



Non-Aboriginal Heritage Management Sub-plan

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Parklife Metro D&C

Document Approval

Revision	Author	Date	Comments	Reviewed by	Approved by
A	J Bradford	20/02/2023	Initial Draft	Mark Chilton	Richard Graham
B	J Bradford	19/04/2023	Revised following stakeholder consultation. Issue for review	Mark Chilton	Richard Graham
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01	C Kennedy	17/07/2023	Revised in response to DPE review	Mark Chilton	Richard Graham

Signature	
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Contents

Acronym and Definitions	5
1 Introduction	6
1.1 Background.....	6
1.2 Scope.....	8
2 Objectives and Targets	9
3 Legal and Other Requirements	10
3.1 Relevant Legislation and Guidelines	10
3.2 Project Compliance Requirements	10
3.3 ISC Rating Tools Requirements	11
3.4 Document Consultation	12
3.5 Document Approval	12
4 Existing Environment	13
5 Environmental Aspects and Impacts	19
6 Heritage Management and Environmental Controls	28
6.1 Heritage Management Measures	28
6.2 Heritage Induction.....	29
6.3 Heritage Specialists	29
6.3.1 Project Heritage Specialist.....	29
6.3.2 Heritage Machinery Specialist	29
6.3.3 Heritage Architect	29
6.3.4 Excavation Director.....	29
6.4 Archival Recording.....	30
6.5 Salvage	30
6.6 Archaeological Method Statement.....	30
6.7 Archaeological Excavation.....	31
6.8 Demolition Management and Existing Structures.....	31
6.8.1 Jib Crane Management	31
6.9 Vibration Management.....	31
6.10 Unexpected Heritage Finds	32
6.11 ECMs and Exclusion Zones.....	32
7 Compliance Management	33
7.1 People, Responsibilities and Communication	33
7.2 Training	33
7.3 Monitoring, Inspections and Audits.....	33
7.4 Hold Points.....	33

7.5	Reporting and Records	33
8	Review and Improvement	34
8.1	Continuous Improvement.....	34
8.2	Sub-Plan Update and Amendment.....	34
Appendix A	Other Conditions of Approval, REMMs and CEMF Requirements Relevant to this Sub-Plan	36
Appendix B	Sydney Metro Unexpected Heritage Finds Procedure	43
Appendix C	Sydney Metro Exhumation Procedure	44
Appendix D	Consultation	45

List of figures

FIGURE 1	OVERVIEW OF SMWSA PROJECT.....	7
FIGURE 2	CONSTRUCTION FOOTPRINT AND HERITAGE ITEMS IN ST MARYS & STATION DETAIL	14
FIGURE 3	ST MARYS CONSTRUCTION SITE ARCHAEOLOGICAL MANAGEMENT ZONES	15
FIGURE 4	CONSTRUCTION FOOTPRINT AND HERITAGE ITEMS IN CLAREMONT MEADOWS	16
FIGURE 5	CONSTRUCTION FOOTPRINT AND HERITAGE ITEMS ORCHARD HILLS TO BADGERYS CREEK	17
FIGURE 6	CONSTRUCTION FOOTPRINT AND HERITAGE ITEMS AT AEROTROPOLIS CORE	18

Table of tables

TABLE 1	OBJECTIVES AND TARGETS FROM CEMF	9
TABLE 2	COMPLIANCE TABLE – REQUIREMENTS FOR PREPARATION OF THIS NAHMP	10
TABLE 3	IS RATING CREDITS RELEVANT TO THIS NAHMP	11
TABLE 4	SUB-PLAN AND MONITORING PROGRAM AGENCY CONSULTATION REQUIREMENTS	12
TABLE 5	ENGAGEMENT LOG.....	12
TABLE 6	OVERVIEW OF POTENTIAL IMPACTS ON NON-ABORIGINAL HERITAGE ITEMS AND ARCHAEOLOGY	20
TABLE 7	HERITAGE CONTROLS	28
TABLE 8	HOLD POINTS RELATED TO HERITAGE MANAGEMENT	33

Acronym and Definitions

Abbreviation	Definition
AMS	Archaeological Method Statement
ARD	Sydney Metro – Western Sydney Airport Non-Aboriginal Archaeological Research Design April 2021
CEMF	Construction Environmental Management Framework
CEMP	Construction Environmental Management Plan
Condition	Planning Minister's Conditions of Approval
CSSI	Critical State Significant Infrastructure
DPE	Department of Planning and Environment
EIS	Environmental Impact Statement
Environmental Heritage	Places, buildings, works, relics, movable objects and precincts, of State or local heritage significance as outline in Section 4 of the Heritage Act
EP&A Act	Environmental Planning and Assessment Act 1979
EPBC Act	Environmental Protection and Biodiversity Conservation Act 1999
EWMS	Environmental Work Method Statements
Heritage Act	Heritage Act 1997
NAHMP	Non-Aboriginal Heritage Management Sub-plan
NPW Act	National Parks and Wildlife Act 1974
OEH	Office of Environment and Heritage (NSW)
PUDCLP	Place, Urban Design and Corridor Landscape Plan
REMMs	Revised Environmental Mitigation Measure
SBT	Station Boxes and Tunnelling
Secretary	Secretary of the NSW Department of Planning and Environment (or delegate)
SMART	Smart, Measurable, Achievable, Realistic, Timely
SSTOM	Stations, Systems, Trains, Operations and Maintenance

1 Introduction

This NSW (off-airport) Non-Aboriginal Heritage Management Sub-plan (NAHMP, this Plan) is applicable to the SSTOM Construction Works of the Sydney Metro Western Sydney Airport Project (the Project). This Plan forms part of the Construction Environmental Management Plan (CEMP) for the Project and describes how Parklife Metro D&C will minimise and manage impacts to Non-Aboriginal Heritage items through the delivery of the SSTOM Works on NSW land.

This Plan has been prepared to address the requirements of the:

- Critical State Significant Infrastructure (CSSI) 10051 Planning Approval (dated 23 July 2021)
- SSI 10051 Mod 1 (determined 14 April 2022), which includes a modification to Condition E4 to reduce the biodiversity offsets credit requirements
- Sydney Metro Western Sydney Airport – CSSI Staging Report (Staging Report)
- AS/NZS ISO 14001:2016 Environmental Management Systems – Requirements with guidance for use
- Sydney Metro Construction Environmental Management Framework (CEMF)
- Environmental Impact Statement (EIS) and the Submissions Report, including the Revised Environmental Mitigation Measures (REMMs)
- Contractual requirements
- Applicable legislation (NSW and Commonwealth) as outlined in Section 3

1.1 Background

Sydney Metro is Australia's biggest public transport program comprising four main packages of work including Metro North-West Line, Sydney Metro City and Southwest, Sydney Metro West, and Sydney Metro Western Sydney Airport. The Sydney Metro Western Sydney Airport 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) and the growing region.

The Sydney Metro Western Sydney Airport Environmental Impact Statement (EIS) was prepared in October 2020 to assess the impacts of construction and operation of the Project and was placed on public exhibition between 21 October 2020 and 2 December 2020. The Project was declared a Critical State Significant Infrastructure (CSSI) Project and is listed in Schedule 5 of State Environmental Planning Policy (State and Regional Development) 2011.

The Sydney Metro Western Sydney Airport Project was approved by the Minister for Planning and Public Spaces on 23 July 2021 (CSSI 10051) under section 5.19 of the NSW Environmental Planning and Assessment Act 1979 (EP&A Act). Modification 1 of the Project Approval, to Condition E4 to reduce the biodiversity offsets credit requirements, was approved on the 14 April 2022.

The Project involves the construction and operation of a new metro railway line around 23km in length that extends from the existing Sydney Trains suburban T1 Western Line at St Marys in the north and the Aerotropolis in the south at Bringelly. The alignment includes a combination of tunnel, surface, bridges and viaduct sections, and comprises six new metro stations between St Marys and the Aerotropolis Core precinct, as well as a stabling and maintenance facility and operational control centre to support the operation of the new metro railway line (see Figure 1).

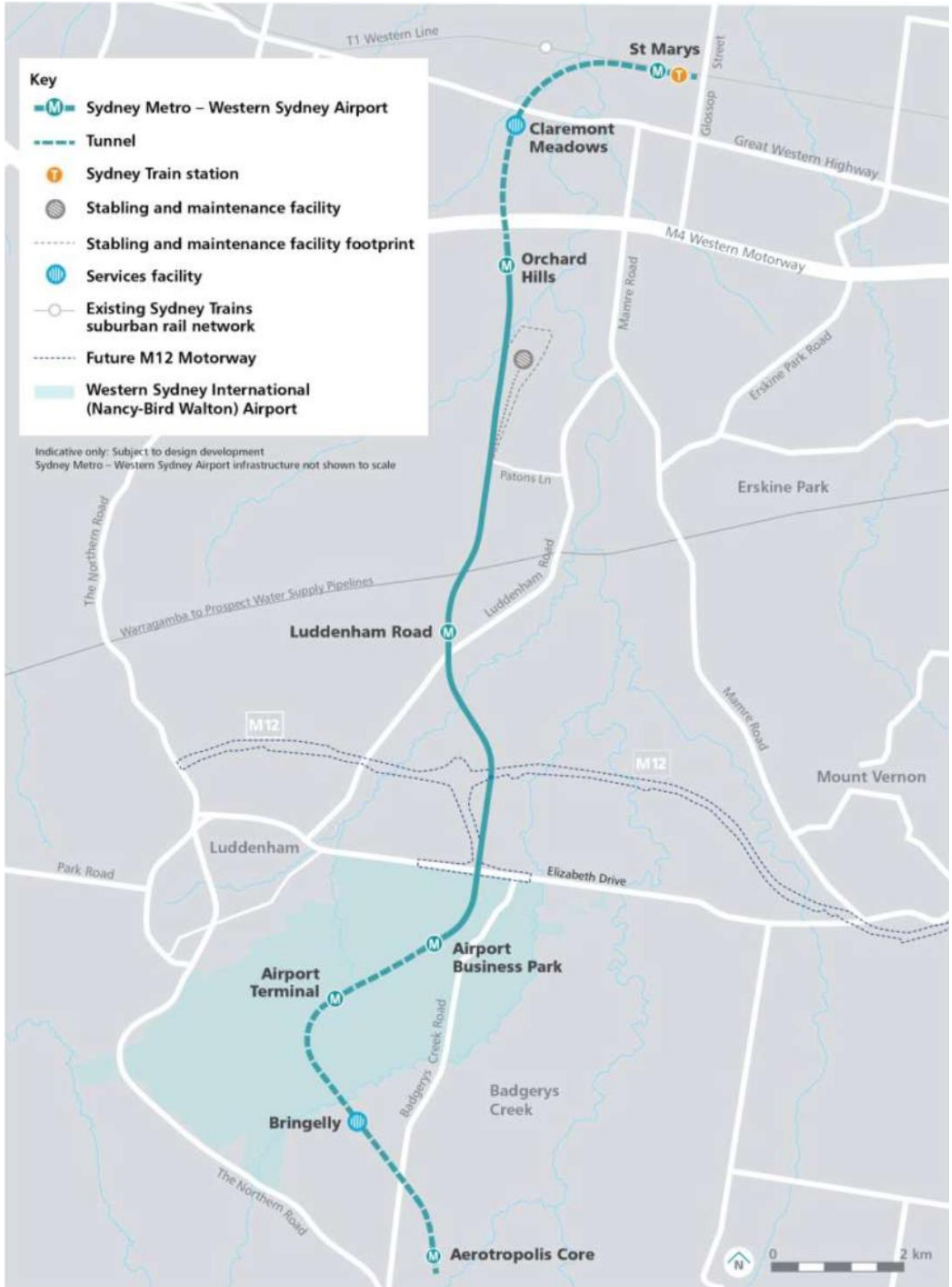


FIGURE 1 OVERVIEW OF SMWSA PROJECT

1.2 Scope

The scope of this NAHMP is to describe how Parklife Metro D&C will minimise and manage potential non-Aboriginal heritage impacts of the SSTOM Construction Works and discuss how compliance and implementation of the applicable sections from the following documents, collectively referred to herein as the 'Project requirements':

- NSW Minister for Planning and Public Spaces Conditions of Approval (Conditions)
- Revised Environmental Mitigation Measures (REMMs)
- Sydney Metro Construction Environmental Management Framework (CEMF)
- Sydney Metro Construction Noise and Vibration Standard (CNVS).

The SSTOM Works scope as part of the Sydney Metro Western Sydney Airport Project includes:

- Installation of tracks, signalling, mechanical and electrical systems
- Construction of a stabling and maintenance facility at Orchard Hills
- Construction of the lower chamber of Bringelly shaft, along with capping and backfill
- Construction of the lower chamber of Claremont Meadows shaft, along with capping and backfill
- Construction of six stations, including:
 - A new metro station connecting to, and providing an interchange with, the T1 Western Line (part of the existing Sydney Trains suburban rail network) at St Marys
 - Two new metro stations between the T1 Western Line and Western Sydney International; one at Orchard Hills and one at Luddenham within the Northern Gateway Precinct
 - Two new metro stations within the Western Sydney International site; one at the Airport Terminal and one at the Airport Business Park, both of which are located on Airport land and are managed under a separate CEMP
 - A new metro station within the Aerotropolis Core precinct, south of Western Sydney International.

The SSTOM Package also includes the supplying new driverless trains, and the operation and maintenance of the new metro railway line and its assets, which will be managed separately to this NAHMP.

2 Objectives and Targets

In order to assess the environmental performance relating to non-aboriginal heritage impacts during construction, environmental objectives and targets have been established. These objectives and targets have been developed to align with those established through the EIS and set out in the CEMP.

The environmental performance outcomes in relation to non-Aboriginal heritage from the EIS (Chapter 12) and Staging Report are:

- Impacts on non-Aboriginal heritage items and archaeology are to be avoided or minimised where avoidance is not possible, and
- The design of the project incorporates non-Aboriginal heritage interpretation.

The objectives and targets outlined in Section 9.1 of the CEMF, have been adopted by Parklife Metro D&C to provide measurable performance standards for the management of non-Aboriginal heritage, as shown in Table 1. Parklife Metro D&C will implement the project requirements detailed in Section 5 (Environmental Controls) to achieve targets related to the management of heritage impacts.

TABLE 1 OBJECTIVES AND TARGETS FROM CEMF

Objectives	Targets (KPI)	Measurement Tool
Embed significant heritage values through any architectural design, education or physical interpretation	100% compliance with the heritage interpretation strategy, to be prepared by Sydney Metro, wherever practicable.	Compliance Tracking Program Design Reports Unexpected Heritage Finds Procedure
Minimise impacts on items or places of heritage value	Zero incidents relating to impacts on known non-Aboriginal and archaeological sensitivity and significance	Pre- and post-condition surveys Unexpected Heritage Finds Procedure Vibration monitoring records, if required Unexpected Heritage Finds Procedure Site inspections Audits
Avoid accidental impacts on heritage items	100% of unexpected heritage items during construction are reported as per the Unexpected Finds Procedure Controls are implemented to protect known heritage items on or adjacent to the site and 100% of weekly environmental inspections completed to review that the controls are appropriate	Inductions Training records Site inspections Unexpected Heritage Finds Procedure
Maximise worker’s awareness of indigenous and non-indigenous heritage	Heritage specific information to be included in the project induction and 100% of all on-site personnel attend induction Delivery of a minimum of two site specific heritage awareness training at toolbox and pre-starts, including training on the Unexpected Heritage Finds Protocol	Inductions Training records Unexpected Heritage Finds Procedure

Parklife Metro D&C will monitor performance against the objectives and targets in Table 1 and document this in the compliance reporting and at least on an annual basis as part of auditing requirements outlined in the Section 3 of the CEMP.

3 Legal and Other Requirements

3.1 Relevant Legislation and Guidelines

Legislation relevant to this Non-Aboriginal Heritage Management Subplan includes:

- *Environmental Planning & Assessment Act 1979* (NSW) (EP&A Act)
- *Heritage Act 1977* (NSW) (Heritage Act)
- *Penrith Local Environment Plan 2010* (Penrith LEP)
- *Liverpool Local Environment Plan 2008* (Liverpool LEP).

Additional guidelines and standards relating to the management of non-Aboriginal heritage include:

- NSW Heritage Council's Criteria for Assessment of Excavation Directors (2019)
- NSW Heritage Council's Assessing Significance for Historical Archaeological Sites and Relics (2009)
- NSW Heritage Office Archaeological Assessments (1996)
- NSW Heritage Council's How to Prepare Archival Records of Heritage Items (1998)
- NSW Heritage Council's Photographic Recording of Heritage Items Using Film or Digital Capture (2006)
- NSW Heritage Office Guidelines for Management of Human Skeletal Remains (1998).

3.2 Project Compliance Requirements

The Conditions relevant to the development of this NAHMP are listed in Table 2. Other requirements relevant to this Plan are included in Appendix A.

TABLE 2 COMPLIANCE TABLE – REQUIREMENTS FOR PREPARATION OF THIS NAHMP

No.	Condition	Where addressed
CSSI 10051 Infrastructure Approval including Mod 1 dated 14 April 2022		
C1	Construction Environmental Management Plans (CEMPs) and CEMP Sub-plans must be prepared in accordance with the Construction Environmental Management Framework (CEMF) included in the documents listed in Condition A1 of this schedule to detail how the performance outcomes, commitments and mitigation measures specified in the documents listed in Condition A1 of this schedule will be implemented and achieved during construction.	This Sub-plan
C5	Of the CEMP Sub-plans required under Condition C1, the following CEMP Sub-plans must be prepared in consultation with the relevant government agencies identified for each CEMP Sub-plan. Details of issues raised by a government agency during consultation (as required by Condition A6) must be provided as part of the relevant CEMP Sub-Plan when submitted to the Planning Secretary / ER (whichever is applicable). Where a government agency(ies) request(s) is not included, the Proponent must provide the Planning Secretary / ER (whichever is applicable) justification as to why. d) Non-Aboriginal heritage – Relevant Councils, WaterNSW and Heritage NSW	Section 3.4
C6	The CEMP Sub-plans must state how:	
	(a) the environmental performance outcomes identified in the documents listed in Condition A1 will be achieved;	Section 2
	(b) the mitigation measures identified in the documents listed in Condition A1 will be implemented;	Section 6
	(c) the relevant terms of this approval will be complied with; and	Appendix A

	(d) issues requiring management during construction (including cumulative impacts), as identified through ongoing environmental risk analysis, will be managed through SMART principles.	Sections 6, 7.3 and 7.5
C7	With the exception of any CEMP Sub-plans expressly nominated by the Planning Secretary to be endorsed by the ER, all CEMP Sub-plans must be submitted to the Planning Secretary for approval.	Section 3.5
C8	The CEMP Sub-plans not requiring the Planning Secretary's approval must obtain the endorsement of the ER as being in accordance with the conditions of approval and all relevant undertakings made in the documents listed in Condition A1. Any of these CEMP Sub-plans must be submitted to the ER with, or subsequent to, the submission of the CEMP but in any event, no later than one (1) month before construction or where construction is staged no later than one (1) month before the commencement of that stage.	Section 3.5
C9	Any of the CEMP Sub-plans to be approved by the Planning Secretary must be submitted to the Planning Secretary with, or subsequent to, the submission of the CEMP but in any event, no later than one (1) month before construction or where construction is staged no later than one (1) month before the commencement of that stage.	Section 3.5
C10	Construction must not commence until the CEMP and all CEMP Sub-plans have been approved by the Planning Secretary or endorsed by the ER (whichever is applicable), unless otherwise agreed by the Planning Secretary. The CEMP and CEMP Sub-plans, as approved by the Planning Secretary or endorsed by the ER (whichever is applicable), including any minor amendments approved by the ER, must be implemented for the duration of construction.	Section 3.5
Construction Environmental Management Framework		
3.4g(iii)	For each plan under the CEMP include a matrix of the relevant SSI Conditions of Approval referencing where each requirement is addressed	Appendix A
3.4g(iv)	For each plan under the CEMP, set objectives and targets, and identify measurable key performance indicators in relation to these	Section 2

3.3 ISC Rating Tools Requirements

The Infrastructure Sustainability Council (ISC Council) ISC Rating Tool targets relevant to this NAHMP are outlined in Table 3.

TABLE 3 IS RATING CREDITS RELEVANT TO THIS NAHMP

ID	ISC Rating Tool Requirement	Where addressed
Her-1 L1	Community heritage values have been identified through consultation and integrated into studies. Measures to minimise adverse impacts to heritage during construction and operation have been identified and implemented.	Section 6
Her-1 L2	Community and key stakeholders have participated in the heritage studies. Heritage values beyond those listed in government registers have been identified, considered and addressed. Heritage has been interpreted to promote local heritage values.	Section 3.4 Heritage interpretation strategy prepared by Sydney Metro
Her-1 L3	Opportunities have been identified and implemented to enhance heritage values.	Design package Design compliance reports
Her-2 L1	Monitoring of heritage is undertaken at appropriate intervals during construction	Section 7.3 Appendix A
Her-2 L2	Monitoring and modelling demonstrate maintenance of heritage values.	Heritage interpretation strategy prepared by Sydney Metro

Her-2 L3 Monitoring and modelling demonstrates enhancements to heritage values.

Heritage interpretation strategy prepared by Sydney Metro

3.4 Document Consultation

The Project Heritage Specialist, who satisfies reasonable qualifications and experience, has assisted in the preparation of this NAHMP, to ensure this Sub-plan best minimises and manages impacts to non-Aboriginal Heritage during construction of the SSTOM Works.

In accordance with Condition C5(d), this Non-Aboriginal Heritage Management Sub-plan was prepared in consultation with the agencies identified in Table 4.

TABLE 4 SUB-PLAN AND MONITORING PROGRAM AGENCY CONSULTATION REQUIREMENTS

Plan	Consultation requirement
Non-Aboriginal Heritage	Relevant Councils (Penrith City Council and Liverpool City Council), WaterNSW and Heritage NSW.

A summary of this consultation is provided below in Table 5, whilst details of issues raised by stakeholders during consultation and how issues have been addressed is contained in Appendix D, in accordance with Condition A6.

TABLE 5 ENGAGEMENT LOG

Agency	Date consulted	Comments received	Discussion
Penrith City Council	13 March 2023 Resent 15 March 2023	29 March 2023	Comments provided by Penrith City Council have been reviewed and minor amendments have been made. Further detail is included in Appendix D
Liverpool City Council	13 March 2023	No comments received	See Appendix D 2 for further consultation detail
Heritage NSW	13 March 2023	27 March 2023	Additional detail has been provided in Section 6 to describe the heritage management processes. Further detail is included in Appendix D
WaterNSW	13 March 2023	15 March 2023	A copy of the Guideline for Development Adjacent to the Upper Canal and Warragamba Pipelines Sept 2021 was also provided by WaterNSW. Comments have been addressed in Appendix D

3.5 Document Approval

In accordance with the Staging Report and advice provided by Department of Planning and Environment (DPE) this Sub-plan will be provided to the ER for review and endorsement and then submitted to the Planning Secretary for approval no later than one month prior to the commencement of construction.

Construction is not to commence until the CEMP and all required Sub-plans and Monitoring Programs have been endorsed by the ER and approved by DPE. This Sub-plan will be implemented for the duration of construction.

4 Existing Environment

The potential for impacts on non-Aboriginal heritage has been assessed as part of the EIS. The non-Aboriginal heritage impacts were assessed in Chapter 12, Tech Paper 4 and the Submissions Report, Archaeological Research Design (ARD) (Appendix K of Submissions Report).

The EIS identified multiple non-Aboriginal heritage items that could potentially be impacted by the SSTOM Works. These items are shown in Figure 2 through to Figure 6 and include:

- St Marys Railway Station – listed State significant item (within the construction footprint) includes the platforms, Goods Shed, Jib Crane and Signal Box
- St Marys Post-War Commercial Building on the west side of Queen Street – potential locally significant item
- St Marys Munitions Workers Housing in the area to the west of Carinya Avenue – potential locally significant item
- Great Western Highway Milestone located on the southern side of the Great Western Highway – listed locally significant item
- Four Winds Dwelling on the southern side of the Great Western Highway and to the east of Reserve Road – listed locally significant item
- Brick House on the northern side of the Great Western Highway to the east of Werrington Road – listed locally significant item
- McGarvie-Smith Farm north of Elizabeth Drive and west of Badgerys Creek – listed locally significant item (within the construction footprint)
- Luddenham Road Alignment – listed locally significant item (within the construction footprint)
- Warragamba Supply Scheme – listed on the WaterNSW section 170 Heritage and Conservation Register as State significant (within the construction footprint)
- Kennett's Airfield located to the west of Luddenham Road and directly south of the Warragamba to Prospect Water Supply Pipelines - It is noted that additional investigations during the Submissions Report phase determined the Airfield it did not reach the threshold for local heritage significance. This item is not considered further in this NAHMP
- McMasters Farm north of Elizabeth Drive and east of Cosgroves Creek – potential locally significant item (within the construction footprint)
- Former OTC Site Group – listed locally significant item (within the construction footprint)
- Two Water Tanks on the eastern side of Badgerys Creek Road – listed locally significant item (within the construction footprint)
- Kelvin – Homestead complex listed as a State and locally significant item (within the construction footprint)
- Bringelly RAAF Base in the area to the east of Badgerys Creek Road and north of Thompsons Creek – potential locally significant item (within the construction footprint).

The potential for impacts on these items as a result of the SSTOM is discussed in Section 5. The EIS archaeological assessment identified potential archaeological remains at St Marys construction site only.

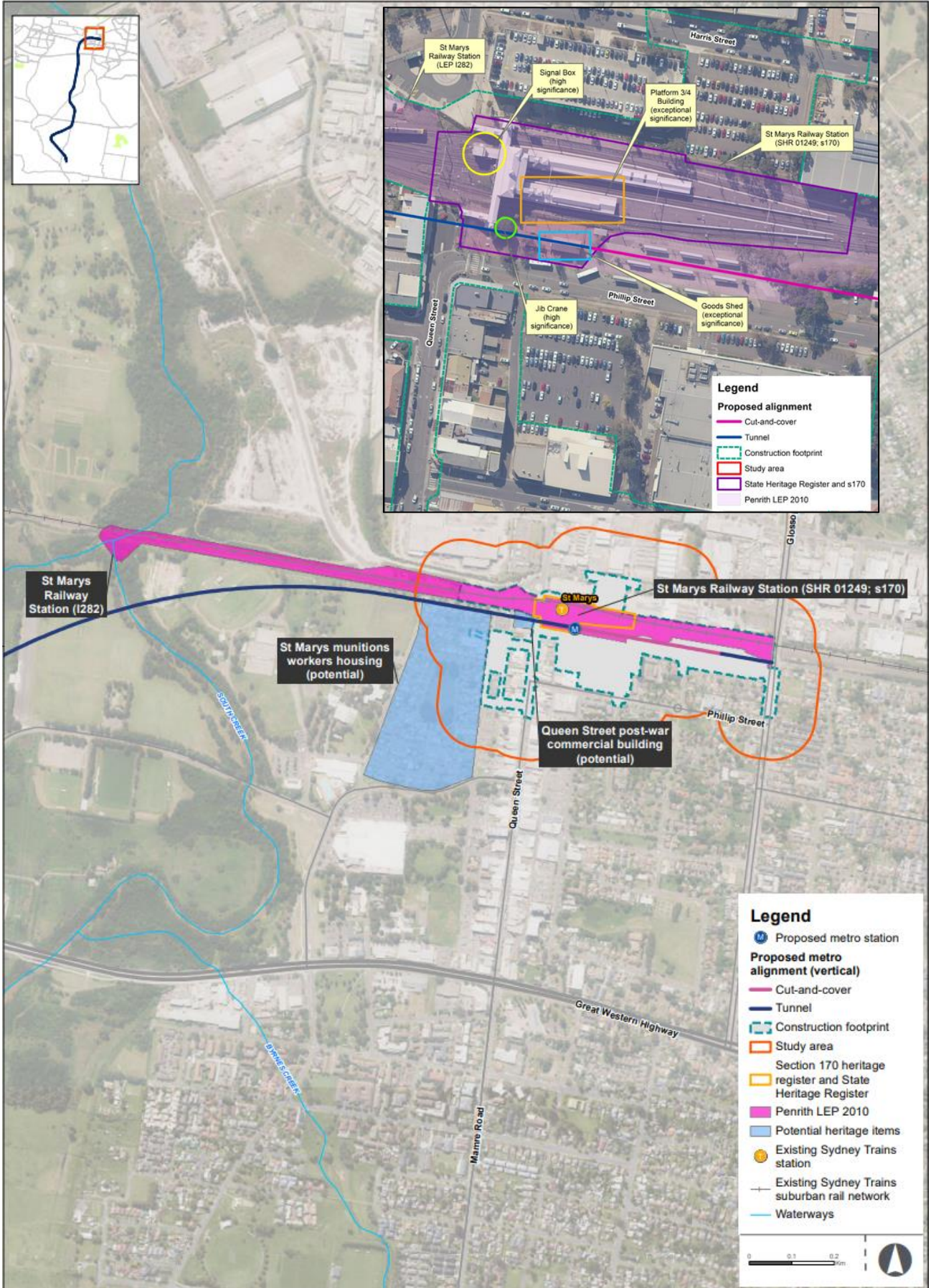


FIGURE 2 CONSTRUCTION FOOTPRINT AND HERITAGE ITEMS IN ST MARYS & STATION DETAIL



FIGURE 3 ST MARYS CONSTRUCTION SITE ARCHAEOLOGICAL MANAGEMENT ZONES

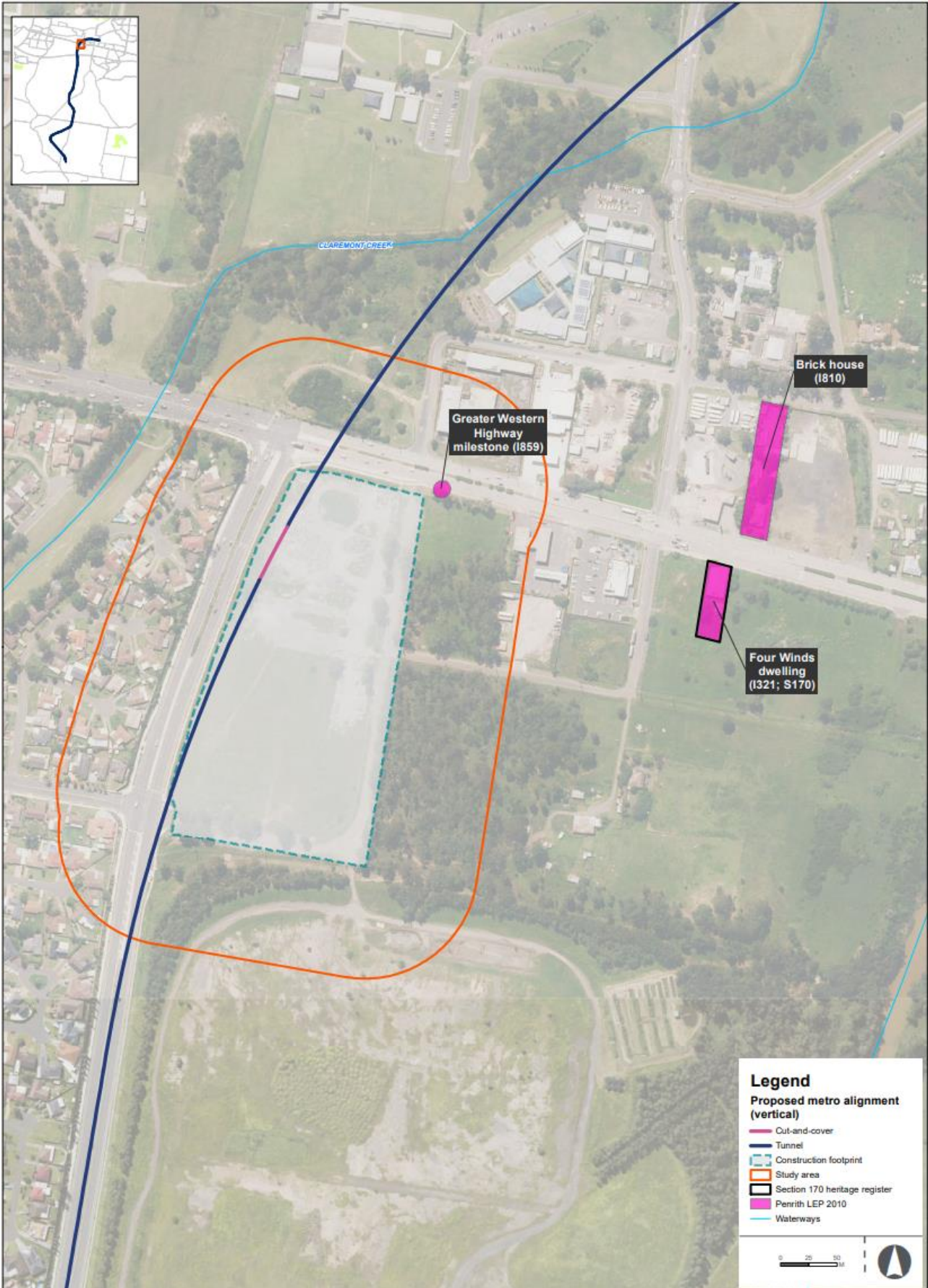


FIGURE 4 CONSTRUCTION FOOTPRINT AND HERITAGE ITEMS IN CLAREMONT MEADOWS

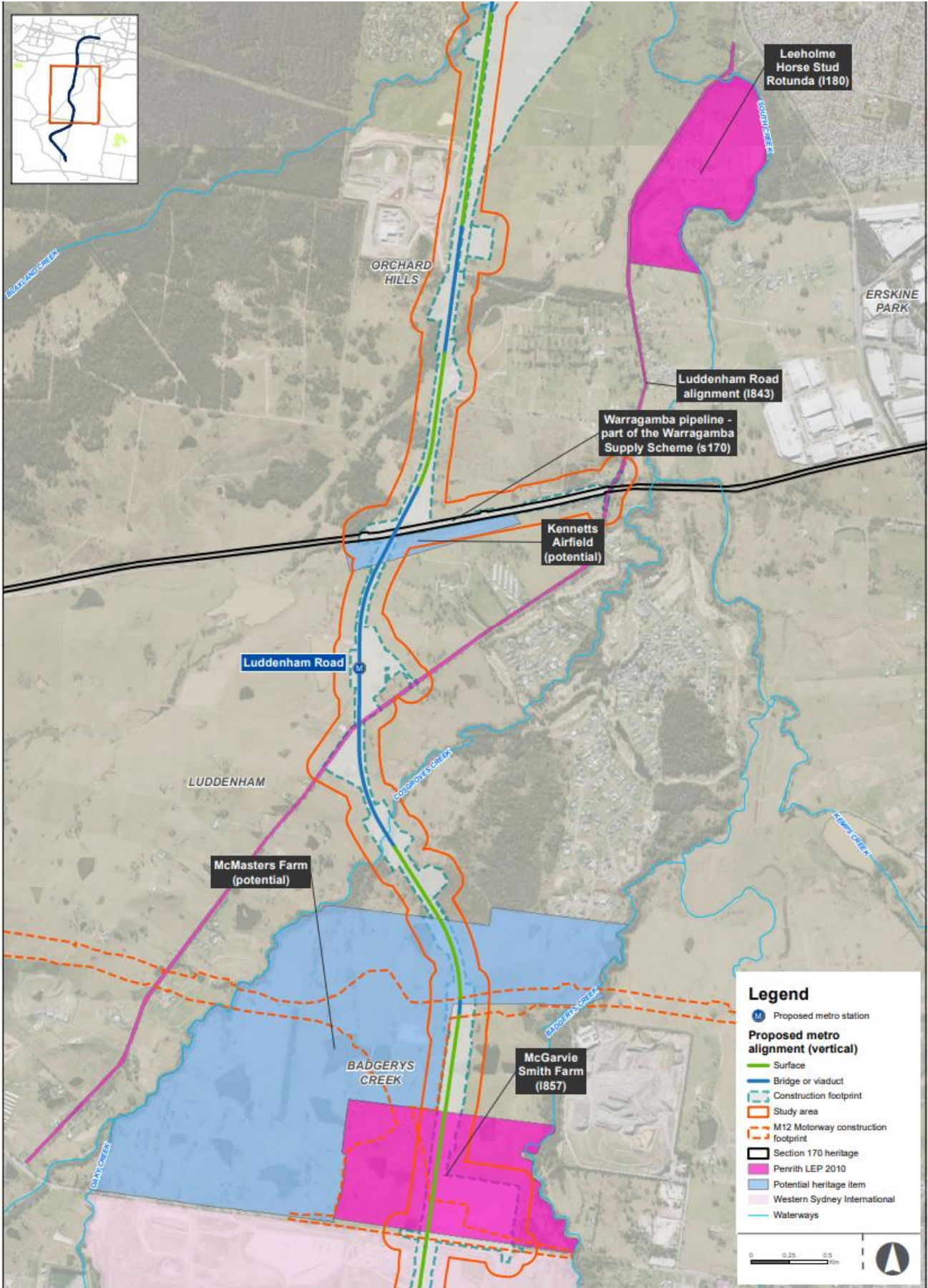


FIGURE 5 CONSTRUCTION FOOTPRINT AND HERITAGE ITEMS ORCHARD HILLS TO BADGERYS CREEK

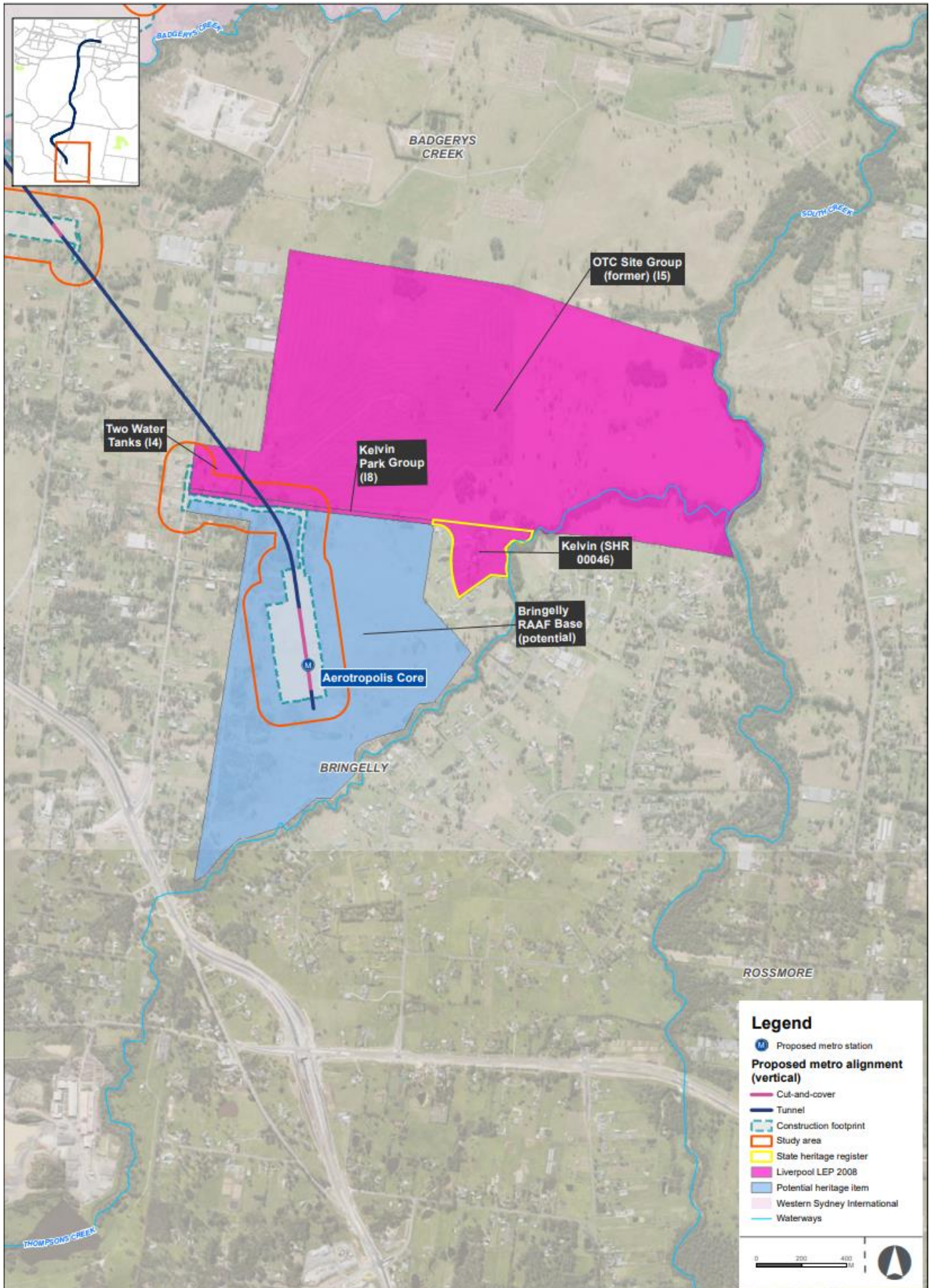


FIGURE 6 CONSTRUCTION FOOTPRINT AND HERITAGE ITEMS AT AEROTROPOLIS CORE

5 Environmental Aspects and Impacts

Non-Aboriginal heritage impacts have been assessed based on impacts as a result of the following impact types:

- Direct impacts
- Permanent indirect impacts
- Temporary indirect impacts
- Vibration impacts.

The construction activities that have potential to impact on non-Aboriginal heritage are:

- Establishment of temporary ancillary facilities, minor demolition of existing structures or impacts to the existing fabric of buildings and minor vegetation clearing
- Minor earthworks including for services and drainage works
- Station and concourse construction
- Track fit-out
- Construction of maintenance facilities.

The EIS and ARD identified that most of the project area applicable to SSTOM Works is unlikely to contain significant archaeology, with the exception of St Marys construction site. The St Marys site is identified in the archaeological assessment (Submissions Report, ARD) as having potential archaeological remains. Major earthworks and bulk excavation will be substantially completed prior to Parklife Metro D&C commencing work, reducing the potential for encountering unexpected archaeology during SSTOM works. Management of non-Aboriginal heritage items, including archival recording, has generally been completed (or is underway) as part of prior delivery stages of the Project. The potential for impacts on non-Aboriginal heritage items and archaeology are discussed in Table 6.

The potential for vibration impacts on non-Aboriginal heritage items is considered minor and will be managed in accordance with the Noise and Vibration Management Sub-plan (NVMP).

Implementation of the Sydney Metro Unexpected Heritage Finds Procedure, included in this Sub-plan in Appendix B will manage residual risk to heritage items during construction.

TABLE 6 OVERVIEW OF POTENTIAL IMPACTS ON NON-ABORIGINAL HERITAGE ITEMS AND ARCHAEOLOGY

Item, Listing and Significance	Potential Impacts	Magnitude	Summary of SSTOM Works Impacts
St Marys Study Area – Heritage items and conservation areas			
St Marys Railway Station SHR 01249, RailCorps170 (SHI 4801036), Penrith LEP 2010 I282 State significance	Direct impact – slight alteration of heritage elements The proposed excavation for the cut-and-cover station box would occur within the LEP listing curtilage but would not impact significant fabric associated with the existing St Marys Railway Station.	Minor	The SSTOM Works includes construction of the new concourse, which will have a minor impact on the St Marys Railway Station Group. The SSTOM Works also include precinct works in the areas around St Marys Station. These precinct plans are currently being developed however works in the vicinity of the Goods Shed and jib crane are likely to include pedestrian connections, street furniture, associated utilities and landscaping.
	Permanent indirect impact – alteration of heritage setting The aerial concourse is a large structure and would not be sympathetic in material and scale with the Victorian-era architecture and character of the existing St Marys Platform 3/4 building and Goods Shed.	Moderate	The jib crane may need to be temporarily removed to facilitate the precinct works. Any works that impact the Goods Shed would be the subject of a planning approval modification. This NAHMP would be updated following any such approval.
	Temporary indirect impact – alteration of heritage setting (construction phase) During construction, elements including a site compound, laydown areas, storage facilities and tunnel boring machine retrieval sites would be visible in the vicinity of the station. An acoustic shed and crane may also be required. These elements, along with the station box excavation and construction of the new aerial concourse, would result in significant alteration to the setting of the station.	Moderate	The minor to negligible vibration impact as determined by the EIS is considered to be applicable to the SSTOM Works. Potential settlement impacts associated with station box excavation and tunnelling are not applicable to SSTOM Works. Other potential settlement impacts are considered negligible.
	Vibration impact Vibration may have the potential to result in cosmetic structural damage to the Goods Shed which would be retained in-situ. Potential vibration impact on other heritage significant structures of the station would be negligible. The jib crane would be temporarily relocated during construction and therefore vibration impacts on this item would not occur.	Minor to negligible	
	Settlement impact Potential settlement impacts on the Goods Shed would be minor while potential settlement impacts on the station platforms and Platform 3/4 building would be negligible	Minor to negligible	
	Overall impact on significance	Moderate	

Item, Listing and Significance	Potential Impacts	Magnitude	Summary of SSTOM Works Impacts
St Marys Study Area – Potential archaeological site			
Potential archaeological remains within the St Marys Station construction site	<p>Direct impact – excavation</p> <p>Proposed works at the St Marys construction site would involve excavation in areas with the potential for locally significant archaeological remains including the station box, which would impact remains associated with the St Marys Goods Yard.</p> <p>While previous excavation and station precinct redevelopment works are likely to have removed shallow remains associated with the former Goods Yard at St Marys, deeper remains may be preserved including undocumented subsurface features (i.e., services and footings). Former late nineteenth and early twentieth century commercial, industrial, and residential remains associated with the historical phase 3 (1888 – 1942) of the St Marys construction site, if revealed, would not meet the threshold for local significance. Construction works for the development of the concourse-to-platform stairs and lifts may impact archaeological remains associated with the first St Marys Station and the former platform ½ 1888 station building, if surviving.</p> <p>Excavation would take place within areas identified as having low to moderate potential for locally significant archaeological remains. As such, the project may result in moderate impacts to significant archaeological remains within the St Marys construction site.</p>		<p>As described above precinct works are likely to require sub surface disturbance within archaeological management Zone 1 as shown in Figure 3.</p> <p>Deep excavation work has been completed by previous SBT works contractors.</p> <p>An AMS will be prepared for any sub surface disturbance within Zone 1.</p>
Local significance	<p>Overall impact on significance</p>	Negligible	
St Marys Study Area – Potential heritage items			
St Marys Post-War Commercial Building	<p>Direct impact – demolition</p> <p>This item is located outside the construction footprint and would not be directly affected.</p>	Nil	The SSTOM Works includes construction of the new aerial concourse and works for the new St Marys Station. Negligible construction phase impacts are anticipated.
Unlisted Potential Local significance	<p>Permanent indirect impact</p> <p>Project works in the vicinity of this item would not alter significant views to the St Marys Post-War Commercial Building.</p> <p>Temporary indirect impact (construction phase)</p> <p>Elements including a construction site would be visible, although partially obscured, resulting in a minor impact on this item.</p> <p>Vibration impact</p> <p>Potential construction vibration impacts on this item are expected to be negligible.</p> <p>Settlement impact</p> <p>Potential settlement impacts on this item are expected to be negligible.</p>	Negligible	
		Minor	
		Negligible	
		Negligible	

Item, Listing and Significance	Potential Impacts	Magnitude	Summary of SSTOM Works Impacts
Overall impact on significance		Negligible	
St Marys Munitions Workers Housing	Direct impact Proposed works in this area are limited to adjacent roads and car park areas and there would be no direct impact on the housing fabric itself.	Nil	The SSTOM Works includes construction of the new aerial concourse and works for the new St Marys Station. Negligible construction phase impacts are anticipated.
Unlisted Potential Local significance	Permanent indirect impact Project works in the vicinity of this item would not alter the visual setting of the former worker's housing area.	Negligible	
	Temporary indirect impact (construction phase) Elements including a construction site would be visible. However, these works would not intrude within the boundary nor alter the setting of this item.	Negligible	
	Vibration impact Potential construction vibration impacts on this item are expected to be negligible.	Negligible	
	Settlement impact Potential settlement impacts on this item are expected to be negligible.	Negligible	
	Overall impact on significance	Negligible	
Claremont Meadows Study Area – Heritage items and conservation areas			
Great Western Highway Milestone	Direct impact This item is located around 20 m to the east of the proposed services facility and would not be directly affected.	Nil	No impact anticipated
Penrith LEP 2010 1859	Permanent indirect impact During operation, the services facility would not obscure views toward the item, nor would it alter the views between the item and the Great Western Highway.	Nil	
Local significance	Temporary indirect impact – alteration of heritage setting (construction phase) Construction works near this item would not affect the setting of the item.	Minor	
	Vibration impact No potential vibration impacts on this item are anticipated during construction.	Nil	
	Settlement impact No potential settlement impacts have been identified in the vicinity of this item.	Nil	
	Overall impact on significance	Nil	

Item, Listing and Significance	Potential Impacts	Magnitude	Summary of SSTOM Works Impacts
Four Winds – Dwelling	Direct impact The construction footprint would not be located within the heritage curtilage of this item.	Nil	No impact anticipated
Penrith LEP 2010 I321, DPE s170 (SHI 3490036)	Permanent indirect impact The proposed services facility is around 300 m from this item and would not affect the setting of, or views to, this item.	Nil	
Local significance	Temporary indirect impact (construction phase) Construction of the proposed services facility would not affect the setting of this item given its distance from the construction site.	Nil	
	Vibration impact No potential vibration impacts on this item are anticipated during construction.	Nil	
	Settlement impact No potential settlement impacts have been identified in the vicinity of this item.	Nil	
	Overall impact on significance	Nil	
Brick house	Direct impact The construction footprint would not be located within the heritage curtilage of this item.	Nil	No impact anticipated
Penrith LEP 2010 I810	Permanent indirect impact The proposed services facility is around 320 m from this item and would not affect the setting of, or views to, this item.	Nil	
Local significance	Temporary indirect impact (construction phase) Construction of the proposed services facility would not affect the setting of this item given its distance from the construction site.	Nil	
	Vibration and settlement impacts No potential vibration and/or settlement impacts on this item are anticipated during construction.	Nil	
	Overall impact on significance	Nil	
Off-Airport Construction Corridor Study Area – Heritage items and conservation areas			
Warragamba Supply Scheme	Direct impact During construction the existing Warragamba to Prospect Water Supply Pipelines corridor would be used for heavy vehicle access to support construction of the rail viaduct structure over the pipelines. The proposed viaduct structure would be elevated above the pipelines and	Negligible	The viaduct structures were constructed by previous SCAW contractor. SSTOM Works involve access to the viaduct structure for track

Item, Listing and Significance	Potential Impacts	Magnitude	Summary of SSTOM Works Impacts
WaterNSW s170 (SHI 4580161)	would not be physically connected to the pipelines in any way. Works in the vicinity of the pipelines would be managed in accordance with Guidelines for Development Adjacent to the Upper Canal and Warragamba Pipelines (WaterNSW, 2021).		delivery. No impact to the pipeline structures is anticipated.
State significance	<p>Permanent indirect impact</p> <p>The project would introduce an elevated concrete viaduct structure over the pipelines which would be visible from the surrounding rural landscape. The viaduct would only be visible within a localised area and minor portion of heritage curtilage.</p>	Minor	
<p>Temporary indirect impact (construction phase)</p> <p>A construction site with vegetation clearance and earthworks to support viaduct construction would be required. Construction site hoarding and fencing would temporarily obstruct views of the pipelines in a small, localised area.</p>	Minor		
<p>Vibration impact</p> <p>There is potential for minor vibration impact to this item as the pipelines are located within the minimum safe working distance for the viaduct construction. Works in the vicinity of the pipelines would be managed in accordance with Guidelines for Development Adjacent to the Upper Canal and Warragamba Pipelines (WaterNSW, 2021).</p>	Minor		
<p>Settlement impact</p> <p>The project alignment is on viaduct at this location and therefore no potential settlement impacts are anticipated.</p>	Nil		
<p>Overall impact on significance</p>	Minor		
McGarvie-Smith Farm	<p>Direct impact – partial demolition</p> <p>The project would result in the construction of surface rail track and rail sidings through the heritage curtilage, the demolition of two buildings of moderate significance and outbuildings, and extensive landscape modification.</p>	Moderate	The SSTOM Works involve track delivery and the final landscaping within heritage curtilage. The impact of this work will be mitigated through appropriate and sympathetic landscape design as described in Section 6. Landscaping will be undertaken in accordance with the Place, Urban Design and Corridor Landscape Plan (PUDCLP), which will include heritage interpretation.
Penrith LEP 2010 1857	<p>Permanent indirect impact – alteration of heritage setting</p> <p>The project alignment would result in irreversible changes to the significant rural farming landscape that is directly associated with the history of the McGarvie-Smith Farm. It would change the setting of the item, divide the heritage curtilage and obstruct views throughout the site.</p>	Major	
Local significance	<p>Vibration impact</p> <p>Potential construction vibration impacts on a concrete silo (high significance) associated with the heritage item have been identified. These potential impacts are considered to be minor.</p>	Minor	

Item, Listing and Significance	Potential Impacts	Magnitude	Summary of SSTOM Works Impacts
	<p>Settlement impact The project alignment would be at surface in this location and therefore no settlement impacts are anticipated.</p>	Nil	
	Overall impact on significance	Major	
Luddenham Road Alignment	<p>Direct impact Proposed works in this location include two new signalled intersections to provide access to the station and the construction of an elevated viaduct structure over Luddenham Road. There would be no permanent changes to the road alignment and no significant fabric would be removed.</p>	Nil	The SSTOM Works involve construction and fit out of the Luddenham Road Station. There are no additional impacts to the area outside those anticipated by the EIS.
Penrith LEP 2010 I843	<p>Permanent indirect impact – alteration of heritage setting The introduction of an elevated station and viaduct would alter the rural character of the area, which is part of the heritage significance of this item.</p>	Minor	
Local significance	<p>Temporary indirect impact – alteration of heritage setting (construction phase) Construction works and construction sites would be required to the north west and the south east of Luddenham Road which would temporarily alter the setting of this item.</p>	Minor	
	<p>Vibration and settlement impact No potential vibration and/or settlement impacts on the heritage item are anticipated.</p>	Nil	
	Overall impact on significance	Minor	
Off-Airport Construction Corridor Study Area – Potential heritage items			
McMaster Farm	<p>Direct impact – partial demolition A small number of significant elements of this item would be removed for construction of the project, including one remnant dam and two former feeding troughs.</p>	Minor	The SSTOM Works involve track delivery and the final landscaping within heritage curtilage. Landscaping will be undertaken in accordance with the PUDCLP, which will include heritage interpretation.
Unlisted Potential Local significance	<p>Permanent indirect impact – alteration of heritage setting The project alignment would run through part of the heritage curtilage of this property at surface level resulting in irreversible changes to the rural farming landscape which is of heritage significance.</p>	Minor	
	<p>Temporary indirect impact – alteration of heritage setting (construction phase) Construction works would include vegetation removal and excavation which would alter the rural landscape associated with the item.</p>	Minor	
	Vibration impact	Negligible	

Item, Listing and Significance	Potential Impacts	Magnitude	Summary of SSTOM Works Impacts
	The vibration assessment has identified that heavy earthmoving equipment during construction may result in potential for minor vibration impacts on heritage significant structures.		
	Settlement impact	Nil	
	The project would be located at surface level in this location and therefore potential settlement impacts are not anticipated.		
	Overall impact on significance	Moderate	
Aerotropolis Core Study Area – Heritage items and conservation areas			
Former OTC Site Group	Direct impact The project alignment would be in tunnel below this item and no direct impacts are anticipated. All significant fabric associated with this item has been previously demolished.	Nil	The SSTOM scope of works involves construction of the Aerotropolis Core Station and access road. No impacts to the Overseas Telecommunications Commission (OTC) heritage item.
Liverpool LEP 2008 I5, Register of the National Estate (as the Bringelly Receiving Station)	Permanent indirect impact Aerotropolis Core Station and the new access road would only be partially visible from this item and would not result in permanent visual impacts on the setting.	Nil	
Local significance	Temporary indirect impact (construction phase) Construction works for Aerotropolis Core Station and the new access road would not alter the visual setting of this item.	Nil	
	Vibration and settlement impact No potential vibration and/or settlement impacts are expected.	Nil	
	Overall impact on significance	Nil	
Two Water Tanks	Direct impact The project alignment would be in tunnel below this item and no direct impacts are anticipated.	Nil	No impact anticipated
Liverpool LEP 2008 I4	Permanent indirect impact The project alignment would be in tunnel below this item and therefore would not alter its visual setting.	Nil	
Local significance	Temporary indirect impact (construction phase) Construction activities for tunnelling, Aerotropolis Core Station and the new access road would not alter the visual setting of this item.	Nil	
	Settlement and vibration impact No potential vibration and/or settlement impacts are expected.	Nil	

Item, Listing and Significance	Potential Impacts	Magnitude	Summary of SSTOM Works Impacts
Overall impact on significance		Nil	
Kelvin SHR 00046, Liverpool LEP 2008 I8 (named as Kelvin Park Group)	Direct impact The project alignment would be in tunnel below the former driveway to Badgerys Creek Road (part of the LEP curtilage). No works would occur within the SHR curtilage.	Nil	No impact anticipated.
	Permanent indirect impact – alteration of heritage setting Aerotropolis Core Station would be visible from this item from a distance of around 650 m away and would not affect views to this item.	Minor	
State and local significance	Temporary indirect impact – alteration of heritage setting (construction phase) Aerotropolis Core Station construction site would be temporarily visible from this item but from some distance away	Minor	
	Vibration and settlement impact No potential vibration and/or settlement impacts are expected.	Nil	
Overall impact on significance		Minor	
Aerotropolis Core Study Area – Potential heritage items			
Bringelly RAAF Base Unlisted Potential Local significance	Direct impact – partial demolition Construction for Aerotropolis Core Station would require the demolition of several buildings within the former RAAF Base site (the main receiving building and tower, fire hose shed, and dangerous goods store). Only three ancillary buildings of moderate and little significance would remain.	Major	Site levelling and demolition of the Bringelly RAAF base was undertaken during the Advanced and Enabling Works stage. The SSTOM Works will not require any further removal of buildings and will not have additional heritage impact.
	Overall impact on significance	Major	

6 Heritage Management and Environmental Controls

6.1 Heritage Management Measures

A range of standard and specific controls will be implemented to minimise non-Aboriginal and cumulative heritage impacts, to ensure compliance, and to reduce risk before any relevant works commence. Elimination of the hazard is the first preference of control, followed by engineering, then administrative controls. Mitigation measures have been developed considering the SMART principles, being specific with measurable outcomes. They are all achievable and realistic. Each measure is also time-based, applicable before or during construction as indicated in Table 7.

TABLE 7 HERITAGE CONTROLS

Reference	Control	Responsibility	Timing	Source
NAH_M1	Induction presentation will include: <ul style="list-style-type: none"> Heritage awareness Applicable legislative requirements Unexpected Heritage Finds Procedure Complaints management (complaints to be managed in accordance with Section 3.7.5 of the CEMP) 	Environmental Manager	Pre-construction	Best practice CEMF Section 9.3(a)(i)
NAH_M2	Environmental control maps will be prepared to show location of non-Aboriginal Heritage items	Environmental Manager	Pre-construction	CEMF Section 3.6(c)
NAH_M3	Any heritage item not affected by the works will be retained and protected throughout construction as per Section 6.11	Site Supervisor Environmental Manager	Pre-construction	CEMF Section 9.3(a)(ii) Condition E19
NAH_M4	Undertake vibration monitoring if indicated by detailed construction noise and vibration statement (DNVIS) of the: <ul style="list-style-type: none"> St Marys Railway Station Group Queen Street Post-War Commercial Building St Marys Munitions Workers Housing McGarvie Smith Farm McMaster Farm 	Environmental Manager	Construction	Condition E54 REMM NAH6
NAH_M5	Seek heritage specialist advice on methods and location for installing equipment used for noise and vibration monitoring at heritage items.	Environmental Manager	Construction	Condition E55
NAH_M6	If required, the dismantling and reassembly of the jib crane at St Marys Station will only be undertaken under the supervision of an appropriately experienced heritage specialist.	Environmental Manager	Construction	Condition E20 REMM7
NAH_M7	The ARD will be implemented during construction including <ul style="list-style-type: none"> Establish an exclusion zone around area of predicted archaeological remains (see Figure 3) An AMS would be prepared prior to any ground disturbance in areas identified as low-moderate archaeological potential (see Figure 3) 	Environmental Manager	Construction	Condition E22

6.2 Heritage Induction

The SSTOM Works induction will include a heritage-specific section for all on-site personnel, which will address all relevant heritage requirements. The induction would illustrate the location of the known and potential heritage items, describe their significance and inform personnel of specific mitigation measures, legislative requirements, responsibilities and circumstances that could result in a breach of the Projects environmental requirements and Approval Conditions.

6.3 Heritage Specialists

6.3.1 Project Heritage Specialist

The Project Heritage Specialist will be available for the duration of the SSTOM Works and will:

- Provide advice on methods and location for installation of site boundary hoarding or monitoring equipment on Heritage items (where required)
- Provide advice on proposed installation of at-property vibration treatment on Heritage items (if required)
- Undertaken any additional assessments as required by this Sub-plan and/or the CEMP
- Contribute to ongoing consultation for the development and revision of this NAHMP.

The Project Heritage Specialist/s will demonstrate that they hold appropriate qualifications and all licenses relevant to the work being undertaken for the various roles and functions required to be performed under the project Deed and General Specification.

6.3.2 Heritage Machinery Specialist

The Heritage Machinery Specialist will be employed in the event the jib crane is required to be temporarily relocated. The Heritage Machinery Specialist would be responsible for

- Developing a detailed methodology for the removal and reinstatement as per Section 6.8.1 and
- Supervision of the dismantling and reassembly work

6.3.3 Heritage Architect

An appropriately qualified Heritage Architect would be engaged by Parklife Metro D&C to provide specific input into the design development of the Project. The Heritage Architect will work with the design team to address the Operational REMMs which will be captured within the PUDCLP, relevant design packages, design compliance reports and station specific heritage interpretation plans.

6.3.4 Excavation Director

Before commencement of any archaeological excavation an Excavation Director will be nominated by Parklife Metro D&C in accordance with Condition E23. The nominated Excavation Director will comply with Heritage Council of NSW's Criteria for Assessment of Excavation Director (September 2019) undertake the following roles and responsibilities:

- Oversee and advise on matters associated with historical archaeology
- Be present to oversee archaeological excavation
- Advise on archaeological issues
- Advise on the duration and extent of oversight required during archaeological excavations consistent with the ARD.

The Excavation Director may also advise on any additional excavations if required in the event of an unexpected find.

6.4 Archival Recording

Archival photographic digital recording has been undertaken by Sydney Metro and/or previous contractors for:

- St Marys Railway Station (including the jib crane)
- Luddenham Road Alignment
- McMaster Farm
- McGarvie-Smith Farm
- Kelvin (the State Heritage listed curtilage)
- Bringelly RAAF Base.

As required by Condition E24 and REMM NAH3, these recordings have been completed for the Project.

In the unlikely event of additional archival recording being required, this would be directed by the Project Heritage Specialist, and if required the Excavation Director, and any photographic archival recording would be prepared in accordance with *How to Prepare Archival Records of Heritage Items* (NSW Heritage Office, 1998) and *Photographic Recording of Heritage Items Using Film or Digital Capture* (NSW Heritage Office, 2006).

Any additional Archival Recording Report(s) will be submitted to the Planning Secretary, relevant councils and Heritage NSW for information within 12 months of completing all heritage works for the SSTOM Works in accordance with the requirements of Condition E25. Copies of the Archival Recording Report will also be provided to relevant local historical societies.

Recording of any unexpected finds would be in accordance with the Unexpected Heritage Finds Procedure outlined in Appendix B.

6.5 Salvage

No moveable heritage items have been identified for salvage as part of the SSTOM Works and all salvage works, as required by REMM NAH1, will be completed by prior works contractors. However, in the event the scope of work changes and moveable heritage items or significant fabric are impacted by works the Project Heritage Specialist would be responsible for implementing the following general process:

1. The Project Heritage Specialist will undertake an inspection and determine any elements which would be appropriate for archival recording and/or salvage. The salvage register would be updated by the Project Heritage Specialist as required for items proposed to be salvaged
2. Initial discussions with Sydney Metro would occur to determine the feasibility of salvage, with consideration of the potential for significance to be retained and re-used as per REMM NAH1. Significant fabric would only be salvaged if it can be salvaged in such a way that it can be reused and is likely to be able to be reused. Reuse options may include reuse at an alternative site, display or interpretation
3. Salvaged items will be stored as directed by Sydney Metro.

6.6 Archaeological Method Statement

The Sydney Metro – Western Sydney Airport Archaeological Research Design (Artefact 2021) (ARD) identifies that, should construction works impact nominated areas of significant archaeology, impacts should be managed in accordance with an Archaeological Method Statement (AMS). An activity specific AMS would be prepared for SSTOM works for ground disturbing activities in the area of the St Marys Goods Yard and Shed as shown in Figure 3.

The AMS would be prepared by the Excavation Director in accordance with the general archaeological methodologies outlined in the ARD. The Excavation Director will determine whether monitoring or a test excavation program is necessary.

6.7 Archaeological Excavation

Should archaeological excavations be undertaken as part of any AMS, or in the event of unexpected finds that require excavation, then the requirements of the planning conditions will be followed as outlined below.

The appointed Excavation Director, or their delegate, will be present to oversee excavation, advise on archaeological issues, advise on the duration and extent of oversight required during archaeological excavations consistent with the Archaeological Research Design and Excavation Methodology(s).

Following completion of all heritage excavation works under SSTOM, a Non-Aboriginal Archaeological Excavation Report will be produced in accordance with Condition E26 and E27. The Report will include details of further historical research either undertaken or to be carried out, archaeological excavations (with artefact analysis and identification of a final repository for finds) and address the research design.

The Non-Aboriginal Archaeological Excavation Report will be submitted to the Planning Secretary, relevant councils and Heritage NSW within 12 months of completing all heritage work completed during the SSTOM Works. Copies of the Report will also be provided to relevant local historical societies and local libraries.

Any non-Aboriginal heritage items raised as an unexpected finds notification will be detailed in a Final Archaeological Report.

6.8 Demolition Management and Existing Structures

No demolition of heritage structures is anticipated for the SSTOM Works as demolition work has been completed by previous contractors on the Project.

6.8.1 Jib Crane Management

If relocation of the Jib Crane is required, the mitigation measures outlined in Condition E20 and REMM NAH7 will be implemented. This will include the preparation of a detailed methodology for the removal and reinstatement of the Jib Crane in consultation with an appropriately qualified Heritage Machinery Specialist. The methodology will include:

- Determination of whether crane is operational, to ensure that it is restored to its existing condition at the completion of works
- Provision for detailed documentation of the Jib Crane, including as built drawings (architectural, structural etc), assessment of fabric and condition of individual elements
- A methodology for dismantling and reassembly of the Jib Crane
- A methodology and requirements for storage to ensure the item is not damaged after disassembly
- Provision for a detailed index that indicates the size of each element and its exact location for storage.

6.9 Vibration Management

Vibration monitoring, as required by REMM NAH6, has not been allocated to the SSTOM Works due to the low potential for vibration impacts from the SSTOM scope of work. Parklife Metro D&C however will review advice from the noise and vibration consultant as part of the Detailed Noise and Vibration Impact Statements (DNVIS) process, as described in the NVMP in accordance with Condition E47.

If predicted vibration levels exceed vibration criteria at the heritage locations listed in REMM NAH6, Parklife Metro D&C will undertake vibration monitoring in accordance with the NVMP, which sets out vibration assessment and monitoring processes for heritage items. If vibration monitoring is deemed to be required, Parklife Metro D&C will contact the Project Heritage Specialist for advice on methods and locations for installing equipment used for vibration monitoring at the following locations in accordance with Condition E55. The heritage locations listed in REMM NAH6 include:

- St Marys Railway Station Group

- Queen Street Post-War Commercial Building
- St Marys Munitions Workers Housing
- McGarvie Smith Farm
- McMaster Farm.

In accordance with REMM NAH8 a dilapidation survey of the Warragamba to Prospect Water Supply Pipelines has been completed by Sydney Metro. Parklife Metro D&C will also consult with WaterNSW regarding design and construction where SSTOM works interact with the Warragamba to Prospect Water Supply Pipelines. All works will be consistent with the 'Guidelines for Development Adjacent to the Upper Canal and Warragamba Pipelines' (WaterNSW 2021), including vibration management requirements.

6.10 Unexpected Heritage Finds

In the event of an unexpected finds all works in the vicinity of the find will be stopped and the Sydney Metro Environment Manager, Sydney Metro Senior Heritage Advisor and the Project Heritage Specialist and/or Excavation Director will be contacted. Any potential unexpected heritage finds will be managed in accordance with the Sydney Metro Unexpected Heritage Finds Procedure (SM-18-001105232) provided in Appendix B.

The Procedure has been prepared by a suitable qualified and experienced heritage specialist to manage unexpected heritage finds (heritage items and values). The discovery of human skeletal remains will be managed in accordance with the Sydney Metro Exhumation Management Procedure provided in Appendix C. Both Procedures have been prepared to meet the requirements of Conditions E34 to E36.

The Sydney Metro Unexpected Heritage Finds Procedure and the Exhumation Management Procedure will be implemented for the duration of construction.

In accordance with Condition E19, if the find is identified as a relic having state significance, methods of avoidance and redesign will be considered to protect the find.

6.11 ECMs and Exclusion Zones

Exclusion zones (no-go zones) and signage will be established where required to ensure no inadvertent encroachment or impacts to heritage items occurs. Heritage structures, items and places, and the associated exclusions zones, will be illustrated on Environmental Control Maps (ECMs) (refer to CEMP) and will be communicated to Parklife Metro D&C personnel through the site inductions, toolboxes and signage in prominent locations around the site.

Where works will not be undertaken immediately adjacent an item temporary fencing/exclusion zones will be employed, where works will be undertaken immediately adjacent and have potential for direct harm to item more robust protective fencing and spotters will be employed during works.

Exclusion zones will include the jib crane and Good Shed within the St Marys Railway Station Group. An exclusion zone may also be applied to the Warragamba Water Supply Scheme crossing depending on the construction methodology required, and would be installed in consultation with WaterNSW and with reference to the WaterNSW (2021) Guideline for Development Adjacent to the Upper Canal and Warragamba Pipelines.

Any access to exclusion / no-go zones will require a Permit to Access No Go Zone, which will form a Hold Point prior to works in this area, as described in Section 7.4.

7 Compliance Management

7.1 People, Responsibilities and Communication

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

A Project Heritage Specialist has been engaged by Parklife Metro D&C to support the implementation of this Sub-plan as needed. Refer to Section 6.3 for detail this position and other on relevant external heritage roles.

7.2 Training

Parklife Metro D&C will deliver environmental training specific to heritage management through:

- The site induction where the requirements of this Sub-plan will be communicated. The induction will include applicable legislation and the Unexpected Heritage Finds Procedures (see Appendix B and Appendix C)
- Toolbox talks will be held regularly through site establishment and construction. They will reinforce heritage information from the site induction and site specific heritage management actions and tasks.

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

7.3 Monitoring, Inspections and Audits

Worksites are regularly inspected to ensures the adequacy of controls and compliance with the requirements of this Sub-plan:

- Daily inspections
- Routine weekly inspections including heritage checks where applicable.

Audits (both internal and external) will be undertaken to assess the effectiveness of environmental mitigation and management measures, compliance with Project requirements and any other relevant approvals, licenses and guidelines. Audit management is detailed in Section 3.9 of the CEMP.

7.4 Hold Points

Hold points relevant to the management of heritage impacts from SSTOM Works are listed in Table 8.

TABLE 8 HOLD POINTS RELATED TO HERITAGE MANAGEMENT

Hold Point	Release of Hold Point	Approver
Permit to Enter No-go Zone	Prior to accessing No-go zones	Parklife Metro D&C Environmental Manager, or delegate

7.5 Reporting and Records

Parklife Metro D&C will retain the following compliance records in relation to this Sub-plan:

- Inspections undertaken in relation to heritage management measures
- Archival recordings undertaken of any heritage item
- Records of Unexpected finds
- Incident reports for unintentional impacts to heritage items
- Records of any impacts avoided or minimised through design or construction methods.

In addition, the Design Report/s will detail the records of any avoided impacts through the design.

8 Review and Improvement

8.1 Continuous Improvement

Parklife Metro D&C will continually improve environmental systems and performance through the implementation of an audit and review program. Refer to Section 3.9 of the CEMP.

8.2 Sub-Plan Update and Amendment

A formal review of the management systems by the Parklife Metro D&C Senior Management Team will also occur on an annual basis, as a minimum, in accordance with Section 3.11 of the CEMP. This review shall generate actions for the continual improvement of the systems and supporting management plans.

If changes to this NAHMP are identified as required as a result of an annual performance review, or as a result of project changes, construction updates, risk reviews, or general observations throughout construction, they may be approved by the ER in accordance with Condition A32(j) or by the Planning Secretary. Minor changes to this NAHMP that may be approved by the ER would generally comprise changes that are of an administrative or minor nature, which do not increase impacts to nearby sensitive land use(s), and are consistent with the terms of the Infrastructure Approval and with the document as approved by the Planning Secretary. Where the ER deems it necessary (ie. where the change is not considered to be minor), the amended NAHMP will be provided to the Planning Secretary for approval.

Appendices

Appendix A Other Conditions of Approval, REMMs and CEMF Requirements Relevant to this Sub-Plan

Note: additional Conditions relevant to the preparation and approval of this Plan are included in Table 2

Minister's Conditions of Approval (23 July 2021) CSSI 10051

Reference	Requirement	Where addressed
A6	<p>Where the terms of this approval require a document or monitoring program to be prepared, or a review to be undertaken, in consultation with identified parties, evidence of the consultation undertaken must be submitted to the Planning Secretary with the document. The evidence must include:</p> <p>(a) documentation of the engagement with the party identified in the condition of approval that has occurred before submitting the document for approval;</p> <p>(b) a log of the dates of engagement or attempted engagement with the identified party and a summary of the issues raised by them;</p> <p>(c) documentation of the follow-up with the identified party(s) where feedback has not been provided to confirm that the party(s) has none or has failed to provide feedback after repeated requests;</p> <p>(d) outline of the issues raised by the identified party(s) and how they have been addressed; and</p> <p>(e) a description of the outstanding issues raised by the identified party(s) and the reasons why they have not been addressed.</p>	Section 3.4 Appendix D
E19	The Proponent must not destroy, modify or otherwise physically affect any Heritage item not identified in documents referred to in Condition A1.	Section 6, Appendix B and Appendix C
E20	The dismantling and reassembly of the jib crane at St Marys Station, if required, must only be undertaken under the supervision of a consultant experienced in the conservation of heritage machinery.	Table 7
E21	The St Marys Goods Shed must not be destroyed, modified or otherwise adversely affected, except as identified in the documents listed in Condition A1.	Figure 2 and Section 6.11
E22	The Archaeological Research Design included in the documents listed in Condition A1 must be implemented during construction.	Section 5 and 6
E23	Before commencement of archaeological excavation, the Proponent must, in consultation with Heritage NSW, nominate a suitably qualified Excavation Director, who complies with Heritage Council of NSW's Criteria for Assessment of Excavation Director (September 2019), to oversee and advise on matters associated with historical archaeology for the approval of the Planning Secretary. The Excavation Director must be present to oversee excavation, advise on archaeological issues, advise on the duration and extent of oversight required during archaeological excavations consistent with the Archaeological Research Design and Excavation Methodology(s) identified in the documents listed in Condition A1. More than one Excavation Director may be engaged for CSSI to exercise the functions required under the conditions of this approval.	Section 6.3.4 and Section 7.1 Archaeological investigations will be substantially completed prior to the commencement of the SSTOM Works. Parklife Metro D&C will employ an ED for the SSTOM Works in accordance with this Condition.
E24	Archival photographic digital recording must be undertaken for all listed heritage items which will be affected by the CSSI. The recordings must be undertaken prior to the commencement of Work which may impact the items and documented in an Archival Recording Report. The recordings must include buildings, structures and landscape features and detailed maps showing the location of features. The archival recording must be prepared in accordance with How to Prepare Archival Records of Heritage Items (NSW Heritage Office, 1998) and Photographic Recording of Heritage Items Using Film or Digital Capture (NSW Heritage Office, 2006).	Section 6.4 Archival recording has been completed by prior delivery contractors. No further action required prior to SSTOM Works

Minister's Conditions of Approval (23 July 2021) CSSI 10051

Reference	Requirement	Where addressed
E25	The Archival Recording Report must be submitted to the Planning Secretary, relevant councils and Heritage NSW for information within 12 months of completing all work described in the documents listed in Condition A1 in relation to heritage items. Copies of the Archival Recording Report must also be provided to relevant local historical societies.	Section 6.4 Archival recording has been completed by prior delivery contractors. No further action required prior to SSTOM Works
E26	Following completion of all work described in the documents listed in Condition A1 in relation to heritage items, a non-Aboriginal Archaeological Excavation Report including the details of further historical research either undertaken or to be carried out and archaeological excavations (with artefact analysis and identification of a final repository for finds) and addressing the research design, must be prepared in accordance with any guidelines and standards required by the Heritage Council of NSW and Heritage NSW.	The Non-Aboriginal Archaeological Excavation Report will be completed as part of the archaeological investigation program managed as part of the SBT Works. No further action required prior to SSTOM Works.
E27	The non-Aboriginal Archaeological Excavation Report must be submitted to the Planning Secretary, relevant councils and Heritage NSW for information within 12 months of completing all Work described in the documents listed in Condition A1 in relation to heritage items. Copies of the Report must also be provided to relevant local historical societies and local libraries.	As above
E28	All reasonable steps must be taken so as not to harm, modify or otherwise impact Aboriginal objects or places of cultural significance except as authorised by this approval.	ACHMP and CEMP
E34	An Unexpected Heritage Finds and Human Remains Procedure must be prepared to manage unexpected heritage finds (heritage items and values) in accordance with any guidelines and standards prepared by the Heritage Council of NSW or Heritage NSW.	Section 6.10 Appendix B and Appendix C
E35	The Unexpected Heritage Finds and Human Remains Procedure must be prepared by a suitably qualified and experienced heritage specialist in consultation with the Heritage Council of NSW (with respect to non-Aboriginal cultural heritage) and in relation to Aboriginal cultural heritage, in accordance with the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010) and submitted to the Planning Secretary for information no later than one (1) month before the commencement of construction.	Appendix B and Appendix C
E36	The Unexpected Heritage Finds and Human Remains Procedure, as submitted to the Planning Secretary, must be implemented for the duration of construction. Where archaeological investigations have been undertaken as a result of Unexpected Finds notifications then a Final Archaeological Report must be provided in accordance with Heritage Council guidance and standard requirements for final reporting under Excavation Permits. Note: Human remains that are found unexpectedly during the carrying out of work may be under the jurisdiction of the NSW State Coroner and must be reported to the NSW Police immediately. Management of human remains in NSW is subject to requirements set out in the	Section 6

Minister's Conditions of Approval (23 July 2021) CSSI 10051

Reference	Requirement	Where addressed
	Public Health Act 2010 (NSW) and Public Health Regulation 2012 (NSW). Nothing in these conditions prevents separate procedures for the Unexpected Heritage Finds and Human Remains Procedure.	
E54	Vibration testing must be conducted during vibration generating activities that have the potential to impact on Heritage items to verify minimum working distances to prevent cosmetic damage. In the event that the vibration testing and attended monitoring shows that the preferred values for vibration are likely to be exceeded, the Proponent must review the construction methodology and, if necessary, implement additional mitigation measures. Such measures must include, but not be limited to, review or modification of excavation techniques.	Section 6.9 NVMP
E55	The Proponent must seek the advice of a heritage specialist on methods and locations for installing equipment used for vibration, movement and noise monitoring at Heritage items.	Section 6.8 NVMP
E121	The proponent must consult with WaterNSW regarding design, construction and operational management where the proposal interacts with the Warragamba to Prospect Water Supply Pipeline, and ensure that proposed construction and operational agreements are consistent with the "Guidelines for Development Adjacent to the Upper Canal and Warragamba Pipelines" and implement all practical measures to protect the Warragamba to Prospect Water Supply Pipelines infrastructure, or as otherwise agreed to by WaterNSW.	Section 6.9

Revised Environmental Management Measures

Reference	Requirement	Where addressed
NAH1	Potential moveable heritage items would be identified and assessed and a significant fabric salvage schedule would be prepared by an appropriately qualified and experienced heritage specialist for St Marys Railway Station, Bringelly RAAF Base, McGarvie-Smith Farm, and McMasters Farm. Significant fabric would only be salvaged if it can be salvaged in such a way that it can be reused and is likely to be able to be reused	Section 6.5 Moveable heritage items have been assessed and managed as part of prior work packages. This plan addresses potential salvage of unexpected finds only.
NAH2	Heritage advice would be sought to develop solutions to manage potential ground movement impacts to the St Marys Goods Shed	Potential settlement impacts will continue to be monitored as part of the SBT Works. Not applicable to SSTOM Works
NAH3	Archival recording of heritage items which would be impacted or that would have their setting altered, would be carried out in accordance with the NSW Heritage Office's Photographic Recording of Heritage Items Using Film or Digital Capture (2006). The following items would be archivally recorded:	Section 6.4 Archival recording completed by prior delivery contractors.

Revised Environmental Management Measures

Reference	Requirement	Where addressed
	<ul style="list-style-type: none"> St Marys Railway Station Luddenham Road Alignment McMaster Farm McGarvie-Smith Farm Kelvin (the State Heritage listed curtilage) Bringelly RAAF Base 	
NAH5	Archaeological investigations would be undertaken in accordance with recommendations in the non-Aboriginal Archaeological Research Design	Table 7 and Section 6
NAH6	<p>The following heritage items would be monitored for potential vibration impacts during construction:</p> <ul style="list-style-type: none"> St Marys Railway Station Group Queen Street Post-War Commercial Building St Marys Munitions Workers Housing McGarvie Smith Farm McMaster Farm 	<p>Section 6.9</p> <p>Condition has not allocated to SSTOM through the Staging Report however vibration impacts will be considered for these items as part of the DNVIS.</p>
NAH7	If required, the St Marys Station jib crane would be temporarily relocated prior to construction that may impact on this item, safely stored and appropriately maintained and conserved before reinstatement. If relocation is required, a detailed methodology for the removal and reinstatement of the jib crane would be prepared in consultation with an appropriately qualified heritage advisor	Section 6.4 and 6.8.1
NAH8	A dilapidation survey of the Warragamba to Prospect Water Supply Pipelines would be undertaken prior to construction commencing in the vicinity of this item	Section 6.9
ONAH1	Design development for the project would endeavour to minimise adverse impacts to heritage buildings, elements, fabric, and heritage significant settings and view lines that contribute to the overall heritage significance of heritage items	<p>Design package</p> <p>Design compliance reports</p>
ONAH2	The architectural design for the project would take account local heritage context and be sympathetic to local heritage character. This would include using sympathetic building materials, colours and finishes. Design should aim to minimise visual impacts by ensuring that significant elements are not obstructed or overshadowed. Design should adhere to the Sydney Metro – Western Sydney Airport Design Guidelines.	<p>Design package</p> <p>Design compliance reports</p>
ONAH3	Consultation with the Heritage Council and relevant stakeholders would occur for the design of works that have the potential to impact State significant items including St Marys Railway Station	<p>Design package</p> <p>Design compliance reports</p>
ONAH7	An appropriately qualified and suitably experienced heritage architect would be engaged to provide input into design development at St Marys Station	<p>Section 6.3.3</p> <p>Design package</p>

Revised Environmental Management Measures

Reference	Requirement	Where addressed
		Design compliance reports
ONAH1	Design development for the project would endeavour to minimise adverse impacts to heritage buildings, elements, fabric, and heritage significant settings and view lines that contribute to the overall heritage significance of heritage items	Design package Design compliance reports
HR4	Where the project crosses or is adjacent to the Warragamba to Prospect Water Supply Pipelines, construction planning, and approaches to minimising risks of damage or rupture to of the Pipelines, would be developed in consultation with WaterNSW, and in accordance with the Guidelines for Development Adjacent to the Upper Canal and Warragamba Pipelines (Water NSW, 2020) [note updated guidelines September 2021]	Design package Design compliance reports

Construction Environmental Management Framework (CEMF) Requirements

Reference	Requirement	Where addressed
9.1a	The following heritage management objectives will apply to construction:	Section 2
	i. Embed significant heritage values through any architectural design, education or physical interpretation;	
	ii. Minimise impacts on items or places of heritage value;	Section 2 and 6
	iii. Avoid accidental impacts on heritage items;	Section 2, 6 and 6.11
	v. Maximise worker's awareness of indigenous and non-indigenous heritage; and	Section 2 and 7.2
	v. For on-airport works, the Sydney Metro Western Sydney Airport Aboriginal Cultural Heritage CEMP and the European and Other Heritage CEMP will detail all the heritage management objectives and will be consistent with the WSA Aboriginal Cultural Heritage CEMP and European and Other Heritage CEMP, including all appendices to these CEMP documents.	N/A
9.2a	On-airport management of Aboriginal cultural heritage and European heritage will be achieved through the implementation of the SMWSA Aboriginal Cultural Heritage and the European and Other Heritage CEMPs. Principal Contractors will develop and implement a Heritage Management Plan for all off-airport works. Plans will include as a minimum:	Section 3.4 and Appendix D. Consultation with RAPs is detailed in Sydney Metro Aboriginal Cultural Heritage Management Plan
	i. Evidence of consultation with Registered Aboriginal Parties and the NSW Heritage Council;	
	ii. Identify initiatives that will be implemented for the enhancement of heritage values and minimisation of heritage impacts, including procedures and processes that will be used to implement and document heritage management initiatives;	Section 6.1 and 6.5 PUDCLP
	iii. The heritage mitigation measures as detailed in the planning approval documentation;	Section 6
	iv. The responsibilities of key project personnel with respect to the implementation of the plan;	Section 7.1
	v. Procedures for interpretation of heritage values uncovered through salvage or excavation during detailed design	Section 6 and 6.5 PUDCLP

Construction Environmental Management Framework (CEMF) Requirements

Reference	Requirement	Where addressed
	vi. Procedures for undertaking salvage or excavation of heritage relics or sites (where relevant), consistent with and any recordings of heritage relics prior to works commencing that would affect them;	Section 6.5
	vii. Details for the short and / or long term management of artefacts or movable heritage;	Section 6
	viii. Details of management measures to be implemented to prevent and minimise impacts on heritage items (including further heritage investigations, archival recordings and/or measures to protect unaffected sites during construction works in the vicinity);	Section 6
	ix. Procedures for unexpected heritage finds, including procedures for dealing with human remains;	Section 6.10, Appendix B and Appendix C
	x. Heritage monitoring requirements; and	Section 7.3
	xi. Compliance record generation and management.	Section 7.5
9.2b	The Contractor's regular inspections will include checking of Aboriginal and non-Aboriginal heritage mitigation measures.	Section 7.3
9.2c	Compliance records will be retained by the Contractor. These will include:	Section 7.5
	i. Inspections undertaken in relation to heritage management measures;	
	ii. Archival recordings undertaken of any heritage item;	Section 6.4
	iii. Unexpected finds and stop work orders; and	Section 6.10
	iv. Records of any impacts avoided or minimised through design or construction methods.	Section 7.5 and Design compliance reports
9.3a	The on-airport Aboriginal Cultural Heritage and European and Other Heritage CEMPs and the off-airport Heritage Management Plan will include the following mitigation measures as well as relevant Conditions:	Section 6.2
	i. Induction courses for site workers will include training in the identification of Aboriginal artefacts and management of Aboriginal heritage values.	
	ii. Any heritage item not affected by the works will be retained and protected throughout construction;	Section 6 and Section 6.11
	iii. During construction undertake professional archaeological investigation, excavation, and reporting of any historical Indigenous heritage sites of state significance which will be affected. Reporting may be completed as construction progresses;	Section 6
	iv. Undertake archival recordings of all non-Indigenous heritage items affected by the works prior to commencement of works; and	Section 6.4
	v. Implement unexpected heritage find procedures for Indigenous and non-Indigenous heritage items.	Section 6.10

Appendix B Sydney Metro Unexpected Heritage Finds Procedure



Unexpected Heritage Finds Procedure

SM-20-00099497

Metro Body of Knowledge (MBoK)

Applicable to:	Sydney Metro
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Name of Approver:	Carolyn Riley
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Digital Signature:	

Table of contents

1.	Introduction	4
1.1.	Purpose	4
1.2.	Scope	4
1.3.	Definitions and abbreviations	5
1.3.1.	What is an unexpected heritage find?	5
1.3.2.	Abbreviations	5
1.4.	Accountabilities	6
2.	Types of unexpected heritage finds and their statutory protections.....	6
2.1.	Aboriginal objects	6
2.2.	Historic heritage items	7
2.2.1.	Archaeological relics	7
2.2.2.	Other historic heritage.....	8
2.3.	Human skeletal remains	8
3.	Unexpected heritage finds procedure.....	10
4.	Responsibilities.....	16
5.	Seeking advice	16
6.	Related documents and references	17
7.	Superseded documents	17
8.	Document history.....	17
	Appendix A: Examples of unexpected heritage finds	18
	Appendix B: Unexpected heritage find recording form.....	24
	Appendix C: Photographing unexpected heritage items	25
	C1: Context and detailed photographs	25
	C2: Photographing distinguishing features	25
	C3: Photographing bones.....	26
	Appendix D: Archaeological/heritage advice checklist.....	28

Figures

Figure 1: Summary of steps to be taken on the discovery of an unexpected heritage item..	10
Figure 2: Aboriginal stone artefacts found at the Wickham Transport Interchange, 2015	18
Figure 3: Aboriginal artefacts (shell material) found at the Wickham Transport Interchange, 2015.....	18
Figure 4: 1840s seawall and 1880s retaining wall uncovered at Balmain East, 2016	19
Figure 5: Sandstone pavers uncovered at Balmain East, 2016	19
Figure 6: Platform at Hamilton Station classified as a ‘work’ by the project archaeologist, Wickham Transport Interchange project, 2015	20
Figure 7: Sandstone flagging and cesspit, Wynyard Walk project, 2014.....	20
Figure 8: Chinese Ming Dynasty pottery and English porcelain/pottery dating back to the early nineteenth century, Wynyard Walk project, 2014.....	21
Figure 9: Pottery made by convict potter Thomas Ball during the early settlement period, Wynyard Walk project, 2014	21
Figure 10: Top left hand picture continuing clockwise: Stock camp remnants (Hume Highway Bypass at Tarcutta); linear archaeological feature with post holes (Hume Highway Duplication), animal bones (Hume Highway Bypass at Woomargama); cut wooden stake; glass jars, bottles, spoon and fork recovered from refuse pit associated with a Newcastle Hotel (Pacific Highway, Adamstown Heights, Newcastle area)	22
Figure 11: Culturally modified stone discovered on Main Road 92, about two kilometres west of Sassafras. The remaining images shown a selection of stone artefacts retrieved from test and salvage archaeological excavations during the Hume Highway Duplication and Bypass projects from 2006-2010	23

Tables

Table 1: Terms/acronyms and definitions.....	5
Table 2: Specific tasks to be implemented following the discovery of an unexpected heritage item.....	10
Table 3: Roles and responsibilities.....	16

1. Introduction

1.1. Purpose

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

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

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

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

1.2. Scope

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

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

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

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

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

CEMPs and this Procedure, the approved CEMP must be followed. Where an approved CEMP does not provide sufficient detail on particular issues, this Procedure should be used as a reference.

1.3. Definitions and abbreviations

1.3.1. What is an unexpected heritage find?

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

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

1.3.2. Abbreviations

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

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

Table 1: Terms/acronyms and definitions

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

	Definitions
NPW Act	NSW <i>National Parks and Wildlife Act 1974</i> .
Relic	A relic means any deposit, artefact, object or material evidence that: <ol style="list-style-type: none"> relates to the settlement of the area that comprises NSW, not being Aboriginal settlement; and is of State or local significance.
SSD	State Significant Development.
SSI	State Significant Infrastructure.

1.4. Accountabilities

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

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

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

2. Types of unexpected heritage finds and their statutory protections

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

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

Unexpected heritage finds are categorised as either:

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

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

2.1. Aboriginal objects

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

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

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

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

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

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

IMPORTANT!

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

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

2.2. Historic heritage items

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

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

2.2.1. Archaeological relics

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

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

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

IMPORTANT!

All relics are subject to statutory controls and protection.

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

2.2.2. Other historic heritage

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

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

2.3. Human skeletal remains

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

Human skeletal remains can be classified as:

- Reportable deaths;
- Aboriginal objects; or
- Relics.

Where it is suspected that less than 100 years has elapsed since death, human skeletal remains come under the jurisdiction of the State Coroner and the *Coroners Act 2009* (NSW). Under s35(2) of the Act, a person must report a death to a police officer, a coroner or an assistant coroner as soon as possible. This applies to all human remains less than 100 years old regardless of ancestry. Public health controls may also apply.

Where the remains are suspected of being more than 100 years old, they are considered to be either Aboriginal objects or non-Aboriginal relics, depending on the ancestry of the individual. Aboriginal human remains are protected under the NPW Act, while non-Aboriginal heritage remains are protected under the Heritage Act.

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

IMPORTANT!

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

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

3. Unexpected heritage finds procedure

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

IMPORTANT!

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



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

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

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

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

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

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

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

4. Responsibilities

Table 3: Roles and responsibilities

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

5. Seeking advice

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

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

6. Related documents and references

Related documents and references

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

7. Superseded documents

Superseded documents

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

8. Document history

Version	Date of approval	Notes
1.1	June 2017	Incorporates Environmental Representative comments
1.2	-	Amends p13 step 8 reference to s146
1.3	-	Incorporates Planning Mods 1-4 including amended CoA E20
1.4	March 2018	Incorporates Environmental Representative comments
2.0	-	Removes SSI 15-7400 COA reference
3.0	-	Revises definitions
3.1	-	Revises procedure
3.2	-	Revises roles and responsibilities
3.3	-	Minor edits and corrections
4.0	16 August 2021	Revises definitions and procedure; references the Sydney Metro Exhumation Management Procedure v5 with amendments throughout for consistency with that document. Updates to related documents and references.
4.1	December 2022	Minor clarifications and updates to the process for the notification of the discovery of a relic under section 146 of the <i>Heritage Act 1977</i> to address a change in Heritage NSW's process.

Appendix A: Examples of unexpected heritage finds



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



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



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



Figure 5: Sandstone pavers uncovered at Balmain East, 2016



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



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



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



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



Figure 10: Top left hand picture continuing clockwise: Stock camp remnants (Hume Highway Bypass at Tarcutta); linear archaeological feature with post holes (Hume Highway Duplication), animal bones (Hume Highway Bypass at Woomargama); cut wooden stake; glass jars, bottles, spoon and fork recovered from refuse pit associated with a Newcastle Hotel (Pacific Highway, Adamstown Heights, Newcastle area)



Figure 11: Culturally modified stone discovered on Main Road 92, about two kilometres west of Sassafras. The remaining images shown a selection of stone artefacts retrieved from test and salvage archaeological excavations during the Hume Highway Duplication and Bypass projects from 2006-2010

Appendix B: Unexpected heritage find recording form

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

Appendix C: Photographing unexpected heritage items

Photographs of unexpected finds in their current context (*in situ*) may assist archaeologists/Aboriginal heritage consultants to better identify the heritage values of the item. Emailing good quality photographs to specialists can allow for better quality and faster heritage advice. The key elements that must be captured in photographs of the item include its position, the item itself and any distinguishing features. All photographs must have a scale (ruler, scale bar, mobile phone, coin etc.) and a note describing the direction of the photograph.

C1: Context and detailed photographs

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

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

C2: Photographing distinguishing features



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

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



Figure 3: Ceramic bottle artefact with stamp.

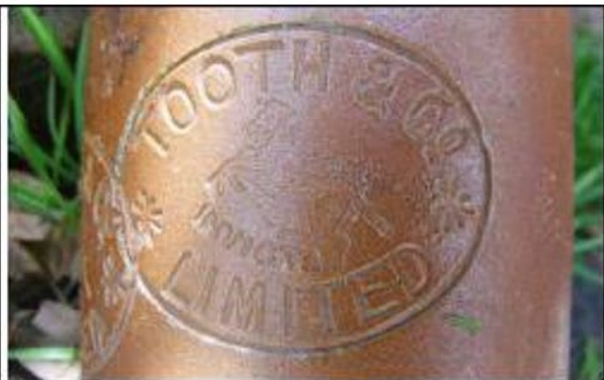


Figure 4: Detail of the stamp allows 'Tooth & Co Limited' to be made out. This is helpful to a specialist in gauging the artefact's origin, manufacturing date and likely significance.

C3: Photographing bones

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

Ensure that photographs of bones are not concealed by foliage (example below left, labelled Figure 5) as this makes it difficult to identify. Minor hand removal of foliage can be undertaken as long as disturbance of the bone does not occur. Excavation of the ground to remove bone(s) should not occur, nor should they be pulled out of the ground if partially exposed.

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



Figure 5: Bone concealed by foliage.



Figure 6: Bone covered in sediment

Ensure that all close up photographs include the whole bone and then specific details of the bone (especially the ends of long bones, the *epiphysis*, which is critical for species identification). The images below (labelled Figure 7, left and Figure 8, right) are examples of good photographs of bones that can easily be identified from the photograph alone. They show sufficient detail of the complete bone and the epiphysis.



Figure 7: Photograph showing complete bone.



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

Appendix D: Archaeological/heritage advice checklist

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



Appendix C Sydney Metro Exhumation Procedure



Exhumation Management Procedure

SM-20-00099495 (formerly SM ES-PW-315)

Metro Body of Knowledge (MBoK)

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Table of contents

1.	Introduction	4
1.1.	Purpose and scope.....	5
2.	Overview of legislative requirements for dealing with human remains	6
2.1.	Discovery of human remains and forensic cases: <i>NSW Coroners Act 2009</i>	6
2.2.	Historic human remains: <i>Heritage Act 1977</i> and <i>Guidelines for the Management of Human Skeletal Remains under the Heritage Act 1977</i>	7
2.3.	Aboriginal human remains: <i>National Parks and Wildlife Act 1974</i>	7
2.4.	Exhumation of human remains: <i>Public Health Regulation 2022 (NSW)</i>	8
2.5.	<i>Work Health and Safety Act 2011</i>	8
3.	Procedure for the discovery and management of human remains.....	8
3.1.	Initial discovery of bones: What do we do?	8
3.1.1.	Stop Work and preliminary notification.....	8
3.1.2.	Confirm the remains are human.....	9
3.1.3.	Notification based on jurisdiction (forensic or archaeological) ..	10
3.2.	Archaeological exhumation methodology.....	10
3.2.1.	Securing the site	10
3.2.2.	Excavation Director.....	11
3.2.3.	Excavation and recording.....	11
3.2.4.	Recording	11
3.2.5.	Excavation	11
3.2.6.	Relocation of bones	12
3.3.	Resume work.....	12
3.4.	Reporting.....	12
4.	Excavation and post-excavation tasks	14
4.1.	Research questions	14
4.1.1.	Social history and burial practices.....	14
4.1.2.	Environmental factors and scientific analysis	15
4.2.	Process for DNA testing, isotope analysis and environmental sampling...	15
4.2.1.	Pre-excavation.....	15
4.2.2.	Excavation	15
4.2.3.	Post-Excavation.....	16
4.3.	Reporting.....	16
4.4.	Public involvement.....	17
4.5.	Temporary storage and permanent repository or resting place for remains	17
4.5.1.	Temporary storage.....	17
4.5.2.	Permanent repository or resting place for remains	17
5.	Definitions.....	18
6.	Accountabilities.....	18
7.	Related documents and references	18
8.	Superseded documents	19
9.	Document history.....	19

Appendix A: NSW Health Application Form to Exhume Human Remains 20

Figures

Figure 1: Sydney Metro overview and station locations 5
Figure 2: Exhumation procedure flow chart 13

1. Introduction

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

The procedure is applicable to all stages of any Sydney Metro project and to all staff and contractors.

Sydney Metro is Australia's biggest public transport project. By 2030, Sydney will have a network of four metro lines, 46 stations and 113km of new metro rail.

Sydney Metro is revolutionising how Australia's biggest city travels, connecting Sydney's north west, west, south west and greater west to fast, reliable turn-up-and-go metro services with fully accessible stations.

The metro program includes the operational Metro North West Line and three projects under construction:

- City & Southwest
- West
- Western Sydney Airport

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

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

This ExMP should be read in conjunction with [SM-20-00099497 Unexpected Heritage Finds Procedure](#).

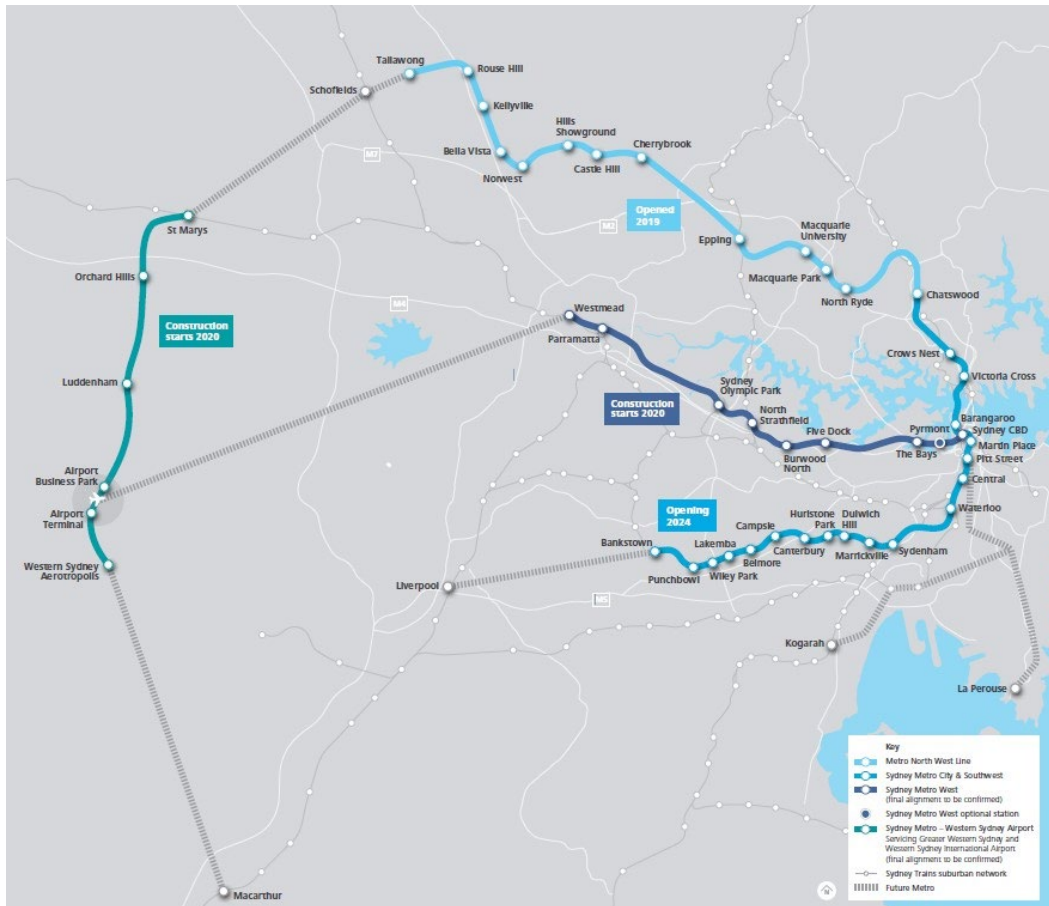


Figure 1: Sydney Metro overview and station locations

1.1. Purpose and scope

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

- Overview of legislative requirements for dealing with human remains (e.g. *Coroners Act 2009*, *Heritage Act 1977*, *Guidelines for the Management of Human Skeletal Remains 1988*, and the *Public Health Regulations 2022*).
- A flow chart process to be followed when human remains are uncovered.
- An archaeological methodology for the excavation of remains including processes for appropriately handling remains in accordance with the relevant guidelines (see section 2.3 and 2.4 below).
- Post-exhumation management processes including relocation, processing and long-term arrangements.
- Process for nomination of a physical anthropologist and temporary storage location.
- Process for additional analysis including DNA testing, isotope analysis and environmental sampling, and discussion on requirements for public involvement.

2. Overview of legislative requirements for dealing with human remains

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

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

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

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

35 Obligation to report death or suspected death

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

Maximum penalty (subsection (2)): 10 penalty units.
- (3) *A police officer to whom a death or suspected death is reported under this section is required to report the death or suspected death to a coroner or assistant coroner as soon as possible after the report is made.*
- (4) *An assistant coroner to whom a death or suspected death is reported under this section is required to report the death or suspected death to a coroner as soon as possible after the report is made.*
- (5) *A coroner to whom a death or suspected death is reported under this section is required to inform the State Coroner of the report as soon as practicable after the report is made.*

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

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

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

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

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

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

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

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

If suspected human skeletal remains are uncovered at any time during the archaeological management program, the process outlined in this ExMP and detailed in the flow chart is to

¹ NSW Heritage Office, 1998.

² Heritage Branch of the Department of Planning, 2009.

³ NSW Department of Environment and Conservation, 2005.

⁴ Office of Environment and Heritage, 2011.

⁵ Department of Environment, Climate Change and Water, 2010.

⁶ Office of Environment and Heritage, 2010.

be followed. Management of the remains would be guided by consultation with the nominated Registered Aboriginal Parties (RAPs) for the project, in adherence to the ACHAR.

2.4. Exhumation of human remains: *Public Health Regulation 2022 (NSW)*

The *Public Health Regulation 2022* provides specific regulation for the exhumation of human remains in NSW.

Under Clause 95 of the Regulation, an application for approval to exhume the remains of a dead person may be made to the Secretary via an approved form to the Local Public Health Unit delegated to act on behalf of the Secretary.

Refer to Appendix 1 for a copy of the approved form.

2.5. *Work Health and Safety Act 2011*

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

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

3. Procedure for the discovery and management of human remains

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

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

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

3.1.1. Stop Work and preliminary notification

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

The Project Excavation Director must be notified.

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

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

3.1.2. Confirm the remains are human

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

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

What?	Confirmation that the remains are human, their burial context - whether they are forensic (less than 100 years) or archaeological (older than 100 years) and suspected ancestry (Aboriginal or non-Aboriginal).
Who?	Excavation Director and or Forensic or physical anthropologist, or archaeologist with specialist skills such as an osteoarchaeologist. Notification to the NSW Police will be undertaken by the Sydney Metro Environmental Manager.
How?	Consultation could be undertaken as either an on-site inspection or via good quality photos sent to the nominated technical specialist of 1) the remains; and 2) the site general site location of the discovery.

Actions	<p>Contact nominated technical specialists to confirm that the remains are: a) human, b) burial context (archaeological or forensic), and c) suspected ancestry (Aboriginal or non-Aboriginal).</p> <p>For the duration of the Sydney Metro project, the nominated technical specialists are:</p> <ul style="list-style-type: none"> • Forensic Anthropologist – TBC by contractor for project area. • Nominated Excavation Director – TBC by contractor for project area. • Sydney Metro Environmental Manager to conduct and or oversee liaison with NSW Police. <p>The archaeologist may be able to identify the nature of remains without input from the Forensic Anthropologist. The Forensic Anthropologist should be contacted as required.</p>
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3.1.3. Notification based on jurisdiction (forensic or archaeological)

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

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

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

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

3.2. Archaeological exhumation methodology

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

3.2.1. Securing the site

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

plastic tape or flagging, with only technical staff allowed within this area for the duration of exhumation activities.

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

3.2.2. Excavation Director

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

3.2.3. Excavation and recording

Exhumation and recording are to be undertaken in accordance with best practice forensic and Heritage Council of NSW guidelines. Prior to removal, the remains should be fully recorded in situ to understand their surrounding archaeological context. This will include recording any disturbances to the burial and the identification of bones present. In some cases, the deposit of bones may be a mixture of articulated and disarticulated remains. Care should be taken to distinguish articulated remains and to assess if they represent commingled individuals or disturbed remains belonging to one individual, and to record them accordingly.

3.2.4. Recording

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

3.2.5. Excavation

- Detection of the extent of the grave/remains (if disarticulated).
- Surface soils removed in excavation units of 100mm (site dependent) using small hand tools.
- Expose remains with soft paint brushes and pedestal the remains.

- Record position and depth of remains.
- Soil removed is to be sieved through 3mm mesh to examine for teeth and bone fragments.

Soil samples may be taken from the abdominal and/or chest areas of the body (articulated remains) to retrieve further evidence.

- Exhumation must be under the control of the Excavation Director, with the assistance of a Forensic Anthropologist if required. Exhumation permit/s, provided by NSW Ministry of Health may also require the presence of an authorised officer or a member of staff of the Ministry of Health.
- Further excavation of the bottom of the pit (grave) following removal to confirm the absence of further remains.

3.2.6. Relocation of bones

Removal and collection of skeletal remains is to follow the standard forensic practice of labelling as follows:

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

3.3. Resume work

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

3.4. Reporting

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

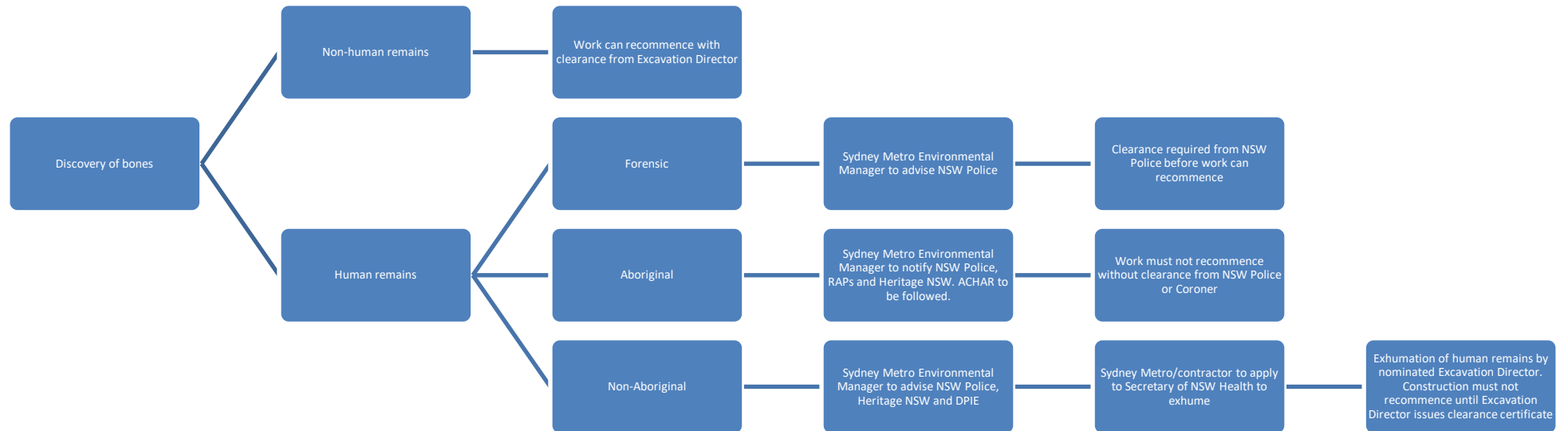


Figure 2: Exhumation procedure flow chart

4. Excavation and post-excavation tasks

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

4.1. Research questions

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

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

4.1.1. Social history and burial practices

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

4.1.2. Environmental factors and scientific analysis

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

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

4.2.1. Pre-excavation

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

4.2.2. Excavation

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

- The location, quantity and material (bone, teeth, hair, soil, wood) of samples will be determined by the Excavation Director or Forensic Anthropologist prior to its collection.
- Samples would be stored in a safe, secure and climate controlled location while excavations are in progress. This would be chosen by the Excavation Director or Forensic Anthropologist on site.
- Each collected sample would be given a unique catalogue number and a sample register would be recorded throughout the excavation.

- 'Clean excavation' procedures would be followed during the excavation of burials and during the sample collection process⁷. This would include:
 - Latex gloves would be worn by individuals excavating and/or handling bone or soil samples. Gloves would be changed for each bone and/or individual to prevent cross-contamination;
 - Excavation tools/brushes would be cleaned prior to and after the collection of each sample to prevent cross-contamination;
 - In some cases, a face mask would be worn when samples for DNA analysis are being collected;
 - Bone samples for DNA testing would be collected with surrounding in situ soil and should not be cleaned prior to bagging;
 - It may be necessary for individuals involved in sample collection to submit DNA for comparison in the event of cross-contamination; and
 - All bags containing samples for analysis would be bagged and labelled appropriately to prevent cross contamination and ensure they are handled and stored correctly.

4.2.3. Post-Excavation

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

4.3. Reporting

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

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

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

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

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

4.4. Public involvement

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

Public involvement may include:

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

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

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

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

4.5.1. Temporary storage

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

4.5.2. Permanent repository or resting place for remains

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

5. Definitions

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

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

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

6. Accountabilities

The Executive Director, Environment, Sustainability & Planning is accountable for this Procedure including approving the document and monitoring its effectiveness. The Senior Advisor Heritage is responsible for overseeing the implementation of this Procedure, and performing a formal review of the document.

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

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

7. Related documents and references

Related documents and references

- [SM-20-00099497 Unexpected Heritage Finds Procedure](#)
- [NSW Health Application to Exhume Human Remains](#)
- Department of Environment, Climate Change and Water 2010, Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010
- Department of Environment, Climate Change and Water 2010, Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW

8. Superseded documents

Superseded documents

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

9. Document history

Version	Date of approval	Notes
1.1	May 2017	New IMS document.
2.0	July 2017	Incorporates Stage 2 (section 3)
2.1	February 2019	Extended for Metro Program wide application, includes changes specific Central Station management, and incorporates comments received from the State Coroner's Office, NSW Police, NSW Health, and Sydney Metro Environmental, Environmental Representatives engaged on the Central site and the Office of Environment and Heritage (OEH).
2.2	February 2019	Incorporates comments received from Artefact Heritage and Dr Denise Donlon issued to Health and OEH Heritage Division for consultation.
3.0	May 2019	Incorporates Health, Coroner and OEH comments.
4.0	April 2020	Updates to remove specific references to City and South West and Central Station. Change of title to "Procedure". Update to references.
5.0	16 August 2021	Updates to related documents and references.
6.0	December 2022	Minor clarifications to the procedure.


Appendix A: NSW Health Application Form to Exhume Human Remains

For a copy of the form see [NSW Health Application to Exhume Remains](#).

NSW Health Form

Application to Exhume Remains

Public Health Regulation, 2022 Section 95



In accordance with the requirements of Section 95(2) of the Public Health Regulation 2022,

I, _____
(Full name of applicant)

of _____ hereby
(Address)

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

from Grave No: _____, Section _____, being a single
interment within the _____ Cemetery,
for the purpose of _____

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

The deceased:

- was not known to be infected with a prescribed infectious disease as defined in Section 79 of the Public Health Regulation 2022; **OR**
- was known to be infected with a prescribed infectious disease as defined in Section 79 of the Public Health Regulation 2022

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

- The executor of the estate of the deceased; **OR**
- The nearest surviving relative of the deceased; **OR**
- If there is no executor or relative available to make the application, a proper person can make the application for the reasons set out below:

(Full reasons for proper person to make application)

NSW Health **Application to Exhume Remains** Form
Public Health Regulation, 2022 Section 95

Attached are:

- A certified copy of the death certificate of the deceased issued under the Births Deaths and Marriages Registration Act 1995.
- A statutory declaration as to:
 - My relationship to the deceased; and
 - the wishes of the deceased regarding the disposal of the body (if known);
 - the reasons why the Secretary may consider me the proper person in all circumstances to make the application (if applicable)
- The application fee of \$ _____

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

by _____

employed with _____
(Funeral Director/Cemetery)

in the capacity of _____

Signature of applicant: _____

Date: _____

Appendix D Consultation

Consultation Summary

Document Reference	Stakeholder	Comment	Parklife Metro D&C Response
Section 4	Heritage NSW	Please provide a clear and complete table of heritage items along with each item's full and correct name (as stated in the heritage listing), it's address or Lot/DP, its listing number/s and the listing each item is included on (including multiple lists, where applicable). Listings should include the names of local Councils for Local Environmental Plan listings and the relevant State agencies for section 170 Heritage and Conservation Register. Items should be referred to with consistent naming, as established in this section, throughout the document. The archaeological site should be clearly named in the list and its listing status clarified.	The items heritage listing and significant is provided in Table 5. It is noted some items are unlisted and this is also noted in Table 5. An additional line item has been provided in Table 5 to describe the archaeological site at St Marys Station. Clarification has been made in Section 4 regarding the listing of the Warragamba Supply Scheme under Water NSW section 170 register.
Figures 2 – 6	Heritage NSW	the mapping of heritage items is to clearly indicate the relevant data. In relation to the mapping in Figures 2 to Figure 6, please update to make colours consistent throughout all figures (ie SHR boundaries shown in the same colour in each Figure). Clear colour distinction for separate elements is also required. The colour mapping for 'cut-and-cover' areas and heritage items are both indicated in pink and should be amended to use more distinctive colours. The mapping for the archaeological site should also indicate that it is within the St Mary's Station SHR curtilage.	The figures included within the NAHMP are extracted from the EIS (Chapter 12) and the Archaeological Research Design (Artefact April, 2021) The detail in the Figures is unable to be amended, however it is considered the information provided is clear and appropriate for inclusion in the NAHMP without further revision.
Section 4	Heritage NSW	The heritage listing status for the Warragamba Pipelines is to be ascertained and made clear in the document. It should be stated that, while assessed as being of State heritage significance, the pipeline is not listed on the SHR but is included on the WaterNSW section 170 Heritage and Conservation Register.	Clarification has been made in Section 4 regarding the listing of the Warragamba Supply Scheme under Water NSW section 170 register

Document Reference	Stakeholder	Comment	Parklife Metro D&C Response
Section 3	Heritage NSW	In Section 3 Legal and Other Requirements, please include a section titled Other Environmental Documents, that references for other environmental documents that intersect with the NAHMP (ie, full reference for the ARD or other specialist reports, the CEMP).	The ARD is fully referenced in the Acronym and Definitions table as well as in Section 4. No additional references have been made
Section 2	Heritage NSW	In Table 1 Objectives and Targets, it is suggested that the Targets and Measurement Tools are refined to be more specific, for example: “100% of training completed on time for all staff”, “Zero breaches or regulatory infringements”	The objectives and targets are consistent with the Sydney Metro Construction Environmental Framework. The existing targets and measurement tools are considered appropriate for the NAHMP.
Section 6.5	Heritage NSW	Section 6.5 Salvage – The terminology in this section requires review to remove confusion. It’s unclear if this section relates to archaeology, significant fabric or moveable heritage. Please review to clarify which element of heritage management it is addressing, as each has different management requirements.	Section has been updated to clarify salvage is applicable to moveable items and significant fabric only. A note has been included to clarify no salvage is anticipated for SSTOM Works as all salvage is anticipated to be completed during prior works contracts.
Section 6.5	Heritage NSW	The term ‘unexpected find’ generally refers to the management of unexpected archaeological finds. The purpose of the Unexpected Finds Procedure is to address unexpected archaeological finds (rather than significant fabric or moveable heritage items). The process for unexpected finds should be as per the formal Sydney Metro Unexpected Finds Procedure (rather than the 3-step process listed in Section 6.5).	Reference to the Unexpected Finds Procedure has been removed from Section 6.5.
Section 6.5	Heritage NSW	‘Significant fabric’ generally refers to the construction material of a building that contributes to its heritage values. ‘Salvage’ generally refers to building materials or features that are to be kept rather than disposed of during demolition. Moveable heritage may be building fabric but also includes items of heritage significance that are not fixed in a location, such as furniture or objects.	Noted. No further changes to Section 6.5

Document Reference	Stakeholder	Comment	Parklife Metro D&C Response
Section 6.5	Heritage NSW	It should be clearly stated that reuse may include reuse at an alternative site, display or interpretation. If it is anticipated that significant fabric will be impacted by the work, a Salvage Report should be prepared that identifies and determines appropriate management of the fabric	In accordance with NAH1 all salvage works have been completed by prior contractors, Reuse options have been included for completeness in the methodology (in dot point 2 of Section 6.5). It is noted that there is no requirement in the Conditions or REMMs for a Salvage Report.
Section 6.5	Heritage NSW	<p>Consider use of the following salvage methodology:</p> <p>Salvage of fabric will take place where significant fabric has been identified. Salvage will take place prior to demolition and include:</p> <ul style="list-style-type: none"> o A site inspection by a suitably qualified heritage consultant to assess and determine any elements which would be appropriate for archival recording and/or salvage. o The completion of a significant fabric and moveable heritage salvage register for each site inspected. o Any significant elements or moveable heritage items which are considered to have potential for reuse or reinstatement will be salvaged. This may include potential for use in interpretation. If any salvage of fabric from State Heritage Register items is proposed, this will take place in consultation with Heritage NSW. 	Minor updates to Section 6.5 have been made
Section 6.7 Section 6.10	Heritage NSW	<p>A clear and accurate provision for management and protection of historical archaeology is required. This includes clear direction in relation to a stop work order for unexpected finds. In relation to the management of archaeology:</p> <ul style="list-style-type: none"> o In Section 6.7 Archaeological Excavation, please clearly state if there is any identified excavation required. o An unexpected find would need to be notified immediately, rather than delayed in a Final Archaeological Report. When an unexpected find is uncovered, an archaeological excavation permit under section 140 or section 60 of the Heritage Act 1977 may be required to further investigate or remove it, if investigation is not covered by an existing approval. All bones must be treated as potential human skeletal remains and work around them must stop while they are appropriately protected and investigated, the relevant authorities notified, and approvals received. This should be discussed in Section 6.10 Unexpected Heritage Finds. 	<p>An AMS will be prepared for works around the St Marys Good Sheds, which is identified as an archaeological management zone for potential archaeological remains. These works would be carried prior to station precinct construction. The requirement for archaeological investigation will be determined by the Excavation Director as part of the preparation of the AMS.</p> <p>Additional detail has been provided in Section 6.10 to address the first step of the Unexpected Heritage Finds Procedure. All</p>

Document Reference	Stakeholder	Comment	Parklife Metro D&C Response
		o In Section 6.10 Unexpected Heritage Finds, include the statement: Where either unexpected heritage finds or potential human remains are identified, the first step is to stop all works in the vicinity of the find, and to notify the Sydney Metro Environment Manager and the Excavation Director.	further detail is contained within Appendix B and C.
Section 7.4	Heritage NSW	In Section 7.4 Hold Points, consider the suitability of the following hold points and include as appropriate: identification of an unexpected heritage find, pre-demolition of significant fabric, establishing protection measures for heritage items during works	The hold points for the NAHMP have been developed with consideration of the CEMF. No additional hold points have been included.
Section 6.11	Heritage NSW	<p>Section 6.11 ECMs and Exclusion Zones. Please provide a definitive statement about the locations of exclusion zones. It is also desirable to include the kinds of protection that will be needed to ensure significant fabric is not damaged during construction and when and for how long it will be implemented (ie before works for the duration of the works, then made good). Include a basic statement of methodology in relation to temporary relocation of the jib crane at St Mary's Station to ensure its protection, including that it is removed without damage to significant fabric and that it is stored in an appropriate location and secure conditions during works. State if there is any required protection of heritage items in relation to the construction of the aerial concourse, lifts and connections at St Mary's Railway Station.</p> <p>It is noted that the Guideline for Development Adjacent to the Upper Canal and Warragamba Pipelines, prepared by WaterNSW, dated September 2021, states:</p> <p><i>"As critical components of Sydney's water supply system, applicants and authorities must ensure the Corridors including all support structures, are adequately protected from damage during construction. Any damage that does occur to water supply infrastructure or land in the Corridors, as a result of development or activities, will be the responsibility of the developer or builder to rectify to the satisfaction of WaterNSW."</i></p>	<p>Additional detail has been included to define exclusions zones around the jib crane and good shed within the St Marys Railway Station item.</p> <p>Jib crane management has been further described in an additional Section (6.8.1).</p> <p>An exclusion zone may also be applied to the Warragamba Water Supply Scheme crossing depending on the construction methodology required.</p> <p>No other protection to items within the St Marys Railway Station is applicable to SSTOM works.</p>
General	Heritage NSW	Suggest inclusion of a complaints management process.	Complaints management process is outlined within the CEMP. Reference to the section in the CEMP added to NAH_M1 in Table 7 of the NAHMP.

Document Reference	Stakeholder	Comment	Parklife Metro D&C Response
General	Heritage NSW	Suggest a section is added for Roles & Responsibilities, via a summary table, which outlines the relevant roles (ie Project Director, Environment Manager, Site Director, Excavation Director, Heritage Consultant, etc) in relation to the NAHMP implementation and their respective responsibilities.	The role of the Heritage specialist is outlined in Section 6.3. The Excavation Directors roles are summarised in Section 7.1. The responsibility for implementation of management measures is included in Table 6. The current detail is considered appropriate.
General	WaterNSW	There a number of reference inconsistencies throughout the document as they relate to the WaterNSW Guideline for Development. The correct reference is the WaterNSW 2021 version...We request that the references be corrected in the sub-plan, so that the most up to date document is considered in any management response.	The correct reference has been updated through the document
Section 6.4	Penrith City Council	Council requests a copy of the archival recordings stated to have been undertaken.	Parklife Metro D&C are not able to access this information. Sydney Metro have been advised of the PCC request for action, however it is noted that Condition E25 requires that the Archival Recording Report should be submitted to Councils within 12 months of completion.
Section 6.4	Penrith City Council	It is noted that works are occurring in proximity to listed heritage items that are unlikely to be impacted, but there is still a potential for these items to be adversely impacted. It is therefore requested that an archival recording is undertaken for any listed heritage items within proximity to the works.	Archival recording has been carried out in accordance with the Conditions of Approval and Revised Environmental Mitigation Measures. No further archival recording is proposed by this NAHMP unless triggered by an unexpected find and in accordance with the ARD.
General	Penrith City Council	It is noted that an appropriately qualified heritage specialist is to be engaged for the project. It is requested that Council be furnished with details, including CV's of the shortlist of candidates for review and comment prior to engagement.	A heritage architect will be involved in all heritage interpretation and precinct design at St Marys Station. The qualifications of this specialist will be made available to Sydney Metro. This process is managed

Document Reference	Stakeholder	Comment	Parklife Metro D&C Response
			through the preparation of the Place, Urban Design and Corridor Landscape Plan (PUDCLP). No additional review by Penrith City Council is proposed.
General	Penrith City Council	It is recommended that the appointed qualified heritage specialist is to be employed throughout the construction phase to attend regular site inspections, issue instructions, take photographs and record meeting notes especially relating to latent conditions and to ensure the approved plans and documents have been followed. Site visits are recommended to occur weekly as a minimum, particularly for works associated with St Marys Station. Prior to the issue of an Occupation Certificate, the consultant heritage architect is to submit a report detailing site inspections, issued instructions, photographs, meeting notes and confirmation that the works have adhered to approved plans and approval conditions. It is requested that Council be furnished with the final report.	The function of the heritage specialist is to provide specific advice to Parklife Metro D&C as required. The role of the heritage architect sits within the design brief for SSTOM works and is not discussed within this NAHMP.
General	Penrith City Council	A detailed archival recording should be undertaken for the jib crane at St Marys Station that is proposed to be dismantled and reassembled. Additionally, an archival recording of the jib crane is to be completed whilst it is being dismantled.	The methodology for the jib crane relocation would be developed by the heritage specialist as discussed in an additional section (6.8.1)
	Liverpool City Council	No comments received	

1 Penrith City Council



Our reference: InfoStore
Contact: Lauren Vallejo
Telephone: 0439 608 010

29 March 2023

Mr Mark Chilton
Environment Manager
Parklife Metro Joint Venture

Sent by email: mark.chilton@parklifejv.au

Dear Mr Chilton

Sydney Metro – WSA: SSTOM Non-Aboriginal Heritage and Environmental Management and Monitoring

Thank you for providing Council with the opportunity to review and provide comment on the Non-Aboriginal Heritage Management Sub-Plan (Revision B), Flora and Fauna Management Sub-Plan (Revision B), and Air Quality Monitoring Program (Revision B), for works related to Stations, Systems, Trains, Operations and Maintenance.

After review of the abovementioned documentation, the following is provided.

Non-Aboriginal Heritage Management Sub-Plan (Revision B)

1. Council requests a copy of the archival recordings stated to have been undertaken.
2. It is noted that works are occurring in proximity to listed heritage items that are unlikely to be impacted, but there is still a potential for these items to be adversely impacted. It is therefore requested that an archival recording is undertaken for any listed heritage items within proximity to the works.
3. It is noted that an appropriately qualified heritage specialist is to be engaged for the project. It is requested that Council be furnished with details, including CV's of the shortlist of candidates for review and comment prior to engagement.
4. It is recommended that the appointed qualified heritage specialist is to be employed throughout the construction phase

Penrith City Council
PO Box 60, Penrith
NSW 2751 Australia
T 4732 7777
F 4732 7958
penrith.city

to attend regular site inspections, issue instructions, take photographs and record meeting notes especially relating to latent conditions and to ensure the approved plans and documents have been followed. Site visits are recommended to occur weekly as a minimum, particularly for works associated with St Marys Station. Prior to the issue of an Occupation Certificate, the consultant heritage architect is to submit a report detailing site inspections, issued instructions, photographs, meeting notes and confirmation that the works have adhered to approved plans and approval conditions. It is requested that Council be furnished with the final report.

5. A detailed archival recording should be undertaken for the jib crane at St Marys Station that is proposed to be dismantled and reassembled. Additionally, an archival recording of the jib crane is to be completed whilst it is being dismantled.

Flora and Fauna Management Sub-Plan (Revision B)

6. It is understood that majority of clearing has been undertaken during earlier stages of the project. The submitted report is satisfactory. Council has no objection, comment or recommendation.

Air Quality Monitoring Program (Revision B)

7. The proposed monitoring program is generally satisfactory.
8. The Air Quality Monitoring Program document details the baseline data available for reference during baseline modelling, as well as the parameters of the project to be monitored and frequency of monitoring to be undertaken. It is also noted the procedures to implement for additional mitigation measures should monitoring reveal unacceptable air quality impacts recorded.
9. It is noted in Section 6.1 that it is proposed to have wind conditions monitored and reviewed daily either via the project automatic weather station or via daily data available online. There is also mention of a daily review of the wind forecast in Table 7. It is recommended that wind direction and wind speed be monitored in real time, or on an hourly basis to ensure that appropriate mitigation measures can be implemented, or activities can cease within suitable timeframes to avoid any

potential impacts on surrounding sensitive receivers in terms of air quality.

10. Whilst details have been provided in relation to the methods for selection of locations for which monitoring is to be undertaken, the specific locations have not been disclosed in Section 6.3.2. It is stated within the monitoring program document that the specific sampling locations will be determined in consultation with Sydney Metro and the Environmental Representative and will consider previous monitoring locations on the Sydney Metro – WSA project. It is recommended that the Air Quality Monitoring Program document include detailed locations for which the monitoring is to be undertaken, as well as identifying such locations on a diagrammatic figure to obtain perspective in relation to the subject property and surrounding sensitive receivers.

If you have any questions about this matter, please contact myself via email to lauren.vallejo@penrith.city or on 0439 608 010.

Yours sincerely



Lauren Vallejo
Project Interface – Sydney Metro

2 Liverpool City Council

Agency	Date consulted	Details
Liverpool City Council	13 March 2023	Initial consultation – via email
	27 March 2023	Follow up email sent
	2 June 2023	Phone call
	5 June 2023	Follow up email

Note: no response currently received

From: [Mark Chilton](#)
To: nelsonp@liverpool.nsw.gov.au
Cc: wiafec@liverpool.nsw.gov.au
Subject: SMWSA Project - SSTOM Works - Non-Aboriginal Heritage Management Sub-plan Consultation
Date: Monday, 13 March 2023 2:42:00 PM
Attachments: [SMWSASSM-PLD-1NL-PC-PLN-000026_SSTOM_NAHMP_RevB.pdf](#)
[image001.png](#)
[image002.png](#)

Dear Peter Nelson,

As part of the Sydney Metro Western Sydney Airport (SMWSA) Project, Parklife Metro will be constructing the Stations, Systems, Trains, Operations and Maintenance (SSTOM) package. You're probably aware that the SMWSA Project involves the construction and operation of a new metro line around 23km in length that extends from the existing station at St Marys in the north to a new Aerotropolis Station at Bringelly in the south, but by way of providing background to the SSTOM Project, it includes the construction of the six new metro stations, installation of tracks, signalling and support systems, construction of a stabling and maintenance facility at Orchard Hills, as well as operation and maintenance of the newly constructed metro line.

In accordance with the SMWSA Project's infrastructure approval (SSI-10051), we have prepared a Non-Aboriginal Heritage Management Sub-plan for the construction of the SSTOM Works, and as per Condition C5 of the infrastructure approval, Parklife Metro requests that Liverpool City Council review this document (attached) and if required, provide comment. Any review comments or issues raised will be duly considered by Parklife Metro in the name of open and honest communication and consultation.

You may have previously been contacted by other parties regarding earlier stages of the SMWSA Project, and Parklife Metro appreciates the time and effort in reviewing documents. Therefore, Parklife Metro are more than happy to offer a suitable time to go through any comments or questions regarding the reviewed documents prior to the end of the two week review period, until 27 March 2023. If you have any questions, or would like to set up a time to meet, please contact me via reply email or on 0488 477 686.

Regards,

Mark Chilton
Environment Manager
Mob. +61-0488 477 686
email: mark.chilton@parklifejv.au
Parklife Metro JV
680 George Street, Sydney NSW 2000



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From: [Mark Chilton](#)
To: nelsonp@liverpool.nsw.gov.au
Cc: "; wiafec@liverpool.nsw.gov.au"
Subject: FW: SMWSA Project - SSTOM Works - Non-Aboriginal Heritage Management Sub-plan Consultation
Date: Monday, 27 March 2023 1:43:00 PM
Attachments: [SMWSASSM-PLD-1NL-PC-PLN-000026_SSTOM_NAHMP_RevB.pdf](#)
[image001.png](#)
[image002.png](#)

Dear Peter

In relation to the email sent to you on the 13th March should you require any further information in your review of the attached Non-Aboriginal Heritage Management Plan please contact me at your convenience.

It is our intention to finalise this document by the 10th April and we would greatly appreciate any comments you may have or alternately if you have no comment a response to this affect.

Kind Regards

Mark Chilton
Environment Manager
Mob. +61-0488 477 686
email: mark.chilton@parklifejv.au
Parklife Metro JV
680 George Street, Sydney NSW 2000



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From: Mark Chilton
Sent: Monday, March 13, 2023 2:43 PM
To: nelsonp@liverpool.nsw.gov.au
Cc: : <qus@liverpool.nsw.gov.au>; wiafec@liverpool.nsw.gov.au
Subject: SMWSA Project - SSTOM Works - Non-Aboriginal Heritage Management Sub-plan Consultation

Dear Peter Nelson,

As part of the Sydney Metro Western Sydney Airport (SMWSA) Project, Parklife Metro will be constructing the Stations, Systems, Trains, Operations and Maintenance (SSTOM) package. You're probably aware that the SMWSA Project involves the construction and operation of a new metro line around 23km in length that extends from the existing station at St Marys in the north to a new Aerotropolis Station at Bringelly in the south, but by way of providing background to

the SSTOM Project, it includes the construction of the six new metro stations, installation of tracks, signalling and support systems, construction of a stabling and maintenance facility at Orchard Hills, as well as operation and maintenance of the newly constructed metro line.

In accordance with the SMWSA Project's infrastructure approval (SSI-10051), we have prepared a Non-Aboriginal Heritage Management Sub-plan for the construction of the SSTOM Works, and as per Condition C5 of the infrastructure approval, Parklife Metro requests that Liverpool City Council review this document (attached) and if required, provide comment. Any review comments or issues raised will be duly considered by Parklife Metro in the name of open and honest communication and consultation.

You may have previously been contacted by other parties regarding earlier stages of the SMWSA Project, and Parklife Metro appreciates the time and effort in reviewing documents. Therefore, Parklife Metro are more than happy to offer a suitable time to go through any comments or questions regarding the reviewed documents prior to the end of the two week review period, until 27 March 2023. If you have any questions, or would like to set up a time to meet, please contact me via reply email or on 0488 477 686.

Regards,

Mark Chilton
Environment Manager
Mob. +61-0488 477 686
email: mark.chilton@parklifejv.au
Parklife Metro JV
680 George Street, Sydney NSW 2000



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General Correspondence

Reference No: SMWSASSM-PLD-GEN000141
Project Title: Sydney Metro Western Sydney Airport Project Delivery
Contract No: SSM - Stations, Systems, Trains, Operations and Maintenance (SSTOM)
Sub Contract: -
Orig Ref No:
DLM:

Date: 05 April 2023, 04:13 PM
From: Keirron Anderson (Parklife Metro D&C)
To: Stella Qu (Liverpool City Council)
Cc: Mark Chilton (Parklife Metro D&C) ; Foster Walker (Sydney Metro) ; Rebecca Pearson (Sydney Metro) ; Jeremy Parkin
Subject: **SMWSA Project - SSTOM Works - Non-Aboriginal Heritage, Fauna and Flora Management Sub-plan and Air Quality**

Hi All,

As part of the Sydney Metro Western Sydney Airport (SMWSA) Project, Parklife Metro will be constructing the Stations, Systems, Trains, Operations and Maintenance (SSTOM) package. Aerotropolis Station at Bringelly in the south, but by way of providing background to the SSTOM Project, it includes the construction of the six new metro stations, installation of tracks, sign

In accordance with the SMWSA Project's infrastructure approval (SSI-10051), we have prepared a Non- Aboriginal Heritage, Flora and Fauna Management Sub-plan and Air Quality M Council review these documents and if required, provide comment. Any review comments or issues raised will be duly considered by Parklife Metro in the name of open and honest c

Further to previous correspondence, we appreciate that you may have been contracted by other parties regarding earlier stages of the SMWSA Project, and therefore, Parklife Metro : have any questions or would like to set up a time to meet, please contact me via reply email or on 0488 477 686.

Regards,

Mark Chilton

Sent by Keirron Anderson

Discipline:
Sub Discipline: -

Design Series:
Design Lots:

Attachments

Sydney Metro - WSA - SSTOM - Non-Aboriginal Heritage, Fauna and Flora Management Sub-plan and Air Quality Monitoring Program Consultation.htm (10 KB), Sydney Metro - WSA - SSTOM - Non-Aboriginal Heritage, Fauna and Flora Management Sub-plan and Air Quality Monitoring Program Consultation.zip (15 MB)

3 Water NSW

From: [Justine Clarke](#)
To: [Mark Chilton](#)
Subject: WaterNSW response - SMWSA Project - SSTOM Works - Non-Aboriginal Heritage Management Sub-plan Consultation
Date: Wednesday, 15 March 2023 9:27:54 AM
Attachments: [image003.png](#)
[image004.png](#)
[image005.png](#)
[Guideline for development adjacent to the Upper Canal and Warragamba Pipelines - v4 Sept 2021.pdf](#)

Hi Mark

Thank you for allowing WaterNSW the opportunity to comment on the Non-Aboriginal Heritage Management Sub-plan prepared by Parklife Metro JV.

Water has reviewed the plan and has no specific comment to make on its contents or management measures, except that there a number of reference inconsistencies throughout the document as they relate to the WaterNSW Guideline for Development.

The correct reference is the WaterNSW 2021 version. Some reference list this as the 2020 version. I have attached the correct version for your information.

We request that the references be corrected in the sub-plan, so that the most up to date document is considered in any management response.

If you have any questions, please do not hesitate to contact me.

Kind Regards

Justine Clarke
Catchment and Asset Protection Adviser



Level 14, 169 Macquarie Street
PO Box 398
Parramatta NSW 2150

M: 0457 535 955

justine.clarke@waternsw.com.au

www.waternsw.com.au

From: Mark Chilton <mark.chilton@parklifejv.au>
Sent: Monday, 13 March 2023 2:44 PM
To: Justine Clarke <Justine.Clarke@waternsw.com.au>
Subject: ARK: SMWSA Project - SSTOM Works - Non-Aboriginal Heritage Management Sub-plan Consultation

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Dear Justine Clark,

As part of the Sydney Metro Western Sydney Airport (SMWSA) Project, Parklife Metro will be constructing the Stations, Systems, Trains, Operations and Maintenance (SSTOM) package. You're probably aware that the SMWSA Project involves the construction and operation of a new metro line around 23km in length that extends from the existing station at St Marys in the north to a new Aerotropolis Station at Bringelly in the south, but by way of providing background to the SSTOM Project, it includes the construction of the six new metro stations, installation of tracks, signalling and support systems, construction of a stabling and maintenance facility at Orchard Hills, as well as operation and maintenance of the newly constructed metro line.

In accordance with the SMWSA Project's infrastructure approval (SSI-10051), we have prepared a Non-Aboriginal Heritage Management Sub-plan for the construction of the SSTOM Works, and as per Condition C5 of the infrastructure approval, Parklife Metro requests that WaterNSW review this document (attached) and if required, provide comment. Any review comments or issues raised will be duly considered by Parklife Metro in the name of open and honest communication and consultation.

You may have previously been contacted by other parties regarding earlier stages of the SMWSA Project, and Parklife Metro appreciates the time and effort in reviewing documents. Therefore, Parklife Metro are more than happy to offer a suitable time to go through any comments or questions regarding the reviewed documents prior to the end of the two week review period, until 27 March 2023. If you have any questions, or would like to set up a time to meet, please contact me via reply email or on 0488 477 686.

Regards,

Mark Chilton
Environment Manager
Mob. +61-0488 477 686
email: mark.chilton@parklifejv.au
Parklife Metro JV
680 George Street, Sydney NSW 2000



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4 Heritage NSW

Mr Mark Chilton
Environment Manager
Parklife Metro JV
680 George Street
SYDNEY NSW 2000

By email: mark.chilton@parklifejv.au

Dear Mr Chilton

SSI 10051 - Sydney Metro Western Sydney Airport - Non-Aboriginal Heritage Management Sub-plan (NAHMP)

Thank you for your referral dated 13 March 2023, inviting comments from the Heritage Council of NSW on the above State Significant Infrastructure (SSI) in relation to the *Non-Aboriginal Heritage Management Sub Plan (NAHMP) - SMWSASSM-PLD-1NL-PC-PLN-000026, Rev B*, prepared by Parklife Metro, dated 10 March 2023.

The NAHMP forms part of the *Construction Environmental Management Plan (CEMP)* for the *Stations, Systems, Trains, Operations and Maintenance (SSTOM)* package for the Sydney Metro Western Sydney Airport. The Plan has been prepared to address the requirements of the State Significant Infrastructure Planning Approval (SSI 10051, dated 23 July 2021). The NAHMP describes how Parklife Metro will manage both known and potential impacts to non-Aboriginal heritage during the construction of the Project.

The proposed development involves:

- The construction and operation of a new metro railway line, 23km in length, that extends from the existing T1 Western Line at St Marys in the north to the Aerotropolis in the south at Bringelly. The alignment includes a combination of tunnel, surface, bridges and viaduct sections and six new metro stations, as well as a stabling and maintenance facility and an operational control centre to support the operation of the new metro railway line.

The proposed SSI affects the following State Heritage Register (SHR) items:

- St Marys Railway Station (SHR 01249) (includes the Platforms, Goods Shed, Jib Crane and Signal Box) - within the construction footprint.
- “Kelvin” (SHR 00046), 30 The Retreat, Bringelly – within the construction footprint.

It is noted that the Warragamba Pipelines has been assessed as being of State heritage significance, however, is not currently listed on the SHR.

Additionally, there are potential archaeological remains identified as follows:

- Potential archaeological remains within the St Marys Station construction site, located within the SHR listing curtilage for St Mary’s Station.

A number of items of Local heritage significance are affected by the proposal. Local heritage items are within the jurisdiction of local council and so detailed comments are not provided for these items in this response.

The following reports were considered in our assessment:

- *Non-Aboriginal Heritage Management Sub Plan - SMWSASSM-PLD-1NL-PC-PLN-000026, Rev B*, prepared by Parklife Metro, dated 10 March 2023.

As delegate of the Heritage Council of NSW, I provide the following comments:

- The NAHMP needs to clearly identify heritage items within the study area, along with all relevant basic data. Update is required to *Section 4 Existing Environment* to provide full identifying information. Please provide a clear and complete table of heritage items along with each item's full and correct name (as stated in the heritage listing), its address or Lot/DP, its listing number/s and the listing each item is included on (including multiple lists, where applicable). Listings should include the names of local Councils for Local Environmental Plan listings and the relevant State agencies for section 170 Heritage and Conservation Register. Items should be referred to with consistent naming, as established in this section, throughout the document. The archaeological site should be clearly named in the list and its listing status clarified.
- Similarly, the mapping of heritage items is to clearly indicate the relevant data. In relation to the mapping in Figures 2 to Figure 6, please update to make colours consistent throughout all figures (ie SHR boundaries shown in the same colour in each Figure). Clear colour distinction for separate elements is also required. The colour mapping for 'cut-and-cover' areas and heritage items are both indicated in pink and should be amended to use more distinctive colours. The mapping for the archaeological site should also indicate that it is within the St Mary's Station SHR curtilage.
- The heritage listing status for the Warragamba Pipelines is to be ascertained and made clear in the document. It should be stated that, while assessed as being of State heritage significance, the pipeline is not listed on the SHR but is included on the WaterNSW section 170 Heritage and Conservation Register.
- In *Section 3 Legal and Other Requirements*, please include a section titled *Other Environmental Documents*, that references for other environmental documents that intersect with the NAHMP (ie, full reference for the ARD or other specialist reports, the CEMP).
- In *Table 1 Objectives and Targets*, it is suggested that the Targets and Measurement Tools are refined to be more specific, for example: "100% of training completed on time for all staff", "Zero breaches or regulatory infringements".
- *Section 6.5 Salvage* – The terminology in this section requires review to remove confusion. It's unclear if this section relates to archaeology, significant fabric or moveable heritage. Please review to clarify which element of heritage management it is addressing, as each has different management requirements.

The term 'unexpected find' generally refers to the management of unexpected archaeological finds. The purpose of the Unexpected Finds Procedure is to address

unexpected archaeological finds (rather than significant fabric or moveable heritage items). The process for unexpected finds should be as per the formal Sydney Metro Unexpected Finds Procedure (rather than the 3-step process listed in Section 6.5).

‘Significant fabric’ generally refers to the construction material of a building that contributes to its heritage values. ‘Salvage’ generally refers to building materials or features that are to be kept rather than disposed of during demolition. Moveable heritage may be building fabric but also includes items of heritage significance that are not fixed in a location, such as furniture or objects.

It should be clearly stated that reuse may include reuse at an alternative site, display or interpretation. If it is anticipated that significant fabric will be impacted by the work, a Salvage Report should be prepared that identifies and determines appropriate management of the fabric.

Consider use of the following salvage methodology:

Salvage of fabric will take place where significant fabric has been identified. Salvage will take place prior to demolition and include:

- A site inspection by a suitably qualified heritage consultant to assess and determine any elements which would be appropriate for archival recording and/or salvage.
 - The completion of a significant fabric and moveable heritage salvage register for each site inspected.
 - Any significant elements or moveable heritage items which are considered to have potential for reuse or reinstatement will be salvaged. This may include potential for use in interpretation. If any salvage of fabric from State Heritage Register items is proposed, this will take place in consultation with Heritage NSW.
- A clear and accurate provision for management and protection of historical archaeology is required. This includes clear direction in relation to a stop work order for unexpected finds. In relation to the management of archaeology:
 - In *Section 6.7 Archaeological Excavation*, please clearly state if there is any identified excavation required.

An unexpected find would need to be notified immediately, rather than delayed in a Final Archaeological Report. When an unexpected find is uncovered, an archaeological excavation permit under section 140 or section 60 of the *Heritage Act 1977* may be required to further investigate or remove it, if investigation is not covered by an existing approval. All bones must be treated as potential human skeletal remains and work around them must stop while they are appropriately protected and investigated, the relevant authorities notified, and approvals received. This should be discussed in *Section 6.10 Unexpected Heritage Finds*.

- In *Section 6.10 Unexpected Heritage Finds*, include the statement: *Where either unexpected heritage finds or potential human remains are identified, the first step is to stop all works in the vicinity of the find, and to notify the Sydney Metro Environment Manager and the Excavation Director.*

- In *Section 7.4 Hold Points*, consider the suitability of the following hold points and include as appropriate: *identification of an unexpected heritage find, pre-demolition of significant fabric, establishing protection measures for heritage items during works.*
- *Section 6.11 ECMs and Exclusion Zones*. Please provide a definitive statement about the locations of exclusion zones. It is also desirable to include the kinds of protection that will be needed to ensure significant fabric is not damaged during construction and when and for how long it will be implemented (ie before works for the duration of the works, then made good). Include a basic statement of methodology in relation to temporary relocation of the jib crane at St Mary's Station to ensure its protection, including that it is removed without damage to significant fabric and that it is stored in an appropriate location and secure conditions during works. State if there is any required protection of heritage items in relation to the construction of the aerial concourse, lifts and connections at St Mary's Railway Station.

It is noted that the *Guideline for Development Adjacent to the Upper Canal and Warragamba Pipelines*, prepared by WaterNSW, dated September 2021, states:

“As critical components of Sydney’s water supply system, applicants and authorities must ensure the Corridors including all support structures, are adequately protected from damage during construction. Any damage that does occur to water supply infrastructure or land in the Corridors, as a result of development or activities, will be the responsibility of the developer or builder to rectify to the satisfaction of WaterNSW.”

- Suggest inclusion of a complaints management process.
- Suggest a section is added for Roles & Responsibilities, via a summary table, which outlines the relevant roles (ie Project Director, Environment Manager, Site Director, Excavation Director, Heritage Consultant, etc) in relation to the NAHMP implementation and their respective responsibilities.

If you have any questions regarding the above advice, please contact Ruth Berendt, Senior Assessments Officer at Heritage NSW on 02 4927 3118 or via email ruth.berendt@environment.nsw.gov.au.

Yours sincerely

Rochelle Johnston

Rochelle Johnston
Senior Manager - Major Projects
Heritage NSW
Department of Planning & Environment
As Delegate of the Heritage Council of NSW

24 March 2023