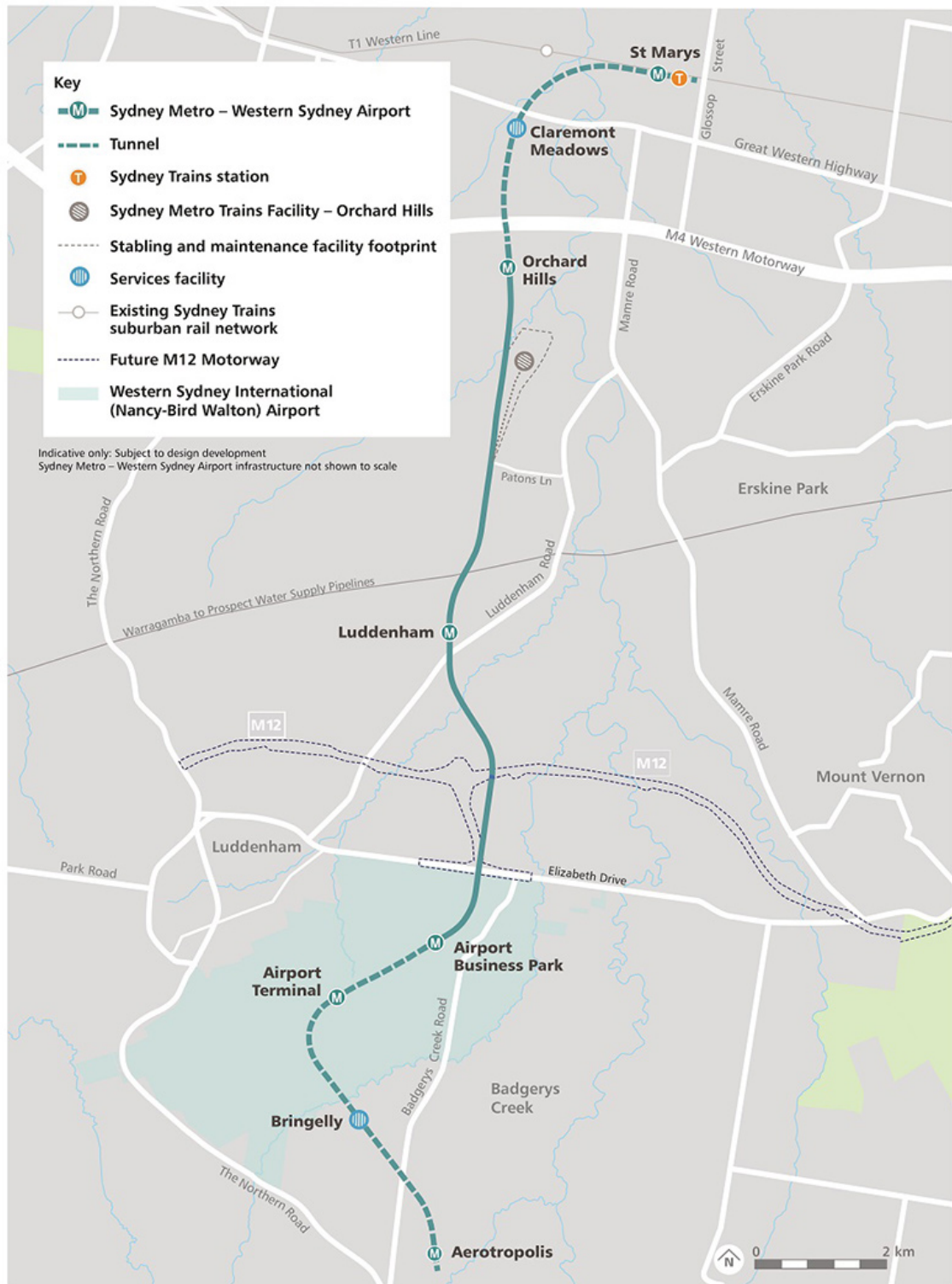


Figure 1-1 Sydney Metro Network

1.2. Sydney Metro Western Sydney Airport

The Western Sydney Airport Plan sets out the vision for the development and operation of WSI airport and provides authorisation for Stage 1 of the airport. The construction of Stage 1 of the airport is expected to be completed to enable operations to commence in 2026 and will comprise a single runway, a terminal and other relevant facilities to accommodate around 10 million passengers annually as well as air freight traffic. Interface with Western Sydney International Rail access to WSI Airport will contribute to the success of the airport and the Western Parkland City, as it will facilitate passengers' and workers' journeys, reduce road congestion and support the economic viability of the airport.

The project is proposed to enter the airport site from the north and will include stations at the Airport Business Park and the Airport Terminal. The rail line will travel through the airport, before exiting the airport site beneath Badgerys Creek in the southeast of the airport site. Sydney Metro has been, and will continue, working closely with Western Sydney Airport to ensure design development and construction planning of the Project is coordinated with the construction and operation of Western Sydney International.

1.3. Background/Context

The Airport Plan for the Western Sydney International was determined in December 2016, following preparation and exhibition of an Environmental Impact Statement, and incorporates the conditions specified by the Commonwealth Environment Minister. The delivery of the Project on the WSI airport site has been authorised through a variation of the Airport Plan by the Commonwealth Infrastructure Minister, taking into account advice from the Commonwealth Environment Minister.

In September 2019, the Commonwealth Infrastructure Minister referred the on-airport components of the Project to the Commonwealth Environment Minister. In December 2019, the delegate of the Commonwealth Environment Minister decided that advice is required under section 160 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) as the proposed action is likely to have a significant impact on the environment and will require further assessment. The following documents were prepared as part of the SMWSA EIS, to respond to the Request for Further Information, and were published, in accordance with the Direction to Publish, from 21 October to 18 November 2020:

- SMWSA EPBC Act Final Environmental Impact Assessment of on-airport proposed action (EPBC 2019/8541)
- SMWSA EIS Technical Paper 3: Biodiversity Development Assessment Report
- SMWSA EIS Appendix F: Construction Environmental Management Framework.

An EPBC Act Final Environmental Impact Assessment of on-airport proposed action

(EPBC 2019/8541) was approved by the Commonwealth Department of Agriculture, Water and the Environment (DAWE) and formed part of the conditions of the Airport Plan which was lodged with the Infrastructure Department and approved by the Commonwealth Infrastructure Minister on 15 September 2021.

This Plan has been prepared to satisfy the requirements of the Visual and Landscape CEMP set out in the Conditions for the Project of the Western Sydney International (Nancy-Bird Walton) (WSI) Airport detailed in Section 3.11.6 of the Airport Plan. Condition 39 (2(i)) of the

Airport Plan requires that a Sydney Metro Visual and Landscape CEMP be approved under the Airport Plan prior to the commencement of the Project.

This Plan provides the management approach and requirements for managing visual and landscape related matters during construction of the Project. This Plan forms one of nine CEMPs which are collectively covered by the SMWSA Construction Environmental Management Framework (CEMF). To ensure the environmental resources, responsibilities and management measures are implemented during the construction activities, the CEMF will be included within the Sydney Metro Construction (Rail) Plan.

The implementation of the Sydney Metro Construction (Rail) Plan and the CEMF are aligned with Project level management plans including the Community Communications Strategy and the Sustainability Plan as illustrated in Figure 1-2.

The Construction Plan, including the SM CEMF and nine CEMPs provide the environmental management approach and requirements and therefore should not be read in isolation to each other due to interconnecting management outcomes and objectives. Specifically, for the EHCEMP, it is considered that the following management plan linkages can be made:

- Aboriginal Cultural Heritage CEMP – Management of European heritage works will need to take into account the controls provided in this CEMP
- Biodiversity CEMP – Management of impacts on biodiversity is important in relation to heritage values of the area
- Soil and Water CEMP – Management of soil on-site will need to take into account the controls provided in this CEMP
- Visual and Landscape CEMP – European heritage items have the potential to be impacted by changes to visual amenity
- Community Communications Strategy – It is anticipated that the surrounding community and stakeholders will be sensitive to heritage impacts
- Sustainability Plan – Management of heritage impacts about quality of life for surrounding communities.

Where relevant, linkages to other CEMPs and management objectives have been included in the risk assessment and the environmental control measures (Section 6.1 and Section 7 respectively).

Table 1-1 highlights relationships and linkages of this EHCEMP with other CEMPs and management plans, including key cross-referencing to Airport Plan and Sydney Metro Western Sydney Airport (SMWSA) EIS.

Table 1-1 European and other heritage CEMP relationship with other CEMP documentation

CEMP	Airport Plan (3.11.6)	SM - WSA EIA Table 8-1: On-airport environmental management framework requirements	SM - WSA EIA Table 8-3: Mitigation measures
Aboriginal cultural heritage	39 2(f)	CEMF5	AH8
Air quality	39 2(e)	CEMF10	AQ1-3
Biodiversity	39 2(b)	CEMF6	FF1, 3, 5, 6, 9-11 HR2
Community Communications Strategy	40	N/A	N/A
European and other heritage	39 2(g)	CEMF5	NAH9
Noise and vibration	39 2(a)	CEMF4	NV1
Soil and water	39 2(c)	CEMF3 CEMF8	HYD1 WQ1-2 GW4-6 SC1,5-9, 11 HR1,3
Sustainability plan	41	N/A	SUS1-3 GHG1
Traffic and access	39 2(d)	CTMF	T1,3 ,4,6
Visual landscape	39 2(i)	CEMF7	LV1-3
Waste and resources	39 2(h)	CEMF9 CEMF11	WR1-3

Key

Moderate to high relevance to this CEMP

Some relevance to this CEMP

The context of this Plan in relation to the Sydney Metro Environmental Management System is presented below in Figure 1-2.

1.4. Document purpose

The purpose of this Plan is to provide the foundation for the management of European and Other Heritage impacts in accordance with best practice and legal requirements (including environmental mitigation measures, controls, monitoring and reporting) during the construction phase of the Project based on the assessment undertaken as part of the SMWSA EIS.

This Plan details the European and Other Heritage management requirements that must be satisfied in order to demonstrate compliance with Condition 39 (2) of Section 3.11.6 of the Airport Plan for the construction of the Project.

Legal and other requirements are identified and maintained in a register within the SM CEMF (refer CEMF chapter 2). Mitigation measures (specific to European and Other Heritage) required to satisfy these requirements are derived from the EIA and through risk assessment processes (refer Section 6.1) and included within this CEMF (Section 7).

Implementation of these measures is ensured through monitoring, training and competence, inspection, audit and reporting actions detailed in Sections 10 and 11, with the responsibilities for implementation identified in Section 9. Continual improvement processes, including in relation to compliance with regulatory requirements, in response to incidents and in the interest of better environmental management outcomes, are detailed in the CEMF Section 3.18.

In summary, this Plan sets out to achieve the following:

- Provision of details for the management and mitigation measures to be implemented, including timing and responsibilities
- Ensuring the commitments of the Conditions (as set out in the Airport Variation Plan) and regulatory requirements are met and satisfied by both Sydney Metro and contractors;
- Provision of process for monitoring implementation, reporting, and auditing of European and Other Heritage related management and compliance related issues
- Commitment to meeting the requirements of AS/NZS ISO 14001:2016 Environmental Management Systems, including the need for continual improvement
- Provision of a process to be implemented for the management of complaints, for stakeholder engagement, and for the management of emerging environmental issues as they arise
- Provision of a system including procedures, plans and documentation for implementation by Sydney Metro personnel and contractors to enable Project completion in accordance with the environmental requirements.

Effective implementation of this Plan will assist Sydney Metro and relevant contractors to achieve compliance with necessary environmental regulatory and policy requirements in a systematic manner with an outcome of continual environmental management performance.

1.5. Consistency

A major requirement of these plans is for Sydney Metro to maintain consistency with the already approved WSA CEMPs. This consistency requirement results in SM not needing to undertake consultation as is the requirement of WSA for their plans.

SM approached the development of these plans to meet the requirements of the Airport Plan, ensure compliance with Tables 8-1, 8-2 and 8-3 of the EPBC 2019/8541 and remain consistent with the WSA CEMPs.

SM have achieved this consistency through the following:

- Consistent format
- Consistent language
- Consistent existing environment with the addition of the SM – WSA RCIZ existing environment

- Consistent aspects and impacts but removing those not applicable and adding specific SM – WSA aspects and impacts
- Consistent Risk Assessment but removing those not applicable and adding specific SM – WSA risks
- Consistent mitigation measures but removing those not applicable and adding SM – WSA specific mitigation measures
- Consistent monitoring with the addition of any SM – WSA specific monitoring requirements
- Consistent auditing and reporting
- References to SEMF replaced with consistent CEMF requirements.

1.6. Sydney Metro Environmental Management System overview

Sydney Metro operates in general accordance with AS/NZS ISO 14001:2016 – Environmental management systems. A copy of the Sydney Metro environmental policy is provided in Appendix A of the SM CEMF.

The Project will be undertaken in accordance with the Sydney Metro Construction (Rail) Plan including the SM CEMF and the associated CEMPs (including this Plan).

The SM CEMF and WSA SEMF form an appendix to the Construction (Rail) Plan and is the overarching environmental plan for the implementation of the nine CEMPs. It provides a structured and systematic approach to environmental management and provides an expectation and guidance with regards to environmental management for the overall construction of the Project.

The structure of the environmental management system for the Project is shown in Figure 1-2.

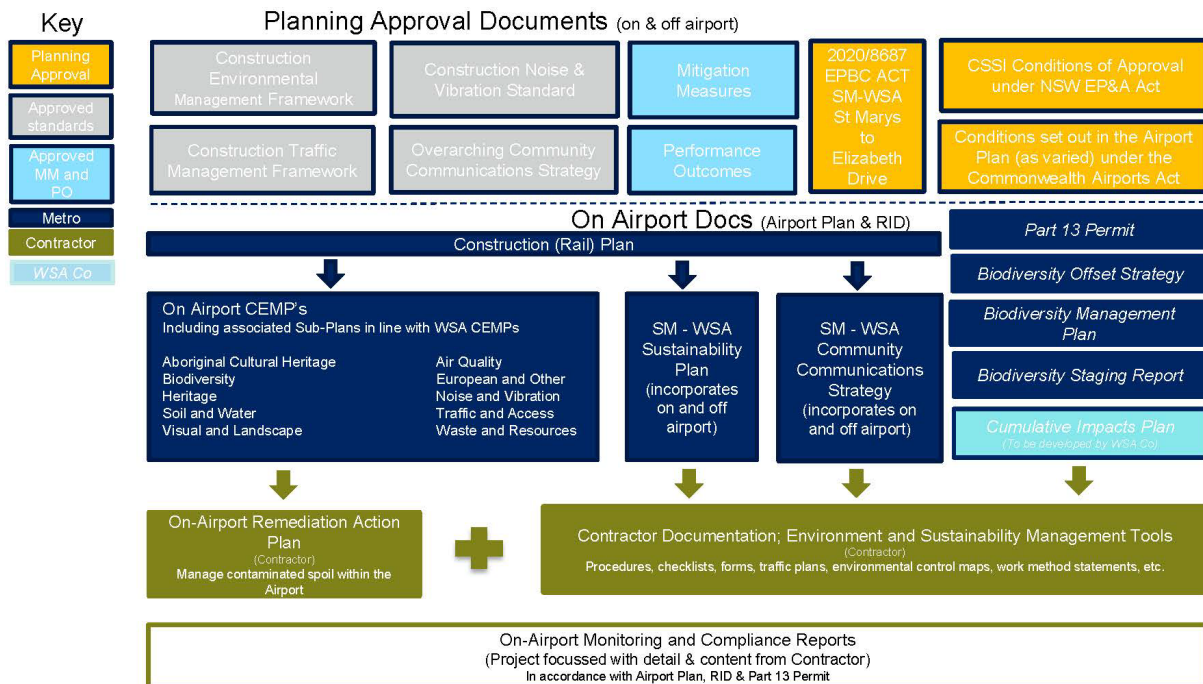


Figure 1-2 SMWSA Environmental Management System and CEMP context

1.7. Consultation requirements of this document

There is no direct consultation condition requirement for the Project, under the Airport Variation Plan. No consultation has yet been completed during the development of this CEMP. However, WSA completed consultation for the development of their WSA EHCEMP (Revision 0) and subsequently during the review and update of Revision 3 of their document (Sections 1.7 and 1.8). SMWSA will continue to consult with WSA in the development of these plans and as required with relevant stakeholders prior to seeking approval for these plans.

Consultation will continue with agencies, councils and other relevant stakeholders throughout the Project where there is a change to a CEMP. The outcomes of this consultation will be documented in subsequent revisions of the relevant CEMPs, with details of such consultation included in the applicable document.

1.8. Certification and approval

This EHCEMP will be reviewed and approved for issue by the SMWSA Environment Manager prior to submission to the Australian Government Department of Infrastructure, Transport, Regional Development and Communications (DITRDC).

1.9. Distribution

All Sydney Metro personnel and contractors will have access to this EHCEMP via the Project document control management system. Unless otherwise agreed by the Approver, the Approved Plan must be published on Sydney Metro’s website within one month of being approved and be available until the end of the Construction Period. An electronic copy can be found on the Project website.



This document is uncontrolled when printed. One controlled hard copy will be maintained by the quality manager at the Project office.

2. Scope of works

2.1. Overall Project scope

The Sydney Metro Construction Plan details the construction staging of the Airport Railway Development.

The delivery of the Project will be through a packaging strategy with a wide variety of package sizes, risk profiles and contracting entities. Each package will have different levels of environmental risk and environmental obligations, depending on the scope of works, location of works and sensitivity of the receiving environment and cultural heritage issues and relevant statutory requirements and obligations.

The packages have been divided into:

- AEW – Advanced and Enabling Works;
- SCAW – Surface and Civil Alignment Works;
- SBT – Station Boxes and Tunnelling Works;
- SSTOM – Stations, Systems, Trains, Operations and Maintenance.

The On-Airport Railway Development of the Project comprises the following key features as described in the Sydney Metro Construction (Rail) Plan (which is consistent with the Airport Plan and EIA Chapter 4):

- Around two kilometres of surface rail alignment within Western Sydney International (SCAW);
- Around 3.3 kilometres of twin rail tunnels (including tunnel portal) within Western Sydney International (SBT);
- Around three kilometres of twin rail tunnels between Western Sydney International and the Aerotropolis Station (SBT);
- Two new metro stations, Airport Business Park Station and Airport Terminal Station (STOM);
- All operational systems and infrastructure (SSTOM);
- A rail segment factory comprising a concrete batch plant and stockpile area (SBT and SCAW); and
- Spoil stockpile areas (SBT and SCAW).

Details of the Project construction activities, staging and programming including the phases of works is described in the Sydney Metro Construction (Rail) Plan (2021) as required by the Airport Plan Variation.

The proposed construction activities that would be undertaken for the Project include:

- preparatory activities (AEW);
- main construction works including;
 - tunnelling and associated works (SBT);
 - corridor and associated works (SCAW);

- stations and associated works (SSTOM);
- rail systems fitout (SSTOM);
- activities required for tunnel and viaduct segment manufacture and storage and temporary haulage roads (SBT and SCAW); and
- finishing works and testing and commissioning (FAW).

The Project would also include the potential permanent placement of spoil at two sites to support the development of future stages of the airport.

The Rail Construction Impact Zone (CIZ) including the construction footprint and key construction sites proposed for use during the construction of the Project are shown in Figure 2-1. This figure also indicates the Western Sydney International Stage 1 CIZ and the Environmental Conservation Zone within Western Sydney International.

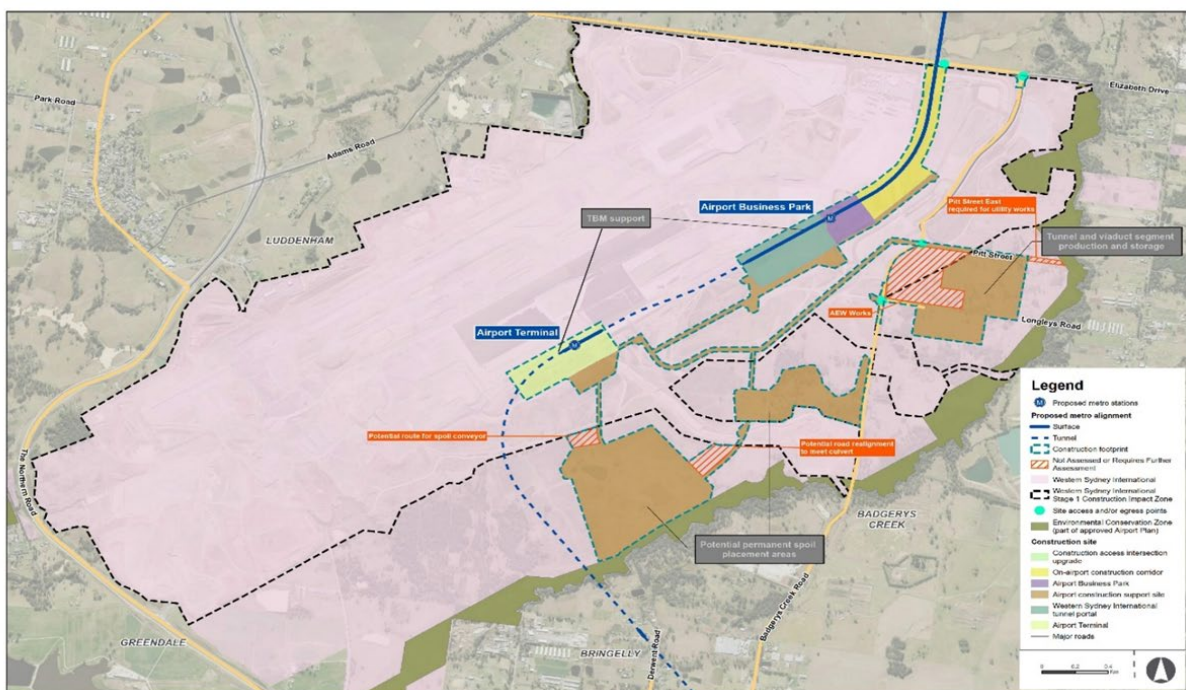


Figure 2-1 Construction footprint and key construction sites

It is anticipated that the Project construction works will commence in 2021 and take about five years to complete, subject to planning approval. The Operational SM - WSA opening is anticipated to align with the opening of passenger services for Western Sydney International in 2026. An indicative main construction program for the project is shown in Figure 2-2 below.



Construction Activities	Overview of Program																											
	Start	Finish	2021				2022				2023				2024				2025				2026					
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Enabling Work	25-Jan-21	19-Sep-22	█																									
SBT Enabling Works	27-Apr-22	23-Jan-23					█																					
SBT Station & Tunnel Portal Excavation	23-Jun-22	17-Jun-23					█																					
SBT Tunnel Construction	20-Apr-23	20-Dec-24									█																	
SCAW Surface work	14-Feb-23	19-Jun-24									█																	
SCAW Station works	14-Feb-23	13-Jul-23					█																					
SSTOM Station Construction and fitout	17-Jul-23	29-Aug-25									█																	
SSTOM Rail System fitout	18-Jun-24	3-Oct-25													█													
SSTOM Systems Testing and commissioning (incl integrated)	31-Jan-25	15-Dec-26																	█									

Figure 2-2 Indicative main construction program for the project

2.2. Preparatory activities

Preparatory activities for the Project are required to establish key construction sites and facilitate construction activities.

The majority of the preparatory activities are expected to commence in advance of main construction works, such as tunnelling and station excavation, while some preparatory activities will continue concurrently with the main construction works. Preparatory activities will include:

- detailed site investigations and subsequent clearance works
- provision of construction haul roads
- relocating, adjusting and protecting utilities and services affected by the proposed action
- supplying power, water and other utilities to construction sites and other areas within the construction footprint
- vegetation clearance (as permitted)
- establishment of construction sites.

2.3. Construction sites

The Project’s construction activities will be carried out within and to the south-west of the WSI airport Stage 1 CIZ. The indicative works at proposed construction sites required for the construction of the Project are shown in Figure 2-3. The use of these sites will be confirmed by the construction contractor(s) (when appointed) in consultation with Western Sydney Airport.

Location	Preparatory activities	TBM launch	TBM support	TBM retrieval	Spoil handling and removal	Roadheader launch/support	Ancillary facility construction	Stabling and maintenance facility construction	Major earthworks	Bridge and viaduct construction	General civil works	Concrete batch plant	Equipment and material laydown	Rail system fitout	Site offices and worker amenities	Water treatment plant	Potential acoustic shed	Vehicle parking
On-airport																		
On-airport construction corridor	✓				✓		✓		✓	✓	✓		✓	✓	✓			✓
Airport Business Park	✓				✓		✓		✓		✓		✓	✓	✓			✓
Western Sydney International tunnel portal	✓	✓	✓		✓	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓
Airport Terminal	✓		✓		✓	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓
Airport construction support site	✓				✓				✓		✓	✓	✓	✓	✓			✓

Figure 2-3 Indicative construction activities at proposed action construction sites

Note: TMB retrieval would occur outside the proposed action at the Aerotropolis Station site

3. Objectives and targets

3.1. Objectives

The key objective of this plan is to ensure European and Other Heritage is managed and protected during construction of the Project. To achieve this objective, the following will be undertaken:

- Implement agreed management measures for elements of European and Other Heritage
- Treat all heritage items with respect to their identified values
- Minimise impacts on items or places of heritage value
- Avoid accidental impacts on heritage items
- Maximise worker's awareness of indigenous and non-indigenous heritage;
- Comply with objectives to ensure that environment and heritage items are appropriately considered as outlined in the Land Use Plan and the Airport Variation Plan
- Ensure appropriate measures are implemented to address the performance outcomes detailed in Tables 8-1, 8-2 and 8-3 of the SMWSA EIA
- Ensure appropriate measures are implemented to comply with all relevant legislation and other requirements as described in Section 4 of this plan
- Records of any impacts avoided or minimised through design or construction methods; and
- Detail all the heritage management objectives and be consistent with the WSA European and Other Heritage CEMP, including all appendices to these CEMP documents.

3.2. Targets and performance

European and Other Heritage specific targets and performance criteria have been established for the management of European and Other Heritage impacts during the construction phase of the works which have been, in part, derived from the performance criteria identified in the WSA EIS, Table 28-14, as well as SMWSA EIA CEMF, as presented in Table 3-1.

Table 3-1 European and other heritage Targets and performance

Objective	Target	Document reference
Minimise disturbance and loss to European or Other Cultural Heritage values	Ensure full compliance with statutory requirements (including general duty to preserve heritage under the AEPR). Compliance with objectives to ensure that environment and heritage items are appropriately considered as outlined in the Land Use Plan in the Airport Plan.	Environmental reporting

Objective	Target	Document reference
Enhance public knowledge of the heritage values in the local area	Recognising the European and other heritage values of the site in the detailed design of the airport. Treating heritage items with respect to their identified values.	Community Communications Strategy
Implement agreed management measures for elements of European and other heritage	Compliance with the approved European and Other Heritage CEMP. Compliance with the general duty to preserve heritage under the AEPR.	This CEMP

The above targets have been set to provide a benchmark performance objective to which Sydney Metro will endeavour to achieve. Failure to achieve the targets will not necessarily be considered a non-conformance, however will prompt internal review of environmental management (as detailed further in environmental control measures in (Table 7-1) and assessment of potential improvement opportunities.

4. Legal and other requirements

Relevant environmental legislation and other requirements are identified below.

4.1. Relevant legislation and guidelines

As the Project is to be developed under the Airport Plan determined under the Airports Act, some state laws will not be applicable to the Project (s112 of this Act). Where state law is applicable, this Plan will set out the relevant applicable state legislation and requirements and demonstrate how compliance with those laws including obtaining relevant permits will be achieved. Where state laws are not applicable, there may nonetheless be a requirement to have regard to those laws, for example, through mitigation measures to be incorporated in CEMPs to satisfy conditions under the Airport Variation Plan.

4.1.1. Legislation

Relevant legislation and regulations to this Plan are summarised in Table 4-1.

Table 4-1 Principal legislation and relevance

Legislation or regulation	Relevance	CEMP compliance provisions
Commonwealth		
Airports Act 1996 (Cth) (Airports Act)	The Airports Act and AEPRs set out the framework for the regulation and management of activities at airports that could have potential to cause environmental harm. This includes offences related to environmental harm, environmental management standards, monitoring and incident response requirements. The Airport Plan prepared under the Airports Act covers several environmental matters and, in particular, details specific measures to be carried out for the purposes of preventing, controlling or reducing the environmental impact associated with the airport. Criminal offences are applicable if these measures are not complied with.	This CEMP forms part of the overall Sydney Metro environmental management system which has as a target, full compliance with the Airport Variation Plan. Relevant mechanisms within this CEMP that will contribute to this include but are not limited to: <ul style="list-style-type: none"> • Section 1.3 – Objectives • Section 3.1 – Airport Plan Conditions • Section 4.4 – Environmental Impact Statement Requirements • Section 6.1 – Risk assessment • Section 7 – Environmental control measures • Section 9 – Environmental roles and responsibilities • Section 10 – Environmental Inspection, Monitoring and Auditing • Section 10.6 – Environmental Incidents and complaints management • Section 10.5 – Review of approved plans
Airports (Environment Protection) Regulations 1997 (AEPR)	Imposes various duties including a general duty to preserve existing aesthetic, cultural, historic and social values and a duty to give notice of unexpected finds.	Refer to commentary on Airport Plan above.
Airports (Building Control) Regulations 1996	Any conditions imposed on the ABC and ALC consent are to inform the relevant CEMPs (where appropriate).	This document

Legislation or regulation	Relevance	CEMP compliance provisions
Environment Protection and Biodiversity Conservation Act, 1999	National environment law that provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places, defined in the Act as matters of national environmental significance. Relevant heritage items listed on the National Heritage List include the Greater Blue Mountains Area. There are no relevant places listed on the Commonwealth Heritage list	Section 7 – Environmental control measures Section 10 – Environmental inspection, monitoring and auditing
NSW As the Airport is to be developed under the Airport Plan determined under the Airports Act, 1996 (Cth), some state laws will not be applicable to the project or to parts of the Project (see for example S 112 of that Act). Where state laws are not applicable, it is still intended to have regards to relevant laws for example through inclusion of mitigations measures incorporated into this CEMP. These laws are identified below		
Environmental Planning and Assessment Act, 1979 (EPA Act)	Objects of the Act include the encouragement of proper management and conservation of natural and artificial resources and the promotion of the orderly and economic use and development of land in NSW. The EP&A Act also provides for the making of environmental planning instruments including State Environmental Planning Policies (SEPPs) and Local Environmental Plans (LEPs), which include land use controls, such as development standards applicable to the land within the area covered by each instrument.	This Project has been authorised under the Airports Act; however, a range of matters arising from the EP&A Act have been considered - Refer to Section 7 for environmental mitigation measures and controls. Section 7 – Environmental control measures
Work Health and Safety Act 2011 & Work Health and Safety Regulation 2017.	The Work Health and Safety Act 2011 (NSW) (the Act) provides a framework to protect the health, safety and welfare of all workers and others in relation to NSW workplaces and work activities. The Work Health and Safety Regulation 2017 set out specific requirements for particular hazards and risks, such as noise, machinery, and manual handling.	Health and Safety documents
State Environmental Planning Policy (Western Sydney Aerotropolis) 2020 (Aerotropolis SEPP)	The Aerotropolis SEPP was made in accordance with division 3.3 of the EP&A Act and provides planning controls for development within the Western Sydney Aerotropolis. The Aerotropolis SEPP overrides any LEP provisions that apply to that land.	Section 7 – Environmental control measures
Heritage Act 1997	The Heritage Act makes provisions for the conservation of NSW's non Aboriginal environmental heritage.	Section 7 – Environmental control measures

Legislation or regulation	Relevance	CEMP compliance provisions
Liverpool Local Environmental Plan 2008 (Liverpool LEP)	The Liverpool LEP provides local environmental planning controls and standards for land in the Liverpool LGA in accordance with the relevant standard environmental planning instrument under section 33A section 3.20 of the EPA Act.	Section 7 – Environmental control measures
Penrith Local Environmental Plan 2010 (Penrith LEP)	The Penrith LEP provides local environmental planning controls and standards for land in the Penrith LGA in accordance with the standard environmental planning instrument under section 3.20 of the EPA Act.	Section 7 – Environmental control measures

4.1.2. Guides and standards

Guidelines and standards that are relevant to European and Other Heritage management and this plan are summarised in Table 4-2.

Table 4-2 Relevant guidelines and standards

Guidelines and standards
Altering Heritage Assets (Heritage Office and DUAP 1996)
Archaeological Assessment Guidelines (NSW Heritage Office and NSW Department of Urban Affairs and Planning 1996)
Assessing Heritage Significance (NSW Heritage Office 2001)
Assessing Historical Association: A Guide to State Heritage Register Criterion B (Heritage Office 2000)
Assessing Historical Association: A Guide to State Heritage Register Criterion A (Heritage Office 2006)
Assessing Historical Association: A Guide to State Heritage Register Criterion A (Heritage Office 2006)
Assessing Significance for Historical Archaeological Sites and 'Relics' (Heritage Council of NSW, 2009)
Charter for Places of Cultural Significance ('the Burra Charter') (Australia ICOMOS 2013)

4.2. Approvals and other specifications

Approvals and other specifications relevant to European and Other Heritage management in this plan include:

- Functional Specifications
- Western Sydney Airport Variation Plan
- Sydney Metro Western Sydney Airport Environmental Impact Statement
- Sydney Metro Sustainability Plan
- Sydney Metro Community Communications Strategy
- Sydney Metro Construction Plan, including the CEMF.

4.3. Airport Plan Conditions

Conditions relevant to the management of European and Other Heritage during construction of the Project are provided in Section 3.11.6 of the Airport Plan and summarised in Table 4-3. Compliance with the Airport Plan conditions is a statutory requirement and as such, failure to comply may constitute a criminal offence liable to criminal prosecution under the relevant legislation.

Sydney Metro – Integrated Management System (IMS)

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Table 4-3 Airport Plan Conditions relevant to European and Other Heritage management

Condition no.	Condition	Timing	Responsibility	Reference within this CEMP
39.1	The rail authority must not: (a) Commence Rail Construction Works until each and all of the CEMPs specified in paragraph (2) have been prepared and approved in accordance with this condition; or b) Carry out any Rail Development inconsistently with any of the approved Rail CEMPs.	Prior to Construction Works	Sydney Metro	CEMP Sections 6, 7, 8, 9 and 10
39.2	The Rail Authority must prepare and submit to an Approver for approval; (g) a European and Other Heritage CEMP in relation to the carrying out of the Rail Development.	Prior to Construction Works	Sydney Metro All contractors	This document
39.3	The criteria for approval of each of the Rail CEMPs are that an Approver is satisfied that (a) The CEMP complies with the mitigation measures and other requirements set out in Table 8-1 and Table 8-3 of the EIA which are relevant to that CEMP; and (b) The Rail Authority, in preparing the CEMP has taken into account any performance outcomes specified in Table 8-2 of the EIA relevant to the CEMP; and (c) the CEMP is otherwise appropriate	Prior to Construction Works	Sydney Metro	This document Table 4.5
39.4	The Rail Authority must ensure that: (a) a Rail CEMP is to the extent possible, consistent with a CEMP of the Site Occupier; and (b) no Rail CEMP is inconsistent with the approved Construction (Rail) Plan.	CEMP preparation	Sydney Metro	This document Section 1.3 Section 4.4 Section 7
45.3	The Rail Authority must take reasonable steps to ensure that: (a) each person involved in carrying out a development which is part of the Rail Development: (i) is informed of the conditions that are relevant to the carrying out of the Rail Development; and (ii) in carrying out the Rail Development, complies with those conditions as if they applied to the person in the same way as they apply to the Rail Authority; and (b) each person involved in operating a development described in section 3.10 of Part 3 of the Airport Plan: (i) is informed of the conditions that are relevant to the operation of the development; and (ii) in operating the development, complies with those conditions as if they applied to the person in the same way as they apply to the Rail Authority.	Prior to construction	Sydney Metro	Section 11

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Condition no.	Condition	Timing	Responsibility	Reference within this CEMP
46	Site Occupier and Plan Owner to maintain records about compliance with conditions Each Site Occupier, the Rail Authority and each Plan Owner must maintain accurate records which demonstrate its compliance with the conditions, including measures taken to implement the Approved Plans, and must make the records available upon request to the Infrastructure Department.	During construction	Sydney Metro	Section 10
47.4	Unless otherwise agreed in writing by an Approver, the Rail Authority must prepare a report addressing its compliance with each condition set out in section 3.11.6, including implementation of any Approved Plan, in respect of: (a) the 12-month period commencing with the commencement of Rail Construction Works; and (b) each subsequent 12-month period until the end of the Rail Construction Period; and (c) any period between the commencement of Rail Construction Works and the end of the Rail Construction Period that is not covered by paragraph (a) or (b).	During construction	Sydney Metro	Section 10.4
47.5	Unless otherwise agreed in writing by an Approver, the Rail Authority must publish each report prepared under subcondition (4) on its website within three months of the end of the period in respect of which the report was prepared. Documentary evidence providing proof of the date of publication must be provided to the Infrastructure Department at the same time as each report is published (with a copy to be provided to the Environment Department). Each report must remain on the Rail Authority's website for a minimum of 12 months (beginning on the date of publication).	During construction	Sydney Metro	Section 10.4
48.4	The Rail Authority must ensure that an independent audit of its compliance with the conditions set out in section 3.11.6 (except condition 44) is conducted in respect of the 12-month period commencing with the commencement of Rail Construction Works.	During construction	Sydney Metro	Section 10.4
48.5	The Rail Authority must ensure that an independent audit of its compliance with condition 46 is conducted in respect of the 12-month period from commencement of Rail Operations.	During construction	Sydney Metro	Section 10.4
48.6	The Rail Authority must submit the report of each audit conducted under subcondition (4) or (5) to an Approver (with a copy to the Environment Department) within six months of the end of the period in respect of which the audit was conducted. For each audit, the independent auditor must be approved by an Approver prior to the commencement of the audit. Audit criteria must be agreed by an Approver and the report of the audit must address the criteria to the satisfaction of an Approver.	During construction	Sydney Metro	Section 10.4

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Condition no.	Condition	Timing	Responsibility	Reference within this CEMP
49.1	The Plan Owner may seek approval for a variation of an Approved Plan by submitting to an Approver a version of the plan with the proposed variation clearly marked in it (varied plan).	During construction	Sydney Metro	Section 10.5
49.2	The criteria for approval of the varied plan are the same as those in the Approval Condition, but only to the extent that they are relevant to the proposed variation.	During construction	Sydney Metro	Section 10.5
49.3	If an Approver approves a varied plan prepared under subcondition (1) or paragraph (5)(b), or the Infrastructure Minister varies an Approved Plan under paragraph (5)(a), then, from the date when it is approved or varied (as the case may be), the plan as varied is taken to be the Approved Plan for the purposes of the conditions.	During construction	Sydney Metro	Section 10.5
49.6	The Infrastructure Minister may: (a) vary an Approved Plan; or (b) request in writing that the Plan Owner prepare and seek approval for a specified variation of an Approved Plan in accordance with subcondition (1), if the Infrastructure Minister believes on reasonable grounds that: (c) a condition has been contravened and the nature of the contravention is relevant to the subject matter of the Approved Plan; and (d) the variation or the request for a specified variation (as the case may be) will address the contravention.	During construction	Sydney Metro	Section 10.5
49.7	The Plan Owner must comply with a request made by the Infrastructure Minister in accordance with subcondition (5) within three months of the date of the request.	During construction	Sydney Metro	Section 10.5
50.1	Unless otherwise agreed in writing by an Approver, the Plan Owner must publish all Approved Plans on its website.	During construction	Sydney Metro	Section 10.5

Sydney Metro – Integrated Management System (IMS)

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Condition no.	Condition	Timing	Responsibility	Reference within this CEMP
50.2	<p>Each Approved Plan must be published on the Plan Owner's website within one month of being approved and remain so published:</p> <p>(a) for CEMPs – until the end of the Airport Construction Period or Rail Construction Period as relevant;</p> <p>(e) the Community Communications Strategy – on commencement and each time there is a variation to the Strategy; and</p> <p>(f) for all other plans – until there is a Master plan for the Airport.</p>	During construction	Sydney Metro	Section 10.5

4.4. Environmental Impact Requirements

4.4.1. WSA EIA requirements

The requirements of European and Other Heritage management to be taken into account and addressed during the construction phase of the Project on the Stage 1 area are included in the WSA EIS, specifically Table 28-4. In line with the requirement of the SMWSA CEMPs to be consistent with the WSA CEMPs, Sydney Metro have ensured that the implementation, risk assessment, management measures, monitoring, auditing, reporting and responsibility for European and Other Heritage management by the SM Project is aligned with the requirements of the WSA.

4.4.2. SMWSA EIA requirements

The requirements of European and other heritage management to be taken into account and addressed during the construction phase of the Project are included in Section 8 of the SMWSA EIA, in particular Table 8-1, CEMF 5. A summary of these requirements and how they have been addressed in this EHCEMP is presented in Table 4-5.

Table 4-4 Summary of European and Other Heritage management requirements from the SMWSA EIA

EIA Reference	Topic	Summary	European and Other Heritage CMEP Reference
SMWSA EIA Table 8-1 CEMF5	Framework requirements	The on-airport Aboriginal Cultural Heritage CEMP and the European and Other Heritage CEMP would detail the Sydney Metro – Western Sydney Airport heritage management objectives, including:	
		<ul style="list-style-type: none"> embed significant heritage values through any architectural design, education or physical interpretation 	-Sydney Metro has prepared a line-wide Heritage Interpretation Strategy for the SMWSA project which includes on-airport. SMWSA is also taking part in a pilot of the Draft Connecting with Country Framework.
		<ul style="list-style-type: none"> minimise impacts on items or places of heritage value 	Section 8 European & other heritage sites disturbance area
		<ul style="list-style-type: none"> avoid accidental impacts on heritage items and 	Section 7
		<ul style="list-style-type: none"> maximise worker's awareness of indigenous and non-indigenous heritage 	Section 7
		The on-airport Aboriginal Cultural Heritage CEMP and the European and Other Heritage CEMP would be consistent with the WSA Aboriginal Cultural Heritage CEMP and European and Other Heritage CEMP, including all appendices (and sub plans) to these CEMPs. The plans would include as a minimum:	
		<ul style="list-style-type: none"> evidence of consultation with Registered Aboriginal Parties and the NSW Heritage Council where relevant 	Not applicable to the EOH CEMP
		<ul style="list-style-type: none"> procedures for interpretation of heritage values uncovered through salvage or excavation during detailed design 	Section 7 Environmental Control measures Section 8 European and other heritage sites disturbance area
		<ul style="list-style-type: none"> procedures for undertaking salvage or clearance works 	Section 7 Environmental Control measures Section 8 European and other heritage sites disturbance area
		<ul style="list-style-type: none"> details for the short and/or long term management of artefacts 	Section 7 Environmental Control measures Section 8 European and other heritage sites disturbance area

EIA Reference	Topic	Summary	European and Other Heritage CMEP Reference
		<ul style="list-style-type: none"> details of management measures to be implemented to prevent and minimise impacts on heritage items (including further heritage investigations, archival recordings and/or measures to protect unaffected sites during construction works in the vicinity) 	Section 7 Environmental Control measures Section 8 European and other heritage sites disturbance area
		<ul style="list-style-type: none"> procedures for unexpected heritage finds, including procedures for dealing with human remains 	Section 7 Environmental Control measures Section 8 European and other heritage sites disturbance area
		<ul style="list-style-type: none"> Heritage monitoring requirements 	Section 10 Inspection, monitoring and auditing
		<ul style="list-style-type: none"> Compliance record generation and management including: inspections undertaken in relation to heritage management measures archival recordings undertaken of any heritage item unexpected finds and stop work orders records of any impacts avoided or minimised through design or construction methods. 	Section 7 Environmental Control measures Section 10 Inspection, monitoring and auditing
		The on-airport Aboriginal Cultural Heritage and European and Other Heritage CEMPs would include the following mitigation measures:	
		<ul style="list-style-type: none"> induction courses for site workers will include training in the identification of Aboriginal artefacts and management of Aboriginal heritage values 	Section 7 Environmental Control measures
		<ul style="list-style-type: none"> any heritage item not affected by the works will be retained and protected throughout construction 	Section 7 Environmental Control measures Section 10 Inspection, monitoring and auditing
		<ul style="list-style-type: none"> implement unexpected heritage find procedures for Indigenous and non-Indigenous heritage items. 	Section 7 Environmental Control measures

EIA Reference	Topic	Summary	European and Other Heritage CMEP Reference
<p>SMWSA EIA Table 8-3 Mitigation Measures</p>	<p>NAH9</p>	<p>If suspected human remains or unexpected items of potential heritage significance are discovered within the on-airport area, all activity would cease and the unexpected/chance finds requirements specified in the Western Sydney Airport European and Other</p> <ul style="list-style-type: none"> Heritage Construction Environmental Management Plan would be followed 	

5. Existing environment

The following information is summarised from the European and Other Heritage Assessment in Chapter 20 of the WSA EIA Volume 2A, as well as from Section 7-4 and Technical Paper 4 of the SMWSA EIA. In addition, WSA EIS Section 5.4 includes a summary of works / assessments completed since the preparation of the EIS including:

- Cemeteries relocation plan
- Archival recordings of European heritage items.

It should be noted that for the purpose of the Project works covered by this EOH CEMP, the existing environment described herein is considered consistent and acceptable for consideration in the risk assessment process and the identification of suitable environmental mitigation measures and controls. Details of environmental mitigation measures and controls for the management of European and Other Heritage impacts is provided in Section 7.

5.1. European heritage

There were 20 European heritage items located at the Project Site and an additional 22 heritage items located within the surrounding area. No known European heritage items are located within the Experience Centre and Site Office area (Figure 5-1). These items are shown in Figure 5-1 overleaf and tabulated in Table 5-1, with the heritage items located within the footprint of the Project works covered by covered by this CEMP highlighted.

There are no heritage items in the Project Site listed on the World Heritage List, National Heritage List or Commonwealth Heritage List. There are no heritage items listed on the NSW Heritage Act 1977 State Heritage Register within the Project Site.

Heritage items in the WSA Stage 1 construction footprint, as identified in Figure 5-1, have been surveyed, archived and removed / demolished as detailed further in Section 5.3. This includes the relocation of the identified cemeteries. Appropriate requirements for additional awareness and vigilance in the areas of known previous heritage items are included in Section 7.

The sites highlighted green in Table 5-1 are within SMWSA construction support sites and the RCIZ.

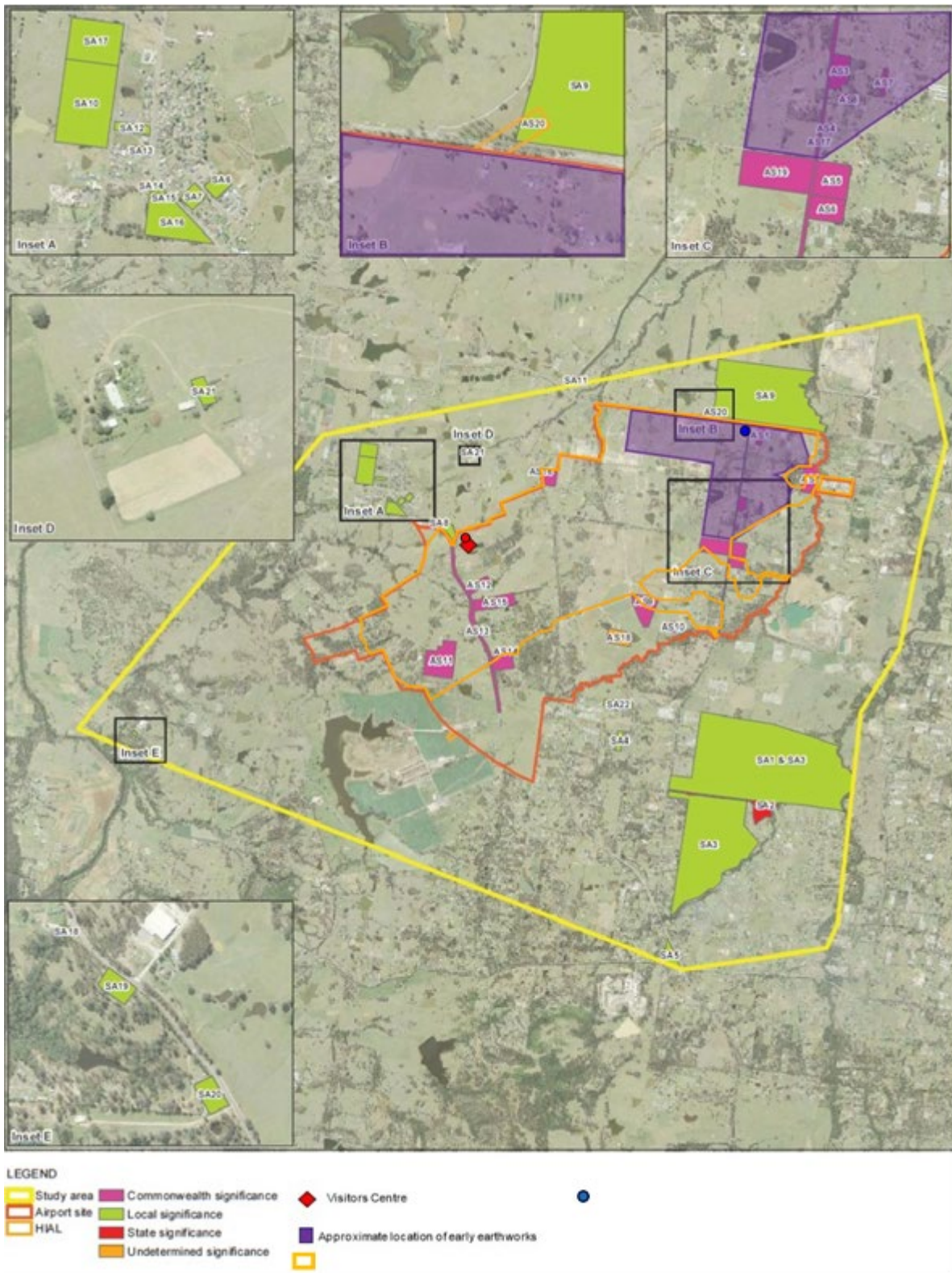


Figure 5-1 European and other Heritage location plan

Table 5-1 European heritage item within the airport site and associated sites

Item (EIS ref)	Location	Description	Significance
European and other heritage within or immediately adjacent to SMWSA construction support sites			
Spredenbergs (AS18)	55 Longleys Road, Badgerys Creek	Spredenbergs features in a map of Luddenham Estate dated 1859 with a house visible in an aerial photograph dated 1947. The site is overgrown, confounding validation of its heritage.	Unknown
Braeburn homestead (AS9)	55 Longleys Road, Badgerys Creek	Braeburn was a farm homestead circa 1910. The homestead and associated shed were demolished in the late 1990s	Local
Orange Hill homestead (AS10)	5 Jagelman Street, Badgerys Creek	Orange Hill was a farm homestead thought to be a predecessor to Braeburn. Two wells and a number of subsurface sandstone bricks were identified by test excavation at the site.	Local
Badgerys Creek post office (AS5)	Lot 52 Badgerys Creek Road, Badgerys Creek	Badgerys Creek post office operated between 1894 and 1989. No surface elements of the post office remain; however, subsurface remains are likely.	Local
European and other heritage in WSA			
Pennell's property (AS1)	2170 Elizabeth Drive, Badgerys Creek	Pennell's property is likely to contain subsurface remains of an early farm homestead	Local
Gardiner Road farm complex (AS2)	5 Gardiner Road, Badgerys Creek	Gardiner Road farm complex comprises an early 20th century farm cottage and outbuildings	Local
Badgerys Creek Public School (AS3)	Corner of Pitt Street and Badgerys Creek Road, Badgerys Creek	Badgerys Creek Public School is a small rural school containing elements from the early 20th century. The school has been damaged by vandalism following its closure in 2014.	Local
Badgerys Creek butchery (AS4)	Lot 51A Badgerys Creek Road, Badgerys Creek	Badgerys Creek butchery was one of two retail outlets in Badgerys Creek and had been operating for over a hundred years prior to demolition in the 1990s.	Local
Saw pit (AS6)	61 Badgerys Creek Road, Badgerys Creek	Although marked on the 1859 map of Luddenham, there is very little observable evidence of the saw pit due to overgrowth and use of the site as a dam.	Local
Badgerys Creek Uniting Church and cemetery (AS7)	15 Pitt Street, Badgerys Creek	Badgerys Creek Uniting Church was the first formal place of worship at Badgerys Creek, opening in 1898 followed by the cemetery in 1927. The church was removed from the site in the early 1990s. The cemetery has two marked graves and could contain further unmarked graves.	Local (Commonwealth)
St John's Anglican Church and cemetery (AS8)	30 Pitt Street, Badgerys Creek	St John's Anglican Church was built in the early 1900s. The church was removed or demolished after 1992. The cemetery contains at least 27 graves, which the church yard retains a small monument comprising a plaque, small brick base and corrugated iron roof.	Local

Item (EIS ref)	Location	Description	Significance
Vicary's Winery (AS11)	1935 The Northern Road, Luddenham	Vicary's Winery was a farm property in the late 19th century. The site features a slab homestead circa 1860s and woolshed circa 1880s. The site was converted to a dairy and vineyard in the early 20th century.	Local
Well (AS12)	1972 The Northern Road, Luddenham	The undated sandstone well sits within a more recently constructed homestead. The presence of such a well is rare in the local area.	Local
The Northern Road alignment within the airport site (AS13)	The Northern Road, Luddenham	The Northern Road is a very early road alignment. The route is recorded in an edition of the Sydney Gazette dated 1821 and a map of Bringelly dated 1834. The alignment of the Northern Road has deviated in some areas of the airport site since that time.	Local
Anschau Vineyard, Steinberg and grave(s) (AS14)	1845-1875 The Northern Road, Luddenham	Anschau Vineyard operated from the late 1800s. No evidence of the vineyard remains; however, blacksmith tools and remains of a homestead has been identified. A possible grave suspected to belong to a member of the Anschau family is also present at the site.	Local
St Francis Xavier Church and cemetery (AS15)	1966 The Northern Road, Luddenham	St Francis Xavier Church was built in 1912 while it is probable that the associated cemetery was established earlier. The contents of the church and graves were relocated to a new site at Greendale in the 1990s.	Local
Jackson Road cottage (AS16)	Lot 2 Jackson Road, Luddenham	Jackson Road hosted a farm cottage and several ancillary structures circa 1890. The cottage and structures remain at the site.	Local
Badgerys Creek Road alignment within the airport site (AS17)	Badgerys Creek Road, Badgerys Creek	Badgerys Creek Road alignment has been noted on maps since the 1850s and has not changed substantially since that time.	Local
Howe residence (AS19)	Corner Badgerys Creek Road and Longleys Road, Badgerys Creek	The Howe residence is thought to have been occupied from the early 19th century. Potential homestead remains were identified at the site including wooden posts, bricks, corrugated iron and a potential well site. Refer to the Archival Record of European Heritage Items Report for more information.	Local
Part McGarvie Smith University Farm (AS20)	124 Elizabeth Drive, Badgerys Creek	The McGarvie Smith University Farm is considered to have heritage significance for its historic, associative and technical values. The farm was established as a place to teach animal husbandry to veterinary students at the University of Sydney and has associations with Sir Frederick Tout.	Local

5.2. Additional works completed post WSA EIS

The following sections provide details regarding additional works that have been completed on the Project Site since the completion of the WSA EIS with regards to European and Other Heritage management.

5.3. Cemeteries

A Cemeteries Relocation Management Plan (CRMP) for the Project Site was completed in 2017. The CRMP was prepared to address the relevant Airport Plan conditions as provided for in Section 3.7.1 of the Airport Plan condition 3 which required that the CRMP addresses the following:

- Preparatory activities to assist with determining the scope of the process involved in relocating the human remains located in the Identified Gravesites
- The disinterment of the remains at the Identified Gravesites
- The reinterment of these remains at another cemetery or other cemeteries. The CRMP included the preparatory, disinterment and reinterment activities associated with the relocation of gravesites. A map of the Sydney Metro site showing the location of the Identified Gravesites is provided in Figure 5-2. Cemeteries relocation has been completed in accordance with the CRMP. Due to the personal nature of the information contained in the CRMP, it was not published.

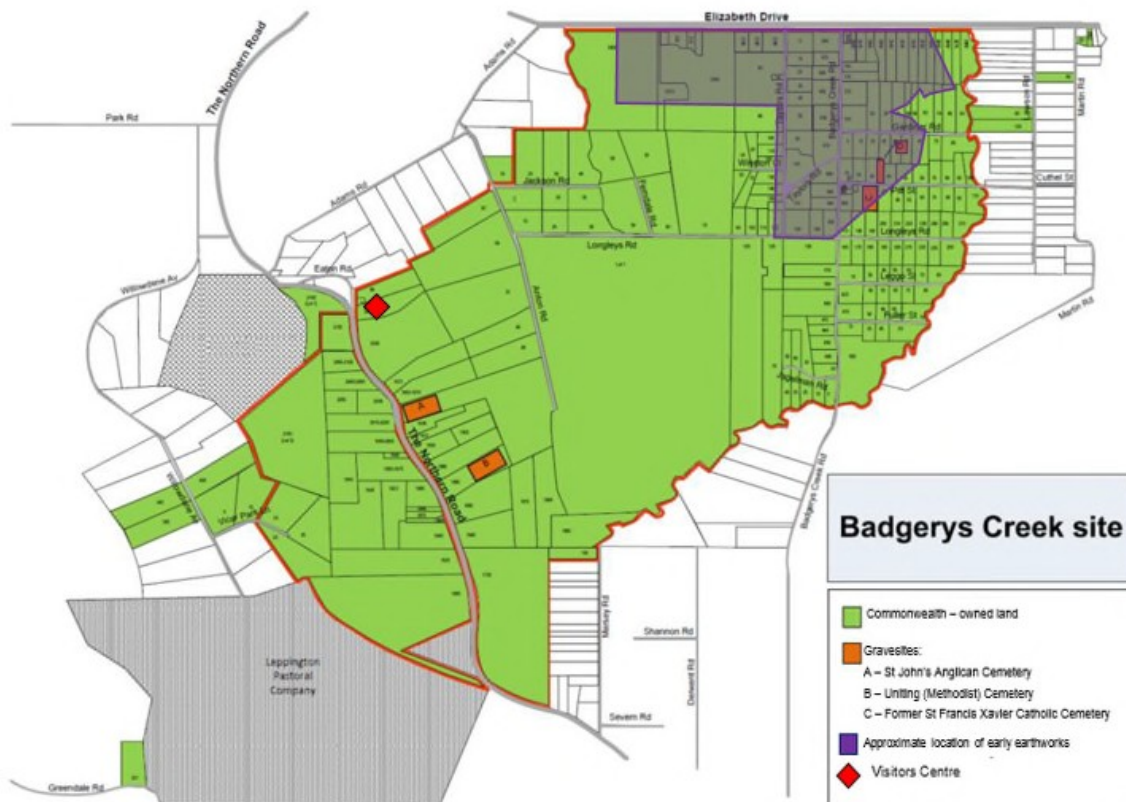


Figure 5-2 Gravesite location plan

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5.3.1. Archival record of European Heritage items report

5.3.1.1. Background

As part of site preparation activities required to be undertaken before commencement of construction of the WSA Stage 1 development, the removal of these European heritage items from the airport Site was required. This included implementation of mitigation and management measures such as further archaeological investigations, archival recording, creating an inventory of moveable items, cultural planting investigations, identification of structures that could potentially be relocated, relocation of remains located in grave sites (refer to Section above) and the staged demolition of European heritage structures.

An archival record of European heritage items report covers the archival recording of six European heritage sites. These are the Gardiner Road farm complex - Homestead and outbuildings, the Badgerys Creek Public School, the Vicary's Winery and Woolshed, the Jackson Road cottage, the Badgerys Creek Uniting Cemetery and the St John's Anglican Cemetery. One site identified as 'The Well' was found to not have the heritage significance that was first thought it had once the archival recording commenced on the site.

5.3.1.2. Archival recording

There were several stages to the archival recording of each European heritage item. In 2015, a preliminary survey was undertaken as part of the non-Aboriginal Heritage Assessment to identify items of potential heritage significance. These surveys included extensive photographing of items that were later identified as meeting the threshold of Commonwealth heritage significance. One of the recommendations of the non-Aboriginal Heritage Assessment was to archive and record each item of built heritage. By the time of archival recording in 2017, many of these properties had substantially deteriorated.

The photographs undertaken in 2015 were therefore useful in demonstrating this deterioration together with the archival photographs taken in 2017. Additional research was undertaken on each of the identified properties and expanded to include ownership and land-use information. This additional research established through-lines to other items in the area, such as the school and cemeteries. Following the research and using the 2015 photographs as a baseline, additional pedestrian and photographic surveys were undertaken in 2017. Archival recording was undertaken at seven European heritage sites. These were:

1. Gardiner Road Farm Complex, 80-90 Gardiner Road, Badgerys Creek. Archival recording was undertaken on the cottage and huts, cow shed, byre and outbuildings. Archival recording was not undertaken on the 1960s house, sleep out and garage, Lysaght silo, water stand on tank or poultry sheds.
2. Badgerys Creek Public School, 10 Pitt Street, Badgerys Creek. Archival recording was undertaken on the library, old cottage and staff room. Archival recording was not undertaken on the classroom block, washroom or hall.
3. Vicary's Winery, 1935 The Northern Road, Luddenham. Archival recording was undertaken on the 1860s slab homestead and time capsule (which was removed prior to demolition), train carriage, woolshed (former dairy) and cow bails.
4. Well, 1972 The Northern Road, Luddenham.
5. Jackson Road Cottage, 10 Jackson Road, Luddenham. Archival recording was undertaken on the 1890 farm cottage building.

6. Badgerys Creek Uniting Cemetery, 15 Pitt Street, Badgerys Creek.

7. St John's Anglican Cemetery, 30 Pitt Street, Badgerys Creek.

The archival recording methodology is based on guidance detailed by the Department for Planning, Industry and Environment in How to Prepare Archival Records of Heritage Items (1998) and Photographic Recording of Heritage Items Using Film or Digital Capture (2006).

The intent of the archival recording was to ensure that the history and environment of each structure can be retained for future reference and research. Photographic records and measured drawings of existing features contribute to the heritage significance of each item. The record was prepared for the original buildings within the context of their landscape setting, local environment and associations with other buildings and features.

5.3.1.3. Photographic records

For each European heritage site, the photographs have been arranged according to the following categories:

- Relationship between features and other relevant landscape features
- Detail, features and construction.

Photographs were taken of all European heritage items in 2015 as part of an initial survey of the airport site and again in 2017 as part of a detailed photographic survey. The subjects of the photographs varied between each item but were broadly focused on any important heritage elements of the item, identifying characteristics and important fabric. Spatial relationships between significant heritage features were also captured where applicable, the photographic plans for each site can be used to identify these. Photographs were also taken during the staged demolitions of heritage items except for the relocation works related to the two cemeteries and The Well. The two cemeteries were relocated as part of a separate Cemeteries Relocation Management Plan process. As archival work commenced at The Well at 1972 The Northern Road it became apparent that heritage significance was not present and that an archival record detailing the demolition works was not required.

5.3.1.4. Inventory of moveable heritage items

Individual items which are part of a heritage item make an important contribution to the heritage significance of the item or may have heritage significance. These may include tools of the trade and machinery. These are known as “moveable items”.

The NSW Department of Education conducted an inventory of moveable heritage items at the Badgerys Creek Public School in 2014. The school monument was considered an item of significance and was relocated by the NSW Department of Education to the Luddenham Public School. This was removed prior to the preparation of the archival record for the school.

In 2015, RPS Group prepared heritage protocols for two of the European heritage sites, the Badgerys Creek Public School and the Gardiner Farm complex. This report identified consideration to the relocation of two structures should be considered, the Badgerys Creek Public School library and the Badgerys Creek Public School old cottage.

The 2015 heritage protocols report also recommended the dismantling or staged demolition including archival recording for the Badgerys Creek Public School staff room, Gardiner Road farm complex cottage (including huts), Gardiner Road farm complex cow shed, Byre and Outbuildings.

The Badgerys Creek Public School classroom block, washroom and hall and Gardiner Road farm complex 1960s house, sleep-out and garage, Lysaght silo, water tank on stand and poultry sheds could be altered or removed without archival recording being required.

No additional items were identified for the inventory of moveable heritage items as part of the archival recordings.

5.3.1.5. Staged demolition

To record potential construction techniques, original fabric and other information, staged demolitions were undertaken at the following four European heritage sites:

- Gardiner Road farm complex (detail as per archival recording, Gardiner Road, Badgerys Creek)
- Badgerys Creek Public School, Pitt Street, Badgerys Creek
- Vicary's Winery, 1935 The Northern Road, Luddenham
- Cottage at 10 Jackson Road, Luddenham.

Using the historical information and previous photographs, the RPS team gave direction to the demolition crew to carefully remove accretions, wall linings, etc. from each structure to gain insight and additional historical information about each item. This includes records of original finishes, earlier configurations, profiles of earlier structures, positions of earlier openings, and construction technologies used.

6. European and other heritage aspects & impacts

The potential for European and Other Heritage impacts was considered in Chapter 20 of the WSA EIS and has been summarised in Section 5 of this CEMP. The heritage items within the WSA Stage 1 construction footprint and the Project footprint, which is the subject of this CEMP, are summarised in Table 6-1.

Since the completion of the environmental impact assessment associated with the EIS, archival recording and demolition of all European and Other Heritage Items within the Airport Development Site Construction Impact Zone (CIZ), including of the graves and gravestones, has been completed and reports prepared accordingly (refer to Section 5.3).

Table 6-2 shows the sites which could potentially be impacted by the Rail Development including one site within the footprint of a SMWSA Rail Development construction support site (Sprendenbug). This site will need to be assessed and salvaged or cleared prior to works commencing in these areas, using best practice methods.

The remaining aspects and potential impacts are those associated with the unexpected finds of both surface and sub-surface items. A risk assessment has been undertaken for the associated risks, with appropriate mitigation measures and controls included in Section 7.

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Table 6-1 European and other Heritage sites within the WSA Stage 1 construction footprint

Site name	Ref	Significance	Type of harm	Degree of harm	EIS recommended mitigation measures
Pennell's property	AS1	Local (Commonwealth)	Direct	Total removal of site	EH_03, EH_04, EH_07, EH_12
Gardiner Road farm complex	AS2	Local (Commonwealth)	Direct	Total removal of site	EH_03, EH_04, EH_07, EH_12
Badgerys Creek Public School	AS3	Local (Commonwealth)	Direct	Total removal of site	EH_03, EH_04, EH_07, EH_12
Badgerys Creek butchery	AS4	Local (Commonwealth)	Direct	Total removal of site	EH_03, EH_04, EH_07, EH_12
Badgerys Creek post office	AS5	Local (Commonwealth)	None	No Impact from works covered by this CEMP	EH_03, EH_04, EH_07, EH_12
Badgerys Creek Uniting Church and cemetery	AS7	Local (Commonwealth)	Direct	Total removal of site	EH_03, EH_04, EH_07, EH_12
St John's Anglican Church and cemetery	AS8	Local	Direct	Total removal of site	EH_03, EH_04, EH_07, EH_12
Badgerys Creek Road alignment within the airport site	AS17	Local (Commonwealth)	Direct	Partial removal of road within construction footprint.	EH_03, EH_04, EH_07, EH_12

Table 6-2 European and other Heritage sites within the SMWSA construction footprint

Site name	Ref	Significance	Type of harm	Degree of harm	EIS recommended mitigation measures
Badgerys Creek post office	AS5	Local (Commonwealth)	None	Partial section on additional land handed to SMWSA from WSA	EH_03, EH_04, EH_07, EH_12
Braeburn homestead	AS9	Local	Direct	Total removal of site	EH_03, EH_04, EH_07, EH_12
Orange Hill homestead	AS10	Local	Direct	Total removal of site	EH_03, EH_04, EH_07, EH_12
Spredenbergl	AS18	Unknown	Direct	Total removal of site	EH_03, EH_04, EH_07, EH_12

6.1. Environmental Risk assessment

A risk assessment has been undertaken as part of the review and development of this CEMP and in accordance with the Environmental risk analysis process in chapter 26 of the SMWSA EIS and with Environmental Aspects, Impact and Risk Procedure (Appendix D of the WSA SEMF). The parts of the overall risk assessment relevant to European and Other Heritage have been extracted and summarised in Table 6-3 applies to all phases of works that the Construction (Rail) Plan authorises.

The identification of construction activities and associated impacts that could eventuate during construction of the Project is central to the selection of appropriate environmental safeguards.

The risk management process involved an assessment of all specific Project activities/aspects in or near environmentally sensitive areas and resulted in the development of a list of environmental risks (effects and impacts) and a corresponding risk mitigation strategy and risk ranking.

The identification of risks included a review of the works, and review of the environmental risks identified by the WSA EIS and the SMWSA EIA. The mitigations in the risk assessment are in line with the WSA EIS mitigation measures in chapter 7, Table 7-1.

Table 6-3 European and other Heritage risk assessment

Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level ² pre-mitigation	Mitigation measure ¹	Risk level ² post-mitigation	Management tools
01	Site Compound establishment	Site construction staff/ visitors	Damage to heritage	Damage to known heritage items, loss of history	Low (9)	EH_02 EH_03 EH_12 EH_13	Low (6)	<ul style="list-style-type: none"> • European and Other Heritage CEMP, Heritage awareness training • Aboriginal Cultural Heritage CEMP • Biodiversity CEMP • EWMS • Soil and Water CEMP • Complaints Procedure • Induction • Area Erosion and Sedimentation Control Plans (ESCPs) • Environmental Control Map (ECM)
02	Site Compound establishment	Site construction staff/ visitors	Damage to heritage	Inadvertent damage to sub- surface remnants of former heritage sites	(Low 9)	EH_10 EH_12 EH_13	Low (6)	<ul style="list-style-type: none"> • European and Other Heritage CEMP, Heritage awareness training • Aboriginal Cultural Heritage CEMP • Archival record of European heritage items report • EWMS • Induction • ECM •



Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level ²	Mitigation measure ¹	Risk level ²	Management tools
					pre-mitigation		post-mitigation	
04	Site compound establishment	Topsoil stripping for compound footprint	Damage to heritage	Inadvertent damage to sub-surface remnants of former heritage sites	Low (9)	EH_10 EH_12 EH_13	Low (6)	<ul style="list-style-type: none"> European and Other Heritage CEMP, Heritage awareness training Aboriginal Cultural Heritage CEMP Archival record of European heritage items report EWMS Induction ECM
05	Site compound establishment	Topsoil stripping for compound footprint	Damage to heritage	Damage/ loss to previously unknown heritage items, loss of history	Low (9)	EH_02 EH_03 EH_12 EH_13	Low (6)	<ul style="list-style-type: none"> European and Other Heritage CEMP Aboriginal Cultural Heritage CEMP Biodiversity CEMP EWMS Soil and Water CEMP Complaints Procedure Induction ESCPs ECM
06	Site compound establishment	Potholing / service locating and trenching	Uncovering previously unknown heritage items	Damage/loss to previously unknown heritage items, loss of history	Low (9)	EH_02 EH_03 EH_12 EH_13	Low (6)	<ul style="list-style-type: none"> European and Other Heritage CEMP Aboriginal Cultural Heritage CEMP Biodiversity CEMP EWMS Soil and Water CEMP



Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level ²	Mitigation measure ¹	Risk level ²	Management tools
					pre-mitigation		post-mitigation	
								<ul style="list-style-type: none"> Complaints Procedure Induction ESCP Dial before you dig plans (DBYD) Service Location Plans ECM Aboriginal Topsoil Protocol
07	Site compound establishment (continued)	Potholing / service locating and trenching (continued)	Disturbance of human remains	Disturbance of human remains	Low (9)	EH_10 EH_12 EH_13 EH_14	Low (6)	<ul style="list-style-type: none"> European and Other Heritage CEMP, Heritage awareness training Aboriginal Cultural Heritage CEMP Cemetery Relocation Management Plan EWMS Induction ECM
08	Clearing and grubbing	Topsoil stripping throughout alignment	Damage to heritage	Damage to known heritage items, loss of history	Low (9)	EH_02 EH_03 EH_12 EH_13	Low (6)	<ul style="list-style-type: none"> European and Other Heritage CEMP Aboriginal Cultural Heritage CEMP Biodiversity CEMP EWMS Soil and Water CEMP Complaints Procedure Induction ESCP



Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level ²	Mitigation measure ¹	Risk level ²	Management tools
					pre-mitigation		post-mitigation	
09			Damage to heritage	Inadvertent damage to sub-surface remnants of former heritage sites	Low (9)	EH_10 EH_12 EH_13	Low (6)	<ul style="list-style-type: none"> • ECM • European and Other Heritage CEMO • Heritage awareness training • Aboriginal Cultural Heritage CEMP • Archival record of European heritage items report • EWMS • Induction • ECM
10	Earthworks	Excavation	Vibration damage to nearby heritage items	Damage/ loss to previously unknown heritage items, loss of history	Low (9)	EH_02 EH_03 EH_12 EH_13 Vibration monitoring	Low (6)	<ul style="list-style-type: none"> • European and Other Heritage CEMP • Aboriginal Cultural Heritage CEMP • Biodiversity CEMP • EWMS • Soil and Water CEMP • Complaints Procedure • Induction • ESCPs • ECM



Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level ²	Mitigation measure ¹	Risk level ²	Management tools
					pre-mitigation		post-mitigation	
11	Earthworks	Excavation	Damage to heritage	Inadvertent damage to subsurface remnants of former heritage sites	Low (9)	EH_10 EH_12 EH_13	Low (6)	<ul style="list-style-type: none"> European and Other Heritage CEMP Heritage awareness training Aboriginal Cultural Heritage CEMP Archival record of European heritage items report EWMS
12	Earthworks		Disturbance of human remains	Disturbance of human remains	Low (9)	EH_10 EH_12 EH_13 EH_14	Low (6)	<ul style="list-style-type: none"> European and Other Heritage CEMP, Heritage awareness training Aboriginal Cultural Heritage CEMP Cemetery Relocation Management Plan EWMS Induction ECM
13	Earthworks	Stockpiling materials	Damage to heritage	Damage to known heritage items, loss of history	Low (9)	EH_02 EH_03 EH_12 EH_13	Low (6)	<ul style="list-style-type: none"> European and Other Heritage CEMP Aboriginal Cultural Heritage CEMP Biodiversity CEMP EWMS Soil and Water CEMP Complaints Procedure Induction ESCP ECM

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Ref	Activity	Construction Aspect	Environmental Aspect	Potential Impact	Risk level ²	Mitigation measure ¹	Risk level ²	Management tools
					pre-mitigation		post-mitigation	
14	Earthworks	Blasting	Damage to heritage	Damage to known and unknown heritage items, loss of history	Low (9)	EH_02 EH_03 EH_12 EH_13	Low (6)	<ul style="list-style-type: none"> • European and Other Heritage CEMP • Aboriginal Cultural Heritage CEMP • Biodiversity CEMP • EWMS • Soil and Water CEMP • Complaints Procedure • Induction • ESCP • ECM

1 Refer to Table 7-1 for mitigation measures and controls

2 Derived from risk assessment process detailed in the SEMF Appendix D

7. Environmental Control Measures

Mitigation and management measures that will be implemented during construction are detailed in Table 7-1 and are consistent with those provided in Tables 28-14 and 28-15 in Chapter 28 of the WSA EIS, as well as Table 8-3 of the SMWSA EIA. The relevant control measures will be included in the site-specific Environmental Work Method Statement (EWMS) and Environmental Control Map (ECM) – refer to Section 3.6 of the CEMF for further detail.

Table 7-1 Environmental control measures

Ref	Measure/ Requirement	When to Implement	How to Implement	Responsibility for Implementation	Reference
European and other Heritage Management					
EH_01	The following measures are to be implemented in the manner identified in Chapter 6 of the Appendix O of the EIS for the respective European and Other heritage items (i.e. not all measures will apply to each item) under the supervision of a suitably qualified archaeologist:	Preparatory activities Pre-construction Construction	Where applicable, refer to Appendix O of the EIS. Only 1 archaeological salvage is anticipated for SM – WSA (Spredenburg)	Sydney Metro	WSA EIS Table 28-15
EH_02	All known European and Other Heritage items within the Project disturbance area have been removed prior to construction activities.	Completed	Implementation of the Procedure to protect non-Aboriginal heritage sites within the Project disturbance area – Refer to Section 8.1.	N/A	Best Practice
EH_03	Protection of any known European and Other Heritage items located outside of the Project disturbance area, however within proximity to the construction activities (where appropriate).	Completed	Consider implementation of the Procedure to protect non-Aboriginal heritage sites outside the Project disturbance area – Refer to Section 8.2	Sydney Metro and All Contractors	Best Practice SMWSA EIA Table 8-1 CEMF5
EH_04	Further targeted archaeological investigation will be undertaken to record subsurface remains and infer the layout, occupants and activities of certain European heritage places	Completed	Further targeted archaeological excavation is required of one site within the SMWSA Rail Development construction support site (Spredenburg) This will comprise test of impact test of significance test excavation development of salvage strategy if required	Infrastructure Department Sydney Metro	WSA EIS Table 28-15 SMWSA EIA Table 8-1 CEMF5

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Ref	Measure/ Requirement	When to Implement	How to Implement	Responsibility for Implementation	Reference
EH_05	Archival recording will be undertaken, including photographic records and measured drawings in their local context for future reference having regard to the guidelines How to Prepare Archival Records of Heritage Items (NSW Heritage Office 1998) and Guidelines for Photographic Recording of Heritage Items Using Film or Digital Captures (NSW Heritage Office 2006)	Completed	Archival recording has been undertaken as part of preparatory activities and preconstruction works. Refer to the WSA – Archival record of European heritage items report (refer to Section 5).	N/A	WSA EIS Table 28-15 SMWSA EIA Table 8-1 CEMF5
EH_06	An inventory of moveable items will be prepared to record information such as the location, designer, creator, use and owner of items such as tools of trade or machinery	Completed	An inventory of moveable items has been prepared / completed by the Infrastructure Department. Western Sydney Airport – Archival record of European heritage items report (refer to Section 5)	Infrastructure Department	WSA EIS Table 28-15 SMWSA EIA Table 8-1 CEMF5
EH_07	Cultural plantings will be investigated to identify and collect samples of plant varieties that have local or historic botanical significance, including plant varieties that are characteristic of the area or not otherwise broadly planted. A list of relevant identified plant species would need to be identified and consideration given to future landscaping (refer to the Visual and Landscaping CEMP). Other considerations include weed mitigation and not attracting birdlife	Prior to commencement of Construction Works	Plantings to be assessed by appropriately experienced landscape specialist.	AEW, SBT & SCAW	WSA EIS Table 28-15
EH_08	Options will be explored for potential relocation of identified European heritage structures to preserve intact surface structures	Completed	N/A	Infrastructure Department	WSA EIS Table 28-15 SMWSA EIA Table 8-1 CEMF5
EH_09	Identified European heritage structures will be demolished in a staged and careful manner that reveals information about their construction, renovation, finishes and so on, which would be recorded	Completed	N/A	Infrastructure Department	WSA EIS Table 28-15

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Ref	Measure/ Requirement	When to Implement	How to Implement	Responsibility for Implementation	Reference
EH_10	Protection of any subsurface items / structures not removed during the survey and salvage works for the heritage items, particularly items associated with the following (refer to Section 5): AS1 - Pennell's Property AS2 - Gardiner Road farm complex AS3 - Badgerys Creek Public School AS4 - Badgerys Creek butchery AS7 - Badgerys Creek Uniting Church and Cemetery AS8 – St Johns Anglican Church and Cemetery AS17 - Badgerys Creek Road Alignment	Prior to and during construction	The former location of identified heritage items is to be included on an ECM. Prior to works commencing in the vicinity of the former location of heritage items, all workers on site are to be informed of the potential presence of sub-surface items / structures that were not completely removed during the survey and salvage works. In the event of any potential heritage finds, the unexpected finds protocol is to be implemented.	SCAW SBT	Good practice
Cemeteries relocation					
EH_11	A Cemeteries Relocation Management Plan will be submitted for approval by the Infrastructure Minister or an SES Officer in the Department of Infrastructure, Transport and Regional Development and communications prior to the disinterment (removal) and reinterment (relocation) of grave sites from the airport site.	Completed	A Cemeteries Relocation Management Plan has been prepared and cemeteries have been relocated as part of preparatory activities. No cemeteries need to be relocated under the SM – WSA scope.	Infrastructure Department	WSA EIS Table 28-15
Heritage awareness					
EH_012	Heritage awareness training will be provided to all works involved in site preparation and construction of the proposed airport.	Preparatory activities Pre-construction Construction	Undertake site heritage inductions	SCAW SBT SSTOM	WSA EIS Table 28-15 SMWSA EIA Table 8-1 CEMF5
Unexpected finds					

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Ref	Measure/ Requirement	When to Implement	How to Implement	Responsibility for Implementation	Reference
EH_13	A procedure will be developed and followed if European heritage items are discovered during construction.	Pre-construction	A Procedure for Discovery of European Heritage Items during construction has been developed – Refer to Section 8.5	SCAW SBT SSTOM	WSA EIS Table 28-15 SMWSA EIA –Table 8-3 NAH9 SMWSA EIA Table 8-1 CEMF5
EH_14	Recognising the possibility of unmarked graves occurring, a procedure will be developed and followed if human remains are discovered at the airport site during construction.	Pre-construction	A procedure for discovery of human remains at Airport Site during construction has been developed – Refer to Section 8.5	SCAW SBT SSTOM	WSA EIS Table 28-15
Cultural significance of the airport site					
EH_16	The European and Other Heritage values of the site will be recognised in the detailed design of the airport, for example, through onsite archiving and curation of heritage items, and public display materials.	As an ongoing and integrated consideration during the design development process.	Design development process.	SSTOM Design Team	WSA EIS Table 28-15

8. European & other heritage sites disturbance area

8.1. Within the project disturbance area

The boundaries of all known and unexpected finds heritage sites that are located within the construction footprint covered by this CEMP will be:

- Clearly marked with star pickets/or pegs and high visibility flagging tape or non-invasive fencing if there is potential for subsurface archaeological deposits to ensure that no impacts can occur to these sites;
- Included in site heritage inductions;
- Clearly marked on maps, with a description of the site and site coordinates available to all employees, contractors and sub-contractors as needed;
- Where sites cannot be identified or located, advice shall be sought from the Project archaeologist; and
- Heritage sites and fencing should be subject to weekly monitoring inspections by the site environmental officer. The location and condition of heritage sites and fencing should be compared to the locations identified within the CEMP to ensure that adequate management measures are being maintained.

8.2. Outside the project disturbance

Where appropriate, the boundaries of heritage sites that are located outside of, but near, the Rail Development will be clearly marked with star pickets/pegs and high visibility flagging tape to ensure that no impacts will occur to these sites. In addition, all employees, contractors and sub-contractors shall:

- Be made aware of the locations of these sites during site induction;
- Seek permission to travel across areas outside of the disturbance areas from the Site Manager
- Be provided within access to maps, with a description of the site and site coordinates available to all employees, contractors and sub-contractors as needed; and
- Where sites cannot be identified or located, advice shall be sought from the Project archaeologist.

8.3. Contingency plan if disturbance area is damaged

If heritage items outside of the RCIZ are damaged, Sydney Metro's environmental incident management procedures will be implemented.

In accordance with clause 4-05 of the AEPR (Duty to give notice of cultural, etc discovery), if Sydney Metro discovers an object, species or ecological community that indicates that the site of the undertaking, or other work, is a site of previously unrecognised significance: (a) for local biota or the ecosystems and habitats of native species; or (b) of the kind mentioned in paragraph 132(1)(c) or (d) of the Airports Act;

Contractors will give notice to Sydney Metro and Sydney Metro will notify the airport environment officer. If an incident occurs that results in actual or potential impacts on known heritage items and/or archaeological items that are discovered unexpectedly, the Sydney

Metro Environment Manager will be notified immediately who in turn will notify the Infrastructure Department in accordance with Section 8.5.1 and Section 8.5.2 of this CEMP.

Incident reporting and documentation should be made in accordance with section 3.12 of the SM CEMF.

8.4. Items of heritage significance could be affected by the works

All heritage items (including any unexpected finds) within the Airport Rail Development will be photographed and recorded in accordance with the guidelines set out in the following documents:

- Historical Archaeology Code of Practice (Department of Planning, Heritage Office, 2006);
- How to prepare archival records of heritage items (NSW Heritage Office, 2009); and
- Heritage Information Series – Photographic Recording of Heritage Items Using Film of Digital Capture (Department of Planning, Heritage Office, 2006).

Any additional archival and photographic recording of heritage items shall be carried out by a qualified archaeologist.

Records of any impacts avoided or minimised through design or construction methods will also be kept.

8.5. Unexpected / Chance Finds Requirements

8.5.1. If discovery of human remains (Procedure)

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

- Immediately cease all work at that location and not further move or disturb the remains;
- Notify the Sydney Metro Environment Manager as soon as practicable who in turn will immediately notify the Infrastructure Department and the Federal Police, providing details of the remains and their location;
- Establish a longer-term appropriate no-go area. This will need to be established in consultation with Federal Police and the Infrastructure Department, and if necessary, a qualified archaeologist;
- Works will not be able to recommence within the location of the find until confirmation from the Federal Police and the Infrastructure Department is obtained. If the remains are confirmed as not being human, then works may recommence. If remains are human then consultation, with the Federal Police, the Infrastructure Department and relevant parties which may include Aboriginal stakeholders to establish a plan of management;
- Works in the vicinity of the find will only be able to commence once the plan of management has been established and approval has been obtained from all relevant parties;
- Should any human remains be identified, unless otherwise agreed by the Approver, this will trigger a review of this European and Other Heritage CEMP in accordance with CEMF Section 9.2.

8.5.2. If unexpected finds of significance

Where an item of item of potential European or Other Heritage significance is identified, an assessment will need to be made as to the significance of the item. Such items may include Archaeological ‘relics’ or other non-Aboriginal items (i.e. works, structures, buildings or movable objects). The Heritage Act 1977 defines a relic as:

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

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

- Should any suspected European or Other Heritage significance be encountered during the works, works in the vicinity must cease immediately and the Sydney Metro Environment Manager notified, who in turn will notify the Infrastructure Department and the AEO to identify an appropriate plan of action
- Sydney Metro in consultation with the Infrastructure Department will liaise with an appropriately qualified archaeologist for input into the appropriate plan of action and to advise of suitable mitigation / control measures to be implemented
- It is likely that the archaeologist will investigate and assess the heritage item to determine the nature, extent and significance of the find. This will enable recommendations to be provided on how work can proceed and whether any further work is required. The archaeologist will supply written advice to the Sydney Metro Environment Manager detailing the following:
 - Determination of whether the find is a relic;
 - Advice on how the project is to proceed and identify the establishment of any no-go areas is necessary;
 - Recommendation on further works that may be required and timeframe for completion of these works; and
 - Appropriate Commonwealth and / or State level government stakeholders may need to be notified. This will include a statement concerning the find, management measures implemented and notification of any further works arising.

Where European and Other Heritage items have already been removed and additional items from known heritage items are considered likely (e.g. additional subsurface foundation from a heritage structure), these areas are to be marked on the Environment Control Map (ECM) and managed in accordance with the Unexpected Finds Procedure if items of potential heritage significance are discovered.

9. Environmental roles and responsibilities

The key environmental management roles and responsibilities for the construction phase of the work are detailed in Section 3.15 of the SM CEMF.

Sydney Metro will ensure enough resources are allocated on an ongoing basis to ensure effective implementation by both Sydney Metro and the responsible contractors.

10. Inspection, monitoring and auditing

Monitoring, inspection and auditing will be undertaken to measure effectiveness and facilitate continuous improvement of European and Other Heritage management.

Refer to section 3.16 of the SM CEMF for general environmental monitoring, inspection and auditing requirements.

A summary of the environmental inspection, monitoring and auditing requirements is provided below, with details of how they apply to European and Other Heritage management where applicable.

10.1. Environmental inspections

Sydney Metro environmental inspections

Environmental site inspections will be undertaken by the Sydney Metro Environment Manager (or delegate) on a monthly basis to evaluate the effectiveness of environmental controls implemented by the contractor. The monthly site inspection is to include a visual check of all European and Other Heritage management control measures, including but not limited to the following:

- Review of current work activities and the applicable ECMs to ensure that the former location of identified heritage sites have been shown and are being considered during the works, given the likely higher chance of 'Unexpected Finds'
- Adherence to the restricted access and any exclusion zones established for the protection of any areas / items of heritage significance
- Ensuring that all site works remain within the designated CIZ.

The findings of the Sydney Metro site environmental inspection will be recorded on a Sydney Metro Site Environmental Inspection Checklist with an accompanying photographic style inspection report.

Contractor environmental inspections

Regular site inspections will be undertaken to monitor compliance with this Plan. Inspection results will be recorded, and the inspection log made available to the Infrastructure Department upon request. Any non-conformance or improvement opportunities associated with European and Other Heritage matters will be reported in the monthly report and discussed at the Environmental Coordination meeting. More frequent site inspections by the person accountable for European and Other Heritage issues will be conducted onsite following the identification of any actual or potential unexpected finds.

Pre-start inspection

Prior to the commencement of works on each shift, an inspection will be carried out by the relevant contractor and will include a check of relevant environmental controls and resources required to ensure effective operation and maintenance. This is to include an inspection of relevant European and Other Heritage management mitigation measures and controls where applicable. Works are not to commence unless inspections are found to be satisfactory.

10.2. European and other Heritage monitoring

General environmental monitoring requirements are set out in the AEPR and include the following:

- Monitoring must take place under the direction of an appropriately qualified person
- The results of the monitoring must be kept in a written record. Specific European and Other Heritage monitoring requirements, including timing and responsibilities, are included in Table 10-1. One of the key monitoring requirements is compliance with unexpected finds protocol.

Table 10-1 European and Other Heritage monitoring requirements

Reference	Requirement	Timing	Responsibility
EH_M_01	Monitoring the effectiveness of European and Other Heritage management measures on site by way of observation of controls.	Pre-construction and during construction	All Contractors

10.3. Environmental auditing

Refer to Section 3.16 of the CEMF for environmental auditing requirements, including internal audits, independent audits and audits to be undertaken by contractors.

Auditing and subsequent reporting will be undertaken annually to ensure compliance with:

- this EOH CEMP
- Airport Plan Conditions of Approval
 - Condition 40.4, 40.5, 40.6 Independent audits about compliance with conditions;
- as identified in Section 4 of this CEMP.

Sydney Metro will also undertake periodic audits of the Principal Contractor's Environment and Sustainability Management Systems (E&SMS) and compliance with the environmental aspects of contract documentation, including this EOH EMP.

On-airport works approved under the Airport Plan will be subject to environmental audits and compliance audits, noting unscheduled audits may also be undertaken. The environmental audits will audit the environmental systems and on-site performance of the on-airport works of SMWSA and be undertaken on a 12 monthly basis, with report being submitted 6 months post the end of that audit period.

10.4. Environmental reporting

General environmental reporting requirements are detailed in Section 3.18 of the SMWSA CEMF.

In addition, a summary of reporting requirements required under this European and Other Heritage CEMP (including environmental reporting requirements required under the Airport Plan specific to the European and Other Heritage CEMP is provided in Table 10-2.

Table 10-2 European and other Heritage management reporting

Action	Scope	Timing/ frequency	Responsibility
Annual reporting	Unless otherwise agreed in writing by an Approver, an annual report will be prepared and submitted to the Infrastructure Development in relation to compliance with the European and Other Heritage CEMP (Condition 49). In accordance with Condition 49 SM will publish each of the annual reports on its website within three months of the end of the period in respect of which the report was prepared, with evidence providing proof of the date of publication to the Infrastructure Department with a copy to the Environment Department. The report must remain on the website for a period of at least 12 months. An annual report is also required to be prepared and managed in accordance with section 6.03 of the AEPR.	As required	Sydney Metro Environment Manager
Compliance reporting	Undertaking monitoring as required by this European and Other Heritage CEMP. Contractor is to provide SMWSA with a monthly summary of all management measures / issues identified for the reporting period with regards to European and Other Heritage	Monthly	All Contractors Environment Manager
Complaints reporting	Recording of complaints and stakeholder interactions	As required	Sydney Metro Environment Manager Sydney Metro Community and Stakeholder Engagement Manager All Contractors
Environmental Site Register (required under the 6.02(3) of the AEPR)	Environmental Site Register to be kept and maintained to include written record of environmental conditions of the Airport and its environmental management generally.	As required	All
General environmental inspection	Inspection of environmental management controls on site and sighting of site documentation as required by the CEMP.	At least weekly	Sydney Metro
General environmental inspection	Inspection of environmental management controls and site documentation as required by the CEMP.	As per Contractor environmental management system (at least weekly)	All Contractors
Reporting of nonconformances and improvement opportunities	The management and reporting requirements of environmental non-conformances and improvement opportunities will be in accordance with Section 3.17 of the CEMP.	As required	Sydney Metro and all Contractors
Design review	Records of any impacts avoided or minimised through design or construction methods.	Detailed design	Sydney Metro and all Contractors

11. Environmental improvement opportunities

11.1. Review and improvement

11.1.1. Continuous improvement

Continuous improvement of this plan will be achieved by the ongoing evaluation of environmental management performance against environmental policies, objectives and targets for the purpose of identifying opportunities for improvement. This process is detailed in Section 3.18 of the CEMF.

The continuous improvement process will be designed to:

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

11.1.2. Change management

Further refinements to the Rail Development may result from detailed design refinement or changes identified during the construction phase of the works. Any design changes or changes in scope of works will be communicated to the SMWSA Environmental Manager.

SMWSA will be responsible for assessing any potential inconsistencies with the Airport Plan and formally seeking approval from the Infrastructure Minister for any project modifications as required, prior to commencement of the scope of works in question.

11.2. Review of approved plans

Sydney Metro will review each approved plan at least every five years (from the date of approval) as required by the Airport Variation Plan. A review will also be completed annually to ensure that it continues to meet the approval criteria. Details of the review will be included in the annual report. If the review identifies areas where the plan does not continue to meet the approval criteria for that plan, a variation to the approved plan will be prepared and submitted for approval. Once the reviewed plan is approved by the Approver, this reviewed plan will be the Approved Plan.

Sydney Metro may initiate reviews of Approved Plans at other times in response to improvement opportunities, non-conformances, and changes to scope of work or construction methodology or alterations to legal or contractual requirements.

If there is a material change to a WSA CEMP which impacts on an area of the Rail CIZ, then SMWSA will review their CEMPs to reflect that change addressed by the WSA review.

Any changes identified and implemented through the variation and review process identified above will be communicated to relevant contractors through re-issue of the revised Sydney Metro Approved Plan and subsequent training and awareness.

11.3. Incidents and complaints management

The management and reporting of environmental incidents shall be undertaken by the appropriate person as detailed in Section 3.12 of the SM CEMF.

All communications and complaints management will be implemented and managed in accordance with Section 4.2 and 4.3 of the SM CEMF and the Community Communications Strategy.

12. Competence, training and awareness

To ensure this European and Other Heritage CEMP is effectively implemented, each level of management is responsible for ensuring that all personnel reporting to them are aware of the requirements within. The Sydney Metro Environment Manager will coordinate the necessary and relevant environmental training in conjunction with other training and development activities.

All competence, training and awareness requirements will be implemented as detailed in section 3.11 of the SM CEMF.