

Construction Heritage Sub-Plan

Project Name: WestConnex New M5

Project number:	15.7020.2597
Document number:	M5N-ES-PLN-PWD-0006
Revision date:	23/08/2016
Revision:	07

Document Approval

Rev.	Date	Prepared by	Reviewed by	Recommended by	Approved by	Remarks
00	10/12/15	CDS-JV				
01	10/02/16	CDS-JV				
02	06/04/16	CDS-JV				
03	02/05/16	CDS-JV				
04	25/05/16	CDS-JV				
05	8/07/16	CDS-JV				
06	25/07/16	CDS-JV				
07	23/08/16	CDS-JV				
Signature:						

Details of Revision Amendments

Document Control

The Project Director is responsible for ensuring that this Sub Plan is reviewed and approved. The Support Services Director is responsible for updating this Sub Plan to reflect changes to the Project, legal and other requirements, as required.

Amendments

Any revisions or amendments must be approved by the Project Director before being distributed or implemented.

Revision Details

Revision	Details
00	Initial draft for information / informal review
01	Issued for consultation and review by WCX M5 AT, RMS and DP&E
02	Issued for consultation and review by DP&E
03	Issued for consultation and review by key stakeholders
04	Issued to DP&E for approval
05	Update to address DP&E comments. Issued for approval
06	Update to address additional DP&E comments. Issued for approval
07	Update to address additional DP&E comments. Issued for information



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1. Introduction

1.1 Context

The New M5 Project is the Stage 2 component of the WestConnex scheme, a NSW Government initiative to connect Sydney’s west and south-west with the Sydney Airport and the Port Botany precinct. It is being delivered by the Sydney Motorway Corporation (SMC), formerly the WestConnex Delivery Authority (WDA).

The CPB Contractors Dragados Samsung Joint Venture (CDS-JV) will deliver the design and construction of WestConnex Stage 2 referred to as the New M5 (the Project). The Project will run from the existing M5 East corridor at Beverly Hills via tunnel to St Peters, providing improved access to the airport, south Sydney and Port Botany precincts. The Project will substantially improve the east - west corridor access between the Sydney CBD, Port Botany and Sydney Airport precincts and the South West growth areas.

The Project will deliver approximately nine kilometres of two-lane twin tunnels with capacity to operate three lanes in the future, motorway to motorway connections to the King Georges Road Interchange Upgrade at Beverly Hills, and a new interchange at St Peters. Infrastructure Approval was granted for the project on 20 April 2016. Major works are expected to commence in mid 2016 and the New M5 tunnel is scheduled to open to traffic in late 2019.

Section 1.2 of the Construction Environmental Management Plan (CEMP) provides further background and detailed description of the Project.

This Construction Heritage Sub-Plan (CHSP) forms part of the CEMP developed for the construction of the Project. The CHSP describes how CDS-JV will manage and minimise Aboriginal and non-Aboriginal heritage impacts during construction of the Project.

This CHSP has been prepared with consideration of Project requirements, and to address the Minister’s Conditions of Approval (CoA), mitigation measures listed in the New M5 Environmental Impact Statement (EIS), the Submissions and Preferred Infrastructure Report (SPIR) and applicable legislation.

1.2 Objectives and Targets

The key objectives of the CHSP are to ensure that impacts to Aboriginal and non-Aboriginal heritage (as defined in Infrastructure Approval SSI 6788) are minimised and are within the scope permitted by the CoA. To achieve these objectives, the targets in Table 1 have been established for the management of Aboriginal and non-Aboriginal heritage impacts during the Project.

Table 1: Project targets associated with the management of heritage

Metric / measure	Target	Timeframe	Accountability	Documentation / reporting
Incidents involving damage to heritage items, places or values	Zero	At all times	Construction Project Managers	Managing HSE incidents – Synergy
Comply with heritage mitigation measures listed in this CHSP	No non-compliances, fines or prosecutions relating to heritage management	At all times	Construction Project Managers	Compliance Tracking Program Managing HSE incidents – Synergy
Minimise or avoid impacts on known Aboriginal and non-Aboriginal heritage sites	Known heritage sites to be identified on Site Environment Plans and physically protected on site (if required)	Prior to commencement of work / stage	Environment and Sustainability Manager	Site Environment Plans Permit to clear land and vegetation

1.3 Interface with Other Plans

This CHSP is part of an integrated set of sub-plans to the CEMP. Table 2: shows the CEMP framework for the Project.

Table 2: New M5 CEMP Framework

Construction Environmental Management Plan	Sub-plans to CEMP	Sub-plan attachments	Standalone Documentation (linked to CEMP)
	Construction Air Quality Sub Plan	<ul style="list-style-type: none"> • NA 	<ul style="list-style-type: none"> • Sustainability Plan • Ancillary Facilities Management Plan
	Construction Noise and Vibration Sub Plan	<ul style="list-style-type: none"> • Out of Hours Works Protocol • Blast Management Strategy 	<ul style="list-style-type: none"> • Land Use Survey • Sustainability Plan • Ancillary Facilities Management Plan • Temporary Noise Barrier Strategy
	Construction Traffic & Access Management Plan	<ul style="list-style-type: none"> • NA 	<ul style="list-style-type: none"> • Traffic Management Plans • Ancillary Facilities Management Plan • Local Road Dilapidation Report • Road Safety Audit • Construction Parking and Access Strategy
	Construction Soil & Water Quality Sub Plan	<ul style="list-style-type: none"> • Acid Sulfate Soil Management Plan 	<ul style="list-style-type: none"> • Flood Management Strategy • Groundwater and Soil Salinity Report • Sustainability Plan • Geotechnical Model • Ancillary Facilities Management Plan • Water Quality Plan and Monitoring Program • Acid Sulfate Soil Management Procedure • Asbestos Guideline
	Construction Heritage Sub Plan	<ul style="list-style-type: none"> • Historical Archaeological Research Design • Unexpected Heritage Finds 	<ul style="list-style-type: none"> • Sustainability Plan • Geotechnical Model • Ancillary Facilities Management Plan
	Construction Flora & Fauna Sub Plan	<ul style="list-style-type: none"> • Pathogen and Weed Management Strategy • Nest Box Plan 	<ul style="list-style-type: none"> • Sustainability Plan • Ancillary Facilities Management Plan • Urban Design and Landscape Management Plan • Revegetation Strategy • Green and Gold Bell Frog Management Plan • Biodiversity Offsets Package • Tree Reports
	Waste and Resource Sub-Plan	<ul style="list-style-type: none"> • NA 	<ul style="list-style-type: none"> • Water Reuse Strategy • Spoil Management Plan • Sustainability Plan
	Energy and Greenhouse Gas Emissions Sub Plan	<ul style="list-style-type: none"> • NA 	<ul style="list-style-type: none"> • Sustainability Plan

1.4 Training

All personnel, including employees, contractors and sub-contractors, are required to complete a Project induction containing relevant environmental information before they are authorised to work on the Project. Refer to the training requirements for the project in the CEMP, Part B Element 7.

The level of specific training on Aboriginal and non-Aboriginal heritage will be tailored to roles and responsibilities and may include:

- Obligations and specific responsibilities under the Infrastructure Approval including identification of known Aboriginal and non-Aboriginal sites, areas of cultural sensitivity and areas of archaeological potential;
- Responsibilities pertaining to the protection of heritage under the *National Parks and Wildlife Act 1974* and *Heritage Act 1977* and other relevant legislation outlined in Section 2.1 of the CHSP;
- Responsibilities relating to the pre-construction and during-construction treatment of identified Aboriginal and non-Aboriginal heritage that may be directly or indirectly affected by the project and to minimise construction impacts where feasible;
- Response procedures to include monitoring and condition surveys (as required) as part of heritage management measures, including specific protection measures for identified heritage items;
- Response procedures in the event of an unexpected heritage item find;
- Response procedures in the event that human remains are discovered during construction work.

Specific training will be provided to personnel likely to work within or in proximity (<50 m) to heritage items and values, including rock overhang sites and non-Aboriginal heritage sites identified on Site Environmental Plans. CDS-JV will ensure that project personnel can competently perform their duties and meet environmental obligations. Toolbox /pre-start talks are to include limits of blasting, safe working distances, vibration work protocols and vibration monitoring requirements where relevant.

The inductions would be developed in consultation with a suitably qualified heritage specialist and historical archaeologist (revised environmental management measure NAH04).

On-site toolbox training will continue throughout the project where required, particularly in areas or localities where there is a high risk of heritage impacts by the projects. Heritage awareness training will be included in the induction process and on-site toolbox sessions to key construction personnel.

Records of all training activities, including inductions, will be maintained. Records will include the name and role of the attendee, the name of the course and, where applicable, reference to the document controlled version of the material presented and a copy of the assessment completed.

2. Legal and Other Requirements

This section provides the relevant legislation, guidelines and project requirements that apply to Aboriginal and non-Aboriginal heritage aspects during the pre-construction and construction phase.

2.1 Legislation and Planning Instruments

Legislation relevant to heritage management for the Project includes:

- *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Commonwealth);
- *Environmental Planning and Assessment Act 1979* (EP&A Act);
- *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth);
- *Heritage Act 1977*;
- *National Parks and Wildlife Act 1974* (NPW Act);
- *National Parks and Wildlife Amendment Act 2010*;

Local environmental plans (LEP) do not apply in respect to State significant infrastructure projects (including New M5); however local heritage identified in the LEPs has been identified in this plan including:

- Botany Bay Local Environmental Plan 2013 (Botany Bay LEP 2013);
- Canterbury Local Environmental Plan 2012 (Canterbury LEP 2012);
- Hurstville Local Environmental Plan 2012 (Hurstville LEP 2012);
- Marrickville Local Environmental Plan 2011 (Marrickville LEP 2011);
- Rockdale Local Environmental Plan 2011 (Rockdale LEP 2011); and
- Sydney Local Environmental Plan 2012 (Sydney LEP 2012).

Relevant provisions of the above legislation are explained in the register of legal and other requirements included in Annexure E– Environmental obligations register of the CEMP.

2.2 Minister’s Conditions of Approval

CoA that relate to heritage management are provided in Table 3. A cross-reference is included to indicate where each condition is addressed in this CHSP or other project management document.

Table 3: Minister’s Conditions of Approval that address heritage management

Reference	Requirement	Where addressed
B33	The proponent must not destroy, modify or otherwise physically affect any heritage items, including human remains, outside the SSI footprint. This approval does not allow the Proponent to harm, modify, or otherwise impact human remains uncovered during the construction and operation of the SSI.	Section 6.2 H1, H2, H3, H13
B34	The Proponent must salvage sections of the laminated timber from the Rudders Bond Store prior to demolition of the building and assess options for its reuse within the project area at St Peters and maximise its use within the operational facilities. The sections to be salvaged must be determined in consultation with the Heritage Council of NSW (or its delegate). The Proponent must submit to the Secretary written advice from the Heritage Council of NSW that it is satisfied with the proposed level of salvage, prior to the building being demolished.	Section 6.2 H22 Appendix B Urban Design and Landscape Plan (M5N-ES-PLN-PWD-0009)
B35	The Proponent must salvage items and materials from heritage items as advised by an independent heritage consultant. The list of items and materials to be salvaged must be developed in consultation with the relevant council(s) and submitted to the Secretary for consideration prior to demolition of any heritage items. How the items are reused in the project is to be detailed in the Urban Design and Landscape Plan required by condition B61.	Section 6.2 H23, H24 Appendix B Urban Design and Landscape Plan (M5N-ES-

Reference	Requirement	Where addressed
	Any residual items and materials are to be made available, through a process to be developed by the Proponent in consultation with the relevant council(s), to property owners within the locality from where the material originated.	PLN-PWD-0009)
B36	Except for necessary stabilisation or maintenance works agreed in consultation with the Secretary, the Proponent must not destroy, modify or otherwise physically affect the Service Garage located at 316 Princes Highway, St Peters.	Section 6.2 H32 Appendix B
B37	Identified impacts to heritage items and heritage conservation areas must be minimised through both detailed design and construction. The measures for ensuring this are to be detailed in the Construction Heritage Management Plan required by condition D68(c).	This plan Section 6.2, in particular H3 Appendix B
B38	Prior to conducting acoustic treatment at any heritage items in accordance with this approval, the proponent must obtain and implement the advice of an appropriately qualified and experienced heritage expert to ensure such work is carried out in a manner sympathetic to the heritage values of the item.	Section 3.6 Section 6.1.5 Section 6.2 H12
B39	Any buildings or structures identified as potential heritage items in the documents listed in conditions A2(b) and A2(c) or identified during detailed design or construction of the SSI, must be dealt with as though they are a locally listed heritage item.	Section 6.1.5
B40	<p>The Proponent must prepare a Heritage Interpretation Plan which identifies and interprets the key heritage values and stories of heritage items and heritage conservation areas impacted by the SSI. The Heritage Interpretation Plan must include, but not be limited to:</p> <p>(a) a discussion of the key interpretive themes, stories and messages proposed to interpret the history and significance of the affected heritage items and sections of heritage conservation areas including but not limited to, St Peters Brickpit Geological site, the Alexandra Canal, Terraces at 28-44 and 82 Campbell Street and the Rudders Bond Store; and</p> <p>(b) identification and confirmation of interpretive initiatives implemented to mitigate impacts to archaeological relics, heritage items and conservation areas affected by the SSI.</p> <p>The Heritage Interpretation Plan must be prepared in consultation with the Heritage Council of NSW and the relevant local councils. A copy of the Plan must be provided to the Heritage Council of NSW, the relevant local councils and the Secretary at least six months prior to the operation of the SSI.</p>	Section 6.2 H28 Appendix B
B41	The Proponent must compile photographic records of those parts of the Alexandra Canal to be impacted by the construction of stormwater drainage works both prior to and post the works being undertaken. The photographs taken prior to the works must be included in the Construction Heritage Management Plan required under condition D68(c) and referred to when reinstating the bricks of the canal embankment to ensure that they are correctly replaced. The pre- and post-works photographs must be made available to the Heritage Council of NSW and the Secretary on request.	Pre-construction photographs will be included in an update to this Plan, once available. Section 6.2 H26 Appendix B
B42	The Proponent shall appoint an appropriately qualified and experienced heritage expert to oversee the removal and	Section 6.2 H27 Appendix B



Reference	Requirement	Where addressed
	reinstatement of sections of the embankment wall of the Alexandra Canal affected by the construction of stormwater drainage points.	
B61	Prior to commencement of permanent built surface works and/or landscaping, or as otherwise agreed by the Secretary, an Urban Design and Landscape Plan (UDLP) must be prepared. The UDLP must be prepared by a suitably qualified and experienced person(s), in consultation with the relevant council(s) and community, Heritage Council of NSW (or delegate), and the UDRP (condition B60). The UDLP must be approved by the Secretary. The UDLP must present an integrated urban and landscape design for the SSI, and must include, but not be limited to:	Urban Design and Landscape Plan (M5N-ES-PLN-PWD-0009)
	(f) information on the reuse of heritage items and materials (condition B34 and B35);	
C1.	<p>Prior to the commencement of construction, or as otherwise agreed by the Secretary, the Proponent must prepare and implement a Community Communication Strategy. The Community Communication Strategy must be submitted to the Secretary for approval. The Community Communication Strategy must provide mechanisms to facilitate communication between the Proponent (and its contractor(s)), the Environmental Representative (refer condition D1), the relevant council(s) and community stakeholders (particularly adjoining landowners) on the design and construction environmental management of the SSI. The Community Communication Strategy must include, but not be limited to:</p> <p>(a) identification of stakeholders to be consulted as part of the Community Communication Strategy, including affected and adjoining landowners, key community and business groups, and community and social service organisations;</p> <p>(b) procedures and mechanisms for the regular distribution of accessible information to community stakeholders on construction progress and matters associated with environmental management, including provision of information in appropriate community languages;</p> <p>(c) the formation of community-based forums that focus on key environmental management issues for the SSI. The Community Communication Strategy must provide detail on the structure, scope, objectives and frequency of the community-based forums;</p> <p>(d) procedures and mechanisms through which the community stakeholders can discuss or provide feedback to the Proponent and/or Environmental Representative in relation to the environmental management and delivery of the SSI;</p> <p>(e) procedures and mechanisms through which the Proponent can respond to enquiries or feedback from the community stakeholders in relation to the environmental management and delivery of the SSI;</p> <p>(f) procedures and mechanisms that would be implemented to resolve issues/disputes that may arise between parties on the matters relating to environmental management and the delivery of the SSI. This may include the use of a suitably qualified and experienced independent mediator; and</p> <p>(g) procedures and mechanisms to manage the ongoing provision of services for the WestConnex Acquisition Assistance Line, as required by condition C2, and procedures for the notification of the contact details for this assistance line to relocated persons.</p> <p>Issues that must be addressed through the Community Communication Strategy include (but are not limited to):...</p>	Community Communication Strategy (M5N-CS-PLN-PWD-0008)



Reference	Requirement	Where addressed
	(c) heritage matters;	
D22.	The Proponent must conduct vibration testing prior to commencing vibration generating activities that have the potential to impact on heritage items and vibration monitoring during initial vibration generating activities to identify minimum working distances to retained heritage items to prevent cosmetic damage to these items. In the event that the vibration testing and 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 feasible and reasonable mitigation measures, unless otherwise agreed to by the Secretary. Vibration monitoring must be undertaken where structures are identified to be within safe working distances of vibration generating equipment/activities.	Construction Noise and Vibration Management Plan
D28.	Should blasting be required, the Proponent must prepare a Blast Management Strategy in consultation with the EPA and submit the Blast Management Strategy to the Secretary prior to any blasting. The Blast Management Strategy must demonstrate that all blasting and associated activities will be undertaken in a manner that will not generate unacceptable noise and vibration impacts or pose a significant risk impact to residences and sensitive receptors. The Blast Management Strategy must also address the principles outlined in <i>Hazardous Industry Planning Advisory Paper No 6: Hazard Analysis</i> (Department of Planning, January 2011) and <i>Assessment Guideline: Multi-Level Risk Assessment</i> (Department of Planning and Infrastructure, May 2011) for the handling and storage of hazardous materials. Issues to be considered in the Blast Management Strategy must include, but not be limited to:	Construction Noise and Vibration Management Plan
	(b) identification of any potentially affected noise and vibration sensitive sites including heritage buildings and utilities;	Appendix B
D37.	Prior to the commencement of construction in proximity to, or affecting, a heritage item or contributory item in a heritage conservation area, the Proponent must complete the archival recordings, including photographic recording of the heritage items, unless otherwise agreed by the Secretary. The archival recording must be undertaken by a qualified and experienced heritage consultant, in accordance with the <i>How to Prepare Archival Records of Heritage Items (2003)</i> guidelines issued by the Heritage Council of NSW. Within 12 months of completing the archival recording, or as otherwise agreed by the Secretary, the Proponent must submit a Heritage and Contributory Item Archival Recording and Research Report containing the archival and photographic recordings and historical research, to the Department, the Heritage Council of NSW, the local library, and the local Historical Society in the respective local government area(s).	Section 6.2 H9 Section 7
D38.	The Proponent must complete archival recordings for any impacted part of the heritage conservation area prior to the commencement of construction within a respective heritage conservation area. Consultation with the Heritage Council of NSW (or its delegate) and the relevant council is to be carried out to determine the objectives and approaches to the archival recording. The archival recording of heritage conservation areas is to include, but not be limited to: (a) comprehensive photographic recording of buildings, structures, open spaces, public realm, architecture, urban design, landscaping and streetscapes;	Section 6.2 H10 Section 7



Reference	Requirement	Where addressed
	<p>(b) surveying and mapping of land use arrangements, street patterns and layouts, subdivision layouts, landscape design and street tree plantings; and</p> <p>(c) any other feasible recording requested and agreed to following consultation with the aforementioned stakeholders.</p> <p>The archival recording of heritage conservation areas must be undertaken by a qualified and experienced heritage consultant, and should be undertaken in a manner generally reflective of the <i>How to Prepare Archival Records of Heritage Items (2003)</i> guidelines issued by the Heritage Council of NSW. Within 12 months of completing the archival recording, or as otherwise agreed by the Secretary, the Proponent must submit a Heritage Conservation Area Archival Recording and Research Report, for each relevant heritage conservation area, containing the archival and photographic recordings, mapping and historical research, to the Department, the Heritage Council of NSW, the local library, and the local Historical Society in the respective local government area(s).</p>	
<p>D39.</p>	<p>Prior to excavation works adjacent to the Alexandra Canal and St Peters Interchange the Proponent must engage a suitably qualified archaeologist whose experience complies with the Heritage Council of NSW's <i>Criteria for Assessment of Excavation Directors</i> (July, 2011) (referred to as the Excavation Director) to oversee and advise on matters associated with historic archaeology and to prepare an Archaeological Research Design and Excavation Methodology. The Archaeological Research Design and Excavation Methodology is to be submitted to the Heritage Council of NSW for review and comment prior to finalisation. The Archaeological Research Design and Excavation Methodology must:</p> <p>(a) be consistent with the <i>Heritage Council of NSW's Archaeological Assessments Guideline (1996)</i>;</p> <p>(b) provide for the detailed analysis of any heritage items discovered during the investigations;</p> <p>(c) include management options for discovered heritage items (including options for relocation and display); and</p> <p>(d) if the findings of the investigations are significant, provide for the preparation and implementation of a heritage interpretation plan.</p> <p>Where excavation works are required in the vicinity of potential archaeological sites, the Excavation Director must be present to advise on archaeological issues and oversee excavation works. The Excavation Director must be given the authority to advise on the duration and extent of oversight required during excavation.</p>	<p>Section 3.6</p> <p>Section 6.1.2</p> <p>Appendix D</p>
<p>D40.</p>	<p>In the event that archaeological relics are discovered during construction, all work must cease in the affected area and the Excavation Director must be notified and attend the site to assess the finds, identify their significance level and provide mitigation advice according to the significance level and the impact proposed. In the event that the relics are identified as being of State or local significance, the Heritage Council of NSW must be notified in writing in accordance with section 146 of the <i>Heritage Act 1977</i>. An Archaeological Relics Management Plan specific to the relics or site encountered is to be prepared in consultation with the Heritage Council of NSW which is to outline all feasible and reasonable measures to be implemented to avoid and/or minimise harm to the State or locally significant heritage items. Works within the vicinity of the find must not recommence without the approval of a suitably qualified and experienced archaeologist in consultation with the Heritage Council of NSW. The Proponent must notify the Secretary in writing of any such encounter of an archaeological relic triggering</p>	<p>Section 6.1.2</p> <p>Section 6.2 H34</p>

Reference	Requirement	Where addressed
	this condition and must also notify the Secretary of the outcome of consultation with the Heritage Council of NSW.	
D41.	In the event that archaeological relics are discovered, within 12 months of completing all archaeological investigations, unless otherwise agreed by the Secretary, the Proponent must prepare an Excavation Report containing the findings of any excavations, including artefact analysis and the identification of a final repository of any finds. The Excavation Report must be submitted to the Department, the Heritage Council of NSW, and the local library and the local Historical Society in the relevant local government area(s). A copy of the Excavation Report must be retained with the relics at all times.	Section 6.1.2 Section 6.2 H35 Section 7 Section 8 Appendix A
D42.	The Proponent must undertake photographic and drawn archival recordings of the geological features of the St Peters Brickpit Geological Site prior to undertaking any works that would result in the features being obscured. The recordings should be included in the Heritage Interpretation Plan required by condition B40.	Section 6.2 H29 Appendix B
D43.	The Proponent must take all reasonable steps so as not to harm, modify or otherwise impact any Aboriginal heritage item associated with the SSI.	Section 6.2 H1 to H3, H13 to H14
D44.	Where previously unidentified Aboriginal objects are discovered during construction of the SSI, all work should stop in the affected area and a suitably qualified and experienced Aboriginal heritage expert should be contacted to provide specialist heritage advice. The measures to consider and manage this process must be specified in the Construction Heritage Management Plan required by condition D68(c) and, where relevant, include registration in the OEH's Aboriginal Heritage Information Management System (AHIMS) register.	Section 6.2 H13 to H14 Section 7 Appendix A
D45.	The Proponent must undertake a program of geotechnical coring at each pile location adjacent to Alexandra Canal to obtain sediment samples to a depth of seven metres. The sediment cores are to be examined by a suitably qualified and experienced archaeologist engaged by the Proponent to determine the potential for Aboriginal archaeological artefacts. The assessment by the archaeologist must be carried out prior to the commencement of excavation and/or piling works adjacent to the Canal. In the event that artefacts are uncovered, the Proponent must implement the procedures for unexpected finds required by condition D68(c)(i) and update the Construction Heritage Management Plan required by condition D68(c).	Section 3.6 Section 6.2 H17 Appendix A Appendix D
D62.	Other than ancillary facilities described in the documents referred in conditions A2(b) and A2(c), or those ancillary facilities approved by the Secretary under condition D63, or allowed under condition D64, the location of ancillary facilities must comply with the following locational criteria: (h) not impact on heritage items (including areas of archaeological sensitivity) beyond those already impacted by the SSI;	Refer to Ancillary Facilities Management Plan (M5N-ES-PLN-PWD-0026)
D68.	(c) a Construction Heritage Management Plan to ensure, and provide detail of how, construction impacts on Aboriginal and non-Aboriginal heritage will be appropriately minimised and managed. The Construction Heritage Management Plan must include, but not be limited to:	This plan
	(i) In relation to Aboriginal Heritage –	



Reference	Requirement	Where addressed
	A. procedures for dealing with previously unidentified Aboriginal objects (excluding human remains) including cessation of works in the vicinity, assessment of the significance of the item(s) and determination of appropriate mitigation measures, including when works can recommence, by a suitably qualified and experienced archaeologist in consultation with the OEH, and Aboriginal stakeholders, and assessment of the consistency of any Aboriginal heritage impacts against the approved impacts of the SSI,	Section 3.4 Table 5 Section 6.1.2 Section 6.2 H13 Section 7 Appendix A
	B. procedures for dealing with human remains, including cessation of works in the vicinity, notification of, NSW Police, OEH and Aboriginal stakeholders and commitment to cease recommencing works in the area unless authorised by OEH and/ or the NSW Police,	Section 3.4 Section 6.1.2 Section 6.2 H13 to H14 Section 7 Appendix A
	C. heritage training and induction processes for construction personnel (including procedures for keeping records of inductions and obligations under this approval) including site identification, protection and conservation of Aboriginal cultural heritage, and	Section 1.4 Section 6.2 H4
	D. procedures for ongoing Aboriginal consultation and involvement for the duration of the SSI, in the event that previously unidentified Aboriginal objects are discovered, and	Section 3.3
	(ii) In relation to non-Aboriginal Heritage –	
	A. identification of heritage items directly and indirectly affected by the SSI,	Section 4.1.2 Appendix B
	B. 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 Section 6.2 Appendix A Appendix B Appendix D
	C. details of monitoring and reporting requirements for impacts on heritage items,	Section 7 Appendix A Appendix B Appendix D
	D. procedures for dealing with previously unidentified heritage objects and relics, including cessation of works in the vicinity, assessment of the significance of the item(s) and determination of appropriate mitigation measures including when works can recommence by a suitably qualified and experienced archaeologist in consultation with the Heritage Council of NSW, and assessment of the consistency of	Section 6.2 H13 to H14 Section 7 Appendix A

Reference	Requirement	Where addressed
	any heritage impacts against the approved impacts of the SSI,	
	E. processes and mechanisms for the reuse and recycling of building and landscape components from contributory, potential and locally listed heritage items within other built or landscaped components of the SSI, and	Section 6.2 H22, H23, H24
	F. heritage training and induction processes for construction personnel (including procedures for keeping records of inductions and obligations under this approval) including site identification, protection and conservation of non-Aboriginal cultural heritage, and	Section 1.4 Section 6.2 H4
	(iii) mechanisms for the monitoring, review and amendment of the Construction Heritage Management Plan.	Section 7 Section 8 Section 9
	The Construction Heritage Management Plan must be developed in consultation with the OEH, Heritage Council of NSW (for non-Aboriginal heritage) and Registered Aboriginal Groups (for Aboriginal heritage).	Section 3

2.3 Revised environmental management measures

The revised environmental management measures (REMMs) included in the New M5 SPIR relating to the management of heritage are included in Table 4.

Table 4: Revised environmental management measures relevant to the management of heritage

Reference	Requirement	Where addressed
Aboriginal heritage		
Impacts on culturally sensitive Aboriginal sites		
REMM AH1	Vibration generating activities, including blasting would be conducted in a manner to ensure vibration levels do not exceed three millimetres per second at potential Aboriginal heritage site SR-OVRH-1.	Section 5.1.1 Section 5.1.2 Section 6.2 H18
Indirect impacts on sandstone rock overhang site. Impacts on culturally sensitive Aboriginal sites		
REMM AH2	Vibration monitoring would be carried out during vibration intensive works within 50 metres of SR-OVRH-1. The need for vibration monitoring would be informed by a preliminary screening of activities at this location to identify what activities have the potential for vibration at this location. The preliminary screening and works requiring monitoring would be contained within the CEMP.	Section 5.1.2 Section 6.2 H19 Section 7
REMM AH3	A baseline condition assessment would be completed by a qualified structural engineer for Aboriginal site SR-OVR-1 before construction commences, followed by a condition assessment immediately following significant vibration and with recommendations for remediation measures if required.	Section 5.1.2 Section 6.2 H20 Section 7
Unexpected discovery of Aboriginal objects (generally)		

Reference	Requirement	Where addressed
REMM AH4	<p>If an Aboriginal object(s) is discovered during construction it would be managed in accordance with the Standard Management Procedure: Unexpected Heritage Items (Roads and Maritime Services, 2015), including:</p> <ul style="list-style-type: none"> • Ceasing works in the vicinity of the object(s), where there is the potential to directly or indirectly impact on the object(s); • Notifying the construction Environmental Representative and OEH of the discovery; • Engaging a qualified archaeologist to determine the nature, extent and scientific significance of the object(s); and • Developing management recommendations in consultation with the qualified archaeologist, OEH and RAPs. 	<p>Section 6.2 H13 to H14</p> <p>Appendix A</p>
Unexpected discovery of Aboriginal objects (Alexandra Canal)		
REMM AH5	<p>In order to manage the potential discovery of an Aboriginal object(s) during pile installation adjacent to Alexandra Canal the following strategy would be implemented:</p> <ul style="list-style-type: none"> • Geotechnical coring at each pile location by a geotechnical engineer to obtain intact sediment samples to a depth of around seven metres; and • Inspection of obtained sediment samples by a qualified archaeologist in consultation with the geotechnical engineer in order to characterise the soil profile and identify any Aboriginal archaeological materials. <p>Should Aboriginal archaeological material be present within one or more core samples, management would occur in accordance with the Standard Management Procedure: Unexpected Heritage Items (Roads and Maritime, 2015).</p>	<p>Section 6.2 H17</p>
Human Skeletal Remains		
REMM AH6	<p>In the event that potential human skeletal remains are identified during construction of the Project, the management procedure detailed in Standard Management Procedure: Unexpected Heritage Finds (Roads and Maritime, 2015) would be implemented, which would include:</p> <ul style="list-style-type: none"> • All relevant works within the vicinity of the remains that have the potential to directly or indirectly impact on the object(s) would cease; • The construction Environmental Representative is to be notified of the discovery who is then responsible for immediately notifying the NSW Police and OEH; • A qualified archaeologist would be engaged to determine the nature, extent and significance of the object(s); and • Directions from the NSW Police and/or OEH, as relevant, would be followed depending on the nature of the remains and the outcomes of forensic investigations. Management recommendations would be developed in consultation with the qualified archaeologist and OEH. 	<p>Section 6.2 H13 to H14</p> <p>Appendix A</p>
Non-Aboriginal heritage		
General		
REMM NAH01	<p>Protocols would be developed for anticipated categories of unexpected non-Aboriginal heritage finds, such as tram infrastructure, late 19th to early 20th refuse, and brick works. In the event of an unexpected cultural heritage find outside of these specific protocols, the Standard</p>	<p>Section 4.2</p> <p>Section 6.2 H5 to H8</p>

Reference	Requirement	Where addressed
	Management Procedure – Unexpected Archaeological Finds (Roads and Maritime, 2015a) would be followed. This would include notification to the NSW Heritage Division of OEH.	Appendix A Appendix D
REMM NAH02	Construction personnel would be made aware of non-Aboriginal heritage sites as part of the site induction. These sites would be identified on sensitive area plans and in the CEMP.	Section 6.2 H4 to H8 Appendix C
REMM NAH03	As part of the construction heritage management plan, an overarching historical archaeological research design would be prepared prior to commencement of construction in consultation with the NSW Heritage Division of OEH. It would describe clear significance thresholds to possible archaeological items that may be uncovered during works and designate when monitoring, testing and / or salvage and excavation should occur in relation to the Project works and timing. Post-excavation reporting, including artefact analysis and additional historical research (where necessary), would be required for any historical archaeological investigations undertaken.	Section 4.2 Appendix D
REMM NAH04	A construction heritage management plan would be prepared prior to construction in consultation with the NSW Heritage Division of OEH, local councils and Sydney Water. The plan would detail how construction impacts on heritage would be minimised and managed including training and induction processes for construction personnel. Inductions are to cover built heritage, landscape and historical archaeological sites and their management, and provide heritage guidance on how to avoid / manage impacts. The induction would be prepared in consultation with a suitably qualified heritage specialist and historical archaeologist. As a minimum, the plan would include the following:	This plan Section 1.4 Section 6.2 Section 3
	<ul style="list-style-type: none"> Induction protocols for staff and Project personnel to undertake a cultural heritage induction, to assist them in understanding and complying with their legal obligations under the <i>Heritage Act 1977</i>; 	Section 1.4 Appendix C Section 2.1
	<ul style="list-style-type: none"> A list, plan and GIS layer showing the location of identified heritage items; 	Appendix B
	<ul style="list-style-type: none"> A significance assessment and statement of significance for each item; 	Appendix C
	<ul style="list-style-type: none"> Detail the mitigation measures identified and when the measures are to be implemented; 	Section 6
	<ul style="list-style-type: none"> Provide protocols and procedures to be enacted during construction to ensure the protection of items of heritage significance, or elements that contribute to the values of the heritage conservation area 	Section 6.1 Section 6.2 Appendix A
	<ul style="list-style-type: none"> An unexpected finds procedure in the event that further sites are identified during works; and 	Appendix A
	<ul style="list-style-type: none"> The separate procedure for the discovery of skeletal remains. 	Appendix A
REMM NAH05	Impacts to built heritage, heritage landscapes and historical archaeological sites, will to the greatest extent practicable, be avoided and minimised. Where impacts are unavoidable, works shall be undertaken in accordance with the strategy outlined in the construction heritage management plan.	Section 6.2 H1, H3



Reference	Requirement	Where addressed
Removal of heritage listed structures		
REMM NAH06	<p>In relation to the house at 82 Campbell Street and terrace group at 28-44 Campbell Street the following would be undertaken:</p> <ul style="list-style-type: none"> The buildings would be subject to a full archival recording following the NSW Heritage Division guidelines <i>How to Prepare an Archival Recording</i> (NSW Heritage Office, 2003) and <i>Photographic recording of heritage items using film or digital capture</i> (NSW Heritage Office, 2006); and Consideration should be given as to whether elements of the houses could be salvaged and used to maintain or restore other properties managed by Roads and Maritime. 	<p>Section 6.2 H1, H24, H25 Appendix B</p>
REMM NAH07	<p>In relation to Rudders Bond Store, the following would be undertaken:</p> <ul style="list-style-type: none"> The bond store would be subject to a full archival recording following the NSW Heritage Division guidelines <i>How to Prepare an Archival Recording</i> (NSW Heritage Office, 2003) and <i>Photographic recording of heritage items using film or digital capture</i> (NSW Heritage Office, 2006). This would include a comparative analysis of the Rudders Bond Stores should be prepared against other laminated truss Symonds buildings in NSW and Australia Consideration would be given as to whether the selected laminated timber columns could be salvaged and re-erected and clad elsewhere within the St Peters interchange or the local area. The cladding and brick walls are not considered to be of heritage significance and are not included within the reuse proposal. The level of fabric salvage required, the appropriate methodology for salvage and identification of appropriate adaptive reuse and locations for reuse of these elements would be determined in consultation with Heritage Council, the NSW Heritage Division of OEH and the New M5 Design Panel, with advice from a suitably a suitably qualified specialist informed by the full archival recording prior to the demolition of the item Investigate options for documenting the history of the Ralph Symonds company and presenting it to a national audience, in partnership with stakeholders such as the City of Sydney and Powerhouse Museum. The focus would be on their development of innovative timber construction methods during and after World War II. 	<p>Section 6.2 H1, H24, H25 Appendix B</p>
Change of use		
REMM NAH08	<p>In relation to the Service Garage at 316 Princes Highway, the following would be undertaken:</p> <ul style="list-style-type: none"> An existing condition survey report and programme of monitoring would be undertaken to identify early potential risks to the heritage item A photographic archival recording is undertaken prior to the current use ceasing. The archival recording should conform to the guidelines provided in <i>How to prepare archival records</i> (NSW Heritage Office, 2003) and <i>Photographic recording of heritage items using film or digital capture</i> (NSW Heritage Office, 2006). The archival recording should be lodged with the relevant local libraries and the State Library of NSW. 	<p>Section 6.2 H32 Appendix B</p>

Reference	Requirement	Where addressed
	<ul style="list-style-type: none"> The oral history should be prepared, which seeks to contact past and present employees as well as others with memories of the service station. The oral history should be lodged with the relevant local libraries and the State Library of NSW. 	
Potential for direct impacts due to vibration associated with surface construction		
REMM NAH09	Detailed mitigation and management measures would be developed for each heritage item directly impacted by the Project with regard to vibration (surface and tunnelling) and settlement once final disturbance areas have been identified through detailed design. These mitigation and management measures would be included in the CEMP(s) for the Project.	Section 6.2 H21
REMM NAH10	<p>Surface works would adhere to safe working distances, and an existing condition survey report and programme of monitoring would be undertaken to identify early potential risks at the following non-Aboriginal heritage items:</p> <ul style="list-style-type: none"> Wolli Creek Culvert St Peters Public School, including interiors Terrace housing, including interiors (1273) Waugh and Josephson industrial buildings, former, showroom, offices and workshops, including interiors Town and Country Hotel, including interiors Group of Victorian Filigree and Victorian Italianate terrace houses – Narara, including interiors Terrace group I12 Water Board pump house, including Interior and substructure Industrial Building, 'Frank G Spurway' Former Alexandria Spinning Mills 	Section 6.2 H21 Appendix B
Visual impacts, as well as vibration impacts to the Macdonaldtown Stormwater Channel #3		
REMM NAH11	An existing condition survey report and programme of monitoring would be undertaken to identify early potential risks at the Macdonaldtown Stormwater Channel #3	Section 6.2 H33 Appendix B
REMM NAH12	<p>The following non-Aboriginal heritage properties would be considered for at property acoustic treatment:</p> <ul style="list-style-type: none"> St Peters Public School, including interiors; and Terrace group I12 (highly effective). <p>Acoustic treatments would be confirmed during detailed design, and would consider the principles of <i>The Burra Charter (the Australia ICOMOS charter for places of Cultural Significance)</i> (ICOMOS (Australia), 2013).</p>	Section 6.2 H12 Appendix B
Impacts to the Goodsell Estate Heritage Conservation Area as a result of vibration, acquisition and modification, as well as visual impacts and impacts conservation area values.		
REMM NAH13	<p>Management measures for the Goodsell Estate Heritage Conservation Area would include:</p> <ul style="list-style-type: none"> Landscaping, to mitigate the impacts of realigning and widening roads, as well as alterations to the existing stormwater detention basin; Surface works would adhere to safe working distances; and An existing condition survey report and programme of monitoring would be undertaken to identify early potential risks to relevant 	Section 6.2 H31 Section 6.1 Appendix B



Reference	Requirement	Where addressed
	structures within the conversation area and within 50 metres of the main alignment tunnels.	
Impacts to the Clemton Park Urban Conservation Area as a result of vibration, changes in heritage area conservation values, and visual impacts.		
REMM NAH14	<p>Management measures for the Clemton Park Urban Conservation Area would include:</p> <ul style="list-style-type: none"> • Surface works would adhere to safe working distances; • An existing condition survey report and programme of monitoring would be undertaken to identify early potential risks to relevant structures within the conservation area; and • Landscaping would provide screening of the Bexley Road South motorway operations complex from the Clemton Park Urban Conservation Area, once established. 	<p>Section 6.2 H31</p> <p>Section 6.1</p> <p>Appendix B</p>
Impacts to the Pallamanna Parade urban Conservation Area as a result of vibration, changes in heritage area conservation values, and visual impacts.		
REMM NAH15	<p>Management measures for the Pallamanna Parade Urban Conservation Area would include:</p> <ul style="list-style-type: none"> • Surface works would adhere to safe working distances; • An existing condition survey report and programme of monitoring would be undertaken to identify early potential risks to relevant structures within the conservation area; and • Landscaping would provide screening of the Project from the Pallamanna Parade Urban Conservation Area, once established. 	<p>Section 6.2 H31</p> <p>Section 6.1</p> <p>Appendix B</p>
Impacts to heritage values due to construction of stormwater discharge points		
REMM NAH16	<p>The following management measures would be implemented with respect to Alexandra Canal:</p> <ul style="list-style-type: none"> • Monitoring during works to ensure vibration is not impacting the Alexandra Canal walls; • Preparation of an archival recording of the canal, involving both scale drawings and photography, prior to the removal of sandstone blocks; • Numbering of sandstone blocks so that those displaced by the discharge points can be replaced in their previous locations; • Stockpiling displaced sandstone blocks for use in repairs of other sections of the Alexandra Canal; and • Installation of heritage interpretation regarding the canal in accordance with an interpretation plan. • Any rehabilitation or conservation works in the vicinity of these areas would be determined in consultation with Sydney Water, as the asset owner • Skilled trades people would be used for the proposed works along Alexandra Canal that involve direct interaction with the heritage item. 	<p>Section 6.2 H27</p> <p>Section 7</p> <p>Appendix B</p>
Heritage interpretation		
REMM NAH17	<p>An interpretation plan would be prepared and implemented for:</p> <ul style="list-style-type: none"> • Alexandra Canal and the industrial heritage of the area. This shall include installation of a heritage interpretation regarding the Canal in accordance with an interpretation plan; 	<p>Section 6.2 H28</p> <p>Appendix B</p>

Reference	Requirement	Where addressed
	<ul style="list-style-type: none"> The St Peters Brickpit geological site, including: Integrate the geological interpretation into the Sydney Park brickworks in consultation with City of Sydney, as the industrial counterpart to the geological history to tell a more complete story of historical land use in the area; Integrate the geological/palaeontological discovery of the <i>Paraclytosaurus davdii</i>; and Retaining an exposed section of the fresh shales and siltstones, including features associated with deposition of the sedimentary rocks, later formed fractures such as joints and faults, if feasible and safe to do so for both landform stability and ongoing access for interpretation. 	
Impact to geological and palaeontological values		
REMM NAH18	An archival recording of the St Peters brickpit geological site would be undertaken prior to and during the construction.	Section 6.2 H29 Section 7 Appendix B
REMM NAH19	An assessment and/or consultation with a palaeontologist to determine whether the Project impact area has potential to contain further specimens of scientific interest.	Section 6.2 H30 Section 7 Appendix B
Visual		
REMM NAH20	Approaches to appropriately manage impacts of the Project to the individual contribution of views into and out from heritage properties and the long-term impact of construction would be detailed in a CEMP. Individually tailored landscape treatments would be developed during detailed design to mitigate visual impacts at 2-34 Campbell Road, St Peters.	Section 6.2 H31 Section 6.1 Appendix B
Impacts on archaeology		
REMM NAH21	The construction heritage management plan would include detailed procedures / strategies for the conservation and curation of any historical artefacts recovered during works.	Section 4.2 Section 6.1
Urban design and landscaping		
REMM NAH22	Urban design and landscaping would be undertaken to manage visual impacts to the following additional non-Aboriginal heritage items: <ul style="list-style-type: none"> Terrace housing (I273); Southern Cross Hotel (I277); and Water Board pump house (I18) (highly effective). 	Section 6.2 H31 Section 6.1
REMM OpV06	A final urban design and landscape plan would be prepared in consultation with the New M5 Urban Design Review Panel, local councils within the project corridor and the local community. The Plan shall include (but not limited to): <ul style="list-style-type: none"> The architectural treatment of the ventilation facilities, which would be informed by the functional requirements and the design principles detailed in the New M5 Urban Design Report. Landscape plans and final plant species for the western surface works, Bexley Road motorway operations complex, Arncliffe 	Urban Design and Landscape Plan (M5N-ES-PLN-PWD-0009)

Reference	Requirement	Where addressed
	<p>motorway operations complex, the St Peters interchange and local road upgrades</p> <ul style="list-style-type: none"> • The artwork strategy for the Kindilan underpass • Outcomes of consultation with NSW Heritage Office with respect to integration of heritage interpretation into the urban design of the Alexandra Canal bridge crossings and St Peters interchange. The urban design of Alexandra Canal bridge crossings would also consider the Alexandra Canal Heritage Conservation Plan (NSW Architect's Office, 2004) • Consideration of the outcomes of the Safety in Design review of the project. 	

2.4 EPL Conditions

The Project's construction activities are regulated by an Environment Protection Licence (EPL 20772 and EPL 4627) issued by the NSW Environment Protection Authority (EPA). No EPL conditions are relevant to the management of heritage.

2.5 Sustainability Requirements

In accordance with the Sustainability Plan, CDS-JV will target to achieve Level 2 of ISCA IS Rating Her-1 (Heritage Assessment and Management) and Her-2 (Monitoring of Heritage).

The EIS identifies both Aboriginal and non-Aboriginal sites, artefacts, objects and other heritage items that will (or have the potential to) be impacted by the Project. This CHSP details the management measures of how CDS-JV will protect and enhance heritage items and also provides mitigation measures to minimise impacts to identified heritage items. CDS-JV will conduct regular monitoring of known heritage sites as provided in Section 7 of this Plan. Monitoring will also be conducted at locations where there could be potential heritage items during the excavation/ tunnelling and surface works in accordance with the Historical Archaeological Research Design (Appendix D).

2.6 Guidelines and Relevant Documents

The main guidelines, specifications and policy documents relevant to this CHSP include:

- Archaeological Assessments: Archaeological Assessment Guidelines (NSW Heritage Office, 1996);
- Assessing Heritage Significance for Historical Archaeological Sites and 'Relics' (Heritage Branch of the Department of Planning, 2009);
- Assessing Heritage Significance, NSW Heritage Manual (Heritage Council of NSW, 2002);
- Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW 2010 (DECCW, 2010);
- Heritage Information Series: How to prepare archival records of heritage items (NSW Heritage Office, 1998);
- Heritage Information Series: Photographic recording of heritage items using film or digital capture (DP&E Heritage Office, 2006);
- Historical Archaeological Sites: Investigation and Conservation Guidelines (Heritage Council of NSW, 1993);
- Historical Archaeology Code of Practice (NSW Heritage Office, 2006);
- Levels of Heritage Significance (NSW Heritage Office, 2008);
- Roads and Maritime Services Procedure for Aboriginal Cultural Heritage Consultation and Investigation (PACHCI) (November 2011);

- Roads and Maritime Services Specification D&C G36 Environmental Protection (Roads and Maritime Services, August 2014 Ed 2 Rev 3)
- Roads and Maritime Standard Management Procedure: Unexpected Heritage Items (March 2015);
- Statements of Heritage Impact, NSW Heritage Manual (Heritage Council of NSW, 2002); and
- The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance 2013 (the Burra Charter).

3. Consultation and engagement of specialists

3.1 Consultation on this Plan

This CHSP has been provided to NSW Office of Environment and Heritage (OEH), the Heritage Council of NSW (for non-Aboriginal heritage), the Metropolitan Local Aboriginal Land Council (MLALC; for Aboriginal heritage), relevant councils and DPI (Water) for consultation. Feedback was received from OEH as delegate of the Heritage Council of NSW on this CHSP. No further comments were received from the remaining stakeholders consulted. Comments from OEH related to the management of impacts on Alexandra Canal¹, impacts to local heritage, urban design outcomes and the Historical Archaeological Research Design (Appendix D). These comments have been considered and updates made to this CHSP where relevant. The CDS-JV response to all comments received is provided in the Consultation Comment and Review Register.

Consultation is ongoing with Heritage Council of NSW / OEH in regards to salvage and reuse options for the Rudders Bond Store in accordance with CoA B34. CDS-JV will provide written advice to the Secretary from the Heritage Council of NSW that it is satisfied with the proposed level of salvage, prior to demolition. Consultation with the relevant councils is also ongoing in relation to the salvage of other heritage items to be demolished for the project in accordance with CoA B35. Ongoing consultation with councils and other stakeholders will be undertaken for particular heritage issues as required by the CoA and REMMs and as described below.

Also refer to Section 6.2 of the CEMP for all consultation requirements relating to the CEMP and sub-plans.

3.2 Aboriginal Consultation

Aboriginal community consultation for the Project to date has been undertaken in accordance with Roads and Maritime Stage 2 Procedure for Aboriginal Cultural Heritage Consultation and Investigation (PACHCI) process (refer Appendix G), which included Local Aboriginal Land Council participation in the archaeological survey and cultural report (refer to Appendix V of the EIS – Aboriginal Heritage Technical Paper (AECOM, 2015).

In accordance with Roads and Maritime's Stage 2 PACHCI process, the following Aboriginal community consultation process was adopted:

- Identification of key Aboriginal stakeholders through searches of the National Native Title Register and Registrar of Aboriginal Owners as well as identify the relevant Local Aboriginal Land Council (LALC);
- Engage identified Aboriginal stakeholders to undertake the archaeological survey; and
- Aboriginal stakeholders to prepare a cultural heritage survey report.

For the New M5 Aboriginal cultural heritage assessment, no Aboriginal stakeholders were identified from searches of the National Native Title Register and Register of Aboriginal Owners.

The Metropolitan LALC (MLALC) was identified as the relevant LALC to consult with for the Project.

3.3 Ongoing Aboriginal Consultation

Given the extent of previous disturbance within the Project corridor as well as the proposed construction activities and operational footprint, it is unlikely that direct or indirect impacts to Aboriginal cultural values would occur as a result of the Project. As a result, the Aboriginal cultural heritage assessment, undertaken as part of the New M5 EIS, has identified that a Roads and Maritime PACHCI (refer Appendix G) Stage 3 assessment would not be required.

In the event of the discovery or disturbance of previously unidentified Aboriginal objects, consultation with registered Aboriginal stakeholders, DP&E, Office of Environment and Heritage (OEH) and the NSW Police Force (if human remains are encountered) would be undertaken. Consultation will focus on the assessment of the significance of the item, determination and implementation of appropriate management measures. Re-commencement of works would only be undertaken in accordance with the Roads and Maritime Standard Management Procedure: Unexpected Heritage Items

¹ Note that Alexandra Canal was previously known as Shea's Creek, which is also referred to throughout this CHSP.

(Appendix A). Work would not recommence until approval has been received from OEH and the Environment Manager (or equivalent). Where relevant, registration of Aboriginal heritage finds in OEH's Aboriginal Heritage Information management System (AHIMS) register is to be undertaken.

If additional assessment is required (e.g. for additional land requirements), assessment and consultation would be undertaken in accordance with Roads and Maritime PACHCI (refer Appendix G).

3.4 Unexpected Heritage Items Management

In the event that unexpected heritage items (Aboriginal or non-Aboriginal) are identified during works, works in the vicinity of the find would stop and the Roads and Maritime Standard Management Procedure: Unexpected Archaeological Finds (2013) would be implemented (Refer to Appendix A). This process is summarised, with project-specific roles, in Figure 1, Section 6.1. In the case of unexpected Aboriginal finds identified during works, OEH and the relevant Aboriginal stakeholder groups will be consulted during the assessment of any unexpected Aboriginal cultural heritage items. Re-commencement of works would only be undertaken in accordance with the Roads and Maritime Standard Management Procedure: Unexpected Heritage Items (Appendix A) and in consultation with the relevant authorities (OEH and Aboriginal stakeholders), where required.

This consultation will follow the procedure set out for further cultural heritage assessments as provided below in Section 7.1.1.

3.5 Heritage Incident Management Process

If unauthorised impacts to heritage values occur, OEH, the Heritage Council of NSW and/or Aboriginal stakeholder groups as required, will be consulted during the assessment of impacts and the development of appropriate management strategies.

3.6 Heritage Specialists

Suitably qualified and experienced heritage specialists will be required during the pre-construction and construction phases. These requirements are addressed in Table 5.

Table 5: Engagement of specialists

Activity	Suitably Qualified and Experience Heritage specialist	Timing
Archival recordings (including photographic recording where required)	Heritage specialist to undertake archival recordings for all heritage items/contributory items that are directly impacted by or in close proximity to construction works and for any impacted parts of heritage conservation areas (CoA D37, D38).	Prior to demolition or any works that may impact on heritage value of items
Salvage	The level of fabric salvage for the Rudders Bond Store, the salvage methodology, identification of appropriate adaptive reuse and locations of reuse to be determined in consultation with the Heritage Council of NSW (or delegate) and guided by advice from a suitably qualified specialist informed by the full archival recording. (CoA B34, REMM NAH07) CoA B35 requires an independent heritage consultant to advise on the salvage of items and materials. This must be undertaken in consultation with the relevant councils.	Prior to demolition
Acoustic treatment	Prior to conducting acoustic treatment at any heritage item (CoA B38), a built-heritage expert would provide advice to ensure works are carried out in a sympathetic manner to the heritage values of the item.	Pre-construction or during construction
Assessing previously unidentified Aboriginal and non-Aboriginal objects	In the event that new or unexpected Aboriginal or non-Aboriginal objects are discovered or new heritage impacts are determined, CDS-JV will obtain advice from a suitably qualified and experienced archaeologist.	As required during pre-construction and construction

Activity	Suitably Qualified and Experience Heritage specialist	Timing
	The archaeologist will determine the consistency of any new heritage impacts against the approved impacts of the Project.	
Condition surveys	Structural engineer to complete baseline condition assessments for sites identified to have potential vibration or settlement impacts (including Aboriginal site SR-OVRH-1) prior to construction. At completion of construction, structural engineer to conduct condition assessment with recommendations for remediation measures if required.	As required during pre-construction and after construction
Vibration monitoring	Vibration monitoring to be conducted as advised by a noise and vibration specialist and as required by the Construction Noise and Vibration Management Plan.	As required during construction
Alexandra Canal (formerly known as Shea's Creek) – Unanticipated Aboriginal objects	Due to the potential for subsurface archaeological deposits, the following specialists may be required to manage any unanticipated impacts: <ul style="list-style-type: none"> • Geotechnical engineer to undertake geotechnical coring; and • Archaeologist to work with geotechnical engineer to inspect obtained sediment samples. 	As required during pre-construction and construction
St Peters Brickpit – Geology and Palaeontology Interpretation	A palaeontologist would be consulted to conduct an assessment and/or to determine whether the Project impact area has potential to contain further specimens of scientific interest.	As required during pre-construction and construction
Excavation monitoring	Excavation director (whose experience complies with the Heritage Council of NSW's Criteria for Assessment of Excavation Directors (July 2011)) to monitor works where required by the HARD (Appendix D). Where excavation works are required in the vicinity of potential archaeological sites, the Excavation Director must be present to advise on archaeological issues and oversee the excavation works. The Excavation Director has the authority to advise on the duration and extent of oversight required during such excavation.	As required during pre-construction and construction

4. Existing Environment

4.1 Existing Heritage

4.1.1 Identified and Impacted Aboriginal Cultural and Archaeological Heritage

The EIS includes an Aboriginal cultural heritage assessment (refer to Appendix V of EIS). The assessment was based on reviews of existing desktop information and interrogation of the Aboriginal Heritage Information Management System (AHIMS) database as well as an Archaeological survey by AECOM archaeologists, accompanied by the Metropolitan Local Aboriginal Land Council (MLALC) representative.

Tables B.1 and B.2 in Appendix B of this plan provide the investigation area survey results for identified Aboriginal sites within one kilometre of the study area. Identified Aboriginal heritage is summarised in Table 6:

Table 6: Summary of identified Aboriginal heritage

Identified Aboriginal Heritage	EIS Findings
From the Desktop AHIMS database search, a total of 17 registered sites were identified within the search area (refer Table B.1 in Appendix B for further detail)	
Eleven rockshelters	All located rockshelters were in good condition with the exception of one site used currently as a rock climbing wall. Three rockshelters were not located
Three open artefact sites (artefact scatters and isolated artefacts)	Sites were either salvaged and likely destroyed or artefacts were not observed with one site within Wollie Creek locality potentially being washed away in previous floods.
Two shell middens	Partially destroyed.
One potential archaeological deposit (PAD).	Not located.
From the Archaeological survey, a total of five sandstone rock overhangs were identified as potential archaeological deposits (PADs): (refer Table B.2 in Appendix B)	
SR-OVRH-1	South facing sandstone overhang measuring 4.8 metres long by 1.4 metres high by 3.1 metres deep. Located on an upper slope overlooking an unnamed tributary of Wollie Creek in Stotts Reserve. PAD area size of overhang.
WC-OVRH-1	South facing sandstone overhang measuring 5.8 metres long by 1.2 metres high by 2.7 metres deep. Located on a lower slope 20 metres from Wollie Creek. PAD area 1.1 metres by 1.3 metres. Site condition poor due to rubbish and collapsed ceiling.
WC-OVRH-2	East facing sandstone overhang measuring 3.6 metres long by 1.9 metres high by 2.7 metres deep. Located on a middle slope PAD area 3.6 metres by 2.4 metres. Site condition good.
WC-OVRH-3	South facing sandstone overhang measuring 12 metres long by one metre high by 3.2 metres deep. Located on a middle slope 100 metres from Wollie Creek. PAD area size of overhang. Site condition good.
WC-OVRH-4	Southeast facing sandstone overhang measuring 4.8 metres long by 1.4 metres high by 3.1 metres deep. Located on a middle slope 60 metres from Wollie Creek. PAD area size of overhang. Condition poor due to graffiti and presence of bed, mirror, chair and weights indicating it is regularly occupied.

4.1.2 Identified and Impacted non-Aboriginal Heritage

A non-Aboriginal Heritage Impact Assessment (HIA) was prepared for the EIS (refer to Appendix R of EIS). The HIA (AECOM, 2015) was based on reviews of existing information, a field survey, desktop and historical research and consultation with heritage advisors at local councils and State agencies. It assessed both the historical archaeological resources and heritage impacts.

In total, 58 individual heritage or conservation areas were identified in the EIS. Appendix B provides maps showing the project area in relation to heritage conservation areas and items within and surrounding the project footprint. Heritage identified in the HIA includes:

- Five of the 58 items within the study area are listed on the State Heritage Register:
 - Alexandra Canal (#01621);
 - Arncliffe Railway Station (#01076);
 - Western Outfall Main Sewer (Rockdale to Homebush) (#01647);
 - Timber Slab Cottage, 44 Barden Street (#01412); and
 - St Peters Anglican Church, Princes Highway (#00032).
- The majority of the 58 items are listed on the Rockdale LEP 2011 and Marrickville LEP 2011, with 21 and 17 items respectively;
- Six items were identified on the Sydney LEP 2012, two items on a draft proposed amendment to the Sydney LEP 2012;
- One item on the Botany Bay LEP 2013;
- Ten items (including conservation areas) were identified on the non-statutory Register of the National Estate. Of the ten items, seven items are not listed on a statutory register. These items are:
 - the Welfare Avenue Urban Conservation Area (RNE#102085);
 - Pallamanna Parade Urban Conservation Area (RNE #102089);
 - Kingsgrove East Urban Conservation Area (RNE #102091);
 - Clemton Park Urban Conservation Area (RNE #102071);
 - Bardwell Park Urban Conservation Area (RNE #102101);
 - Sydenham Village (RNE #100061); and
 - the St Peters Brickpit Geological Site (RNE #162040).
- Nine items of the 58 items are listed on Section 170 Heritage and Conservation Registers including: Sydney Water (three items); Sydney Trains (four items) and Roads and Maritime Services (two items).

4.2 Existing Archaeological Potential

The EIS Non-Aboriginal Heritage Technical Paper (Appendix R of the EIS) identified six areas of potential historic archaeological impact within the project footprint including:

- The western surface works
- The main alignment tunnels
- The Kingsgrove Road surface works
- The Bexley Road surface works
- The Arncliffe surface works and
- The St Peters Interchange and local road upgrade works.

A Historical Archaeological Research Design (HARD) was prepared in accordance with the recommendations contained in the EIS and CoA D39. The HARD includes an excavation methodology (refer to Section 6.1.2) and describes significance thresholds to possible archaeological items that may be uncovered during works and designate when monitoring, testing and / or salvage and excavation should occur in relation to the project works and timing. Table 7 provides the archaeological potential across the project identified areas. The HARD is provided in Appendix D of this plan and discussed further in Section 6.1.2.

4.2.1 Statement of Archaeological Significance

The findings from the HARD have determined that generally the potential historical archaeological remains are largely fragmentary remains of the late 19th and early 20th century subdivision and roadwork activities. These remains would not meet a local level of heritage significance.

The areas near St Peters and Sydney Park have the potential to have fragmentary remains of early to late 20th century industrial activities such as the Brickworks and commonplace World War II area activities. These remains will have local heritage significance.

Other ancillary elements such as early road alignments, kerbing, guttering or tram tracks are commonplace urban elements that are both well documented in the historical record and have minimal archaeological research potential. Better *in situ* examples of these types of urban fabric exist throughout the Sydney metropolitan area.

Table 7: Summary of HARD Assessment of Significance

Site	Potential
New M5 project area generally	Low-None
Bexley Road Surface Works	Low – a low potential for archaeological remains due to historic site use and previous ground disturbance.
St Peters Interchange generally	Low - there is low potential for historic paving or kerbing to exist in the St Peters area due to extensive road and property development in the area.
St Peters Interchange – corner of Princes Highway and Canal Road	Moderate – there is some potential for archaeological remains associated with the Austral Brick Company Pty Ltd and existing motor garage.
St Peters Interchange – Burrows Road	Moderate – there is potential for in-situ remains of an early industrial complex and stream management features.
St Peters Local Roads – corner of Campbell Road and Euston Road	Low to moderate – there is a low potential for evidence of air raid trenches in the St Peters Campbell Road and Euston Road intersection. Any surviving evidence would be limited to the cut of the trench which was likely backfilled with previous-excavated redoubt material. There is a low to moderate potential for evidence of the Bell's Woolwashing Establishment.
St Peters Local Roads – Euston Road	Moderate – There is some potential for archaeological remains associated with the Brickworks Pty Ltd City Yard to remain on site.
St Peters Local Roads – Euston Road and Sydney Park Road	Low – a low potential for archaeological remains associated with the NSW Brick Company Ltd due to extensive road and property development in the area.

5. Construction Aspects and Environmental Impacts

CDS-JV construction activities have the potential to impact on Aboriginal and non-Aboriginal heritage. Key aspects of the Project that could result in adverse impacts to Aboriginal and Non-Aboriginal heritage include:

- Clearing and grubbing (removal of heritage vegetation);
- Change in heritage conservation area values (i.e. construction of new elements within heritage conservation areas);
- Construction of new road infrastructure or ancillary facilities;
- Earthworks (vibration);
- Piling (vibration);
- Excavation and cavern construction (vibration and settlement);
- Tunnelling activities (vibration, settlement and groundwater drawdown);
- Acquisition and associated demolition of properties that contain heritage items; and
- At-property acoustic treatment of heritage listed buildings.

5.1.1 Impacts to Aboriginal Culture and Archaeological Heritage

As an overall finding, the EIS (Appendix V, Technical Working Paper: Aboriginal Heritage) states that given the extent of previous disturbance within the Project corridor, as well as the proposed construction activities and operational footprint, it is unlikely that direct or indirect impacts to Aboriginal cultural values would occur as a result of the Project. Refer to Appendix B for predicted potential impacts on Aboriginal and Non-Aboriginal heritage matters.

The EIS assessed settlement impacts for the project in accordance with Sefton’s (2000) investigation, which examined the effects of mining-related subsidence on Aboriginal rockshelter sites. This study found that rockshelter sites with an overhang size of less than 50 cubic metres were not impacted by subsidence. The only Aboriginal rockshelter site determined to be within a distance that could potentially be impacted by the project is SR-OVRH-1 (within 50 metres of the Project footprint). The other identified rockshelters and EIS identified sites are located at a distance that would result in no impact as a result of the Project. The following Table 8 details the management measures for site SR-OVRH-1. Table 9 provides the criteria for assessing settlement damage at rockshelter sites (extract of Section 7.2, Appendix V, New M5 EIS).

Table 8: Site SR-OVRH-1 Impacts and Management

Site	Potential Impact	EIS Finding	Management
SR-OVRH-1 This site is located within Stotts Reserve within 50 metres of the main tunnel alignment.	Settlement resulting from tunnelling or groundwater drawdown -	Unlikely as the predicted settlement value is less than five millimetres (refer Table 9) and the overhang size is less than 50 cubic metres.	Monitoring – Refer to Section 7.
	Vibration	No surface works or tunnelling vibration impacts likely due to sufficient work distances. Maximum predicted vibration resulting from tunnelling would be less than one millimetre per second at the closest potential Aboriginal site SR-OVRH-1.	Follow DIN 4150-3 Group 3 Vibration velocity of less than 3 millimetres per second. Refer to Table 10 below and Section 6.1.1.
	Blasting	Blasting activities that use a one or two kilogram charge weight would be below the Group 3 of the German Standard (DIN 4150-3) safety limit of three millimetres per second at this site. Blast size in proximity to the site would be selected to comply with the Group 3 of the German Standard safety limit of three millimetres per second.	Follow DIN 4150-3 Group 3 Vibration velocity of less than 3 millimetres per second. Refer to Table 10 below and Section 6.1.1.

Table 9: Criteria for assessing settlement damage at rockshelter sites (extracted from Section 7.2, Appendix V, New M5 EIS)

Maximum settlement (mm)	Degree of damage	Description of potential damage	Approximate crack width (mm)
<5	Negligible	Hairline cracks	<0.1
<10	Very slight	Fine cracks	<0.1 to 1.0
10-50	Slight	Potential fractures	5 to 15

5.1.2 Impacts to non-Aboriginal Culture and Archaeological Heritage

Of the 58 heritage items identified in Section 4.1.2, the following Table 10 details the items that will be demolished, modified, acquired or where heritage conservation area values are impacted. Refer to Appendix B for further details in relation to impacts and associated management measures.

Table 10 : Heritage items to be demolished, acquired or modified

Type of impact	Heritage Item / Conservation Area	EIS Finding
Items to be demolished	<ul style="list-style-type: none"> Warehouse 'Rudders Bond Store' (Sydney LEP I405); 	<ul style="list-style-type: none"> Major negative impact due to loss.
	<ul style="list-style-type: none"> Terrace group – 28-44 Campbell Street, St Peters (Roads and Maritime Section 170 #4305629); and 	<ul style="list-style-type: none"> Moderate negative impact due to loss.
	<ul style="list-style-type: none"> House – 82 Campbell Street, St Peters (Roads and Maritime Section 170 #4305643). 	<ul style="list-style-type: none"> Moderate negative impact due to loss.
Items to be modified (minor to a significant level)	<ul style="list-style-type: none"> Alexandra Canal (previously known as Shea's Creek) (State Heritage Register #01621, Sydney LEP 2012 I3, Marrickville LEP 2011 I270, Botany LEP I1 and non-statutory Register of the National Estate (RNE) # 4571712); 	<ul style="list-style-type: none"> Major negative impact due to direct impacts on sandstone walls. Moderate negative impacts due to construction of additional crossings Major positive impacts due to increased access and appreciation.
	<ul style="list-style-type: none"> St Peters Brickpit Geological Site (RNE #16240); and 	<ul style="list-style-type: none"> Potential positive impact due to improved knowledge, awareness and/or access to site Minor negative impact due to concealment of exposed cutting
	<ul style="list-style-type: none"> Goodsell Estate Conservation Area (Marrickville LEP 2011 C16). 	<ul style="list-style-type: none"> Potential minor impacts on heritage values, including vibration and visual impacts
Full or partial acquisition of items (permanent loss of this curtilage or a change in use)	<ul style="list-style-type: none"> Service Garage – 316 Princes Highway (Marrickville LEP 2011 I312); and 	<ul style="list-style-type: none"> Minor negative impact due to loss of continuity of operation No impact to heritage fabric
	<ul style="list-style-type: none"> Goodsell Estate Heritage Conservation Area (Marrickville LEP 2011 C16) (partial). 	<ul style="list-style-type: none"> Potential minor impacts on heritage values, including vibration and visual impacts
Heritage	<ul style="list-style-type: none"> Welfare Avenue Urban Conservation Area (ID No 102085 under the Register of the National Estate); 	<ul style="list-style-type: none"> Not assessed in EIS, outside study area



Type of impact	Heritage Item / Conservation Area	EIS Finding
<p>conservation areas values partially and directly impacted</p>	<ul style="list-style-type: none"> • Pallamanna Parade Urban Conservation Area (ID No 102089 under the Register of the National Estate); 	<ul style="list-style-type: none"> • Negligible impact, limited to specific areas already associated with major transport infrastructure
	<ul style="list-style-type: none"> • Kingsgrove East Urban Conservation Area (ID No 102106 under the Register of the National Estate); 	<ul style="list-style-type: none"> • No visual impact due to existing screening • Negligible impacts on heritage values
	<ul style="list-style-type: none"> • Clemton Park Urban Conservation Area (ID No 102071 under the Register of the National Estate); 	<ul style="list-style-type: none"> • No visual impact • Potential minor vibration impact
	<ul style="list-style-type: none"> • Goodsell Conservation Area (ID No C16 under the Marrickville LEP); 	<ul style="list-style-type: none"> • Potential minor impacts on heritage values, including vibration and visual impacts
	<ul style="list-style-type: none"> • Cooper Estate Conservation Area (ID No C2 under the Sydney LEP); 	<ul style="list-style-type: none"> • Negligible impacts to heritage values
	<ul style="list-style-type: none"> • Bardwell Park Urban Conservation Area (ID No 102101 under the Register of the National Estate); and 	<ul style="list-style-type: none"> • Negligible impacts to heritage values
	<ul style="list-style-type: none"> • Sydenham Village (ID No 100061 under the Register of the National Estate). 	<ul style="list-style-type: none"> • Negligible impacts to heritage values

6. Management of Heritage Impacts

6.1 Specific Management Measures

Management measures for items detailed in Section 4.1 and Appendix B (particularly those acquired, modified or where heritage values may be impacted) are provided in this section and Section 6.2, Table 13. These sections provide detail on the specific measures that will be incorporated into CDS-JV's management of heritage during construction activities, particularly where impacts may be unavoidable.

6.1.1 Vibration management measures

The potential impacts to heritage items due to ground movement and construction vibration would be confirmed during detailed design. Where required, mitigation and management measures to minimise potential impacts will be investigated during detailed construction methodology. Monitoring undertaken at heritage sites, items or properties would be undertaken for all items located within the EIS assessed project corridor or properties within the recommended safe working setbacks.

The following section provides mitigation measures for the protection and conservation of the Aboriginal and non-Aboriginal heritage items.

- In order to assess potential impacts to the Aboriginal rockshelter (SR-OVRH-1) or rock overhang from vibration caused from construction (including blasting) of the project, the German Standard (DIN 4150 Group 3) guidelines will be applied (refer to Table 13). These standards are commonly used in Aboriginal heritage assessments to assess impacts to potential sites. Group 3 represents the most sensitive safe limit for vibration impacts on structures and has been adopted here as it represents the most cautious approach, and has also been applied to rock overhangs identified in the archaeological survey conducted for this project;
- When vibration intensive works are within 50 metres of rockshelter sites and associated overhangs such as Aboriginal site SR-OVRH-1 (and sites listed in Table 8) the need for vibration monitoring would be informed by a preliminary screening of activities at this location to identify activities which have the potential for vibration at these areas of sensitivity; and

The following vibration monitoring will be undertaken:

- Adjacent to construction compounds and permanent facility works in order to verify compliance;
- Monitoring to test for both structural damage and human comfort where either the 'safe working distances' in the Construction Noise and Vibration Management Plan (CNVMP) cannot be complied with or vibration levels are predicted to be greater than the maximum values for human comfort as a result of works;
- When predicted vibration from activities is above the Vibration Management Level (VML) or where required at sensitive receivers to verify compliance as per this CHSP;
- As required by a Construction Noise and Vibration Impact Statement (CNVIS);
- As required by the project Environmental Protection Licence (EPL #20772 or #4627); and in response to complaints where required.
- Specific monitoring requirements for construction sites associated with the Project will be identified in the CNVIS reports prepared for each construction worksite.

The Submissions Report also provides that building condition surveys would be undertaken on properties and structures (including heritage items) located:

- Within the preferred project corridor (the zone on the surface equal to 50 metres from the outer edge of the tunnels)
- Where the potential for exceedances of the blasting criteria are identified.
- Building condition surveys of potentially affected structures would be completed both before the start of tunnelling or other vibration intensive works and after completion of works, to identify existing damage and any damage due to the works.

Table 11: DIN 4150-3: Structural damage safe limits for building vibration

Group and Type of Structure	Vibration Velocity in mm/s			Vibration at the Horizontal Plane of the Highest Floor
	At foundation at a Frequency of:			
	Less than 10 Hz	10 Hz to 50 Hz	50 Hz to 100 Hz	All Frequencies
Group 1 - Buildings used for commercial purposes, industrial buildings and buildings of similar design.	20	20 to 40	40 to 50	40
Group 2 - Dwellings and buildings of similar design and/or use.	5	5 to 15	15 to 20	15
Group 3 - Structures that because of their particular sensitivity to vibration do not correspond to those listed in Lines 1 or 2 and have intrinsic value (e.g., buildings that are under a preservation order).	3	3 to 8	8 to 10	8

6.1.2 Archaeological Excavation Protocols

The general methodology would be informed by site conditions, proposed strategy and unexpected finds (refer Appendix A, Roads and Maritime Standard Management Procedure: Unexpected Heritage Items). Table 12 provides an overview of the protocols for managing the potential archaeological resources in each area within the project footprint.

Table 12: Archaeological Excavation Protocols

Site	Potential	Strategy	Justification
New M5 project area generally	Low – None	Appendix A: Roads and Maritime Standard Management Procedure: Unexpected Heritage Items	To manage unexpected relics and remains within the broader footprint of the Project area
Bexley Road Surface Works	Low	Appendix A: Roads and Maritime Standard Management Procedure: Unexpected Heritage Items	To manage unexpected relics and remains
St Peters Interchange generally	Low	Appendix A: Roads and Maritime Standard Management Procedure: Unexpected Heritage Items	To manage unexpected relics and remains
St Peters Interchange – corner of Princes Highway and Canal Road	Moderate	Archaeological monitoring as per the HARD (Appendix D)	To discern the existence of in-situ remains of the Austral Brick Company Ltd (Ralford Yard)
St Peters Interchange – Burrows Road	Moderate	Archaeological monitoring as per the HARD (Appendix D)	To discern the existence of in-situ remains of an early industrial complex and stream management features
St Peters Local Roads – corner of Campbell Road and Euston Road	Low	Appendix A: Roads and Maritime Standard Management Procedure: Unexpected Heritage Items	To manage the discovery of any signs of the air raid trenches

Site	Potential	Strategy	Justification
St Peters Local Roads – corner of Campbell Road and Euston Road	Low – moderate	Appendix A: Roads and Maritime Standard Management Procedure: Unexpected Heritage Items	To manage the discovery of any signs of the Bell's Woolwashing Establishment
St Peters Local Roads – Euston Road	Moderate	Archaeological monitoring as per the HARD (Appendix D)	To discern the existence of any building fabric associated with the Brickworks Pty Ltd City Yard
St Peters Local Roads – Euston Road and City Park Road	Low	Appendix A: Roads and Maritime Standard Management Procedure: Unexpected Heritage Items	To manage the discovery of any building fabric associated with the NSW Brick Company Ltd

Section 4.4.1 of the HARD provides general archaeological methodology as informed by the site conditions.

Archaeological Monitoring of Excavations

Archaeological testing is not proposed for any sites currently. Where excavation works are required in the vicinity of potential archaeological sites, the project Excavation Director² must monitor the works. The Excavation Director has the authority to advise on the duration and extent of monitoring required during excavation. The following measures would be implemented as required:

- Excavation methodology to be in accordance with the Historical Archaeological Research Design (HARD, Appendix D)
- Where areas are shown to present sufficient integrity, works will stop in accordance with Appendix A - Roads and Maritime Standard Management Procedure: Unexpected Heritage Items and appropriate recording and analysis completed. In accordance with Section 4.4 and Appendix A of this plan, all exposed archaeological resources would be recorded and managed as per the methodologies provided.
- When the Excavation Director is satisfied that no archaeological resources are present, or those areas which have presented remains have little integrity or significance, the project team will be informed and work will continue.

Managing unexpected Relics

Where a low possibility of archaeological remains exist, testing or monitoring of work in that area will not be required.

Where unexpected relics or archaeological features are exposed, Appendix A - Roads and Maritime Standard Management Procedure: Unexpected Heritage Items will be implemented. The Excavation Director will be contacted to assess the integrity and significance of exposed relics.

Targeted Open-Area Manual Excavation

Open-area excavation will only be required where archaeological relics, deposits or features have been identified by the Excavation Director as having significance, good integrity and complexity and the site is safe for excavation.

Where development impacts are likely to extend below the level of fill currently present across the site it may be necessary to undertake test excavation prior to works in order to determine the extent of significance of any archaeological remains that may be present.

Open-area excavation will be under the direction of the Excavation Director and Environmental Manager and assisted where necessary by one or more archaeologists depending on the extent and complexity of the resource.

² Excavation director who meets the Heritage Council of NSW's Criteria for Assessment of Excavation Directors (July 2011) must monitor the works

All archaeological relics, deposits and features would be excavated and recorded stratigraphically. The methodology would follow Appendix D, including gridding and sieving any significant occupation deposits.

Artefact Analysis and Reporting

Detailed analysis of any exposed artefacts will include preparing a site database that accurately identifies each artefact. Where relevant, specialists will report on the artefact outlining key issues and themes. Important artefacts may be the subject of materials conservation.

The results of any excavations would be detailed in a final Excavation Report, to be prepared within 12 months of completing all archaeological investigations. This report will include post-excavation analysis of significant features, deposits and artefacts. The report will be prepared in accordance with current heritage best practice guidelines as outlined in the Project Approval and will be submitted to DP&E, the Heritage Council of NSW, and the local library and local Historical Society in the relevant local government area(s).

During the analysis stage of the project, artefacts will be safely stored by the archaeologist. Following reporting stage of the project, the artefacts will be returned to SMC to arrange appropriate storage and care of the artefacts dependent on items significance.

Interpretation

Interpretation of the key heritage values and stories of heritage items and heritage conservation areas will be provided in a Heritage Interpretation Plan (CoA B40 and REMM NAH17) and will include the requirements outlined in Section 6.2 (management measure H28).

6.1.3 Management of unexpected heritage finds

Where unexpected relics or archaeological features are exposed, the Roads and Maritime Standard Management Procedure: Unexpected Heritage Items (Appendix A) will be implemented. The Excavation Director will be contacted to assess the integrity and significance of exposed relics. This process (with CDS-JV project-specific responsibilities) is outlined in the flowchart in Figure 1. condition survey

6.1.4 Management of visual impacts

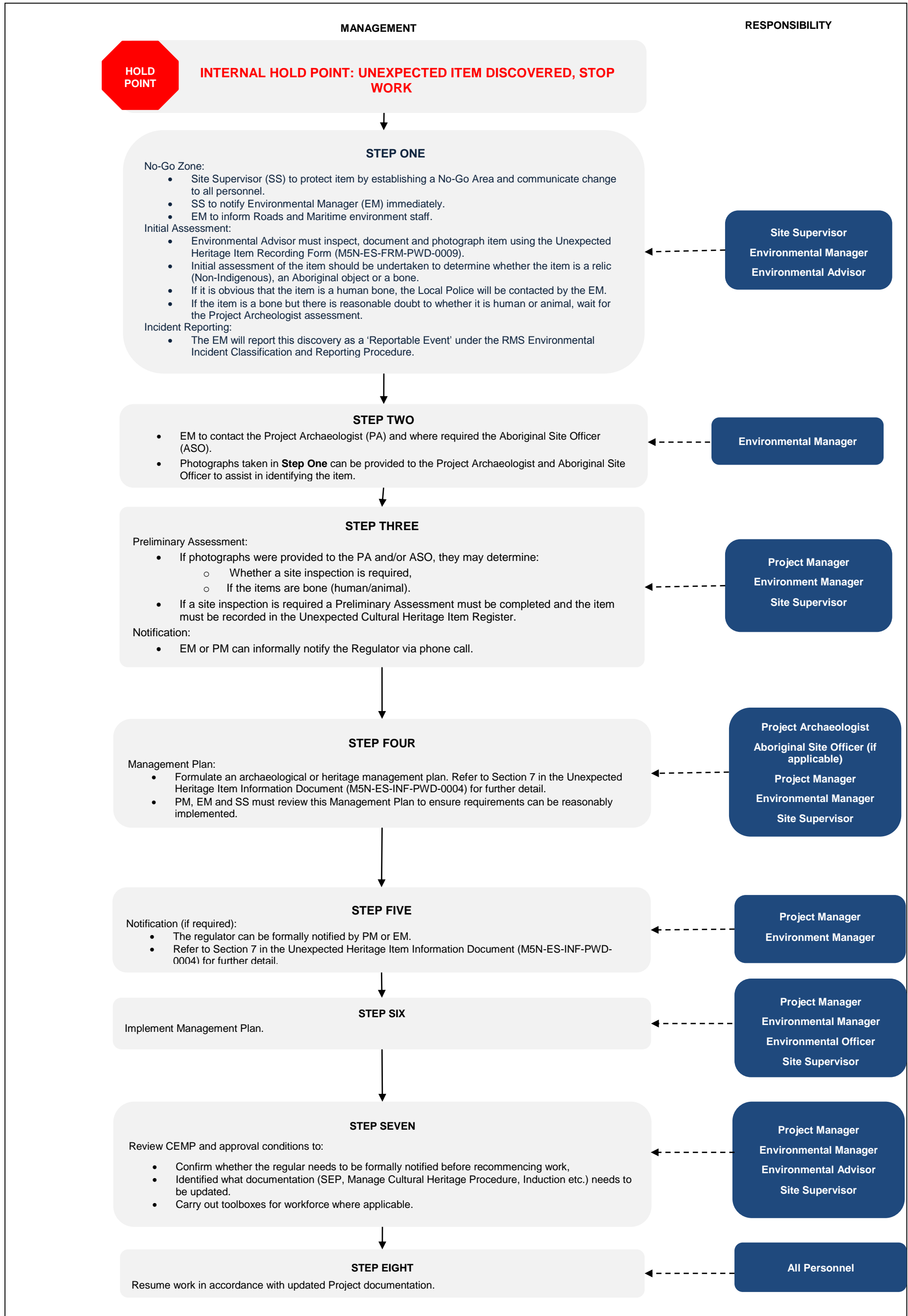
Temporary and permanent visual impacts to existing heritage items during construction will be minimised through landscaping or landscaping treatments where practical. Any at-property acoustic treatment of heritage listed properties would be undertaken in accordance with the advice of the project's heritage specialists, which would be obtained prior to any impact on the property and would be sympathetic to the heritage values of the item. Where possible, the work would be undertaken in accordance with the Burra Charter. In instances where this involves incorporating noise-proofing within heritage structures, the advice of a conservation architect will be sought where possible.

6.1.5 Management of potential heritage items

Where potential heritage items are identified (in the New M5 EIS, Submissions Report or during pre-construction heritage inspections), management of these items will be the same as for locally listed heritage items, as a minimum, within the project footprint. The project heritage specialist and/or archaeologist, as required, will assess and manage these items accordingly. This may include:

- Specialist Advice – this advice as an example may include sympathetic acoustic treatment or specific mitigation measures to be applied where reasonable and feasible
- Assessment
 - Statement of Heritage Impact and Significance Assessment
 - Identification on Site Environment Plans or Constraints Map
- Archival recordings
- Offer of pre- and post-construction condition surveys
- Interpretation
- Salvage and Reuse of salvage materials/items
- Offer of pre and post condition survey

Figure 1: Unexpected heritage item flowchart





6.2 Mitigation and Management Actions

Measures to manage Aboriginal and non-Aboriginal impacts and reduce the risk of impact to heritage items (as defined in Infrastructure Approval SSI 6788) will be implemented prior to and during construction works. Elimination of the hazard is the first preference of control, followed by engineering, then administrative controls. Controls used on this Project are identified in Table 13. These controls include the relevant environmental management measures identified in the EIS and SPIR.

Table 13: Project controls associated with management of heritage

Ref	Control / Actions	Timing	Responsibility	Source
GENERAL				
H1	Impacts to heritage are to be avoided and minimised where practicable. Where impacts are unavoidable, works are to be undertaken in accordance with this Plan.	Pre-construction Construction	EM, PM	CoA B33, D43, D68
H2	Project boundaries (as defined as the SSI footprint) will be clearly delineated where relevant. No harm, modification or construction impacts will occur to any heritage items (including human remains) outside the SSI footprint. Additionally, no harm, modification or other impact is to occur to any human remains identified within or outside the SSI footprint.	Pre-construction Construction	EA	CoA B33, D43, D68
H3	Identified impacts to heritage items listed in Appendix B will be minimised where feasible and reasonable through the implementation of management measures provided in this plan.	Detailed Design Pre-construction Construction	DM, EM, PM	CoA B33, B37, D43, D68
H4	Training will be provided to relevant Project and construction/site personnel (refer Section 1.4), including relevant contractors and sub-contractors on the location of known Aboriginal and non-Aboriginal heritage items. Site inductions, toolboxes and targeted training would be employed particularly for sites where areas of archaeological sensitivity including Potential Archeological Deposits (PADs), artefacts or items are located. These training sessions will include addressing key mitigation and management requirements included in this CHSP, including unexpected finds procedures.	Pre-construction Construction	EM, PM	CoA D68 D&C G36



Ref	Control / Actions	Timing	Responsibility	Source
H5	Ensure Work Packs include relevant environmental control information including a Site Environment Plan where required.	Pre-construction Construction	EM, PM, EA	CoA D68 Good practice
H6	All known heritage items within immediate vicinity of the construction work zones will be identified on Sensitive Area Plans included in the CEMP.	Pre-construction Construction	EM, PM, EA	CoA B38, D68 Good practice
H7	Exclusion fencing or No Go Zones will be established to protect heritage items within the immediate vicinity of the construction work zones as required, unless the site is required to be directly impacted as part of the approved construction works. Distances would consider safe work distances and likely indirect/direct impacts to the item.	Pre-construction Construction	EM, PM	CoA D68 Good practice
H8	A Land Disturbance Permit must be authorised prior to ground disturbance taking place.	Pre-construction Construction	PE, EM	Good practice
H9	<p>Prior to commencement of construction in proximity to or affecting a heritage items or contributory item in a heritage conservation area, archival recordings of existing condition, including photographic recording of these heritage items must be undertaken.</p> <p>The archival recording must be undertaken by a qualified and experienced heritage consultant, in accordance with the How to Prepare Archival Records of Heritage Items (2003) guidelines issued by the Heritage Council of NSW.</p> <p>Within 12 months of completing the archival recording, or as otherwise agreed by the Secretary, a Heritage and Contributory Item Archival Recording and Research Report containing the archival and photographic recordings and historical research, must be submitted to the Department, the Heritage Council of NSW, the local library, and the local Historical Society in the respective local government area(s).</p>	Pre-construction Construction	EM, Heritage specialist	CoA D37
H10	Prior to the commencement of construction within a heritage conservation area, archival recordings must be undertaken for any impacted part of the respective heritage conservation area. Consultation with the Heritage Council of NSW (or its delegate) and the relevant council is to be carried out to determine the objectives and	Pre-construction Construction	EM, Heritage specialist	CoA D38



Ref	Control / Actions	Timing	Responsibility	Source
	<p>approaches to the archival recording, prior to impact. The archival recording of heritage conservation areas is to include, but not be limited to:</p> <p>(a) comprehensive photographic recording of buildings, structures, open spaces, public realm, architecture, urban design, landscaping and streetscapes;</p> <p>(b) surveying and mapping of land use arrangements, street patterns and layouts, subdivision layouts, landscape design and street tree plantings; and</p> <p>(c) any other feasible recording requested and agreed to following consultation with the aforementioned stakeholders.</p> <p>The archival recording must be undertaken by a qualified and experienced heritage consultant, and in a manner generally reflective of the <i>How to Prepare Archival Records of Heritage Items</i> (2003) guidelines issued by the Heritage Council of NSW.</p> <p>Within 12 months of completing the archival recording, or as otherwise agreed by the Secretary, a Heritage Conservation Area Archival Recording and Research Report, for each relevant heritage conservation area, containing the archival and photographic recordings, mapping and historical research, must be submitted to the Department, the Heritage Council of NSW, the local library, and the local Historical Society in the respective local government area(s).</p>			
H11	<p>Where required, suitably qualified and experienced heritage specialists will be engaged (as per Section 3.6 of this CHSP) to provide guidance on the management of construction heritage sites and impacts during pre-construction and construction activities. Guidance would include compliance with MCoA and REMMs particularly for activities or identified sites detailed in Section 4, 5 and Appendix C of this CHSP.</p> <p>Procedures for the engagement of a qualified and experienced archaeologist in consultation with the OEH and the Department, and assessment of the consistency of any new heritage impacts against the approved impacts of the project;</p>	Pre-construction Construction	EM, PM, PE, Heritage Specialist	CoA D68 Table 5
H12	<p>Prior to conducting acoustic treatment at any heritage item as defined in the Infrastructure Approval (SSI 6788), the advice of a suitably qualified and experienced heritage specialist must be obtained and implemented to ensure such work is carried out in a manner sympathetic to the heritage values of the item.</p>	Pre-construction Construction	EM, PM, PE, Heritage Specialist	CoA B38



Ref	Control / Actions	Timing	Responsibility	Source
H13	<p>If any unexpected heritage items (Aboriginal or Non-Aboriginal), including human remains are encountered, works potentially affecting the find would cease immediately and the Roads and Maritime Standard Management Procedure – Unexpected Heritage Items (August 2013) (refer Appendix A) would be followed. Work shall not recommence until approval has been received from the relevant authorities (OEH and/or Heritage Council of NSW), and the Environment Manager (or equivalent).</p> <p>Where relevant, registration of Aboriginal heritage finds in OEH’s Aboriginal Heritage Information management System (AHIMS) register is to be undertaken.</p>	Pre-construction Construction	All personnel (including subcontractors)	CoA D43, D44, D68 D&C G36 Appendix A
H14	<p>Human remains are not permitted to be destroyed, modified or otherwise physically affected as a result of the Project. If human remains are encountered, they would be managed in accordance with the Roads and Maritime Unexpected Heritage Items Procedure (refer to Appendix A). This procedure includes the following provisions:</p> <ul style="list-style-type: none"> • Relevant works in the vicinity of the remains, with the potential to directly or indirectly impact on the remains, would cease; • The construction Environmental Representative, OEH and NSW Police would be notified of the discovery (NSW Police called first); and • Directions from the NSW Police and/or OEH would be followed, depending on the nature of the remains and the outcome of forensic investigations. <p>This procedure would include notification of registered Aboriginal stakeholders and a commitment to not recommencing works in the area unless authorised by the OEH and/or the NSW Police Force.</p>	Construction	All personnel (including subcontractors)	CoA D43, D44, D68 D&C G36 Appendix A
H15	<p>Surface works would adhere to safe working distances.</p> <p>Vibration monitoring shall be conducted in accordance with Section 6 of this CHSP, consistent with the measures detailed in the Construction Noise and Vibration Management Plan (CNVMP).</p>	Construction	EM, PM, PE	CoA D43, D68 Section 6.1.1 REMM NAH10
H16	<p>Where vibration goals are likely to be exceeded, works shall be amended to assist in complying with the vibration goals. Such measures may include reducing plant size, changing operational settings (such as turning off the vibratory function of the</p>	Construction	EM, PM, PE	CoA D68 Section 6.1.1 Section 7



Ref	Control / Actions	Timing	Responsibility	Source
	<p>machine), and using alternative plant, utilising alternate construction methodology and mitigation measures listed within the CNVMP or a combination of these:</p> <ul style="list-style-type: none"> procedures for identifying minimum working distances to retained heritage items (including, at minimum, vibration testing and monitoring), detailed options for alteration of construction methodology should preferred values for vibration be exceeded, and commitment to implementing those options if preferred values for vibration are likely to be exceeded. 			Section 8
SPECIFIC ABORIGINAL HERITAGE MANAGEMENT/ MITIGATION MEASURES				
H17	<p>In order to manage unanticipated impacts to an potential subsurface archaeological deposits at Alexandra Canal (Shea's Creek) from pile installation, the following management strategy will be followed:</p> <ul style="list-style-type: none"> Engage a qualified geotechnical engineer to undertake a programme of geotechnical coring at each pile location to obtain intact sediment samples to a depth of around seven metres; Engage a qualified archaeologist to undertake, in consultation with the geotechnical engineer, an inspection of obtained sediment samples, the purpose of which would be to characterise the soil profile and identify any (or potential for any) Aboriginal archaeological materials (e.g., stone tools, cultural shell and bone materials); and Implement the Roads and Maritime Standard Management Procedure: Unexpected Heritage Finds (Roads and Maritime, 2015) as provided in Appendix A. <p>The assessment by the archaeologist must be carried out prior to the commencement of excavation and/or piling works adjacent to the Canal. In the event that artefacts are uncovered, the procedures for unexpected finds (refer Appendix A) must be implemented and this Construction Heritage Sub-Plan must be updated.</p>	Pre-construction	EM, PM, PE, Geotechnical Engineer, Archaeologist	CoA D45 REMM AH5 Appendix A
H18	Vibration generating activities will not result in vibration levels greater than three millimetres per second at potential Aboriginal heritage site SR-OVRH-1.	Construction	EM, PM, PE	REMM AH1 Section 6.1.1
H19	Vibration monitoring will be conducted for vibration intensive works within 50 metres of SR-OVRH-1. The need for vibration monitoring will be informed by a preliminary	Construction	EM, PM, PE,	REMM AH2



Ref	Control / Actions	Timing	Responsibility	Source
	screening of activities at this location to identify what activities have the potential for vibration.			Section 6.1.1 Section 8
H20	A baseline condition assessment will be completed by a qualified structural engineer for Aboriginal site SR-OVR-1 before construction commences, followed by a condition assessment immediately following significant vibration and with recommendations for remediation measures if required.	Pre-construction Construction Post-construction	EM, PM, PE, Structural Engineer	REMM AH3
SPECIFIC NON-ABORIGINAL HERITAGE MANAGEMENT/MITIGATION MEASURES				
H21	<p>The German Standard DIN 4105-3: Structural Vibration – effects of vibration on structures will be referred to, to assess vibration limits for structural damage to heritage items during tunnelling and surface works.</p> <p>For non-Aboriginal heritage items where the predicted vibration levels are greater than indicated by the German standard, the following measures will be applied:</p> <ul style="list-style-type: none"> • Structural building inspections by qualified engineer/surveyor before works commence; • Follow up structural building inspection after work completed; • Install vibration monitoring; • Consider alternative methods if 'warning levels' of vibration reached; and • Cease work if vibration levels reach 'stop work' levels. 	Pre-construction Construction	EM, PM, SS, PE	REMM NAH09 REMM NAH10 Section 6.1.1
H22	Sections of the laminated timber from the Rudders Bond Store must be salvaged prior to demolition of the building and options for reuse of items must be assessed within the project area at St Peters and maximise its use within the operational facilities. The sections to be salvaged must be determined in consultation with the Heritage Council of NSW (or its delegate). Written advice from the Heritage Council of NSW must be submitted to the Secretary, DP&E, that it is satisfied with the proposed level of salvage, prior to the building being demolished.	Pre-construction	EM, PM, Heritage Specialist	CoA B34, D68 REMM NAH07
H23	Salvage of heritage items (including potential items) is to occur as advised by an independent heritage specialist and in consultation with the relevant council(s). Items to be considered for salvage must include the terrace group at 82 Campbell Road and 28-44 Campbell Street.	Pre-construction Construction	EM, PM, PE, Heritage Specialist/Architect	CoA B35, D68 REMM NAH06

Ref	Control / Actions	Timing	Responsibility	Source
	Reuse of salvaged items within the project will be considered and described in the Urban Design and Landscape Plan. The list of items to be salvaged is to be submitted to the Secretary for consideration prior to demolition of any heritage items.			
H24	Any residual salvaged items and materials are to be made available to property owners within the locality from where the material originated. This will be conducted through a process to be developed in consultation with the relevant council(s).	Construction	EM, CM, CRM	CoA B35, D68 REMM NAH06
H25	Archival recording (as per H9) to include as a minimum: the terrace group at 82 Campbell Road and 28-44 Campbell Street Rudders Bond Store Alexandra Canal (both scale drawings and photography) the St Peters brickpit geological site	Pre-construction Construction	EM, PM, Heritage Specialist	REMM NAH06 REMM NAH07 REMM NAH18
H26	Photographic records of those parts of the Alexandra Canal to be impacted by the construction of stormwater drainage works must be compiled both prior to and after the works are undertaken. The photographs taken prior to the works must be included in this CHSP and referred to when reinstating the bricks of the canal embankment to ensure that they are correctly replaced. The pre- and post-works photographs must be made available to the Heritage Council of NSW and the DP&E on request.	Pre-construction Post-construction	EM, PM, Heritage Specialist	CoA B41 REMM NAH16
H27	The following additional management measures will be implemented at Alexandra Canal (Shea's Creek): <ul style="list-style-type: none"> an appropriately qualified and experienced heritage expert to oversee the removal and reinstatement of sections of the embankment wall; Monitoring during works to ensure vibration is not impacting the Alexandra Canal walls; Numbering and photography (refer H25) of sandstone blocks so that those displaced by the discharge points can be replaced in their previous locations; Stockpiling displaced sandstone blocks for use in repairs of other sections of the Alexandra Canal; and Installation of heritage interpretation regarding the canal in accordance with an interpretation plan. 	Pre-construction Construction	EM, PM, SS Heritage specialist	CoA B41, B42 REMM NAH16 REMM NAH17
H28	A Heritage Interpretation Plan will be prepared and include as a minimum:	Pre-construction	EM, PM, Heritage specialist	CoA B40

Ref	Control / Actions	Timing	Responsibility	Source
	<p>a) A discussion of the key interpretive themes, stories and messages proposed to interpret the history and significance of the affected heritage items and sections of heritage conservation areas including but not limited to:</p> <ul style="list-style-type: none"> – St Peters Brickpit Geological site, including geological/palaeontological interpretation – the Alexandra Canal (Shea’s Creek) and the industrial heritage of the area, – Terraces at 28-44 and 82 Campbell Street and – the Rudders Bond Store; and <p>b) Identification and confirmation of interpretive initiatives implemented to mitigate impacts to archaeological relics, heritage items and conservation areas affected by the project.</p> <p>The Heritage Interpretation Plan must be prepared in consultation with the Heritage Council of NSW and the relevant local councils. A copy of the Plan must be provided to the Heritage Council of NSW, the relevant local councils and the Secretary at least six months prior to the operation of the SSI.</p>	Construction	(Paleontologist / Geologist)	REMM NAH17
H29	Photographic and drawn archival recordings of the geological features of the St Peters Brickpit Geological Site must be undertaken prior to commencing any works that would result in the features being obscured. The recordings must be included in the Heritage Interpretation Plan required by CoA B40 (H24).	Pre-construction Construction	EM, PM, Heritage specialist	CoA D42 REMM NAH18
H30	An assessment and/or consultation with a palaeontologist to determine whether the Project impact area has potential to contain further specimens of scientific interest.	Pre-construction Construction	EM, PM, Heritage specialist (Palaeontologist/ Geologist)	REMM NAH19
H31	Where appropriate, the heritage values of items listed in Appendix B (including the views and vistas) will be considered during the detailed design of built items of the Project and detailed in the Urban Design and Landscape Plan	Detailed Design Pre-construction Construction	DM, EM, PM	REMM NAH11 - REMM NAH16 REMM NAH20 REMM NAH22
H32	Except for necessary stabilisation or maintenance works agreed in consultation with DP&E, the Service Garage located at 316 Princes Highway, St Peters must not be	Pre-construction Construction	EM, PM, SS Heritage specialist	CoA B36 REMM NAH08



Ref	Control / Actions	Timing	Responsibility	Source
	<p>destroyed, modified or otherwise physically affected. In addition, the following will be undertaken:</p> <ul style="list-style-type: none"> • An existing condition survey report and program of monitoring would be undertaken to identify early potential risks to the heritage item; • A photographic archival recording is undertaken prior to the current use ceasing; and • Oral history prepared, which seeks to contact past and present employees as well as others with memories of the service station. The oral history should be lodged with the relevant local libraries and the State Library of NSW. 			
H33	<p>Heritage items identified in REMM NAH10, including these items :</p> <ul style="list-style-type: none"> • Service Garage at 316 Princes Highway; • Macdonaldtown Stormwater Channel #3; • Goodsell Estate Heritage Conservation Area; • Clemton Park urban Conservation Area; and • Pallamanna Parade Conservation Area <p>will be subject to an existing condition survey report prior to construction activities that cause vibration. Where required, a programme of monitoring will be undertaken to identify early potential risks to relevant structures associated with the identified heritage items or conservation areas.</p>	<p>Pre-construction Construction</p>	<p>EM, PM, SS Heritage specialist</p>	<p>REMM NAH10 REMM NAH11 REMM NAH13 - REMM NAH15</p>
H34	<p>In the event that archaeological relics are discovered during construction, all work must cease in the affected area and the Excavation Director must be notified and attend the site to assess the finds, identify their significance level and provide mitigation advice according to the significance level and the impact proposed. In the event that the relics are identified as being of State or local significance, the NSW Heritage Council must be notified in writing in accordance with section 146 of the <i>Heritage Act 1977</i>. An Archaeological Relics Management Plan specific to the relics or site encountered is to be prepared in consultation with the NSW Heritage Council which is to outline all feasible and reasonable measures to be implemented to avoid and/or minimise harm to the State or locally significant heritage items. Works within the vicinity of the find must not recommence without the approval of a suitably qualified and experienced archaeologist in consultation with the Heritage Council of NSW. The Proponent must notify the Secretary in writing of any such encounter of an archaeological relic triggering this condition and must also notify the Secretary of the outcome of consultation with the NSW Heritage Council.</p>	<p>Pre-construction Construction</p>	<p>EM, PM, SS Heritage specialist/ Excavation Director</p>	<p>CoA D40 NSW <i>Heritage Act 1977</i> D&C G36 Appendix A</p>



Ref	Control / Actions	Timing	Responsibility	Source
H35	In the event that archaeological relics are discovered, within 12 months of completing all archaeological investigations, unless otherwise agreed by the Secretary, the Proponent must prepare an Excavation Report containing the findings of any excavations, including artefact analysis and the identification of a final repository of any finds. The Excavation Report must be submitted to the Department, the NSW Heritage Council, and the local library and the local Historical Society in the relevant local government area(s). A copy of the Excavation Report must be retained with the relics at all times.	Construction	EM, PM, SS Heritage specialist/ Excavation Director	CoA D41 Appendix A

CM – Community Manager; DM -Design Manager; EA – Environmental Advisor; EM – Environmental Manager; PE – Project Engineer; PM – Project Manager; SS – Site Supervisor;

7. Monitoring

Inspections, observations, and monitoring requirements relevant to the management of heritage are identified in Table 14.

Table 14: Monitoring requirements relevant to management of Aboriginal and Non-Aboriginal heritage

Item	Frequency	Standards	Recording	Responsibility
Inspection				
Site inspection	Weekly	All heritage management measures in place, maintained and effective. Land disturbance permits obtained for all clearances.	Completed Environmental Inspection Checklist.	Environmental Advisor
Visual surveillance	Daily	No-go zone fencing and signage in place and undamaged. No unauthorised access to No-go zones.	Site Supervisor's daily diary.	Site Supervisor
Archival recording and salvage inspections	Prior to relevant works commencing	CoA D37 and D38 Heritage Information Series – Photographic recording of heritage items using film or digital capture (NSW Heritage Office 2006). How to Prepare Archival Records of Heritage Items (2003) guidelines issued by the NSW Heritage Council.	Draft Salvage Report to identify items and materials to be salvaged for consultation Final Salvage Report for heritage items prior to demolition. Within 12 months of completing the archival recording, or as otherwise agreed by the Secretary the following must be submitted: <ul style="list-style-type: none"> ▪ A Heritage and Contributory Item Archival Recording Research Report, ▪ Heritage Conservation Area Archival Recording and Research Report, for each heritage conservation area. 	Environment and Sustainability Manager / Heritage Specialist
Heritage inspection for acoustic treatments	Prior to any modification to heritage items for acoustic treatments	CoA B38	Written advice to be obtained from the project heritage consultant to ensure modifications are sympathetic to the heritage values of the item.	Environment and Sustainability Manager / Heritage Specialist

Construction Heritage Sub Plan



Item	Frequency	Standards	Recording	Responsibility
Pre and post condition surveys of structures at risk of damage from settlement or vibration impacts	Before and after construction, where structure identified to be at risk	CoA B58 Surveys must be prepared by a suitably qualified and experienced person	Dilapidation survey and report to be provided to owner of building/structure	Project Manager
Management observations (CEMP Element 1.2)	Monthly	Compliance with the CPB EMS and this CHSP.	Management Inspection Checklist	Project Manager
Unexpected heritage item	Upon discovery of potential heritage item	CoA D40 Roads and Maritime Standard Management Procedure: Unexpected Heritage Items (Appendix A). Heritage Information Series – How to prepare archival records of heritage items (NSW Heritage Office, 3rd edition, 1998). Roads and Maritime Procedure for Aboriginal Cultural Heritage Consultation and Investigation (November 2011).	As required by CoA D40, Appendix A and Appendix D	Environment and Sustainability Manager / Excavation Director
Discovery of human remains	Upon discovery of human remains	Contact NSW Police first. Roads and Maritime Standard Management Procedure: Unexpected Heritage Finds Procedure (Appendix A).	As required by Roads and Maritime Procedure.	Environment and Sustainability Manager
Monitoring				
Historical Archaeological Monitoring	In areas identified as having moderate potential for archaeology <i>or</i> Upon identification of potential significant archaeology <i>or</i> If works impact below the present level of fill	CoA D39 Refer to Section 6.1.2 and the Historical Archaeological Research Design (Appendix D) As advised by the Excavation Director Heritage Council of NSW Assessing Significance for Historical Archaeological Sites and 'Relics' (2009) Heritage Council of NSW Archaeological Assessments Guideline (1996).	If required, within 12 months of carrying out the work, an Excavation Report must be submitted ³ , and will include the findings of the excavations, including artefact analysis, and the identification of a final repository for any finds. A copy of the report must also be retained with any relics discovered during excavation.	Environment and Sustainability Manager

³ Report to be submitted to the Department of Planning and Environment, NSW Heritage Council, and the local library and local Historical Society in the respective local government area(s).



Item	Frequency	Standards	Recording	Responsibility
Vibration Monitoring to include preliminary vibration screening	Where required by Construction Noise and Vibration Management Plan (CNVMP)	Monitoring of vibration (guideline values for vibration as per DIN 4150-3: Structural Vibration). See Table 13 in Section 4 for further detail. REMM NAH09	Vibration monitoring report. Sites requiring preliminary vibration screening include works occurring within 50m of SR-OVRH-1. Baseline condition assessment and construction/post-construction condition assessments would need to be undertaken.	Environment and Sustainability Manager, Project Manager and Project Engineer/Structural Engineer

7.1 Other Measures Related to Inspection and Monitoring

Detailed methodologies and strategies for protection, monitoring, salvage, and conservation of sites and items associated with the Project are provided in Section 6.1 and Section 6.2.

Procedures for identifying minimum working distances to prevent damage to retained heritage items are provided in Section 6.1.1 and Table 13 .

7.1.1 Further Aboriginal Cultural Heritage Assessment

In the case of unexpected finds identified during proposed works where it is determined that further investigation is required, the following level of assessments would be undertaken.

- Archaeological survey – the results of the desktop assessment recommending survey would be presented and further investigation determined;
- Archaeological test excavation – should further investigation be determined, nominated archaeologists, archaeological test excavation;
- Where Aboriginal Cultural material is identified through archaeological survey or archaeological test excavations, the nominated archaeologists would be consulted regarding the cultural significance of the material and appropriate management recommendations; and
- Archaeological salvage excavation, nominated archaeologists would be consulted on placement and extent of any archaeological salvage excavations.

8. Reporting

Project reporting requirements and responsibilities are documented in Part B and Appendix E of the CEMP. Reporting requirements relevant to the management of heritage are identified in Table 15 below.

Table 15: Reporting requirements relevant to management of Aboriginal and Non-Aboriginal heritage

Item	Frequency	Standards	Recording	Responsibility
Project reporting				
Project monthly reports	Monthly	As per reporting requirements and responsibilities documented in the CEMP, including reporting on heritage targets and Compliance with this Plan, relevant legislative requirements and CoA	In accordance with CEMP	Environmental and Sustainability Manager
Quarterly construction compliance reports	3-monthly	As per Compliance Tracking Program	In accordance with Compliance Tracking Program	Environmental and Sustainability Manager
Unexpected heritage item report	Upon unexpected heritage find	As required by CoA D40 Roads and Maritime Standard Management Procedure: Unexpected Heritage Items (Appendix A). Historical Archaeological Research Design (Appendix D) Heritage Information Series – How to prepare archival records of heritage items (NSW Heritage Office, 3rd edition, 1998). Roads and Maritime Procedure for Aboriginal Cultural Heritage Consultation and Investigation (November 2011).	As required by CoA D40, Appendix A and Appendix D	Environmental and Sustainability Manager / Excavation Director
Archaeological Relics Management Plan	Upon discovery of an archaeological relic of State or local significance	As required by CoA D40 To be prepared in consultation with the Heritage Council of NSW Notification in accordance with Section 146 of the <i>Heritage Act 1977</i>	As required by CoA D40	Environmental and Sustainability Manager / Heritage Specialist
Archival reporting	Prior to works commencing that would affect the relevant heritage item or conservation area	As required by CoA D37, D38 Archival recording to be in accordance with the Manage Cultural Heritage Procedure (Appendix F), and generally in accordance with the guidelines issued by the Heritage Council of NSW including How to Prepare Archival Records of Heritage Items and Photographic Recording of Heritage Items Using Film or Digital Capture.	Within 12 months of completing the archival recording, a report containing archival and photographic recordings is to be provided to the Department, the heritage Council of NSW, the local library and relevant Councils.	Environmental and Sustainability Manager / Heritage Specialist



Item	Frequency	Standards	Recording	Responsibility
Excavation Report	Within 12 months of completing any archaeological investigations	CoA D41 Historical Archaeological Research Design (Appendix D), including artefact analysis and additional research	As required by Appendix A and Appendix D	Environmental and Sustainability Manager
Heritage Interpretation Plan	At least 6 months prior to operation	As required by CoA B40 and D42 To be prepared in consultation with the Heritage Council of NSW and the relevant local councils	As required by CoA B40 and D42	Environmental and Sustainability Manager / Heritage Specialist
Complaints reporting	As notified	Construction Complaints Management System.	As requested by the Secretary of DP&E	Environmental and Sustainability Manager

9. Review and Improvement

9.1 Auditing

Audits (both internal and external) will be undertaken to assess the effectiveness of environmental controls, compliance with this sub plan, CoA and other relevant approvals, licenses and guidelines.

Audit requirements are detailed in Element 12 of the CEMP.

9.2 Record management

All documents and records referred to within and required to implement the CEMP (including the plan and relevant sub-plan) will be controlled and maintained according to the project's Records Management Plan.

Environmental documents may include, but are not limited to:

- CEMP and sub-plans;
- Procedures and protocols; and
- Checklists, forms and templates.

Environmental records relevant to the CHSP may include, but are not limited to:

- All monitoring, inspection and compliance reports / records.
- Reports on environmental incidents, other environmental non-conformances, complaints and follow-up action;
- Minutes of the CEMP and construction environmental management system review meetings and any resulting actions;
- Results of internal and external audits.

The minimum document retention periods beyond practical completion for environmental documents and records are described in Records Management Plan.

9.3 Non-conformance management, corrective and preventative action

Environmental inspection, observation and monitoring results are interpreted to identify actual and potential non-conformances and events that may result in nuisance, environmental harm and unacceptable loss of amenity or community complaints. The Environmental Representative, WCX M5 AT Representative and/or a public authority may also raise a non-conformance or improvement notice.

Where non-conformances are identified during regular inspections, corrective actions are raised, tracked and closed out through the inspection records if the actions can be closed out within 72 hours. All other non-conformances are recorded and reported as incidents in Synergy.

Following the identification of a non-conformance, corrective and/or preventative actions will be identified and assigned to the appropriate person with set timeframes. Timeframes will be set to ensure any damage incurred is rectified and any chance of recurrence is eliminated as soon as practicable. Synergy will be used to assign, track and close out corrective actions (except for those actions identified, tracked and closed out within 72 hours through inspection records). All corrective actions will include reference to the relevant incident record for ease of tracking. Refer to Element 3 and Element 9 of the CEMP.

9.4 Complaints

Complaints will be recorded in accordance with the Construction Complaints Management System. Information to be recorded will include location of complaint, time(s) of occurrence of alleged impacts and perceived source. Resident complaints will be responded to in a timely manner and action taken recorded in accordance with the Construction Complaints Management System.

9.5 Revision of this plan

Continual improvement is achieved through constant measurement and evaluation, audit and review of the effectiveness of the plan, and adjustment and improvement of the Construction Environmental Management Plan, project environmental outcomes and CDS-JV Environmental Management System. Monthly reviews undertaken by the Environmental Representative and annual management

reviews provide specific opportunities to identify improvements in the environmental management system and/or this CHSP.

This plan will be updated as required:

- As a result of any investigations into any non-conformances that determine changes to this plan are required to prevent reoccurrences;
- To take into account changes to the environment or generally accepted environmental management practices, new risks identified that may impact heritage or changes in law;
- Where requested or required by the NSW Department of Planning and Environment or any other Authority; or
- In response to internal or external audits or annual management reviews.

The updated plan must be endorsed by the Environment and Sustainability Manager and approved internally by the Project Director. Minor changes may be approved by the Environmental Representative. Minor changes would typically include those that:

- Are editorial in nature (e.g. staff and agency/authority name changes);
- Do not increase the magnitude of impacts on the environment when considered individually or cumulatively;
- Are in response to audit findings or periodic reviews; or
- Do not comprise the ability of the project to meet approval or legislative requirements.

Where the Environmental Representative deems it necessary, the CHSP will be provided to relevant stakeholders for review and comment if required and forwarded to the Secretary of DP&E for approval. Revisions to the plan will be provided to the Project Company for review upon request by the Project Company prior to submission to stakeholders or the NSW Department of Planning and Environment.

Where approval of the Secretary of DP&E is not required, a copy of the updated plan will be provided to the Secretary for information.



Appendices

Appendix A: Roads and Maritime Standard Management Procedure: Unexpected Heritage Items

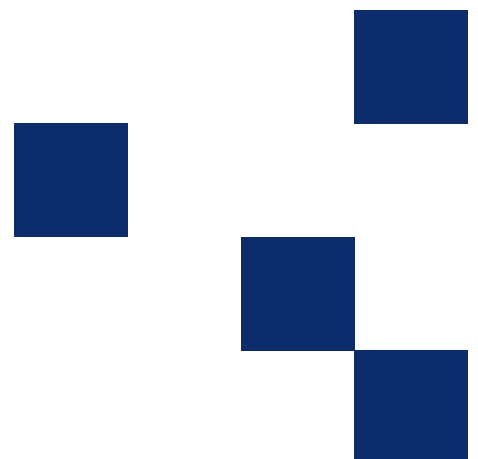


Transport
Roads & Maritime
Services

STANDARD MANAGEMENT PROCEDURE

Unexpected Heritage Items

March 2015



About this release

RMS/ISBN numbers	RMS 12.003 ISBN 9781922040305
Title	Unexpected Heritage Items Procedure

Approval and authorisation		Name
Prepared by	Environmental Officer (Heritage)	Gretta Logue
Revised by	Environmental Officer (Heritage)	Daniel Percival
Approved by	Manager Environmental Policy	Michael Crowley

File location	File name
Objective - SF2013/153770	Unexpected heritage items procedure.doc

Document status	Date
Final	16 March 2015

Version	Date	Revision Description
Final	1 November 2011	First Draft
Revised	23 July 2012	Amended to reflect that (a) unexpected finds do not include items covered by a relevant approval; (b) Aboriginal people must be consulted where an unexpected find is likely to be an Aboriginal object; (c) the Department of Planning and Environment must be notified in accordance with Step 5 of this procedure for Part 3A and Part 5.1 projects.
Revised	09 October 2013	Amended to clarify that the procedure applies to all types of unexpected heritage items, not just archaeological items. The procedure introduces the term 'Historic Items' to cover both 'archaeological relics' and 'other historic items' such as works, structures, buildings and movable objects. The title of the document has been amended to better reflect this clarification.
Revised	16 March 2015	The procedure was streamlined to address all project types including maintenance works. The separate maintenance procedure (formerly Appendix B) was removed. Names and titles updated throughout.

Prepared by
Environment Branch
Roads and Maritime Services
Level 17, 101 Miller Street
North Sydney, NSW 2060
T 02 8588 5726

Please note

This procedure applies to all development and activities concerning roads, road infrastructure and road related assets undertaken by Roads and Maritime.

For advice on how to manage unexpected heritage items as a result of activities related to maritime infrastructure projects, please contact the Senior Environmental Specialist (Heritage).

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Unexpected heritage items procedure

1. Purpose

This procedure has been developed to provide a consistent method for managing unexpected heritage items (both Aboriginal and non-Aboriginal) that are discovered during Roads and Maritime activities. This procedure includes Roads and Maritime's heritage notification obligations under the *Heritage Act 1977* (NSW), *National Parks and Wildlife Act 1974* (NSW), *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cth) and the *Coroner's Act 2009* (NSW).

This document provides relevant background information in Section 3, followed by the technical procedure in Sections 6 and 7. Associated guidance referred to in the procedure can be found in Appendices A-H.

2. Scope

This procedure assumes that an appropriate level of Aboriginal and non-Aboriginal heritage assessment has been undertaken prior to on site project work commencing. In some case, such as exempt development, detailed heritage assessment may not be required.

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

This procedure applies to all Road and Maritime construction and maintenance activities

This procedure **applies to**:

- The discovery of any unexpected heritage item (usually during construction), where Roads and Maritime does not have approval to disturb the item or where safeguards for managing the disturbance (apart from this procedure) are not contained in the environmental impact assessment.
- All Roads and Maritime projects that are approved or determined under Part 3A (including Transitional Part 3A Projects), Part 4, Part 5 or Part 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), or any development that is exempt under the Act.

This procedure must be followed by Roads and Maritime staff, alliance partners (including local council staff working under Road Maintenance Council Contracts, [RMCC]), developers under works authorisation deeds or any person undertaking Part 5 assessment for Roads and Maritime.

This procedure **does not apply** to:

- The legal discovery and disturbance of heritage items as a result of investigations being undertaken in accordance with OEH's *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW* (2010); an Aboriginal Heritage Impact Permit (AHIP) issued under the *National Parks and Wildlife Act*

1974; or an approval issued under the *Heritage Act 1977*¹.

- The legal discovery and disturbance of heritage items as a result of investigations (or other activities) that are required to be carried out for the purpose of complying with any environmental assessment requirements under Part 3A (including Transitional Part 3A Projects) or Part 5.1 of the EP&A Act.
- The legal discovery and disturbance of heritage items as a result of construction related activities, where the disturbance is permissible in accordance with an AHIP²; an approval issued under the *Heritage Act 1977*; the Minister for Planning's conditions of project approval; or safeguards (apart from this procedure) that are contained in the relevant environmental impact assessment.

All construction environment management plans (CEMPs) must make reference to and/or include this procedure (often included as a heritage sub-plan). Where approved CEMPs exist they 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 additional guidance. When in doubt always seek environment and legal advice on varying approved CEMPs.

3. Types of unexpected heritage items and their legal protection

The roles of project, field and environmental staff are critical to the early identification and protection of unexpected heritage items. **Appendix A** illustrates the wide range of heritage discoveries found on Roads and Maritime projects and provides a useful photographic guide. Subsequent confirmation of heritage discoveries must then be identified and assessed by technical specialists (usually an archaeologist).

An 'unexpected heritage item' means any unanticipated discovery of an actual or potential heritage item, for which Roads and Maritime does not have approval to disturb³ or does not have a safeguard in place (apart from this procedure) to manage the disturbance.

These discoveries are categorised as either:

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

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

3.1 Aboriginal objects

The *National Park and Wildlife Act 1974* protects *Aboriginal objects* which are defined as:

¹ RMS' heritage obligations are incorporated into the conditions of heritage approvals.

² RMS *Procedure for Aboriginal cultural heritage consultation and investigation* (2011) recommends that Part 4 and Part 5 projects that are likely to impact Aboriginal objects during construction seek a whole-of-project AHIP. This type of AHIP generally allows a project to impact known and potential Aboriginal objects within the entire project area, without the need to stop works. It should be noted that an AHIP may exclude impact to certain objects and areas, such as burials or ceremonial sites. In such cases, the project must follow this procedure.

³ Disturbance is considered to be any physical interference with the item that results in it being destroyed, defaced, damaged, harmed, impacted or altered in any way (this includes archaeological investigation activities).

“any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non Aboriginal extraction, and includes Aboriginal remains”⁴.

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

IMPORTANT!

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

If any impact is expected to an Aboriginal object, an Aboriginal Heritage Impact Permit (AHIP) is usually required from the Office of Environment and Heritage (OEH)⁵. Also, when a person becomes aware of an Aboriginal object they must notify the Director-General of OEH about its location⁶. Assistance on how to do this is provided in Section 7 (Step 5).

3.2 Historic heritage items

Historic (non-Aboriginal) heritage items may include:

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

3.2.1 Archaeological relics

The *Heritage Act 1977* protects *relics* which are defined as:

“any deposit, artefact, object or material evidence that relates to the settlement of the area that comprises NSW, not being Aboriginal settlement; and is of State or local heritage significance”⁷.

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

⁴ Section 5(1) *National Park and Wildlife Act 1974*.

⁵ Except when Part 3A, Division 4.1 of Part 4 or Part 5.1 of the *EP&A Act* applies.

⁶ This is required under s89(A) of the *National Park and Wildlife Act 1974* and applies to **all projects** assessed under Part 3A, Part 4, Part 5 and Part 5.1 of the *EP&A Act*, including exempt development.

⁷ Section 4(1) *Heritage Act 1977*.

IMPORTANT!

All relics are subject to statutory controls and protections.

If a relic is likely to be disturbed, a heritage approval is usually required from the NSW Heritage Council⁸. Also, when a person discovers a relic they must notify the NSW Heritage Council of its location⁹. Advice on how to do this is provided in Section 7 (Step 5).

3.2.2 Other historic items

Some historic heritage items are not considered to be ‘relics’; but are instead referred to as works, buildings, structures or movable objects. Examples of these items that Roads and Maritime may encounter include culverts, historic road formations, historic pavements, buried roads, retaining walls, tramlines, cisterns, fences, sheds, buildings and conduits. Although an approval under the *Heritage Act 1977* may not be required to disturb these items, their discovery must be managed in accordance with this procedure.

As a general rule, an archaeological relic requires discovery or examination through the act of excavation. An archaeological excavation permit under Section 140 of the *Heritage Act 1977* is required to do this. In contrast, ‘other historic items’ either exist above the ground’s surface (e.g. a shed), or they are designed to operate and exist beneath the ground’s surface (e.g. a culvert).

Despite this difference, it should be remembered that relics can often be associated with ‘other heritage items’, such as archaeological deposits within cisterns and underfloor deposits under buildings.

3.3 Human skeletal remains

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

As a simple example, a pre-contact archaeological Aboriginal burial would be protected under the *National Park and Wildlife Act 1974*, while a historic (non-Aboriginal) archaeological burial within a cemetery would be protected under the *Heritage Act 1977*. For these cases, the relevant heritage approval and notification requirements described in the above sections 3.1 and 3.2 would apply. In addition to the *National Park and Wildlife Act 1974*, finding 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* (Cth).

⁸ Except when Part 3A, Division 4.1 of Part 4 or Part 5.1 of the *EP&A Act* applies.

⁹ This is required under s146 of the *Heritage Act 1977* and applies to **all projects** assessed under Part 3A, Part 4, Part 5 and Part 5.1 of the *EP&A Act*, including exempt development.

 **IMPORTANT!**

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

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

However, where it is suspected that less than 100 years has elapsed since death, the human skeletal remains come under the jurisdiction of the State Coroner and the *Coroners Act 2009* (NSW). Such a case would be considered a 'reportable death' and under legal notification obligations set out in 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 old¹⁰ regardless of ancestry (ie both Aboriginal and non-Aboriginal remains). Public health controls may also apply.

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

¹⁰ Under s19 of the *Coroners Act 2009*, the coroner has no jurisdiction to conduct an inquest into reportable death unless it appears to the coroner that (or that there is reasonable cause to suspect that) the death or suspected death occurred within the last 100 years.

4. Responsibilities

The following roles and responsibilities are relevant to this procedure.

Role	Definition/responsibility
Aboriginal Cultural Heritage Advisor (ACHA)	Provides Aboriginal cultural heritage advice to project teams. Acts as Aboriginal community liaison for projects on cultural heritage matters. Engages and consults with the Aboriginal community as per the Roads and Maritime <i>Procedure for Aboriginal Cultural Heritage Consultation and Investigation</i> .
Aboriginal Sites Officer (ASO)	Is an appropriately trained and skilled Aboriginal person whose role is to identify and assess Aboriginal objects and cultural values. For details on engaging Aboriginal Sites Officers, refer to Roads and Maritime <i>Procedure for Aboriginal Cultural Heritage Consultation and Investigation</i> .
Archaeologist (A)	Professional consultant, contracted on a case-by-case basis to provide heritage and archaeological advice and technical services (such as reports, heritage approval documentation etc). Major projects with complex heritage issues often have an on call Project archaeologist.
Project Manager (PM)	Ensures all aspects of this procedure are implemented. The PM can delegate specific tasks to a construction environment manager, Roads and Maritime site representatives or regional environment staff, where appropriate.
Regional Environment Staff (RES)	Provides advice on this procedure to project teams. Ensuring this procedure is implemented consistently by supporting the PM. Supporting project teams during the uncovering of unexpected finds. Reviewing archaeological management plans and liaising with heritage staff and archaeological consultants as needed.
Registered Aboriginal Parties (RAPs)	RAPs are Aboriginal people who have registered with Roads and Maritime to be consulted about a proposed Roads and Maritime project or activity in accordance with OEH's Aboriginal cultural heritage consultation requirements for proponents (2010).
Senior Environmental Specialist (Heritage) (SES(H))	Provides technical assistance on this procedure and archaeological technical matters, as required. Reviewing the archaeological management plans and facilitating heritage approval applications, where required. Assists with regulator engagement, where required.
Team Leader - Regional Maintenance Delivery (TL-RMD)	Ensures Regional Maintenance Delivery staff stop work in the vicinity of an unexpected heritage item. Completes Unexpected Heritage Item Recording Form 418 and notifies WS-RMD.
Technical Specialist	Professional consultant contracted to provide specific technical advice that relates to the specific type of

	unexpected heritage find (eg a forensic or physical anthropologist who can identify and analyse human skeletal remains).
Works Supervisor - Regional Maintenance Delivery (WS-RMD)	Ensures Regional Maintenance Delivery staff are aware of this procedure. Supports the Team Leader - Regional Maintenance Delivery during the implementation of this procedure and ensures reporting of unexpected heritage items through environment management systems.

5. Acronyms

The following acronyms are relevant to this procedure.

Acronym	Meaning
A	Archaeologist
ACHA	Aboriginal Cultural Heritage Advisor
AHIP	Aboriginal Heritage Impact Permit
ASO	Aboriginal Site Officer
CEMP	Construction Environment Management Plan
OEH	Office of Environment and Heritage.
PACHCI	Procedure for Aboriginal Cultural Heritage Consultation and Investigation
PM	Project Manager
RAP	Registered Aboriginal Parties
RES	Regional Environmental Staff
SES(H)	Senior Environmental Specialist (Heritage)
TL-RMD	Team Leader – Regional Maintenance Division
RMD	Regional Maintenance Delivery
RMS	Roads and Maritime
WS-RMD	Works Supervisor - Regional Maintenance Division

6. Overview of the procedure

On discovering something that could be an unexpected heritage item ('the item'), the following procedure must be followed. There are eight steps in the procedure. These steps are summarised in **Figure 1** below and explained in detail in Section 7.

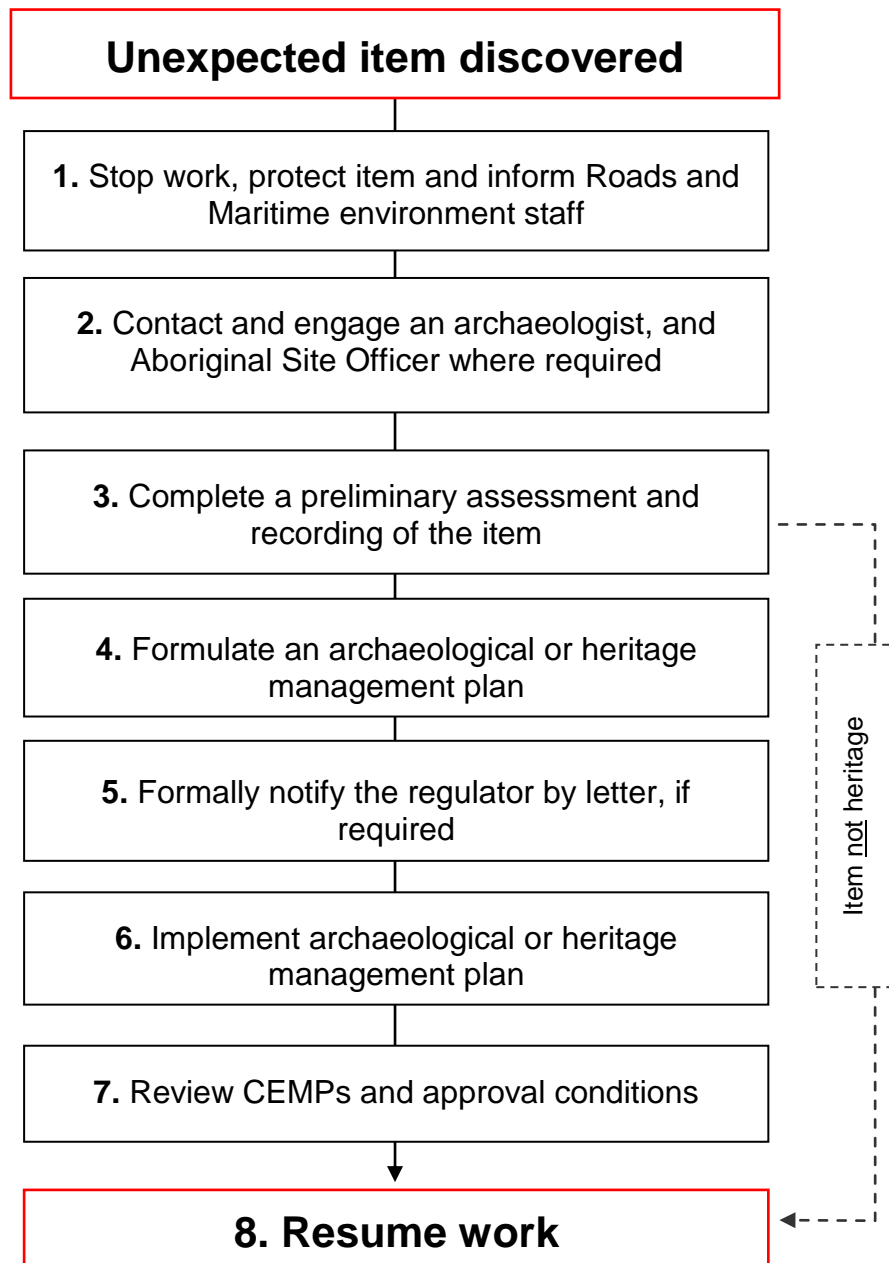


Figure 1: Overview of steps to be undertaken on the discovery of an unexpected heritage item.

IMPORTANT!

RMS may have approval or specific safeguards in place (apart from this procedure) to impact on certain heritage items during construction. If you discover a heritage item and you are unsure whether an approval or safeguard is in place, STOP works and follow this procedure.

7. Unexpected heritage items procedure

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

Aboriginal Cultural Heritage Advisor (ACHA); Aboriginal Sites Officer (ASO); Archaeologist (A); Project Manager (PM); Regional Environment Staff (RES); Registered Aboriginal Parties (RAPs); Senior Environmental Specialist (Heritage) (SES(H)); Team leader – Roads and Maintenance Division (TL - RMD); Works supervisor – Roads and Maintenance Division (WS - RMD).

Step	Task	Responsibility	Guidance & Tools
1	Stop work, protect item and inform Roads and Maritime environment staff		
1.1	Stop all work in the immediate area of the item and notify the Project Manager or Team Leader-RMD. (For maintenance activities, the Team Leader is to also notify the Works Supervisor-RMD)	All	Appendix A (Identifying Unexpected Heritage items)
1.2	Establish a 'no-go zone' around the item. Use high visibility fencing, where practical.	PM or TL-RMD	
1.3	Inform all site personnel about the no-go zone. No further interference, including works, ground disturbance, touching or moving the item must occur within the no-go zone.	PM or TL-RMD	
1.4	Inspect, document and photograph the item using 'Unexpected Heritage Item Recording Form 418'.	PM or TL-RMD	Appendix B (Unexpected Heritage Item Recording Form 418) Appendix C (Photographing Unexpected Heritage items)

Step	Task	Responsibility	Guidance & Tools
1.5	<p>Is the item likely to be bone?</p> <p>If yes, follow the steps in Appendix E – ‘Uncovering bones’. Where it is obvious that the bones are human remains, you must notify the local police by telephone immediately. They may take command of all or part of the site.</p> <p>If no, proceed to next step.</p>	PM or WS-RMD	Appendix E (Uncovering Bones)
1.6	<p>Is the item likely to be:</p> <p>a) A relic? (A relic is evidence of past human activity which has local or state heritage significance. It may include items such as bottles, utensils, remnants of clothing, crockery, personal effects, tools, machinery and domestic or industrial refuse) and/or</p> <p>b) An Aboriginal object? (An Aboriginal object may include a shell midden, stone tools, bones, rock art or a scarred tree).</p> <p>If yes, proceed directly to Step 1.8</p> <p>If no, proceed to next step.</p>	PM or WS-RMD	Appendix A (Identifying heritage items)
1.7	<p>Is the item likely to be a “work”, building or standing structure? (This may include tram tracks, kerbing, historic road pavement, fences, sheds or building foundations).</p> <p>If yes, can works avoid further disturbance to the item? (E.g. if historic road base/tram tracks have been exposed, can they be left in place?) If yes, works may proceed without further disturbance to the item. Complete Step 1.8 within 24 hours.</p> <p>If works cannot avoid further disturbance to the item, works must not recommence at this time. Complete the remaining steps in this procedure.</p>	PM or WS-RMD	Appendix A (Identifying heritage items)

Step	Task	Responsibility	Guidance & Tools
1.8	Inform relevant Roads and Maritime Regional Environmental Staff of item by providing them with the completed 'Form 418'.	PM or WS-RMD (RES)	Appendix D (Key Environmental Contacts)
1.9	Regional Environmental Staff to advise Project Manager or Works Supervisor whether RMS has an approval or safeguard in place (apart from this procedure) to impact on the 'item'. (An approval may include an approval under the <i>Heritage Act</i> , the <i>National Parks and Wildlife Act</i> or the <i>Planning and Assessment Act</i>). Does RMS have an approval, permit or appropriate safeguard in place to impact on the item? If yes , work may recommence in accordance with the approval, permit or safeguard. There is no further requirement to follow this procedure. If no , continue to next step.		
1.10	Liaise with Traffic Management Centre where the delay is likely to affect traffic flow.	PM or WS-RMD	
1.11	Report the item as a 'Reportable Event' in accordance with the Roads and Maritime <i>Environmental Incident Classification and Reporting Procedure</i> . Implement any additional reporting requirements related to the project's approval and CEMP, where relevant.	PM or WS-RMD	RMS Environmental Incident Classification and Reporting Procedure
2	Contact and engage an archaeologist and, where required, an Aboriginal site officer		
2.1	Contact the Project (on-call) Archaeologist to discuss the location and extent of the item and to arrange a site inspection, if required. The project CEMP may contain contact details of the Project Archaeologist. OR	PM or WS-RMD (A; RES; SES(H))	Also see Appendix D (Key Environmental Contacts)

Step	Task	Responsibility	Guidance & Tools
	Where there is no project archaeologist engaged for the works, engage a suitably qualified and experienced archaeological consultant to assess the find. A list of heritage consultants is available on the RMS contractor panels on the Buyways homepage. Regional environment staff and Roads and Maritime heritage staff can also advise on appropriate consultants.		<u>Buyways</u>
2.2	Where the item is likely to be an Aboriginal object, speak with your Aboriginal Cultural Heritage Advisor to arrange for an Aboriginal Sites Officer to assess the find. Generally, an Aboriginal Sites Officer would be from the relevant local Aboriginal land council. If an alternative contact person (ie a RAP) has been nominated as a result of previous consultation, then that person is to be contacted.	PM or WS-RMD (ACHA; ASO)	
2.3	If requested, provide photographs of the item taken at Step 1.4 to the archaeologist, and Aboriginal Sites Officer if relevant.	PM or WS-RMD (RES)	Appendix C (Photographing Unexpected Heritage items)
3	Preliminary assessment and recording of the find		
3.1	In a minority of cases, the archaeologist (and Aboriginal Sites Officer, if relevant) may determine from the photographs that no site inspection is required because no archaeological constraint exists for the project (<i>eg the item is not a 'relic', a 'heritage item' or an 'Aboriginal object'</i>). Any such advice should be provided in writing (eg via email) and confirmed by the Project Manager or Works Supervisor - RMD.	A/PM/ASO/ WS-RMD	Proceed to Step 8
3.2	Arrange site access for the archaeologist (and Aboriginal Sites Officer, if relevant) to inspect the item as soon as practicable. In the majority of cases a site inspection is required to conduct a preliminary assessment.	PM or WS-RMD	
3.3	Subject to the archaeologist's assessment (and the Aboriginal Sites Officer's assessment, if relevant), work may recommence at a set distance from the item. This is to protect any other archaeological material that may exist in the vicinity, which has not yet been uncovered. Existing protective fencing established in Step 1.2 may need to be adjusted to	A/PM/ASO/ WS-RMD	

Step	Task	Responsibility	Guidance & Tools
	reflect the extent of the newly assessed protective area. No works are to take place within this area once established.		
3.4	The archaeologist (and Aboriginal Sites Officer, if relevant) may provide advice after the site inspection and preliminary assessment that no archaeological constraint exists for the project (<i>eg the item is not a 'relic', a 'heritage item' or an 'Aboriginal object'</i>). Any such advice should be provided in writing (eg via email) and confirmed by the Project Manager or Works Supervisor - RMD.	A/PM/ASO/ WS-RMD	Proceed to Step 8
3.5	Where required, seek additional specialist technical advice (such as a forensic or physical anthropologist to identify skeletal remains). Regional environment staff and/or Roads and Maritime heritage staff can provide contacts for such specialist consultants.	RES/SES(H)	Appendix D (Key Environmental Contacts)
3.6	Where the item has been identified as a 'relic', 'heritage item' or an 'Aboriginal object' the archaeologist should formally record the item.	A	
3.7	The regulator can be notified informally by telephone at this stage by the archaeologist, Project Manager (or delegate) or Works Supervisor - RMD. Any verbal conversations with regulators must be noted on the project file for future reference.	PM/A/WS-RMD	
4	Prepare an archaeological or heritage management plan		
4.1	The archaeologist must prepare an archaeological or heritage management plan (with input from the Aboriginal Sites Officer, where relevant) shortly after the site inspection. This plan is a brief overview of the following: (a) description of the feature, (b) historic context, if data is easily accessible, (c) likely significance, (d) heritage approval and regulatory notification requirements, (e) heritage reporting requirements, (f) stakeholder consultation requirements, (g) relevance to other project approvals and management plans etc.	A/ASO	Appendix F (Archaeological/ Heritage Advice Checklist)
4.2	In preparing the plan, the archaeologist with the assistance of regional environment staff must review the CEMP, any heritage sub-plans, any conditions of heritage approvals, conditions of project approval (and or Minister's Conditions of Approval) and heritage assessment documentation (eg Aboriginal Cultural Heritage Assessment Report). This will outline if the unexpected item is consistent with previous heritage/project approval(s)	A/RES/PM	Appendix F (Archaeological/ Heritage Advice Checklist)

Step	Task	Responsibility	Guidance & Tools
	and/or previously agreed management strategies. The Project Manager and regional environment staff must provide all relevant documents to the archaeologist to assist with this. Discussions should occur with design engineers to consider if re-design options exist and are appropriate.		
4.3	The archaeologist must submit this plan as a letter, brief report or email to the Project Manager outlining all relevant archaeological or heritage issues. This plan should be submitted to the Project Manager as soon as practicable. Given that the archaeological management plan is an overview of all the necessary requirements (and the urgency of the situation), it should take no longer than two working days to submit to the Project Manager.	A	
4.4	The Project Manager or Works Supervisor must review the archaeological or heritage management plan to ensure all requirements can reasonably be implemented. Seek additional advice from regional environment staff and Roads and Maritime heritage staff, if required.	PM/RES/SES(H)/ WS-RMD	
5	Notify the regulator, if required.		
5.1	Review the archaeological or heritage management plan to confirm if regulator notification is required. Is notification required? If no , proceed directly to Step 6 If yes , proceed to next step.	PM/RES/SES(H)/ WS-RMD	
5.2	If notification is required, complete the template notification letter.	PM or WS-RMD	Appendix G (Template Notification Letter)
5.3	Forward the draft notification letter, archaeological or heritage management plan and the site recording form to regional environment staff and Senior Environmental Specialist (Heritage) for review, and consider any suggested amendments.	PM/RES/SES(H)/ WS-RMD	

Step	Task	Responsibility	Guidance & Tools
5.4	Forward the signed notification letter to the relevant regulator (ie notification of relics must be given to the Heritage Division, Office of Environment and Heritage (OEH), while notification for Aboriginal objects must be given to the relevant Aboriginal section of OEH). Informal notification (via a phone call or email) to the regulator prior to sending the letter is appropriate. The archaeological management plan and the completed site recording form must be submitted with the notification letter. For Part 3A and Part 5.1 projects, the Department of Planning and Environment must also be notified.	PM or WS-RMD	Appendix D (Key Environmental Contacts)
5.5	A copy of the final signed notification letter, archaeological or heritage management plan and the site recording form should be kept on file by the Project Manager or Works Supervisor- RMD and a copy sent to the Senior Environmental Specialist (Heritage).	PM or WS-RMD	
6	Implement archaeological or heritage management plan		
6.1	Modify the archaeological or heritage management plan to take into account any additional advice resulting from notification and discussions with the regulator.	A/PM or WS-RMD (RES)	
6.2	Implement the archaeological or heritage management plan. Where impact is expected, this would include such things as a formal assessment of significance and heritage impact assessment, preparation of excavation or recording methodologies, consultation with registered Aboriginal parties, obtaining heritage approvals etc, if required.	PM or WS-RMD (RAPs and RES)	PACHCI Stage 3
6.3	Where heritage approval is required contact regional environment staff for further advice and support material. Please note time constraints associated with heritage approval preparation and processing. Project scheduling may need to be revised where extensive delays are expected.	PM/RES/WS-RMD	
6.4	For Part 3A/Part 5.1 projects, assess whether heritage impact is consistent with the project approval or if project approval modification is required from the Department of Planning and Environment. Seek advice from regional environment staff and Environment Branch specialist staff if unsure.	PM/RES	

Step	Task	Responsibility	Guidance & Tools
6.5	Where statutory approvals (or project approval modification) are required, impact upon relics and/or Aboriginal objects must not occur until heritage approvals are issued by the appropriate regulator.	PM or WS-RMD	
6.6	Where statutory approval (or Part 3A/Part 5.1 project modification) is not required and where recording is recommended by the archaeologist, sufficient time must be allowed for this to occur.	PM or WS-RMD	
6.7	Ensure short term and permanent storage locations are identified for archaeological material or other heritage material is removed from site, where required. Interested third parties (eg museums or local councils) should be consulted on this issue. Contact regional environment staff and Senior Environmental Specialist (Heritage) for advice on this matter, if required.	PM or WS-RMD	
7	Review CEMPs and approval conditions		
7.1	Check whether written notification is required to be sent to the regulator before re-commencing work. Where this is not explicit in heritage approval conditions, expectations should be clarified directly with the regulator.	PM	
7.2	Update the CEMP, site mapping and project delivery program as appropriate with any project changes resulting from final heritage management (eg retention of heritage item, salvage of item). Updated CEMPs must incorporate additional conditions arising from any heritage approvals, and Aboriginal community consultation if relevant. Include any changes to CEMP in site induction material and update site workers during toolbox talks.	PM	
8	Resume work		
8.1	Seek written clearance to resume project work from regional environment staff and the archaeologist (and regulator, if required). Clearance would only be given once all archaeological excavation and/or heritage recommendations (where required) are complete. Resumption of project work must be in accordance with the all relevant project/heritage approvals/determinations.	RES/A/PM/WS-RMD	
8.2	If required, ensure archaeological excavation/heritage reporting and other heritage	PM/A/WS-RMD	

Step	Task	Responsibility	Guidance & Tools
	approval conditions are completed in the required timeframes. This includes artefact retention repositories, conservation and/or disposal strategies.		
8.3	Forward all heritage/archaeological assessments, heritage location data and its ownership status to the Senior Environmental Specialist (Heritage). They will ensure all heritage items in Roads and Maritime ownership and/or control are considered for the Roads and Maritime S170 Heritage and Conservation Register.	PM/SES(H)/ WS-RMD	
8.4	If additional unexpected items are discovered this procedure must begin again from Step 1.	PM/TL-RMD	

8. Seeking advice

Advice on this procedure should be sought from Roads and Maritime regional environment staff in the first instance. Contractors and alliance partners should ensure their own project environment managers are aware of and understand this procedure. Regional environment staff can assist non-Roads and Maritime project environment managers with enquires concerning this procedure.

IMPORTANT!

Roads and Maritime Services staff and contractors are not to seek advice on this procedure directly from the Office of Environment and Heritage without first seeking advice from regional environment staff and heritage policy staff.

Technical archaeological or heritage advice regarding an unexpected heritage item should be sought from the contracted archaeologist. Technical specialist advice can also be sought from heritage policy staff within Environment Branch to assist with the preliminary archaeological identification and technical reviews of heritage/archaeological reports.

9. Related information

Contact details: Senior Environmental Specialist (Heritage), Environment Branch, 02 8588 5754

Effective date: 01 February 2015

Review date: 01 February 2016

This procedure should be read in conjunction with:

- Roads and Maritimes' *Heritage Guidelines 2015*.
- Roads and Maritime Services *Environmental Incident Classification and Reporting Procedure*
- Roads and Maritime's *Procedure for Aboriginal Cultural Heritage Consultation and Investigation*
- RTA *Environmental Impact Assessment Guidelines*.

This procedure replaces:

- Procedure 5.5 ("*unexpected discovery of an archaeological relic or Aboriginal object*") outlined in the RTA's *Heritage Guidelines 2004*.

Other relevant reading material:

- NSW Heritage Office (1998), *Skeletal remains: guidelines for the management of human skeletal remains*.
- Department of Environment and Conservation NSW (2006), *Manual for the identification of Aboriginal remains*.
- Department of Health (April 2008), *Policy Directive: Burials - exhumation of human remains*¹¹.

¹¹ http://www.health.nsw.gov.au/policies/pd/2008/pdf/PD2008_022.pdf

10. List of appendices

The following appendices are included to support this procedure.

Appendix A	Identifying Unexpected Heritage items
Appendix B	Unexpected Heritage Item Recording Form 418
Appendix C	Photographing Unexpected Heritage Items
Appendix D	Key Environment Contacts
Appendix E	Uncovering Bones
Appendix F	Archaeological Advice Checklist
Appendix G	Template Notification Letter

Appendix A

Identifying unexpected heritage items

The following images can be used to assist in the preliminary identification of potential unexpected items (both Aboriginal and non-Aboriginal) during construction and maintenance works. Please note this is not a comprehensive typology.



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).



Wood stave water pipe



Tram tracks



Retaining wall



Cistern

Top left hand picture continuing clockwise: Woodstave water pipe with tar and wire sealing (Horsley Drive); Tram tracks (Sydney); Brick lined cistern (Clyde); Retaining wall (Great Western Highway, Leura).



Top left hand picture continuing clockwise: Road pavement (Great Western Highway, Lawson); Sandstone kerbing and guttering (Parramatta Road, Mays Hill); Telford road (sandstone road base, Great Western Highway, Leura); Ceramic conduit and sandstone culvert headwall (Blue Mountains, NSW); Corduroy road (timber road base, Entrance Road, Wamberai).



Alignment pin



Survey tree



Alignment stone



Survey tree



Milestone



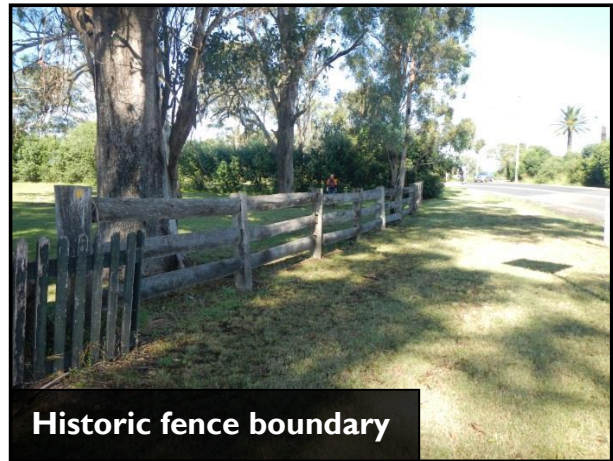
Top left hand corner continuing clockwise: Alignment Pin (Great Western Highway, Wentworth Falls); Survey tree (MR7, Albury); Survey tree (Kidman Way, Darlington Point, Murrumbidgee); Survey tree (Cobb Highway, Deniliquin); Milestone (Great Western Highway, Kingswood, Penrith); Alignment Stone (near Guntawong Road, Riverstone). Please note survey marks may have additional statutory protection under the *Surveying and Spatial Information Act 2002*.



Remnant Bridge Piers



Mine Shaft



Historic fence boundary



Dairy shed

Top left hand corner continuing clockwise: Remnant bridge piers (Putty Road, Bulga); Wooden boundary fence (Campbelltown Road, Denham Court); Dairy shed (Ballina); Golden Arrow Mine Shaft.



Top left hand corner: Culturally modified stone discovered on Main Road 92, about two kilometres west of Sassafras. The remaining images show 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 item recording form 418

This form is to be filled in by a project manager (or their delegate) or a team leader – Road and Maintenance Division, on the discovery of an unexpected heritage item during construction or maintenance works.

Date:		Recorded by: (Include name and position)	
Project name:			
Description of works being undertaken (eg Removal of failed pavement by excavation and pouring concrete slabs in 1m x 1m replacement sections).			
Description of exact location of item (eg Within the road formation on Parramatta Road, east bound lane, at the corner of Johnston Street, Annandale, Sydney).			
Description of item found (What type of item is it likely to be? Tick the relevant boxes).			
A. A relic	<input type="checkbox"/>	A 'relic' is evidence of a past human activity relating to the settlement of NSW with local or state heritage significance. A relic might include bottles, utensils, plates, cups, household items, tools, implements, and similar items.	
B. A 'work, building or structure'	<input type="checkbox"/>	A 'work' can generally be defined as a form infrastructure such as tram tracks, a culvert, road base, a bridge pier, kerbing, and similar items.	
C. An Aboriginal object	<input type="checkbox"/>	An 'Aboriginal object' may include stone tools, stone flakes, shell middens, rock art, scarred trees and human bones.	
D. Bone	<input type="checkbox"/>	Bones can either be human or animal remains. Remember that you must contact the local police immediately by telephone if you are <u>certain</u> that the bone(s) are <u>human remains</u>.	
E. Other	<input type="checkbox"/>		

<p>Provide short description of item (eg Metal tram tracks running parallel to road alignment. Good condition. Tracks set in concrete, approximately 10cms (100 mm) below the current ground surface).</p>	
<p>Sketch (Provide a sketch of the item's general location in relation to other road features so its approximate location can be mapped without having to re-excavate it. In addition, please include details of the location and direction of any photographs of the item taken).</p>	
<p>Action taken (Tick either A or B)</p>	
<p>A. Unexpected item would not be further impacted on by works <input type="checkbox"/></p>	
<p>Describe how works would avoid impact on the item. (eg The tram tracks will be left <i>in situ</i>, and recovered with road paving).</p>	
<p>B. Unexpected item would be further impacted on by works <input type="checkbox"/></p>	
<p>Describe how works would impact on the item. (eg Milling is required to be continued to 200 mm depth to ensure road pavement requirements are met. Tram tracks will need to be removed).</p>	
<p>Important: It is a statutory offence to disturb Aboriginal objects and historic relics (including human remains) without an approval. All works affecting objects and relics must cease until an approval is sought. Approvals may also be required to impact on certain works. Contact your regional environment staff for guidance.</p>	
<p>Project manager / works supervisor signature</p>	

Appendix C

Photographing unexpected heritage items

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

Photographs of unexpected items in their current context (*in situ*) may assist heritage staff and archaeologists 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) and a note describing the direction of the photograph.

Context and detailed photographs

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

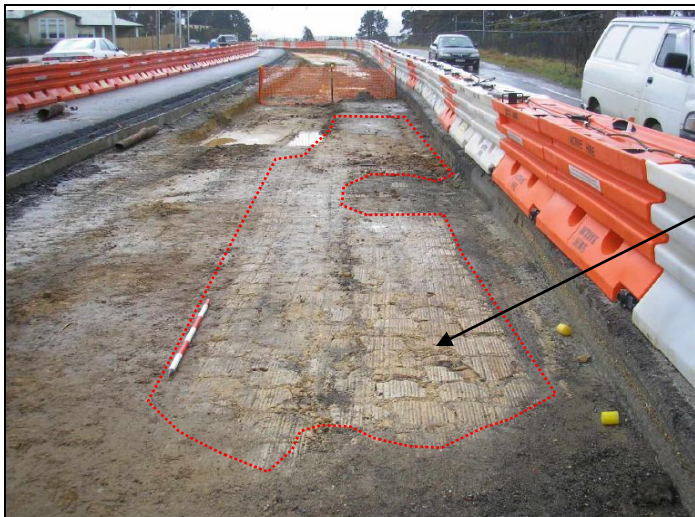


Figure 2: Close up detail of the sandstone surface showing material type, formation and construction detail. This is essential for establishing date of the feature.

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

Photographing distinguishing features

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



Figure 3: Ceramic bottle artefact with stamp.

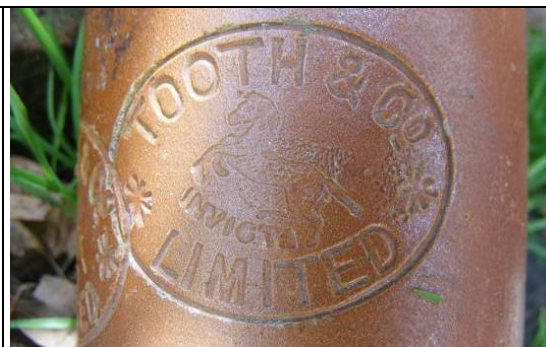


Figure 4: Detail of the stamp allows 'Tooth & Co Limited' to be made out. This is helpful to a specialist in gauging the artefact's origin, manufacturing date and likely significance.

Photographing bones

The majority of bones found on site will those of be recently deceased animal bones often requiring no further assessment (unless they are in archaeological context). However, if bones are human, Roads and Maritime must contact the police immediately (see Appendix F for detailed guidance). Taking quality photographs of the bones can often resolve this issue quickly. Heritage staff in Environment Branch can confirm if bones are human or non-human if provided with appropriate photographs. Ensure that photographs of bones are not concealed by foliage (Figure 5) as this makes it difficult to identify. Minor hand removal of foliage can be undertaken as long as disturbance of the bone does not occur. Excavation of the ground to remove bone(s) should not occur, nor should they be pulled out of the ground if partially exposed. Where sediment (adhering to a bone found on the ground surface) conceals portions of a bone (Figure 6) ensure the photograph is taken of the bone (if any) that is not concealed by sediment.



Figure 5: Bone concealed by foliage.



Figure 6: Bone covered in sediment

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



Figure 7: Photograph showing complete bone.



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

Appendix D

Key environmental contacts

Hunter region	Environmental Manager (Hunter)	4924 0440
	Aboriginal Cultural Heritage Advisor	4924 0383
Northern region	Environment Manager (North)	6640 1072
	Aboriginal Cultural Heritage Advisor	6604 9305
Southern region	Environmental Manager (South)	6492 9515
	Aboriginal Cultural Heritage Advisor	4221 2767
South West region	Environment Manager (South West)	6937 1634
	Aboriginal Cultural Heritage Advisor	6937 1647
Sydney region	Environment Manager (Sydney)	8849 2516
	Aboriginal Cultural Heritage Advisor	8849 2583
Western region	Environment Manager (West)	6861 1628
	Aboriginal Cultural Heritage Advisor	6861 1658
Pacific Highway Office	Environment Manager	6640 1375
Regional Maintenance Delivery	Environment Manager	9598 7721
Environment Branch	Senior Environmental Specialist (Heritage)	8588 5754

Heritage Regulators

Heritage Division Office of Environment and Heritage Locked Bag 5020 Parramatta NSW 2124 Phone: (02) 9873 8500	Department of the Environment (Clth) GPO Box 787 Canberra ACT 2601 Phone: (02) 6274 1111
Office of Environment and Heritage (Sydney Metropolitan) Planning and Aboriginal Heritage Section PO Box 668 Parramatta NSW 2124 Phone: (02) 9995 5000	Office of Environment and Heritage (North Eastern NSW) Planning and Aboriginal Heritage Section Locked Bag 914 Coffs Harbour NSW 2450 Phone: (02) 6651 5946
Office of Environment and Heritage (North Western NSW) Environment and Conservation Programs PO Box 2111 Dubbo NSW 2830 Phone: (02) 6883 5330	Office of Environment and Heritage (Southern NSW) Landscape and Aboriginal Heritage Protection Section PO Box 733 Queanbeyan NSW 2620 Phone: (02) 6229 7188

Project-Specific Contacts

Position	Name	Phone Number
Project Manager		
Site/Alliance Environment Manager		
Regional Environmental Officer		
Aboriginal Cultural Heritage Advisor		
Consultant Archaeologist		
Local Police Station		
OEH: Environment Line		131 555

Appendix E

Uncovering bones

Hand icon All matters relating to uncovering bones and RMS' human remains notification obligations should involve RMS regional environment and heritage staff. They will guide Project Managers through occurrences of uncovering bones.

This appendix provides Project Managers with advice (1) on what to do on first uncovering bones (2) the range of human skeletal notification pathways and (3) additional considerations and requirements when managing the discovery of human remains.

1. First uncovering bones

Stop all work in the vicinity of the find. All bones uncovered during project works should be **treated with care and urgency** as they have the potential to be human remains. Therefore they must be identified as either human or non-human as soon as possible by a qualified forensic or physical anthropologist. These specialist consultants can be sought by contacting regional environment staff and/or heritage staff at Environment Branch.

On the very rare occasion where it is *instantly obvious* from the remains that they are human, the Project Manager (or a delegate) should **inform the police by telephone** prior to seeking specialist advice. It will be obvious that it is human skeletal remains where there is no doubt, as demonstrated by the example in Figure 1. Often skeletal elements in isolation (such as a skull) can also clearly be identified as human. Note it may also be obvious that human remains have been uncovered when soft tissue and clothing are present.

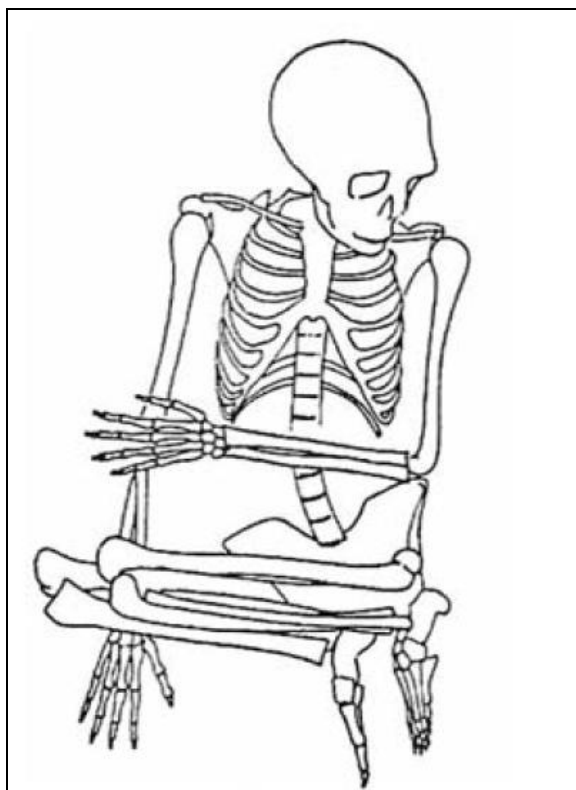


Figure 1: Schematic of a complete skeleton that is 'obviously' human¹².



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

¹² After Department of Environment and Conservation NSW (2006), *Manual for the identification of Aboriginal Remains*: 17.

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

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

If the bones are identified as human (either by photographs or an on-site inspection) a technical specialist must determine the likely ancestry (Aboriginal or non-Aboriginal) and burial context (archaeological or forensic). This assessment is required to identify the legal regulator of the human remains so **urgent notification** (as below) can occur. Preliminary telephone or verbal notification by the Project Manager or regional environment staff is considered appropriate. This must be followed up later by Roads and Maritime's formal letter notification as per Appendix G when a management plan has been developed and agreed to by the relevant parties.

2. Range of human skeletal notification pathways

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

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

Action

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

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

Action

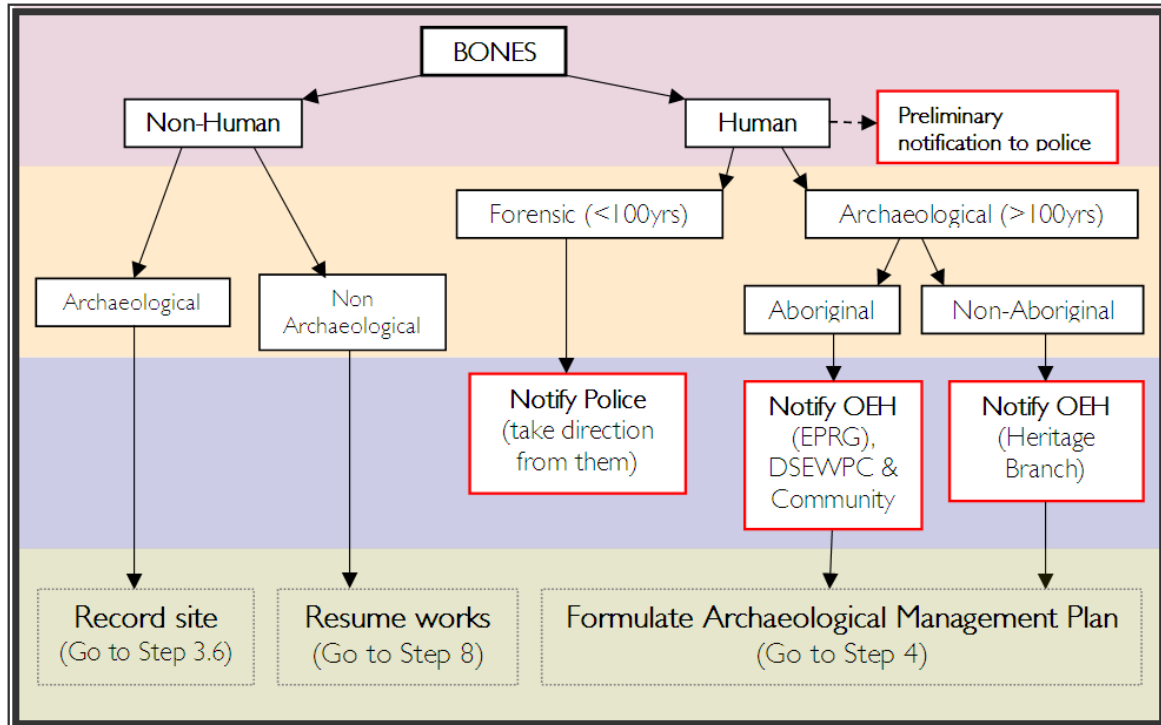
The OEH and the RMS Aboriginal Cultural Heritage Advisor (ACHA) must be notified immediately. The ACHA must contact and inform the relevant Aboriginal community stakeholders who may request to be present on site. Relevant stakeholders are determined by the RTA's *Procedure for Aboriginal Cultural Heritage Consultation and Investigation*.

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

Action

The OEH (Heritage Branch, Conservation Team) must be notified immediately.

The simple diagram below summarises the notification pathways on finding bones.



After the appropriate verbal notifications (as described in B and C), the Project Manager must proceed through the *Unexpected Heritage Items Procedure* to formulate an archaeological management plan (Step 4). Note no archaeological management plan is required for forensic cases (A), as all future management is a police matter. Non-human skeletal remains must be treated like any other unexpected archaeological find and so must proceed to recording the find as per Step 3.6.

3. Additional considerations and requirements

Uncovering archaeological human remains must be managed intensively and needs to consider a number of additional specific issues. These issues might include facilitating culturally appropriate processes when dealing with Aboriginal remains (such as repatriation and cultural ceremonies). Roads and Maritime's ACHA can provide advice on this and how to engage with the relevant Aboriginal community. Project Managers, more generally, may also need to consider overnight site security of any exposed remains and may need to manage the onsite attendance of a number of different external stakeholders during assessment and/or investigation of remains. Project Managers may also be advised to liaise with local church/religious groups and the media to manage community issues arising from the find. Additional investigations may be required to identify living descendants, particularly if the remains are to be removed and relocated.

If exhumation of the remains (from a formal burial or a vault) is required, Project Managers should also be aware of additional approval requirements under the *Public Health Act 1991* (NSW). Specifically, Roads and Maritime is required to apply to the Director General of NSW Department of Health for approval to exhume human remains as per Clause 26 of the *Public Health (Disposal of Bodies) Regulation 2002* (NSW)¹³. Further, the exhumation of such remains needs to consider health risks such as infectious disease control, exhumation procedures and reburial approval and registration. Further guidance on this matter can be found at the NSW Department of Health [website](#).

In addition, due to the potential significant statutory and common law controls and prohibitions associated with interfering with a public cemetery, project teams are

¹³ This requirement is in addition to heritage approvals under the *Heritage Act 1977*.

advised, when works uncover human remains adjacent to cemeteries, to confirm the cemetery's exact boundaries.

Appendix F

Archaeological/heritage advice checklist

The archaeologist must advise the Project Manager of an appropriate archaeological or heritage management plan as soon as possible after site inspection (see Step 4). An archaeological or heritage management plan can include a range of activities and processes, which differ depending on the find and its significance. In discussions with the archaeologist the following checklist can be used by the Project Manager and the archaeologist as a prompt to ensure all relevant archaeological issues are considered when developing this plan. This will allow the project team to receive clear and full advice to move forward quickly and in the right direction. Archaeological and/or heritage advice on how to proceed can be received in a letter or email outlining all relevant archaeological and/or heritage issues.

	Required	Outcome/notes
Assessment and investigation		
• Assessment of significance	Yes/No	
• Assessment of heritage impact	Yes/No	
• Archaeological excavation	Yes/No	
• Archival photographic recording	Yes/No	
Heritage approvals and notifications		
• AHIPs, Section 140, S139 exceptions etc	Yes/No	
• Regulator relics/objects notification	Yes/No	
• Roads and Maritime's S170 Heritage and Conservation Register listing requirements	Yes/No	
• Compliance with CEMP or other project heritage approvals	Yes/No	
Stakeholder consultation		
• Aboriginal stakeholder consultation requirements and how it relates to RTA <i>Procedure for Aboriginal Cultural Heritage Consultation and Investigation (PACHCI)</i> .	Yes/No	
• Advice from regional environmental staff, Aboriginal Cultural Heritage Advisor, Roads and Maritime heritage team.	Yes/No	
Artefact/ heritage item management		
• Retention or conservation strategy (eg items may be subject to long conservation and interpretation) • Disposal strategy (eg former road pavement) • Short term and permanent storage locations (interested third parties should be	Yes/No	

Roads & Maritime Services

consulted on this issue).		
• Control Agreement for Aboriginal objects.	Yes/No	
Program and budget		
• Time estimate associated with archaeological or heritage conservation work.		
• Total cost of archaeological/heritage work.		

Appendix G

Template notification letter

[Select and type date]

[Select and type reference number]

[Select and type file number]

[Insert recipient's name and address, see **Appendix D**]

[Select and type salutation and name],

Re: Unexpected heritage item discovered during Roads and Maritime Services project works.

I write to inform you of an unexpected [select: relic, heritage item or Aboriginal object] found during Roads and Maritime Services construction works at [insert location] on [insert date]. [Where the regulator has been informally notified at an earlier date by telephone, this should be referred to here].

This letter is in accordance with the notification requirement under [select: Section 146 of the *Heritage Act 1977* (NSW) or Section 89(A) of the *National Parks and Wildlife Act 1974* (NSW)] **NB:** There may be not be statutory requirement to notify of the discovery of a 'heritage Item that is not a relic or Aboriginal object].

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

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

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

Resulting from these preliminary findings, Roads and Maritime Services [or contractor] is proposing [provide a summary of the proposed archaeological/heritage approach (eg develop archaeological research design (where relevant), seek heritage approvals, undertake archaeological investigation or conservation/interpretation strategy). Also include preliminary justification of such heritage impact with regard to project design constraints and delivery program].

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

Please contact me if you have any input on this approach or if you require any further information.

Yours sincerely

[Sender name and position]

[Attach the archaeological/heritage management plan and site recording form].



Appendix B: Heritage Items and Conservation Areas within 100m of the New M5 Corridor

Aboriginal Heritage Objects and Sites

Previously identified Aboriginal sites or objects within one kilometre of the study area are provided in Table B.1 below.

The following criterion was applied to determine impact:

- Direct impacts – impacts that would result from the construction of surface roads, interchanges, ancillary and operational facilities, utilities, upgrades of existing roads and construction compounds. Direct impacts have the potential to damage or destroy Aboriginal sites where the sites are located within the proposed disturbance footprint of the Project; and
- Indirect impacts – impacts resulting from vibration during construction and blasting activities, and settlement-related impacts from tunnelling. Indirect impacts have the potential to damage or destroy Aboriginal sites where the sites are located within impact zones.

Tables B.1 and B.2 below provide an overview of the potential impacts to these surveyed items located within one-kilometre of the Project footprint.

At the completion of detailed design, the final list of Aboriginal heritage objects and sites to be impacted will be provided in an update to this plan and appropriate management measures will be identified and implemented.

Table B.1 Previously recorded archaeological sites within and adjacent to the Project corridor

Site name	AHIMS reference	Site type	Site features	Location (Centroid)		Condition	Potential Impact	Direct impact	Indirect impact
				Easting	Northing				
Undercliffe Road	45-6-0615	Rockshelter	Art; Midden Location confirmed.	328605	6244689	Located	No direct or indirect impact due to distance from Project.	N/A	N/A
Shea's Creek (Alexandra Canal)	45-6-0751	Artefact scatter	Artefacts, shell, bone.	332369	6245605	Site salvaged and likely destroyed during construction of Alexandra Canal.	Artefact-bearing deposits may be present in areas adjacent to Alexandra Canal (Shea's Creek). There is potential (although low likelihood) for direct impact on subsurface deposits due to the construction of two bridges across Alexandra Canal.	✓	N/A
		Edge-ground axes	Artefacts	332288	6245561			✓	N/A
		Dugong bones	Bones	331831	6245375			✓	N/A

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Site name	AHIMS reference	Site type	Site features	Location (Centroid)		Condition	Potential Impact	Direct impact	Indirect impact
				Easting	Northing				
View Street	45-6-2198	Midden	Shell; artefacts	329593	6244493	Partially destroyed	No direct or indirect impact due to distance from Project.	N/A	N/A
4 Wollli_Creek 1.6	45-6-2414	Rockshelter	Deposit; artefacts	326390	6243807	Good condition, no artefacts observed.	No direct or indirect impact due to distance from Project.	N/A	N/A
Wollli_Creek 1.4	45-6-2415	Rockshelter	Deposit; artefacts	325846	6243468	Not located	Closest valid site to the Project surface works (250 metres). No direct or indirect impact due to distance from Project.	N/A	N/A
Wollli_Creek 1.3	45-6-2416	Rockshelter	Deposit; shell	326023	6243601	Condition good. No shell observed.	No direct or indirect impact due to distance from Project.	N/A	N/A
Wollli_Creek 1.2;	45-6-2417	Rockshelter	Shell; artefacts	325922	6243536	Not located. Possibly built over by houses along Sutton Avenue.	No direct or indirect impact due to distance from Project.	N/A	N/A
Wollli_Creek 1.1;	45-6-2418	Rockshelter	Deposit; artefacts	325922	6243537	Not located. Possibly built over by houses along Sutton Avenue.	No direct or indirect impact due to distance from Project.	N/A	N/A
Nanny Goat Hill 1;NGH 1;	45-6-2547	Open artefact site	Artefacts	328805	6244489	No artefacts observed.	No direct or indirect impact due to distance from Project.	N/A	N/A
Wollli Creek 2.5	45-6-2564	Rockshelter	Shell; artefacts	327352	6243944	Condition good. No shell or artefacts observed.	No direct or indirect impact due to distance from Project.	N/A	N/A
Wollli Creek 2.4	45-6-2565	Rockshelter	Deposit; artefacts	327190	6243984	Condition good. No artefacts observed.	No direct or indirect impact due to distance from Project.	N/A	N/A
Wollli Creek 2.1	45-6-2566	Rockshelter	Deposit; artefacts	327257	6243971	Condition good. No artefacts observed.	No direct or indirect impact due to distance from Project.	N/A	N/A

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Site name	AHIMS reference	Site type	Site features	Location (Centroid)		Condition	Potential Impact	Direct impact	Indirect impact
				Easting	Northing				
Wolli Creek	45-6-2567	Rockshelter	Shell; artefacts	327369	6243960	Condition poor due to contemporary use as a rock-climbing wall. No artefacts observed. Small animal bone fragments identified.	No direct or indirect impact due to distance from Project.	N/A	N/A
Wolli Creek	45-6-2568	Rockshelter	Deposit; artefacts	327030	6244108	Condition good. No artefacts observed.	No direct or indirect impact due to distance from Project.	N/A	N/A
Fraser Park PAD	45-6-2654	PAD	PAD	330205	6245989	Not located	No direct or indirect impact due to distance from Project.	N/A	N/A
Wolli Creek 3	45-6-2671	Open artefact site	Artefacts	327685	6244051	No artefacts observed. Possibly artefacts removed or washed away during rain/flooding.	No direct or indirect impact due to distance from Project.	N/A	N/A
Tempe House 1	45-6-2737	Open artefact site	Artefacts; PAD	329335	6244119	Site partially destroyed. Comprises subsurface deposit. No surface artefacts observed.	No direct or indirect impact due to distance from Project.	N/A	N/A

^a This site was documented in the late 19th century during construction of the Alexandra Canal (which was previously known as Shea's Creek) at a time when archaeological reporting requirements were poor. Stone artefacts and a dugong skeleton were recovered from the site, and while suspected based on known impacts, it is unclear from available documentation whether the site was subsequently completely destroyed during construction.

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Potential archaeological deposits (PADs) identified during the archaeological survey are provided in Table B.2 below.

Table B.2 Potential Aboriginal archaeological sites with and adjacent to Project corridor

Site name	AHIMS reference	Site type (description)	Site features	Location (Centroid)		Potential Impact	Direct impact	Indirect impact
				Easting	Northing			
SR-OVRH-1	Pending	Sandstone overhang - South facing sandstone overhang measuring 4.8 metres long by 1.4 metres high by 3.1 metres deep. Located on an upper slope overlooking an unnamed tributary of Wolli Creek in Stotts Reserve.	PAD (PAD area size of overhang - <50m ³)	326178	6243095	No direct impact. Potential for indirect impacts (due to settlement, vibration and blasting) considered unlikely (refer to Section 5.1.1 of the CHSP for description of potential impacts).	N/A	✓
WC-OVRH-1	Pending	Sandstone overhang - South facing sandstone overhang measuring 5.8 metres long by 1.2 metres high by 2.7 metres deep. Located on a lower slope 20 metres from Wolli Creek. Site condition poor due to rubbish and collapsed ceiling.	PAD (PAD area 1.1m by 1.3m - <50m ³)	325918	6243345	No direct or indirect impact due to distance from Project.	N/A	N/A
WC-OVRH-2	Pending	Sandstone overhang - East facing sandstone overhang measuring 3.6 metres long by 1.9 metres high by 2.7 metres deep. Located on a middle slope. Site condition good.	PAD (PAD area 3.6m by 2.4m - <50m ³)	326969	6244040	No direct or indirect impact due to distance from Project.	N/A	N/A
WC-OVRH-3	Pending	Sandstone overhang - South facing sandstone overhang measuring 12 metres long by one metre high by 3.2 metres deep. Located on a middle slope 100 metres from Wolli Creek. Site condition good.	PAD (PAD area size of overhang - <50m ³)	327472	6244023	No direct or indirect impact due to distance from Project.	N/A	N/A
WC-OVRH-4	Pending	Sandstone overhang - Southeast facing sandstone overhang measuring 4.8 metres long by 1.4 metres high by 3.1 metres deep. Located on a middle slope 60 metres from Wolli Creek. PAD area size of overhang. Condition poor due to graffiti and presence of bed, mirror, chair and weights indicating it is regally occupied.	PAD (PAD area size of overhang - <50m ³)	327571	6244109	No direct or indirect impact due to distance from Project.	N/A	N/A

Non-Aboriginal Heritage

There are 58 non-Aboriginal heritage items (as assessed by the EIS) expected to be directly or indirectly impacted by the New M5 works. Impacts to heritage items include:

- **Primary direct impacts:** the curtilage of the heritage item is within the Project footprint and may involve the demolition or modification of the heritage item or its heritage significance;
- **Secondary direct impacts:** the Project may impact on the heritage item or its significance subject to the condition of the item potentially requiring more detailed investigation; and
- **Indirect impacts:** the Project may change the visual context and surroundings of the heritage item with the potential to affect its heritage significance.

Identified impacts are further described as either:

- **Negligible:** impacts to the heritage item in question or its significance would be negligible and would not affect the overall heritage significance of the item.
- **Minor:** minor impacts may occur to the listed item, typically with respect to its reported curtilage as opposed to the listed item itself; these impacts would be minimal in nature and would not affect the overall heritage significance of the item; minor impacts can be repaired or rectified, such as the repair of cracking.
- **Significant:** impacts to the heritage item are unavoidable with the current project design; the heritage significance of the item would be impacted.

Table B.3 provides an overview of the potential impacts to Non-Aboriginal heritage items. Salvage will be undertaken where the heritage specialist has identified items that are able to be salvaged and are of sufficient integrity and heritage value. The list of items to be salvaged will be determined in consultation with the relevant Council. Salvaged items will be reused within the project as a first preference and will be incorporated into the Urban Design and Landscape Plan. Any residual salvaged items will be made available to property owners within the locality from where they originated.

At the completion of detailed design, the following tables will be updated with the final list of heritage items and heritage conservation areas to be impacted by the project and appropriate management measures will be identified and implemented.

Table B.3 Summary of the potential impacts to Non-Aboriginal heritage items

Project Location	Number	Item Name	Register	Significance	Location	Potential Impact	Negligible	Minor	Significant	Recommended Minimum Management Measures
Main alignment tunnels	I24	Rossllyn Hospital	Rockdale LEP	Local	30 Forest Road, Arncliffe	Secondary direct - vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)

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Project Location	Number	Item Name	Register	Significance	Location	Potential Impact	Negligible	Minor	Significant	Recommended Minimum Management Measures
Main alignment tunnels	I23	St Francis Xavier Catholic Presbytery	Rockdale LEP	Local	26 Forest Road, Arncliffe	Secondary direct - vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Main alignment tunnels	I22	St Francis Xavier Church Group	Rockdale LEP	Local		Secondary direct - vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Main alignment tunnels	I18	Street Plantings	Rockdale LEP	Local	Firth Street, Arncliffe	Secondary direct - vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Main alignment tunnels	I35	House	Rockdale LEP	Local	31 Kyle Street, Arncliffe	Secondary direct - vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Main alignment tunnels	I22	St Francis Xavier Church Group	Rockdale LEP	Local	2-4 and 6 Forest Road, Arncliffe	Secondary direct - vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Arncliffe surface works	01647	Western Outfall Main Sewer (Rockdale to Homebush) (part of SWSOOS No.1)	SHR	State	Corner Marsh Street and M5 East Freeway, Tempe	Secondary direct - vibration from tunnelling and construction of the ventilation station and water treatment plant.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)

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Project Location	Number	Item Name	Register	Significance	Location	Potential Impact	Negligible	Minor	Significant	Recommended Minimum Management Measures
	4572728		S170 Register (Sydney Water)	State		Indirect - visual impact from GGBF bridge structure.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Main alignment tunnels	I303	Morton Bay Fig Tree	Marrickville LEP	Local	43 South Street, Tempe	Secondary direct - vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Main alignment tunnels	01412 I249	Timber Slab Cottage	SHR Marrickville LEP	Local and State	44 Barden Street, Tempe	Secondary direct - Vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Main alignment tunnels	I299 AR7	Part of Westpac Stores Department and Penfolds Wine Cellars (former), including interiors	Marrickville LEP	Local	688 and 728 Princes Highway (part only), Tempe	Secondary direct - vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Main alignment tunnels	I284	Brick kerb and sandstone kerb guttering	Marrickville LEP	Local	George Street, Henry Street, Park Road, Park Lane, Railway Lane, Rowe Lane, Reilly Lane and Stewart Lane, Sydenham	Secondary direct - vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)

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Project Location	Number	Item Name	Register	Significance	Location	Potential Impact	Negligible	Minor	Significant	Recommended Minimum Management Measures
Main alignment tunnels	I288	Victorian filigree style sandstone faced residence, including interiors	Marrickville LEP	Local	3–47 Railway Road, Sydenham	Secondary direct - vibration and settlement from tunnelling and the construction of the ramps.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
St Peters Interchange Main alignment tunnels	I312 ⁴	Service Garage	Marrickville LEP	Local	Corner Canal Street and Princes Highway, St Peters (Adjacent to Construction Compound C8, St Peters Interchange)	Primary direct – acquisition			✓	Archival recording and oral history where relevant parties are able to be contacted Include in Heritage Interpretation Plan Identify on SEPs Install no-go zone fencing

⁴ Item is labelled as I276 on Marrickville Heritage Map Sheet HER_004, Marrickville LEP 2011 Amendment No. 1

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Project Location	Number	Item Name	Register	Significance	Location	Potential Impact	Negligible	Minor	Significant	Recommended Minimum Management Measures
						Secondary direct - vibration and settlement from construction of the ramps (surface works) and tunnelling.		✓		Existing condition report Ensure safe working distances Monitoring Additional maintenance and/or stabilisation measures if, and as advised by, a structural engineer in consultation with Heritage Specialist (dependent on impacts identified)
						Indirect – visual		✓		Archival recording Include in Heritage Interpretation Plan
Local road works St Peters Interchange	I12	Terrace Group	Sydney LEP	Local	2-34 Campbell Road, Alexandria	Secondary indirect - vibration from construction of the ramps.		✓		Existing condition report Monitoring Ensure safe working distances
						Secondary indirect - potential for at property acoustic treatment (subject to detailed design).		✓		If acoustic treatment required, heritage specialist to ensure work is sympathetic to heritage values
						Indirect – visual		✓		Tailored landscape treatments

Construction Heritage Sub Plan



Project Location	Number	Item Name	Register	Significance	Location	Potential Impact	Negligible	Minor	Significant	Recommended Minimum Management Measures
St Peters Interchange	I1405	Warehouse 'Rudders Bond Store'	Sydney LEP	Local	53-57 Campbell Road, Alexandria (Within Construction Compound C11, St Peters Interchange)	Primary direct impact - demolition is required for the construction of the ramps and St Peters interchange.			✓	Archival recording and comparative analysis Salvage (and reuse within project where feasible) Include in Heritage Interpretation Plan
Local road works St Peters Interchange	01621 I1 I3 4571712 M5EE-02	Alexandra Canal including M5EE-02	SHR Botany LEP Sydney LEP RNE S170 Register (Sydney Water) City Plan Heritage (2011)	State and Local	General Holmes Drive (west of Engine Pond, within the boundary of Sydney (Kingsford Smith) Airport, Mascot (Adjacent to Construction Compounds C12 and C13)	Primary direct – modification to the historical fabric and embankment, to enable new surface water discharge points and scour protection. Possible direct impact to the area of the archaeological remains of the old wharf.			✓	Photographic records and numbering of sandstone blocks Heritage specialist to oversee reinstatement of embankment wall Consult with Sydney Water Include in Heritage Interpretation Plan
						Secondary direct – potential changes to navigability of canal.			✓	Archival recording Consult with Sydney Water

Construction Heritage Sub Plan



Project Location	Number	Item Name	Register	Significance	Location	Potential Impact	Negligible	Minor	Significant	Recommended Minimum Management Measures
						Secondary direct – vibration and settlement from tunnelling and surface works in close proximity to the canal embankments (including activities at construction compounds C12 and C13).			✓	Monitoring Ensure safe working distances
						Indirect - visual impact due to introduction of three new bridges, including two road bridges and one dedicated pedestrian/cyclist bridge.			✓	Archival recording Consult with Sydney Water Include in Heritage Interpretation Plan
Local road works	I18 4571730	Water Board Pump House (including interior and substructure)	Sydney LEP Sydney Water s170	Local and State	48 Huntley Street, Alexandria	Secondary direct – vibration from surface works.		✓		Existing condition report Monitoring Ensure safe working distances
						Indirect - visual		✓		Urban design & landscaping to manage visual impact

Construction Heritage Sub Plan



Project Location	Number	Item Name	Register	Significance	Location	Potential Impact	Negligible	Minor	Significant	Recommended Minimum Management Measures
Local road works	C2	Cooper Estate Conservation Area	Sydney LEP	Local	Between Mitchell, Euston and Sydney Park Roads, Alexandria	Primary direct – change in heritage conservation area values.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
						Secondary indirect - vibration from surface works.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Local road works	I20	Industrial building 'Frank G Spurway'	Sydney LEP	Local	20-30 Maddox Street, Alexandria	Secondary direct – vibration from surface works.		✓		Existing condition report Monitoring Ensure safe working distances
						Indirect - visual		✓		To be developed upon advice from Heritage Specialist (dependent on impact)
Local road works	I281	Town and Country Hotel, including interiors.	Marrickville LEP	Local	2 Unwins Bridge Road, St Peters	Secondary indirect – vibration from surface works.		✓		Existing condition report Monitoring Ensure safe working distances

Construction Heritage Sub Plan



Project Location	Number	Item Name	Register	Significance	Location	Potential Impact	Negligible	Minor	Significant	Recommended Minimum Management Measures
						Indirect - visual		✓		To be developed upon advice from Heritage Specialist (dependent on impact)
Local road works	I282	Group of Victorian Filigree and Victorian Italianate terrace house – 'Narara' including interiors	Marrickville LEP	Local	4-18 Unwins Bridge Road, St Peters	Secondary direct – vibration from surface works.		✓		Existing condition report Monitoring Ensure safe working distances
						Indirect – visual		✓		To be developed upon advice from Heritage Specialist (dependent on impact)
Local road works	I280	Waugh and Josephson industrial buildings former, showroom, officer and workshop, including interiors	Marrickville LEP	Local	1-7 Unwins Bridge Road, St Peters	Secondary indirect – vibration from surface works.		✓		Existing condition report Monitoring Ensure safe working distances
						Indirect – visual		✓		To be developed upon advice from Heritage Specialist (dependent on impact)
Local road works	C16	Goodsell Estate Conservation Area	Marrickville LEP	Local	Between Bedwin Road, May Street, Caroline and May	Primary direct – modification		✓		Include in Heritage Interpretation Plan

Construction Heritage Sub Plan



Project Location	Number	Item Name	Register	Significance	Location	Potential Impact	Negligible	Minor	Significant	Recommended Minimum Management Measures
					Lanes and the rail line, St Peters	Primary direct – acquisition		✓		To be developed upon advice from Heritage Specialist (dependent on impact)
					Lanes and the rail line, St Peters	Primary direct – change in heritage conservation area values.		✓		Sympathetic landscaping to mitigate loss of values Include in Heritage Interpretation Plan
					Lanes and the rail line, St Peters	Secondary direct – vibration and settlement from tunnelling and surface works.		✓		Existing condition survey report for structures at risk Monitoring of structures at risk Ensure safe working distances Include in Heritage Interpretation Plan
Main alignment tunnels	I289	St Mary/St Mina Coptic Orthodox Church, including interiors	Marrickville LEP	Local	24A Railway Road, Sydenham	Secondary direct - vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
St Peters Interchange Local road works	00032 I275 1716	St Peters Anglican Church	SHR Marrickville LEP RNE	Local and State	187-209 Princes Highway, St Peters	Secondary direct - vibration from surface works.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)

Construction Heritage Sub Plan



Project Location	Number	Item Name	Register	Significance	Location	Potential Impact	Negligible	Minor	Significant	Recommended Minimum Management Measures
Local road works	I271	St Peters Public School, including interiors	Marrickville LEP	Local	St Peters	Secondary direct - vibration from surface works.	✓			Existing condition survey report Monitoring Ensure safe working distances
						Secondary direct – potential for at property acoustic treatment (subject to detailed design).		✓		If acoustic treatment required, heritage specialist to ensure work is sympathetic to heritage values
St Peters Interchange	16240	St Peters Brickpit Geological Site	RNE	State	Between Canal, Burrows and Campbell Road and the Princes Highway, St Peters (Within and adjacent to St Peters Interchange construction compounds)	Primary direct – modification through construction of St Peters Interchange (including activities at construction compounds C8 and C9) and shared path along northern boundary of interchange.			✓	Archival recording / 3D model Obtain advice from palaeontologist for potential for further specimens Retain an exposed section if feasible and safe to do so Include in Heritage Interpretation Plan
						Secondary direct - vibration from surface works.			✓	Ensure safe working distances Monitoring

Construction Heritage Sub Plan



Project Location	Number	Item Name	Register	Significance	Location	Potential Impact	Negligible	Minor	Significant	Recommended Minimum Management Measures
						Indirect – visual (including construction compounds C10 and C11)			✓	Archival recording / 3D model Retain an exposed section if feasible and safe to do so Include in Heritage Interpretation Plan
Western surface works	102089	Pallamanna Parade Urban Conservation Area	RNE	Local	Beverly Hills	Primary direct – change in heritage conservation area values.	✓			Landscaping to provide screening of the project from the conservation area
						Secondary direct – vibration from surface works.	✓			Existing condition survey report for structures at risk Monitoring of structures at risk Ensure safe working distances
						Indirect - visual	✓			Landscaping to provide screening of the project from the conservation area
Main alignment tunnels	102106	Kingsgrove East Urban Conservation Area	RNE	Local	Kingsgrove	Primary direct – change in heritage conservation area values.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)

Construction Heritage Sub Plan



Project Location	Number	Item Name	Register	Significance	Location	Potential Impact	Negligible	Minor	Significant	Recommended Minimum Management Measures
						Secondary direct – vibration and settlement from tunnelling and surface works.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
						Indirect - visual	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Bexley Road surface works Main alignment tunnels	4801898	Bexley North Railway Station Group	S170 Register (Railcorp)	State	Bexley Road, Bexley North	Secondary direct – vibration and settlement from tunnelling and surface works.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
						Indirect - visual	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Main alignment tunnels	4805728 I1	Arncliffe (Forest Road) Overbridge	S170 Register (Railcorp) Rockdale LEP	Local and State	Forest Road, Arncliffe	Secondary direct – vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)

Construction Heritage Sub Plan



Project Location	Number	Item Name	Register	Significance	Location	Potential Impact	Negligible	Minor	Significant	Recommended Minimum Management Measures
Local road works	4305629	House	S170 Register (Roads and Maritime)	State	28-44 Campbell Street, St. Peters	Primary direct – demolition to enable widening of Campbell Street.			✓	Archival recording Consideration of salvage and reuse options Include in Heritage Interpretation Plan
Local road works	4305643	House	S170 Register (Roads and Maritime)	State	82 Campbell Street, St Peters	Primary direct – demolition to enable widening of Campbell Street.			✓	Archival recording Consideration of salvage and reuse options Include in Heritage Interpretation Plan
Main alignment tunnels	I51	Victorian semi-detached dwelling	Rockdale LEP	Local	26 Stanley Street, Arncliffe	Secondary direct - vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Main alignment tunnels	I50	Victorian House	Rockdale LEP	Local	22 Stanley Street, Arncliffe	Secondary direct - vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Main alignment tunnels	I49	Victorian House	Rockdale LEP	Local	20 Stanley Street, Arncliffe	Secondary direct - vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)

Construction Heritage Sub Plan



Project Location	Number	Item Name	Register	Significance	Location	Potential Impact	Negligible	Minor	Significant	Recommended Minimum Management Measures
Main alignment tunnels	I48	Victorian House	Rockdale LEP	Local	16 Stanley Street, Arncliffe	Secondary direct - vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Western surface works	102085	Welfare Avenue Urban Conservation Area	RNE	Local	Beverly Hills	Primary direct – change in heritage conservation area values.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
						Secondary direct – vibration from surface works.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
						Indirect - visual	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Main alignment tunnels	#01076 I1 #4801150	Arncliffe Railway Station Group, and	SHR Rockdale LEP Sydney Trains Section 170 register	Local and State	Arncliffe	Secondary direct - vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)

Construction Heritage Sub Plan



Project Location	Number	Item Name	Register	Significance	Location	Potential Impact	Negligible	Minor	Significant	Recommended Minimum Management Measures
Main alignment tunnels	I13	Bard of Avon, 39 Eden Street, Rockdale	Rockdale LEP	Local	Rockdale	Secondary direct - vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Main alignment tunnels	I15	Californian bungalow house, 7 Fairview Street	Rockdale LEP	Local	Fairview Street, Arncliffe	Secondary direct - vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Main alignment tunnels	I16	Californian bungalow house, 21 Fairview Street	Rockdale LEP	Local	Fairview Street, Arncliffe	Secondary direct - vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Main alignment tunnels	19170 I19	Arncliffe Post Office	RNE Rockdale LEP	Local	Rockdale	Secondary direct - vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Main alignment tunnels	I20	Glenevie Lane, Rockdale	Rockdale LEP	Local	Rockdale	Secondary direct - vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Main alignment tunnels	I21	Victorian shop and dwelling – 45 Firth Street, Rockdale	Rockdale LEP	Local	Rockdale	Secondary direct - vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)

Construction Heritage Sub Plan



Project Location	Number	Item Name	Register	Significance	Location	Potential Impact	Negligible	Minor	Significant	Recommended Minimum Management Measures
Main alignment tunnels	I56	House, 73 West Botany St, Rockdale	Rockdale LEP	Local	Rockdale	Secondary direct - vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Main alignment tunnels	I61	House, 148 Wollongong Road, Rockdale	Rockdale LEP	Local	Rockdale	Secondary direct - vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Main alignment tunnels	I165	Stotts Reserve	Rockdale LEP	Local	Rockdale	Secondary direct - vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Main alignment tunnels	I81	Stone Federation House – 15 East Street, Rockdale	Rockdale LEP	Local	Rockdale	Secondary direct - vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Bexley Road surface works	I237	Wolli Creek Valley	Rockdale LEP	Local	Rockdale	Indirect - visual	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Bexley Road surface works	4305006	Wolli Creek culvert*	S170 Register (Roads and Maritime)	State	Bexley Rd, Earlwood	Secondary direct – vibration from surface works.		✓		Existing condition survey report Monitoring Ensure safe working distances

Construction Heritage Sub Plan



Project Location	Number	Item Name	Register	Significance	Location	Potential Impact	Negligible	Minor	Significant	Recommended Minimum Management Measures
Bexley Road surface works Main alignment tunnels	102071	Clemton Park Urban Conservation Area, Homer St	RNE	Local	Clemton Park (Includes Bexley East C6 Construction Compound)	Primary direct (C6 Construction Compound) – change in heritage conservation area values.	✓			Landscaping to provide screening of the Bexley Road South motorway operations complex from the conservation area
						Secondary direct – vibration from surface works.		✓		Existing condition survey report for structures at risk Monitoring of structures at risk Ensure safe working distances
						Indirect - visual	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Main alignment tunnels	102106	Bardwell Park Urban Conservation Area	RNE	Local	Bardwell Park	Secondary direct - vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Local road works	1273	Terrace housing including interiors - Marrickville	Marrickville LEP	Local	119 May Street, Marrickville	Secondary direct – vibration from surface works.		✓		Existing condition report Monitoring Ensure safe working distances

Construction Heritage Sub Plan



Project Location	Number	Item Name	Register	Significance	Location	Potential Impact	Negligible	Minor	Significant	Recommended Minimum Management Measures
						Indirect – visual.		✓		Urban design & landscaping to manage visual impact
Main alignment tunnels St Peters Interchange	I277	Southern Cross Hotel	Marrickville LEP	Local	Marrickville	Secondary direct – vibration and settlement from tunnelling and surface works.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
						Indirect – visual.	✓			Urban design & landscaping to manage visual impact
Local road works St Peters Interchange	I283	Remaining brick road and footpath paving and stone guttering	Marrickville LEP	Local	Marrickville	Secondary direct – vibration from surface works.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Main alignment tunnels	100061	Sydenham Village	RNE	Local	Sydenham	Secondary direct - vibration and settlement from tunnelling.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
						Secondary direct – conservation area values	✓			To be developed upon advice from Heritage Specialist (dependent on impact)

Construction Heritage Sub Plan



Project Location	Number	Item Name	Register	Significance	Location	Potential Impact	Negligible	Minor	Significant	Recommended Minimum Management Measures
Local road works	3	Macdonaldtown Stormwater Channel	Proposed amendment to Sydney LEP 2012 (Industrial and warehouse buildings)	Local	Macdonaldtown	Secondary direct – vibration from surface works.		✓		Existing condition survey report Monitoring
						Indirect – visual.		✓		To be developed upon advice from Heritage Specialist (dependent on impact)
Local road works	14	Former Alexandria Spinning Mills	Proposed amendment to Sydney LEP 2012 (Industrial and warehouse buildings)	Local	Alexandria	Secondary direct – vibration from surface works.		✓		Existing condition report Monitoring Ensure safe working distances
						Indirect – visual.	✓			To be developed upon advice from Heritage Specialist (dependent on impact)
Local road works	C47 C2	King Street conservation area (Sydney LEP) / King Street/Enmore Road conservation area (Marrickville LEP)	Sydney LEP Marrickville LEP	Local	Enmore	No impact likely.				To be developed upon advice from Heritage Specialist (dependent on impact)

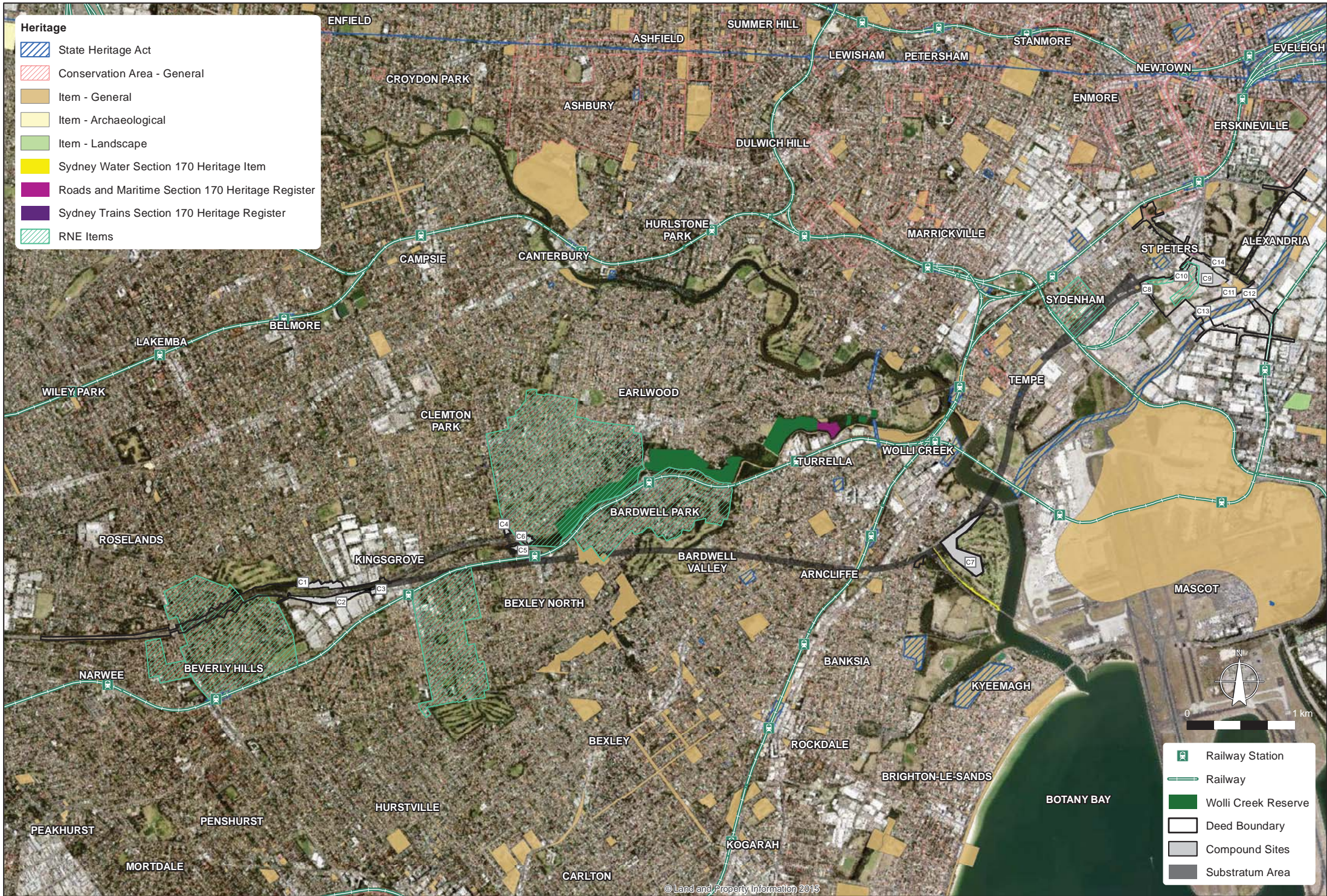


Figure B2 - Existing Non-Aboriginal Heritage – Project Overview



- Heritage**
- State Heritage Act
 - Local Heritage Item - General
 - RNE Items

- Railway Station
- Railway
- Deed Boundary
- Compound Sites
- Substratum Area

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Figure B3 - Existing Non-Aboriginal Heritage - Western Surface Works










Figure B4 - Existing Non-Aboriginal Heritage – Kingsgrove and Bexley Surface Works

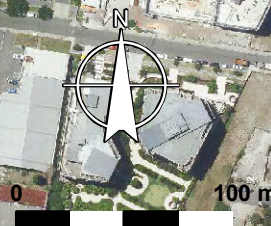


Figure B5 - Existing Non-Aboriginal Heritage – Arncliffe Surface Works



- Heritage**
-  State Heritage Act
 -  Local Heritage Item - General
 -  RNE Items

-  Railway Station
-  Railway
-  Deed Boundary
-  Compound Sites



Existing Non-Aboriginal Heritage - St Peters Interchange & Local Roads (South)



Figure B7 - Existing Non-Aboriginal Heritage – St Peters Interchange & Local Roads (North)

Appendix C: Significance Assessment and statement of significance - EIS AECOM (2015)

The following section provides the significance assessment and Statement of Significance for each of the heritage items across the following areas:

- *Beverley Hills*
- *Kingsgrove*
- *Bexley North*
- *Clenton Park*
- *Bardwell Park*
- *Earlwood*
- *Arncliffe*
- *Wolli Creek*
- *Tempe*
- *Sydenham*
- *St Peters and Alexandria*

6.0 Survey results

6.1 Introduction

A survey was undertaken between 21 and 24 April 2015 and on 21 May 2015 (refer **Section 3.2**) to identify heritage items and to confirm their heritage significance. The following sections provide a description of the identified sites. The sites have been divided by suburb, arranged from west to east, and then heritage listing identification number.

At the time, the majority of the properties could not be accessed and assessments were undertaken from the property boundary or other publicly-accessible locations. Interior features or condition of the interior, if relevant to the listing, were based on the details provided within the specific database listing.

The following descriptions of heritage items are the result of a combination of research and the visual inspections for all properties identified as listed heritage items located within the bounds of, or in proximity to, areas of project works. Statements of significance included here are quoted verbatim (where available), having been sourced from the published listings for these properties. Where necessary, and based upon the site inspection and historical research, the significance assessments have been revised to ensure the significance is accurate. Quoted items are referenced accordingly.

6.2 Beverley Hills

6.2.1 Pallamanna Parade Urban Conservation Area

The Pallamanna Parade Urban Conservation Area was identified as an indicative item on the non-statutory Register of the National Estate (#102089). The Conservation Area appears to have been built up in the 1930s and in the immediate post-World War Two period. It consists of shrub lined streets with well-landscaped gardens. At the time of the nomination to the RNE there were only a small number of unsympathetic intrusions onto the area, an inspection on the 21 May 2015 determined that there are now numerous and an increasing number of modern infill developments that are not sympathetic to the former aesthetic.

The non-statutory Register of the National Estate listing has no assessment against individual criteria, but provides the following Statement of significance:

Pallamana Parade Urban Conservation Area is important because:

- 1) *The precinct possesses streetscape integrity because it was developed during one period.*
- 2) *The area has a uniformity of housing style including colour, form and architectural detail that gives the area an harmonious appearance.*
- 3) *The predominance of 1930s bungalows is a rare example of a homogeneous 1930s subdivision.*
- 4) *It reflects the availability of finance enabling the middle class to borrow money and finance the purchase of a house and epitomises the great diversion of funds in Australia from private investment in industry and infrastructure to non-productive investment in private housing. By virtue of the importance of home ownership in Australia, the area embodies the success in successive Australian governments political control and subjection of the electorate.*

(Australian Heritage Council, n.d.-d)



Plate 1 Example of a larger house on Pallamana Parade



Plate 2 Example of a modest c.1960s house on Pallamana Parade



Plate 3 Example of unsympathetic modern infill, Pallamana Parade

6.3 Kingsgrove

6.3.1 Kingsgrove East Urban Conservation Area

The Kingsgrove East Urban Conservation Area was identified as an indicative place of the non-statutory Register of the National Estate (#102091). As with the Pallamanna Parade Urban Conservation Areas discussed above, it is identified as an area of 1930s Californian bungalows, with some 1940s and 1950s houses. The statement of significance reads thus:

Kingsgrove East Urban Conservation Area is important because:

- 1) *The precinct possesses streetscape integrity because it was developed during one period.*
- 2) *The area has a uniformity of housing style including colour, form and architectural detail that gives the area an harmonious appearance.*
- 3) *The predominance of 1930s bungalows is a rare example of a homogeneous 1930s subdivision.*
- 4) *It reflects the availability of finance enabling the middle class to borrow money and finance the purchase of a house and epitomises the great diversion of funds in Australia from private investment in industry and infrastructure to non-productive investment in private housing. By virtue of the importance of home ownership in Australia, the area embodies the success in successive Australian governments political control and subjection of the electorate.*

(Australian Heritage Council, n.d.-c)

6.4 Bexley North

6.4.1 Bexley North Railway Station

The Bexley North Railway Station is located on the T2 Airport rail line, adjacent to the Bexley Road overbridge. It is listed on Sydney Trains Section 170 Heritage and Conservation Register (S170 Register) (#48101898) as an item of local significance.

The Bexley North Railway Station services four tracks and consists of one island platform, a Railway Station Platform building, and stairs leading to the Bexley Road overbridge. The platform is concrete faced with concrete deck and finished with an asphalt surface. The platforms have been modified to include timber bench seating, lighting, signage and aluminium palisades (**Plate 4**). The platform is around 160 metres in length. A modern shallow pitched asymmetrical roofed weather shelter was erected on the Platform in 2010 to the east and west of the existing Railway Station building. The Platform Railway Station Building is located centrally along the platform. The building is a rectangular liver red face brick building of English bond¹ brickwork (**Plate 5**), divided into five bays, with bays defined by engaged piers. The building has a brick stepped parapet at both the east and west ends, The roof is gabled at east and west ends against the parapets, and is hipped over awnings to north, south and east elevations, which are an integral part of the roof form. Roof cladding is corrugated steel. The east awning wraps around the eastern stepped parapet. The stepped parapets each feature a projecting moulded brick capping course and three vertical lines of projecting decorative brickwork. There are pairs of timber louvered vents to each gabled parapet. There are modern fibre cement sheet ceilings to the awnings. The assessed significance is provided in **Table 5**.

¹ English bond features alternating rows of header and stretcher bricks.



Plate 4 Overview of Bexley North Railway Station. View north west



Plate 5 Detail of windows at Bexley North Railway Station showing brickwork detailing

Table 5 Significance assessment for Bexley North Railway Station (NSW Heritage Division, 2009b)

Significance Assessment	
Criterion a (historical)	Bexley North Railway Station is of historical significance as part of the East Hills line, a major Depression period public work undertaken under the controversial Premiership of Jack Lang and through its relationship to the development of the suburb of Bexley North and the broader East Hills region. The austere design of the platform building is reflective of the completion of the East Hills line as a Depression period unemployment relief works project.
Criterion b (associative)	No assessment provided.
Criterion c (aesthetic)	Bexley North Railway Station is of aesthetic significance as an example of a small Inter-War period suburban railway building matching other East Hills line Railway Station buildings in design and style. The building is very austere in style, with Inter War Art Deco style touches (for example brick detailing to parapets) and is competently executed, exhibiting fine workmanship in its brickwork. The building is noted for its use of monochromatic brickwork, stepped parapets, irregular fenestration and engaged piers. Bexley North platform building is also of significance for its seamless 1947 addition in the same style as the original section of the building, involving recreation of a new parapet to match the original at the eastern end of the building.
Criterion d (social)	The place has the potential to contribute to the local community's sense of place, and can provide a connection to the local community's past.
Criterion e (technical/research)	Bexley North Railway Station is of research significance for its ability to demonstrate design and construction techniques of the Inter-War period. The building provides insights into NSW Railways experimentation with styles of architecture and adaptation to depression period economic conditions.
Criterion f (rare)	The Bexley North Railway Station is not rare, as it is part of a cohesive group of 10 similar to identical Inter-War suburban railway Stations completed in 1931 between Turrella and East Hills.
Criterion g (representative)	Bexley North Railway Station is a good representative example of the cohesive collection of East Hills line railway Stations built from Turrella to East Hills, with the platform and platform building generally intact (except for sympathetic extension to the platform building in 1948), and demonstrates the effects of the economic Depression of 1929-1930s on railway Station construction.

Statement of Significance

Bexley North Railway Railway Station - including the 1931 platform and platform building - is of local heritage significance. Bexley North Railway Railway Station is of historical significance as a major public work completed as an unemployment relief project during the Great Depression, and as a major transport hub for the suburb of Bexley North since 1931. Bexley North Railway Railway Station platform building is of aesthetic/technical significance as an austere 1930s railway building with simple Art Deco detailing and fine brick workmanship that is evocative of the effects of the Depression on building programs for NSW Railways. Bexley North Railway Railway Station is representative of the cohesive collection of 10 East Hills line railway Railway Stations from Turrella to East Hills.

6.4.2 Stotts Reserve – 167 Slade Road

Stotts Reserve has a street address at 167 Slade Road Bexley North. The Reserve is listed on the Rockdale LEP 2011 as an item of local significance as item number I165. The reserve consists of a vegetated gully and covering 2.86 hectares. It constitutes one of the largest undisturbed patches of Sandstone Open Forest and Eastern Sandstone Gully forest (**Plate 6**). Play equipment has been erected on Churchill Street (**Plate 7**). Edges of reserve are mown grass. A surface scatter of glass, slag, earthenware and refined earthenware, slate roof tiles & brick was identified on the Barnsbury Grove frontage near Stotts Reserve sign (**Plate 9**). The reserve also contains pecked sandstone blocks that have been used to form stormwater outlets (**Plate 8**). The assessed significance can be found in **Table 6**.



Plate 6 Vegetation within Stotts Reserve



Plate 7 Churchill Street playground within Stotts Reserve



Plate 8 Sandstone and concrete drain



Plate 9 Artefact scatter within Stotts Reserve

Table 6 Significance assessment of Stotts Reserve (NSW Heritage Division, 2010k)

Significance Assessment	
Criterion a (historical)	Despite the extensive urbanisation of Rockdale local government area, a number of significant remnants have survived, retaining valuable examples of a variety of the vegetation communities once present. These bushland remnants provide snapshots of the original vegetation present within Rockdale LGA prior to European settlement.
Criterion b (associative)	Does not meet this criterion.
Criterion c (aesthetic)	The sandstone vegetation and forested area of Stotts Reserve provides a large relatively undisturbed area of bush which provides a contrast to the highly urbanised environment of the surrounding Rockdale LGA.
Criterion d (social)	Does not meet this criterion.
Criterion e (technical/research)	The vegetation within Stotts Reserve is one of the largest relatively undisturbed patches of sandstone vegetation within Rockdale LGA containing two distinct assemblages of species, Sandstone Open Forest and Eastern Sandstone Gully Forest.
Criterion f (rare)	Does not meet this criterion.
Criterion g (representative)	The vegetation communities are representative of sandstone vegetation community prior to European settlement.
Statement of Significance	
<p><i>The sandstone vegetation and forested area of Stotts Reserve provides a large relatively undisturbed area of bush which is representative of a pre-Colonial settlement landscape and provides a contrast to the highly urbanised environment of the surrounding Rockdale LGA. The two distinct assemblages of species, Sandstone Open Forest and Eastern Sandstone Gully Forest are also significant for their scientific value.</i></p>	

6.5 Clemton Park

6.5.1 Clemton Park Urban Conservation Area

The Clemton Park Urban Conservation Area was identified as an indicative place of the non-statutory Register of the National Estate (#102071). As with the Pallamanna Parade Urban Conservation Areas discussed above, it is identified as an area of 1930s Californian bungalows, with some 1940s and 1950s houses. The statement of significance is as follows:

Clemton Park Urban Conservation Area is important because:

- 1) *The precinct possesses streetscape integrity because it was developed during one period.*
- 2) *The area has a uniformity of housing style including colour, form and architectural detail that gives the area an harmonious appearance.*
- 3) *The predominance of 1930s bungalows is a rare example of a homogeneous 1930s subdivision.*
- 4) *It reflects the availability of finance enabling the middle class to borrow money and finance the purchase of a house and epitomises the great diversion of funds in Australia from private investment in industry and infrastructure to non-productive investment in private housing. By virtue of the importance of home ownership in Australia, the area embodies the success in successive Australian governments political control and subjection of the electorate.*

(Australian Heritage Council, n.d.-b)

6.6 Bardwell Park

6.6.1 Bardwell Park Urban Conservation Area

The Bardwell Park Urban Conservation Area was identified as an indicative place of the non-statutory Register of the National Estate (#102101). As with the Pallamanna Parade, Kingsgrove West and Clemton Urban Conservation Areas discussed above, it is identified as an area of 1930s Californian bungalows, with some 1940s and 1950s houses. The statement of significance reads thus:

Bardwell Park Urban Conservation Area is important because:

- 1) *The precinct possesses streetscape integrity because it was developed during one period.*
- 2) *The area has a uniformity of housing style including colour, form and architectural detail that gives the area an harmonious appearance.*
- 3) *The predominance of 1930s bungalows is a rare example of a homogeneous 1930s subdivision.*
- 4) *It reflects the availability of finance enabling the middle class to borrow money and finance the purchase of a house and epitomises the great diversion of funds in Australia from private investment in industry and infrastructure to non-productive investment in private housing. By virtue of the importance of home ownership in Australia, the area embodies the success in successive Australian governments political control and subjection of the electorate.*

(Australian Heritage Council, n.d.-a)

6.6.2 Stone Federation House

Number 15 East Street is listed on the Rockdale LEP 2011 as an item of local significance under the item name Stone Federation House (I81). It is the middle of three identical houses and was probably the only one to be selected as it has undergone, at least externally, the least unsympathetic alterations. The house has a double fronted form with a verandah supported on turned wooden posts. It is clad in ashlar-laid sandstone, with a tiled roof and sandstone lintel and window sills (**Plate 10**). The assessed significance is provided in **Table 7**.



Plate 10 15 East Street, Bardwell Valley

Table 7 Assessment of Significance of Stone Federation House (NSW Heritage Division, 2010)

Significance Assessment	
Criterion a (historical)	This stone dwelling is historically significant as part of the c. 1910 Mayland Estate subdivision. It was built in 1922 as part of a group of stone cottages which was built by the same stonemason/builder; he added a new cottage to the group every year or so as he was able.
Criterion b (associative)	Does not meet this criteria.
Criterion c (aesthetic)	The house is aesthetically significant as part of a group of six Federation sandstone cottages.
Criterion d (social)	Does not meet this criteria.
Criterion e (technical/research)	The building is significant because it has the potential to yield information about early building materials and techniques.
Criterion f (rare)	This dwelling is part of a rare grouping of six late Federation rusticated sandstone dwellings built by the same stonemason/builder in Rockdale.
Criterion g (representative)	The building is a good example of a late Federation sandstone house.
Statement of Significance	
<p><i>The house at 15 East Street, Bardwell Valley is significant as part of a unique group of six late Federation rusticated sandstone cottages built by the same builder/stonemason on a prominent location overlooking Bardwell Park. It is representative of the historic development of the 1910 Maylands Estate subdivision.</i></p>	

6.7 Earlwood

6.7.1 Wollie Creek culvert – Bexley Road

Wollie Creek culvert is located under Bexley Road in Earlwood adjacent to the Bexley North railway station. It is listed on the Roads and Maritime's Section 170 Heritage and Conservation Register (#4305006) as an item of local significance. The culvert has three arched cells. The curvature of the arch is slightly non-uniform and appears to have been formed using plywood or similar bent over the supporting false work (**Plate 11**). Both sides of the culvert have footways protected by corrugated guard railing. The upstream face has had a footway of cantilever steel beams with concrete cast on profiles added. A footway of similar age is on the downstream side which appears to have been created by using concrete to raise the level of an older footway.

The waterway has been channelled upstream of the bridge with concrete walls that incline and warp to match the vertical abutment walls of the bridge. Downstream blockage of the waterway has been caused by build-up of debris some areas have been stabilised by rock filled gabions on the northern side (**Plate 12**). The assessed significance is provided in **Table 8**.



Plate 11 Culvert and footway from southern bank



Plate 12 Downstream side of culvert from northern bank

Table 8 Assessment of Significance of Wollie Creek culvert (NSW Heritage Division, 2005b)

Significance Assessment	
Criterion a (historical)	The Wollie Creek culvert has local historic significance. It was constructed as a key component in the Bexley Road upgrade program of the 1930s which recognised the importance of that route for traffic movements in and around the fast growing Canterbury area. The culvert's accommodation of a wide carriageway, which has not required widening thus far, and its crossing of the creek on a substantial skew, which enables the roadway to achieve a straight and smooth alignment, physically demonstrate the motor-age standards of the Main Roads Board / Department of Main Roads' upgrade program. The culvert has provided satisfactory service for seventy years.
Criterion b (associative)	No assessment provided.
Criterion c (aesthetic)	The Wollie Creek culvert has some aesthetic significance. It is a modest structure, but visually pleasing due to the arched forms of the cells. The design, similar to that of the Cup and Saucer Creek culvert, seems to reflect a pride in workmanship and civic pride in providing transport infrastructure on this important local route. The culvert also forms a landmark in the Wollie Creek valley. Upstream of the culvert the creek consists of a sterile looking deep-walled and fenced concrete channel. The creek emerges from the culvert to flow along a largely natural streambed surrounded by thick vegetation.

Significance Assessment	
Criterion d (social)	No assessment provided
Criterion e (technical/research)	No assessment provided
Criterion f (rare)	No overview study of concrete culverts has been undertaken. It is therefore not possible to establish whether this structure may have any rarity value.
Criterion g (representative)	No overview study of concrete culverts has been undertaken. It is therefore not possible to establish whether this structure may have the capacity to represent the important characteristics of a class of structures.
Statement of Significance	
<p><i>The Wollie Creek culvert has local historic and aesthetic significance. It is articulate about the history and aesthetics of road infrastructure in the Canterbury area in the 1930s and about the impacts of Departmental management on the landscape and provision of services in the Canterbury area at the inception of the motor-age. The Wollie Creek culvert was constructed as a key component of the upgrade works undertaken on Bexley Road to bring it up to standard as a newly classified Main Road to serve the fast growing Canterbury municipality. The culvert's accommodation of a wide carriageway and its crossing of the creek on a skew, which enables the roadway to achieve a smooth alignment, physically demonstrate those motor-age standards. The structure has provided satisfactory service for seventy years. The arched form of the culvert cells is visually pleasing and indicates an attention to aesthetics on the part of the contractors even in the design of modest, utilitarian structures. The culvert also holds a pivotal position on Wollie Creek, forming a gateway between the sterile concrete channel upstream and the largely natural streambed downstream, a contrast instructive about human action on this local landscape.</i></p>	

6.8 Arncliffe

6.8.1 Arncliffe Railway Station Group

The Arncliffe Railway Station is located on the T4 Eastern Suburbs and Illawarra line. It is listed on the State Heritage Register (#01076), Sydney Trains Section 170 Heritage and Conservation Register (#4801150) and the Rockdale Local Environment Plan (I1) as an item of state significance.

The Arncliffe Railway Station Group curtilage for the State Heritage Register listing is outside the study area. However, the curtilage for the same item under the Rockdale LEP 2011 is more expansive and extends into the study area. For the purposes of this assessment, the item has been carried forward.

The station services four tracks and consists of two island platforms, two station platform buildings, a footbridge for access to platforms with a large kiosk enclosed in the footbridge. The station is accessed via a footbridge and stairs, entered from Firth Street on the western side and via a footpath across a public park from Butterworth Lane on the eastern side. The footbridge is a Dorman Long & Co steel footbridge with stairs with concrete flooring and steps and includes a metal screen on the northern side. The two platforms are asphalt surfaces with some areas of modern brick paving on platforms 1 and 2 (**Plate 13**). The platforms are around 160 metres in length each and have been modified to include seating, lighting and signage. The main section of building located on platforms 1 and 2 has a hipped roof with transverse gables clad in corrugated steel roofing with timber louvered vents to the roof. The other platform building is primarily gabled corrugated steel roofing. Both platform buildings are painted red brick with stucco sills and heads and located on the northern ends of the platforms (**Plate 14**).

The overhead booking office on the footbridge was formerly a weatherboard building but has since been reclad with panels of fibre-cement sheeting. The building has a hipped and gabled corrugated steel roof and original timber framed double hung windows with nine paned top sashes with glazing. The significance assessment is provided in **Table 9**.



Plate 13 Arnccliffe Railway Station from Firth Street pedestrian path



Plate 14 Arnccliffe Railway Station from footbridge

Table 9 Significance Assessment of Arnccliffe Railway Station (NSW Heritage Division, 2010b)

Significance Assessment	
Criterion a (historical)	Arnccliffe Railway Station is of State historical significance as an important station on the Illawarra Line, demonstrating its development from 1884 to 1925, during important phases of railway construction and development. The development of the station has included the adaptation of two wayside buildings for island use.
Criterion c (aesthetic)	The platform buildings are of aesthetic significance, the building on Platforms 1 and 2 being an elaborate Victorian Italianate style building with decorative cast iron columns and brackets to awnings, and elaborate detail, the building on Platforms 3 and 4 being an altered 1884 wayside platform building altered to an island platform building in 1923, with major alterations including new platform awnings, and alterations to windows, doors and joinery.
Criterion f (rare)	Arnccliffe Railway Station is considered rare for its remarkably externally intact second class building on Platforms 1 and 2 dating from 1884, as only three stations on the Illawarra line retain platform buildings of this type and period (other examples at Sydenham and Tempe).
Criterion g (representative)	The Arnccliffe Railway Station 1919 steel footbridge and stairs, and the 1923 overhead booking office are considered to be good representative examples of their types.
Statement of Significance	
<p><i>Arnccliffe Railway Station is of State historical significance as an important station on the Illawarra Line demonstrating its development from 1884 to 1925, including the adaptation of two wayside buildings for island use. The Arnccliffe Railway Station is of historical significance as one of three remaining stations with 1880s 'second class' brick platform buildings on the Illawarra line, and is one of the best examples of suburban station architecture from the first period of construction on the Illawarra line. The platform buildings are of aesthetic significance, the Platform 1/2 building being an elaborate Victorian Italianate style building with decorative cast iron columns and brackets to awnings, and elaborate detail, the Platform 3/4 building being an 1884 wayside platform building altered in 1923 to an island platform building. The Arnccliffe Railway Station 1919 steel footbridge and stairs, the 1923 overhead booking office, and the concrete and brick road overbridge are considered to be good representative examples of their types.</i></p>	

6.8.2 House – 31 Kyle Street

This site is a single storey Victorian house with hipped roof and a verandah across the front elevation. The walls of 31 Kyle Street are rendered masonry with ashlar courses marked in the render. The façade is symmetrical with a central door and a pair of windows on either side (**Plate 15**). Separating each half of the pair of windows is a small tiled plate with wooden frame (**Plate 16**). There is drive way along the eastern side of the block. The roof is replaced concrete tiles on the main structure and verandah. The rear of the house has been altered over time. There is a spear headed steel palisade fence across the front boundary of the site. The site is listed on the Rockdale LEP 2011 as being of local heritage significance (I35). The assessed significance is provided in **Table 10**.



Plate 15 31 Kyle Street facade



Plate 16 31 Kyle Street detail

Table 10 Significance assessment of 31 Kyle Street Arncliffe (NSW Heritage Division, 2010d)

Significance Assessment	
Criterion a (historical)	The house at 31 Kyle Street and originally known as "Hazeldene", is historically significant as one of the first houses to be built on the Innesdale Estate.
Criterion b (associative)	The house has association with George W Beehag who was the son of James Beehag, market gardener and mayor of Rockdale 1872-1874.
Criterion c (aesthetic)	The dwelling is aesthetically significant as a highly intact Victorian house.
Criterion d (social)	No assessment provided.
Criterion e (technical/research)	No assessment provided.
Criterion f (rare)	No assessment provided.
Criterion g (representative)	The building is a good representative example of a single storey Victorian house in Rockdale.
Statement of Significance	
<i>The house at 31 Kyle Street and originally known as "Hazeldene", is historically significant as one of the first houses to be built on the Innesdale Estate. The house has association with George W Beehag who was the son of James Beehag, market gardener and mayor of Rockdale 1872-1874. The building is a good representative example of a single storey Victorian house in Rockdale.</i>	

6.8.3 Victorian Shop and Dwelling – 45 Firth Street

This site is a two storey shop and residence that is part of a group of nine shops extending from Glenevie Lane to around the corner to 30 Forest Road (**Plate 17**). The building has a distinctive parapet, screening a skillion roof behind, the parapet is dated 1909 (**Plate 18**). The site is in the middle of a group of three Federation shops known as Bayview. None of the original shop fronts or timber windows remains. The site is listed on the Rockdale LEP 2011 as being of local heritage significance (I21). The assessed significance is provided in **Table 11**.



Plate 17 45 Firth Street shop fronts



Plate 18 Detail of 45 Firth Street

Table 11 Significance Assessment of 45 Firth Street, Arncliffe (NSW Heritage Division, 2010n)

Significance Assessment	
Criterion a (historical)	The shop and dwelling are significant historically as evidence of the economic growth of the district at the beginning of the 19th century. The building is physical evidence of the half a century of use as a grocery shop servicing the growing population in the district which accompanied the improved railway access.
Criterion b (associative)	No assessment provided.
Criterion c (aesthetic)	The shop is aesthetically significant as part of a group of nine defining the corner of Forest Road and Firth Street in the Arncliffe shopping centre.
Criterion d (social)	No assessment provided.
Criterion e (technical/research)	No assessment provided.
Criterion f (rare)	No assessment provided.
Criterion g (representative)	The building with the shop and dwelling above is representative of strip commercial development in Rockdale in the early 20th century.
Statement of Significance	
<p><i>The shop and dwelling are significant historically as evidence of the economic growth of the district at the beginning of the 19th century. The building is physical evidence of the half a century of use as a grocery shop servicing the growing population in the district which accompanied the improved railway access. The building is aesthetically significant as part of a group of nine defining the corner of Forest Road and Firth Street in the Arncliffe shopping centre. The building with the shop and dwelling above is representative of strip commercial development in Rockdale in the early 20th century.</i></p>	

6.8.4 Californian Bungalow – 7 Fairview Street

The residence, 7 Fairview Street, is listed on the Rockdale LEP 2011 as an item of local heritage significance (I15). The house is a Californian bungalow with a gable roof and three bay windows with timber frames across the façade. The property has a low dark brick fence with pillars across the street boundary and a concrete drive way along the side of the dwelling (Plate 19). The State Heritage Inventory does not contain a significance assessment for the item. Therefore an assessment has been undertaken for the purposes of this report, based on a visual inspection from public space, and is provided in Table 12.



Plate 19 7 Fairview Street

Table 12 Significance Assessment of 7 Fairview Street, Arncliffe

Significance Assessment	
Criterion a (historical)	Number 7 Fairview Street is of local historical significance. It demonstrates the expansion of the suburb of Arncliffe during the 1920s and 1930s.
Criterion b (associative)	Number 7 Fairview Street has not been associated with a person or group of persons of significance in the history of the local area or the State. It is not considered to hold significance under this criterion.
Criterion c (aesthetic)	Number 7 Fairview Street is of local aesthetic significance as a modest, but well-proportioned and executed example of a Californian Bungalow in Arncliffe.
Criterion d (social)	Number 7 Fairview Street is not considered to hold social significance at either a State or local level.
Criterion e (technical/research)	Number 7 Fairview Street is unlikely to yield information not available from other sources. It is not considered to be of technical or research significance at a State or local level.
Criterion f (rare)	Number 7 Fairview Street is not considered to be rare at either a State or local level.
Criterion g (representative)	Number 7 Fairview Street is of local representative significance. It represents a modest Californian Bungalow in the Rockdale area.
Statement of Significance	
Number 7 Fairview Street is of local historical, aesthetic and representative significance. It demonstrates the expansion of the suburb of Arncliffe during the 1920s and 1930s. The house's aesthetic significance arises it is a modest, but well-proportioned and well-executed example of a Californian Bungalow in Arncliffe.	

6.8.5 Californian Bungalow – 21 Fairview Street

Number 21 Fairview Street is identified on the Rockdale LEP 2011 as an item of local significance (I16). It is a double fronted house constructed of liver brick with a gabled roof. The significance assessment is provided in **Table 13**.



Plate 20 21 Fairview Street

Table 13 Significance Assessment of 21 Fairview Street, Arncliffe

Significance Assessment	
Criterion a (historical)	This Californian Bungalow house is historically significant as part of the original Gibbini Dappeto Estate subdivision in 1918 and as part of the development of commuter suburbs in the Rockdale area. The house is of value as part of one of the only remaining streets in Rockdale where a number of returned soldiers built their homes after World War 1. The house is aesthetically significant as a good representative example of a Californian style bungalow which forms part of a consistent streetscape of intact Inter-war bungalows.
Criterion b (associative)	Does not meet this criterion.
Criterion c (aesthetic)	The house is aesthetically significant as a Californian style bungalow which forms part of a consistent streetscape of intact Inter-war bungalows.
Criterion d (social)	Does not meet this criterion.
Criterion e (technical/research)	Does not meet this criterion.
Criterion f (rare)	The house forms part of a rare remaining group of houses in Rockdale, which were constructed by returning World War 1 soldiers.
Criterion g (representative)	The building forms is a good representative example of a Inter-war Californian style bungalow.
Statement of Significance	
This Californian Bungalow house is historically significant as part of the original Gibbini Dappeto Estate subdivision in 1918 and as part of the development of commuter suburbs in the Rockdale area. The house is of value as part of one of the only remaining streets in Rockdale where a number of returned soldiers built their homes after World War 1. The house is aesthetically significant as a good representative example of a Californian style bungalow which forms part of a consistent streetscape of intact Inter-war bungalows.	

6.8.6 Arncliffe (Forest Rd) Overbridge

The Arncliffe Overbridge carries Forest Road over the T4 Eastern suburbs rail line, around 400 metres south of the Arncliffe Railway Station. The overbridge is listed on the Sydney Trains Section 170 Heritage and Conservation Register of local heritage significance (#4805728). It is also incorporated into the Rockdale LEP 2011 listing (I1) as discussed in **Section 6.8.1**.

The bridge is a single 17.3 metre span shallow brick arch railway bridge for the double track below (refer to **Plate 21**). The bridge is supported on bridge abutments with brick parapet walls. At the point of the bridge Forest Road has four lanes of traffic and a wide pedestrian path on each side. The bridge also has a left turn only lane from Firth Street. The significance assessment is provided in **Table 14**.



Plate 21 View of Forest Road Overbridge from Wardell Street looking north

Table 14 Significance Assessment of Arncliffe (Forest Rd) Overbridge (NSW Heritage Division, 2009a)

Significance Assessment	
Criterion a (historical)	The Forest Road Overbridge has historical significance as part of the quadruplication of the Illawarra Line. The brick construction is consistent with the Government directive of the time to use local materials in preference to imported iron bridges.
Criterion b (associative)	No assessment provided.
Criterion c (aesthetic)	The Forest Road Overbridge has aesthetic significance large arch coupled with the size of the cutting in which the bridge is located creates a highly visual landmark for rail and road users. The bridge has technical significance as the largest single span brick arch road bridge in the NSW rail network.
Criterion d (social)	No assessment provided.
Criterion e (technical/research)	The Forest Road Overbridge has research significance as a fine example of historic bridge construction technique.
Criterion f (rare)	No assessment provided.
Criterion g (representative)	The Forest Road Overbridge is a good representative example of brick arch construction in the style of semi-circular elevation.
Statement of Significance	
<i>The Forest Road Overbridge is of local significance as the largest single span brick arch road bridge on the NSW rail network (at 17.3m clear between abutments). The bridge is highly visible from the surrounding area due to the deep multi-track rail cutting leading to the wide brick overbridge and is an impressive landmark.</i>	

6.8.7 Arncliffe Post Office

Arncliffe Post office is identified as an Indicative Place on the non-statutory Register of the National Estate (#19170) (a non-statutory register) and the Rockdale LEP 2011 as an item of local heritage significance (I19). The site consists of a two storey primarily light brown brick post office and residence. The building has sandstone detailing across the façade with a hipped tiled roof with wide eaves and exposed rafters (**Plate 22**). The postal chamber forms a central projecting wing, built to the eastern boundary of the site. Multi-paned windows with coloured glass remain on the upper level verandah. The significance assessment is provided in **Table 15**.



Plate 22 Arncliffe Post Office

Table 15 Significance Assessment for Arncliffe Post Office (NSW Heritage Division, 2010a)

Significance Assessment	
Criterion a (historical)	The building is historically significant associated with postal services in Arncliffe since the end of the nineteenth century. The building provides physical evidence of the development history of Arncliffe and the City of Rockdale in general.
Criterion b (associative)	No assessment provided
Criterion c (aesthetic)	Building is aesthetically significant contributing to the character of Arncliffe shopping centre.
Criterion d (social)	No assessment provided
Criterion e (technical/research)	No assessment provided
Criterion f (rare)	Post office is a rare example of a Federation Post Office in Rockdale. Other offices in Rockdale and Bexley now demolished
Criterion g (representative)	Post Office is representative of Sydney suburban post offices built at the beginning of the twentieth century
Statement of Significance	
<p><i>The Arncliffe post office and residence building is a substantially intact example of late nineteenth century post office architecture from the office of W L Vernon, government architect. It is significant for its accomplished architectural design, fine detailing and as a reminder of the prosperous period in the area's early development.</i></p> <p><i>A rare Federation style Post Office in Rockdale contributing to the character of Arncliffe business centre and representative of postal services in the area. It provides evidence of the development history of Arncliffe and the municipality in general.</i></p>	

6.8.8 Bard of Avon

The Bard of Avon terrace house, located at 39 Eden Street, is identified on the Rockdale LEP 2011 (I13) as an item of local significance. This two storey terrace is oriented to the south, having a filigree verandah on this façade (**Plate 23**). The parapet has a moulded bust of William Shakespeare, giving rise to the name of the terrace. The significance assessment is provided in **Table 16**.



Plate 23 Bard of Avon

Table 16 Significance assessment of the Bard of Avon (NSW Heritage Division, 2000a)

Significance Assessment	
Criterion a (historical)	The house known as the "Bard of Avon" has historic significance as early evidence of the Wincanton Estate and the late 19th century development of Arncliffe.
Criterion b (associative)	Does not meet this criterion.
Criterion c (aesthetic)	The Bard of Avon retains the original aesthetic qualities of 19th century Eden Street formerly Rocky Point Road, and Arncliffe.
Criterion d (social)	Does not meet this criterion.
Criterion e (technical/research)	Does not meet this criterion.
Criterion f (rare)	Does not meet this criterion.
Criterion g (representative)	The building is a good representative example of a two storey late Victorian house in Rockdale.
Statement of Significance	
<p><i>The house known as the "Bard of Avon" has historic significance as early evidence of the Wincanton Estate and the late 19th century development of Arncliffe. The Bard of Avon retains the original aesthetic qualities of 19th century Eden Street formerly Rocky Point Road, and Arncliffe. The building is a good representative example of a two storey late Victorian house in Rockdale.</i></p>	

6.8.9 Street Plantings – Firth Street

Firth Street is a key transit way for the Arncliffe community with access to the Arncliffe Railway Station and a variety of retail outlets, grocery stores and cafes. A row of six large fig trees, together with other plantings, alongside the railway line are listing as being of locally significant on the Rockdale LEP 2011 (I18). The tree plantings are in reasonable condition (**Plate 24**). The significance assessment is provided in **Table 17**.



Plate 24 Tree plantings on Firth Street, Arncliffe

Table 17 Significance assessment of Firth Street, Arncliffe (NSW Heritage Division, 2010)

Significance Assessment	
Criterion a (historical)	The Fig trees in Firth Street are historically significant as early evidence of the beautification program of public streets in the early twentieth century
Criterion b (associative)	No assessment provided
Criterion c (aesthetic)	The Fig trees and Brushbox trees are aesthetically significant as contributing to the amenity of the Arncliffe shopping centre.
Criterion d (social)	No assessment provided
Criterion e (technical/research)	No assessment provided
Criterion f (rare)	The large fig trees are rare in the Rockdale area.
Criterion g (representative)	The planting is indicative of planting at the early part of the twentieth century.
Statement of Significance	
The Fig trees in Firth Street are historically significant as early evidence of the beautification program of public streets in the early twentieth century. The Fig trees and Brushbox trees are aesthetically significant as contributing to the amenity of the Arncliffe shopping centre. The large Fig trees are uncommon in the Rockdale area.	

6.8.10 Glenevie Lane

Glenevie Lane is a pedestrian lane between 45 and 43 Firth Street, Arncliffe. The lane links Firth Street with a number of suburban streets behind and contributes to the village character of Arncliffe. The Lane is bordered by many of the original plantings which were on the land occupied by the now demolished house 'Glenevie' (**Plate 25** and **Plate 26**). The site is listed on the Rockdale LEP 2011 as an item of local heritage significance (I20). The significance assessment is provided in **Table 18**.



Plate 25 Glenevie Lane looking north west towards Barden Lane



Plate 26 43 Firth Street ornamental fencing detail

Table 18 Significance assessment of Glenevie Lane, Arncliffe (NSW Heritage Division, 2010c)

Significance Assessment	
Criterion a (historical)	Glenevie Lane is historically significant as a lane connecting an urban network of streets with Firth Street and Arncliffe Railway Station.
Criterion b (associative)	The lane is historically associated with Thomas Firth, an engineer with the Department of Railroads when the Illawarra Railway line was built. Firth Street was named after him and Glenevie Lane was named after his home "Glenevie" adjacent to the lane
Criterion c (aesthetic)	The laneway is aesthetically significant as part of a network of lanes contributing to character of Arncliffe.
Criterion d (social)	No assessment provided
Criterion e (technical/research)	No assessment provided
Criterion f (rare)	No assessment provided
Criterion g (representative)	Glenevie Lane is an example of a pedestrian walkway in Rockdale.
Statement of Significance	
<i>Glenevie Lane is historically significant as a lane connecting an urban network of streets with Firth Street and Arncliffe Railway Station. The lane is historically associated with Thomas Firth, an engineer with the Department of Railroads when the Illawarra Railway line was built. Firth Street was named after him and Glenevie Lane was named after his home "Glenevie" adjacent to the lane.</i>	

6.8.11 House – 148 Wollongong Road

Number 148 Wollongong Road is a single storey Federation Arts and Crafts style stone and brick house. A projecting gable at the front and side add to the hipped slate roof. The gable ends are stone parapets with infill pieces of brick. The façade includes a verandah with a stone balustrade integrated with stone columns and small timber posts supporting the roof (**Plate 27**). The dwelling has three original chimneys and a bulls eye window in the side elevation (**Plate 28**). The Rockdale LEP 2011 lists the site as a site of local heritage significance (I61). The significance assessment is provided in **Table 19**.



Plate 27 148 Wollongong Rd façade



Plate 28 148 Wollongong Rd western side

Table 19 Significance assessment of 148 Wollongong Rd (NSW Heritage Division, 2010e)

Significance Assessment	
Criterion a (historical)	The house at 148 Wollongong Road, originally known as Rocky Glen, provides evidence of the historical development of Arncliffe and Wollongong Road in the early twentieth century.
Criterion b (associative)	No assessment provided
Criterion c (aesthetic)	The house is aesthetically significant as a very fine Federation free-style rusticated stone house that contributes to the historic character of Wollongong Road. The building is technically significant as an example of the use of locally produced stone adapted to architectural fashions of the time.
Criterion d (social)	No assessment provided
Criterion e (technical/research)	No assessment provided
Criterion f (rare)	The house is a rare example of a Federation free-style rusticated stone house in the Rockdale area.
Criterion g (representative)	No assessment provided
Statement of Significance	
<p><i>The house at 148 Wollongong Road, originally known as Rocky Glen, provides evidence of the historical development of Arncliffe and Wollongong Road in the early twentieth century. The house is aesthetically significant as a very fine Federation free-style rusticated stone house that contributes to the historic character of Wollongong Road. The building is technically significant as an example of the use of locally produced stone adapted to architectural fashions of the time.</i></p>	

6.8.12 House – 73 West Botany St

Number 73 West Botany Street is a single storey Victorian Italianate dwelling with a transverse gable roof and a gable roof projecting at the front to cover a small verandah. The roof of the verandah is corrugated metal painted in a wide vertical stripe pattern; the main structure roof is slate. The verandah retains its original cast iron posts, decorative lace valence and brackets along with the tessellated tiles on the verandah floor. The house also retains the original chimneys and detailing on windows. Below the front facing gable is an elaborate decorative faceted bay window with a parapet roof (**Plate 29**). The cornice moulding is supported on florets and within the frieze are panels of embedded pilasters. The parapet is topped with a small decorative pediment. This house is listed on the Rockdale LEP 2011 as being of local heritage significance (156). The significance assessment is provided in **Table 20**.



Plate 29 73 West Botany Street

Table 20 Significance assessment for 73 West Botany Street, Arncliffe (NSW Heritage Division, 2010f)

Significance Assessment	
Criterion a (historical)	The house once known as "The Grange" is historically significant as one of the remaining house of the Innesdale Estate Arncliffe which formed the village of West Botany.
Criterion b (associative)	The house is associated with W E Grainger postmaster of Arncliffe for 20 years and later alderman and mayor of Ashfield.
Criterion c (aesthetic)	The house is associated with W E Grainger postmaster of Arncliffe for 20 years and later alderman and mayor of Ashfield.
Criterion d (social)	No assessment provided
Criterion e (technical/research)	No assessment provided
Criterion f (rare)	No assessment provided
Criterion g (representative)	The dwelling is an excellent representative of Victorian dwellings in Rockdale.
Statement of Significance	
<p><i>This highly intact building at 73 West Botany Street has aesthetic value due to its integrity as a Victorian house. It's location in the context of other Victorian houses in Kyle Street add to its value both aesthetically and historically. The house is historically significant as one of the remaining houses which formed the village of West Botany.</i></p>	

6.8.13 Rosslyn Hospital – 30 Forest Road

Rosslyn Hospital is listed on the Rockdale LEP 2011 as an item of local heritage significance (I24). It is a two storey brick and stucco Victorian Italianate villa with minimal decorative detail. The building has a hipped slate roof with a central captains walk. The main entrance to the building is on the eastern side as the front is screened from the street by large evergreen trees (**Plate 30** and **Plate 30**). The structure retains its original windows, string courses and entrance portico but has been altered extensively in the 1920s for use as a hospital and then more recently for apartments. The significance assessment is provided in **Table 21**.



Plate 30 Rosslyn Hospital facade



Plate 31 Rosslyn Hospital Facade

Table 21 Significance Assessment for Rosslyn Hospital, Arncliffe (NSW Heritage Division, 2005a)

Significance Assessment	
Criterion a (historical)	The villa is historically significant as representative of the construction of villa in Rockdale in the 1880s.
Criterion b (associative)	No assessment provided
Criterion c (aesthetic)	Number 30 Forest Rd. has aesthetic significance linking with other Victorian style buildings in a precinct along Forest Rd. It is one of a number of prominent buildings along this important Rockdale street.
Criterion d (social)	No assessment provided
Criterion e (technical/research)	No assessment provided
Criterion g (representative)	No assessment provided
Criterion f (rare)	No assessment provided
Statement of Significance	
<i>A prominent Victorian style villa, part of a grouping of other Victorian buildings contributing to the historic character of Forest Road. Its later conversion to a hospital is significant contributing to the development of health services in Arncliffe.</i>	

6.8.14 St Francis Xavier Catholic Presbytery – 26 Forest Road

The St Francis Xavier Catholic Presbytery is located at 26 Forest Road Arncliffe and is listed on the Rockdale LEP 2011 as an item of local heritage significance (I23). The structure is a single storey Italianate brick villa with a basement. A verandah wraps around the front half of the house with structural support from red brick pillars. The verandah retains its original cast iron posts and brackets and the roof of the verandah is covered with new aluminium roof decking (Plate 32). The structure has a hipped slate roof with dormer windows. Adjacent to the dwelling is the T4 Sydney Trains rail line (Plate 33). The significance assessment is provided in Table 22.



Plate 32 St Francis Xavier Presbytery from Forest Road



Plate 33 St Francis Xavier Presbytery from Wardell St

Table 22 Significance Assessment of St Francis Xavier Catholic Presbytery (NSW Heritage Division, 2010h)

Significance Assessment	
Criterion a (historical)	St Francis Xavier Catholic Presbytery is historically significant as part of the early development of the northern end of Forest Road.
Criterion b (associative)	The building has historical association with William Robson and with the Roman Catholic Church.
Criterion c (aesthetic)	St Francis Xavier Catholic Presbytery is aesthetically significant as a late 19th century villa on the ridge of Forest Road providing evidence of the original 19th century character of Forest Road and Arncliffe.
Criterion d (social)	No assessment provided
Criterion e (technical/research)	No assessment provided
Criterion f (rare)	No assessment provided
Criterion g (representative)	St Francis Xavier Catholic Presbytery is a good representative example of a Victorian villa in Rockdale.
Statement of Significance	
<p><i>St Francis Xavier Catholic Presbytery is historically significant as part of the early development of the northern end of Forest Road. St Francis Xavier Catholic Presbytery is aesthetically significant as a late 19th century villa on the ridge of Forest Road providing evidence of the original 19th century character of Forest Road and Arncliffe. The building has historical association with William Robson and with the Roman Catholic Church. St Francis Xavier Catholic Presbytery is a good representative example of a Victorian villa in Rockdale.</i></p>	

6.8.15 St Francis Xavier Church Group – 4-6 Forest Road

St Francis Xavier Church group consists of the St Francis Xavier Roman Catholic Church and an associated presbytery next door. The group are listed on the Rockdale LEP 2011 as items of local heritage significance (I22).

The church is a 1930s Romanesque style church of dark red brick with a circular tower (**Plate 34**). The main feature of the façade is a large recessed arch with an inset rose window in the centre. The recessed double doors are at the top of a small stair case leading from the sandstone fence on the street boundary. The sand stone fence has short steel pickets and a stone arched entry. The roof of the church is a steeply pitched gable with a parapet gable to the front on Forest road. The opposite side of the building to the tower is a two storey faceted bay and a semi-circular bay at the back.

The presbytery is a two storey Victorian Italianate rendered brick house (**Plate 35**). A verandah and balcony run across half the front façade on both levels with Victorian lace balustrade and iron columns. There is a side wing with front facing gables and transverse hipped roofing. This has a two storey faceted bay with three arched windows at each level surmounted by label moulds. The site has an iron spear picket fence at the street boundary with a stone base.

Both the church and presbytery have Marseilles tile cladding on the roof. The significance assessment of the group is provided in **Table 23**.



Plate 34 St Francis Xavier Roman Catholic Church from Forest Road



Plate 35 St Francis Xavier Presbytery from Forest Road

Table 23 Significance Assessment St Francis Xavier Church Group (NSW Heritage Division, 2010i)

Significance Assessment	
Criterion a (historical)	St Francis Xavier Catholic Presbytery is historically significant as part of the early development of the northern end of Forest Road.
Criterion b (associative)	The building has historical association with William Robson and with the Roman Catholic Church.
Criterion c (aesthetic)	St Francis Xavier Catholic Presbytery is aesthetically significant as a late 19th century villa on the ridge of Forest Road providing evidence of the original 19th century character of Forest Road and Arncliffe.
Criterion d (social)	No assessment provided
Criterion e (technical/research)	No assessment provided
Criterion f (rare)	No assessment provided
Criterion g (representative)	St Francis Xavier Catholic Presbytery is a good representative example of a Victorian villa in Rockdale.
Statement of Significance	
<p><i>St Francis Xavier Church group has high level of aesthetically significance for its architectural excellence and for its landmark qualities. St Francis Xavier Church is an excellent example of ecclesiastical design from the inter-war period, demonstrating Romanesque characteristics. St Francis Xavier Church group are historically significant as part of the early 20th century development of Arncliffe and the inter-war period. The Church group of buildings is representative of the growth of Catholicism and reflects the overall historical development of Arncliffe.</i></p>	

6.8.16 Western Outfall Main Sewer (Rockdale to Homebush)

The Western Outfall Main Sewer is a sewerage aqueduct and in this portion consists of three 1.83 diameter brick barrel drains. These have been encased in concrete and masonry superstructure (**Plate 36** and **Plate 37**). The item is listed on the State Heritage Register (SHR #01647). It is also listed as the Southern and Western Suburbs Ocean Outfall Sewer on the Sydney Water Section 170 Heritage and Conservation Register (#4571742) as an item of State heritage significance. The curtilage as per the coordinate provided on the State Heritage Register does not reflect the location of the heritage item. This has been corrected on maps produced for this report.

The significance assessment is provided in **Table 24**.



Plate 36 SWSOOS looking south east from the shared path located between Kogarah Golf Course and M5 East Motorway, Arncliffe



Plate 37 SWSOOS looking north west from the shared path located between Kogarah Golf Course and M5 East Motorway, Arncliffe

Table 24 Significance assessment of Southern and Western suburbs ocean outfall sewer (NSW Heritage Division, 2010g)

Significance Assessment	
Criterion a (historical)	This section of the Western Outfall Main Sewer is of historical significance, being one of Sydney's earliest main sewers, built in the 1890s to end the discharge sewage into Sydney Harbour. It is also significant for its association with the former Botany Sewage Farm, which it served until 1916, when the farm was superseded by the SWSOOS No1.
Criterion b (associative)	No assessment provided against this criterion.
Criterion c (aesthetic)	Item does not have any notable outstanding aesthetic values.
Criterion d (social)	Item is listed on the National Trust (NSW) register and is thus recognised by an identifiable group, and as such has importance to the broader community.
Criterion e (technical/research)	The three barrels are an excellent example of the oviform brick construction method of the period, which have been in continuous operation for over 100 years and continues to give excellent service.
Criterion f (rare)	The brick barrels are a rare and unusual example of late 19th century sewer construction and are part of the highly significant SWSOOS sewer system which is the largest in the SWC system and likely NSW.
Criterion g (representative)	The brick barrels are a representative example of late 19th century sewage construction.
Statement of Significance	
<p><i>The Valda Avenue, Arncliffe to SWSOOS Merging Chamber section of the original Western Outfall Main Sewer is of historical and technical significance. Historically, it is an original section of one of Sydney's oldest main sewers, built in the 1890s to end the discharge of sewage into Sydney Harbour. Its flow originally terminated at the former Botany Sewage Farm (which was one of only two known large scale sewage farms built in Australia during the 19th century), with which it has close temporal and locational associations. Technically, the three brick barrels, which are encased in concrete, are an excellent example of the oviform brick construction method of the time, which have provided continuous service for over 100 years.</i></p>	

6.8.17 Victorian Houses and Semi-Detached Dwellings – 16, 20, 22 & 26 Stanley Street

This is collection of semi-detached dwellings at 16 (**Plate 38**), 20 (**Plate 39**), 22 (**Plate 40**) and 26 (**Plate 41**) Stanley Street, Arncliffe registered on the Rockdale LEP 2011 as items of local heritage significance (I48-I51). The dwellings are single storey semi-detached Victorian Filigree houses with original verandahs across the façade. The verandahs have Victorian detailing and filigree lace balustrade with label mould over the front windows. The underside of the verandah is enclosed rendered and painted masonry with brick arch opening and wooden door. The significance assessment is provided in **Table 25**.



Plate 38 16 Stanley Street, Arncliffe



Plate 39 20 Stanley Street, Arncliffe



Plate 40 22 Stanley Street, Arncliffe



Plate 41 26 Stanley Street, Arncliffe

Table 25 Significance assessment for Victorian semi-detached dwellings (NSW Heritage Division, 2010m)

Significance Assessment	
Criterion a (historical)	The houses provide evidence of the early development of the Bardens Estate of 1895.
Criterion b (associative)	No assessment provided
Criterion c (aesthetic)	The dwellings are aesthetically significant as part of a group of semi-detached dwellings in a prominent location on a ridge close to Forest Rd.
Criterion d (social)	No assessment provided
Criterion e (technical/research)	No assessment provided
Criterion f (rare)	The houses are one of a rare grouping of Victorian semi-detached houses in the Rockdale area.
Criterion g (representative)	The buildings are a good representative example of a Victorian semi-detached house.
Statement of Significance	
<i>The house at 20 Stanley Street, Arncliffe forms part of a rare group of eight semi-detached Victorian houses and sits in a prominent hillside location near the Forest Road ridgeline. The house provides evidence of the early development of the Bardens Estate of 1895. The building is a good representative example of a Victorian semi-detached house.</i>	

6.9 Wollli Creek

6.9.1 Wollli Creek Valley

Wollli Creek is a lower tributary of the Cooks River with a sub-catchment area of 15.5 square kilometres. The creek is around eight kilometres long from Beverley Hills to the Cooks River; much of which is in the form of a lined channel from Kingsgrove Road to Bexley Road. Beyond the Bexley road culvert the river takes a more natural state and forms a defined watercourse to Turrella where a concrete weir separates the estuarine parts and the freshwater areas. The creek is classified as a Class 1 Major Fish habitat as a result of much of the mid to lower reaches of the creek being bordered by the Wollli Creek Nature Reserve which protects riparian vegetation and several fish species. The site is identified on the Rockdale LEP 2011 as I237.

**Plate 42** Wollli Creek downstream of Culvert

Table 26 Assessment of Significance of Wollie Creek Valley (source: NSW Heritage Register)

Significance Assessment	
Criterion a (historical)	The Wollie Creek Valley is historically significant for its role in the decision to begin settlement in this area as it provided water and promised good soils for crops.
Criterion b (associative)	Wollie Creek Valley is associated with Reuben Hannam one of the earliest European settlers in the area and his son David Hannam who was responsible for early land subdivision in Arncliffe.
Criterion c (aesthetic)	The Wollie Creek Valley is integral to the protection of the riparian corridor of Wollie Creek and is today an essential green recreation corridor buffering the densely urban areas surrounding it.
Criterion d (social)	The Wollie Creek Valley has special association for a local group known as the Wollie Creek Preservation Society who have actively campaigned for the conservation of the Valley since 1983
Criterion e (technical/research)	Further research may reveal more about Aboriginal inhabitants of the area prior to and subsequent to Colonial settlement.
Criterion f (rare)	The Wollie Valley contains extensive bushland, much of it of high conservation value. It is associated with one of the few remaining creeks in inner Sydney with banks that have not been extensively engineered or channelled. In combination, they represent a heritage of natural values unique in a wide region from the fringes of the Parramatta River to those of the Georges River and from the coast to as far west as Prospect. (Wollie Creek preservation Society)
Criterion g (representative)	The Wollie Creek Valley is representative of pre-settlement riparian environments in the Rockdale area.
Statement of Significance	
<p><i>The Wollie Creek Valley is historically significant for its role in the decision to begin settlement in this area as it provided water and promised good soils for crops. Wollie Creek Valley is associated with Reuben Hannam one of the earliest European settlers in the area and his son David Hannam who was responsible for early land subdivision in Arncliffe. The Wollie Creek Valley is integral to the protection of the riparian corridor of Wollie Creek and is today an essential green recreation corridor buffering the densely urban areas surrounding it. The Valley is a rare example of native vegetation and landscape in the inner urban area of Sydney, containing several rare and significant faunal and floral species. The place has the potential to reveal more about Aboriginal inhabitants of the area prior to and subsequent to Colonial settlement.</i></p>	

6.10 Tempe

6.10.1 Moreton Bay Fig

A large Moreton Bay Fig (*Ficus macrophylla*) is located at 43 South Street Tempe (**Plate 43**). It is listed as an item of local significance on the Marrickville LEP 2011 (I303). It is thought to have been planted shortly after the subdivision of this section of the Tempe Estate. The assessed significance is provided in **Table 27**.



Plate 43 Moreton Bay Fig. View north

Table 27 Significance assessment for the Moreton Bay Fig (NSW Heritage Division, 2011b)

Significance Assessment	
Criterion a (historical)	Local
Criterion b (associative)	No assessment provided.
Criterion c (aesthetic)	No assessment provided.
Criterion d (social)	No assessment provided.
Criterion e (technical/research)	No assessment provided.
Criterion f (rare)	Local- The tree is a rare example of an established Moreton Bay Fig tree in the area with associated stone surround.
Criterion g (representative)	No assessment provided.
Statement of Significance	
<i>Planted late 19th century/ early 20th century, a prominent feature of the landscape and probably planted shortly after the subdivision of this part of Tempe.</i>	

6.10.2 Timber Slab Cottage

The Timber Slab Cottage at 44 Barden Street, Tempe, is listed on the SHR (SHR #01412) and the Marrickville LEP 2011 (I294). The State Heritage Register listing states “Based on an analysis of the building fabric and the existing land title information it is considered it was constructed c. 1840 and would have been a worker’s cottage on land owned by A.B. Sparke the man who built Tempe House in the 1830s” (NSW Heritage Division, 2000b). Sparke mortgaged the area to the Bank of Australia in the late 1840s, having surveyed the area for subdivision in 1842. In 1850 the Bank of Australia sold 156 allotments, including Block 2 of Lot 43 on which the cottage sits, to Edward Flood. Flood sold a portion of his land to Joseph Nobbs, including the Cottage in 1854, who in turn sold it to Fredrick Barden in 1861.

The cottage is constructed of split timbers arranged horizontally. The exterior seems to have been clad in weatherboard more recently. The recent corrugated iron roof also covers the deep verandah along the front façade (Plate 44). The assessed significance contained in the State Heritage Register listing is provided in Table 28.



Plate 44 Timber Slab Cottage, 44 Barden Street, Tempe.

Table 28 Significance assessment for Timber Slab Cottage, 44 Barden Street, Tempe (NSW Heritage Division, 2000b)

Significance Assessment	
Criterion a (historical)	Land Grants for the site go back to October 1799. The original grant of 470 acres was used for agricultural purposes farmed with assigned convicts. The land was also owned by Robert Campbell who built Tempe House across the river. He sold the land at about this time possibly to help pay for Tempe House. It is probably the oldest extant vernacular house in Tempe.
Criterion b (associative)	No assessment provided
Criterion c (aesthetic)	Small cottage form evident from street. The original southern exterior wall is now part of the living room which is now internal. This wall is 6m slab wall and 2.7m. The adjacent 19th century brick wall is also visible. The cottage is a rare example of a rudimentary timber slab cottage. Although the exterior is now encapsulated within modern aluminium weatherboard cladding it is visible on the inside wall of the living room.
Criterion d (social)	It is significant because it shows an example of a small domestic house from early Sydney. It was constructed c.1840 and would have been a worker's cottage on land owned by A.B. Sparke, the man who built Tempe House in the 1830s. The house shows how older buildings are set on sites at a skew angle and do not always align with new sub-divisions. This provides evidence of an earlier occupation before sub division. It is one of the oldest house in the area and provides evidence of early land use. Grooves in the rear wall show evidence of early steam driven machines. This may have been associated with the agricultural development or be part of some small industry manufacturing process.
Criterion e (technical/research)	Provides evidence of the technology of slab cottages in the middle of the 19th century. The house is raised of the ground and uses nails to fix the slabs which have been roughly thinned out to receive the 'Ewbank' nails. The construction shows a reasonable understanding of carpentry techniques and uses mortise and tenon joints. Accommodation seems above normal for convict/ lessee/ or shepherd. More likely built for a supervisor or farm caretaker for owners.
Criterion f (rare)	This type of vertical timber slab construction is rare, particularly in the Sydney region. It is similar to Dundullimal Homestead, Dubbo. Normally slab buildings are built on the ground, this cottage is unusual in that it has a well ventilated floor space underneath it.

Significance Assessment	
Criterion g (representative)	No other building of this type in the area.
Statement of Significance	
<p><i>The timber slab cottage at 44 Barden Street Tempe dates from the mid-19th century. It is a rare surviving example of the type of vernacular rudimentary timber building built in early Sydney. The house is one of the oldest houses in Tempe and is on land which was part of an original land grant dating back to 1799. It was constructed c. 1840, and would have been a worker's cottage on land owned by A.B. Sparke, the man who built Tempe House in the mid-1830s.</i></p> <p><i>The walls are made up of vertical timber slabs which have been split. The hardwood slabs have been crudely thinned at each end and are fixed with original 'Ewbank' nails (produced from 1838-70). The walls have been painted with multiple layers of limewash. The gaps between the timber slabs have been caulked with a lime putty made from slaked rock lime. The interior walls are timber lath and plaster. The floors are hardwood pit-sawn timber, with saw markings and square edge detailing fixed on round joists with the remnants of the original bark still preserved. The foundations are sandstone piers set into a sand clay footing.</i></p>	

6.11 Sydenham

6.11.1 Brick Kerbs and Sandstone Kerb Guttering

The Marrickville LEP 2011 identifies brick and sandstone kerbing located in George Street, Henry Street, Park Road, Park Lane, Railway Lane, Rowe Lane, Reilly Lane and Stewart Lane in Sydenham as being of local significance (I284). The sandstone sections are dressed, with some having stormwater outlets neatly cut out (**Plate 45**). The brick sections are of a liver colour and have a rounded edge on the outer surface. The liver brick is contrast with a light grey mortar (**Plate 46**). It is noted that sections of the brick guttering on Railway Lane are being damaged by vehicles using the adjacent vacant area for informal parking. The LEP listing does not contain a Statement of Significance or an assessment against the criteria. **Table 29** contains an assessment undertaken by AECOM.



Plate 45 Example of the Sandstone Kerbing in George Street.



Plate 46 Example of Brick guttering in George Street.

Table 29 Significance assessment for the Brick Kerbs and Sandstone Kerb Guttering, Sydenham

Significance Assessment	
Criterion a (historical)	The Brick Kerb and Sandstone Kerb Guttering are of local historical significance. The Kerbing demonstrates the development of the suburb and the civic pride as demonstrated by the high degree of workmanship and attention to detail.
Criterion b (associative)	No associative significance identified.

Significance Assessment	
Criterion c (aesthetic)	The Brick Kerb and Sandstone Kerb Guttering are of local aesthetic significance. The Kerbs contribute to the heritage character of the local area. The high degree of workmanship and attention to detail also provide aesthetic significance in their own right.
Criterion d (social)	No social significance identified.
Criterion e (technical/research)	No research significance identified.
Criterion f (rare)	The Brick Kerb and Sandstone Kerb Guttering are of local rarity. The majority of the guttering in suburban environments having been impacted by upgrade works and replaced with concrete.
Criterion g (representative)	No representative significance identified.
Statement of Significance	
<p><i>The Brick Kerb and Sandstone Kerb Guttering are of local historical, aesthetic and rarity heritage significance. The sections of guttering demonstrate the development of the Sydenham area and the local civic pride. The brick and sandstone gutters both demonstrate a high degree of workmanship, which contribute to the aesthetic significance. The Kerbs also contribute to the broader heritage character of the local area. It is considered that the Kerbs are likely to be rare, the majority of guttering having been impacted by upgrade works and replaced with concrete versions.</i></p>	

6.11.2 Victorian Filigree Style Sandstone Faced Residence, Including Interiors – 19 Railway Road

No. 19 Railway Road in Sydenham is identified as an item of local significance on the Marrickville LEP 2011 (I288). The two storey terrace is principally constructed of red brick, but has been faced with sandstone. The verandah/balcony covers both floors. The asymmetrical façade has been finely finished with moulding to the door and window fenestration (**Plate 47**). The House is currently used as an art studio.

Table 30 Significance assessment for the Sandstone House, Sydenham

Significance Assessment	
Criterion a (historical)	Local
Criterion b (associative)	No heritage significance identified.
Criterion c (aesthetic)	No heritage significance identified.
Criterion d (social)	No heritage significance identified.
Criterion e (technical/research)	No heritage significance identified.
Criterion f (rare)	Local
Criterion g (representative)	No heritage significance identified.
Statement of Significance	
<p>A large Victorian residence with unusual stone front facade that reflects its proximity to stone quarries.</p>	



Plate 47 Sandstone House

6.11.3 St Mary/ St Mina Coptic Orthodox Church

The St Mary/St Mina Coptic Orthodox Church is located at 24A Railway Parade in Sydenham and is an item of local significance on the Marrickville LEP 2011 (I289). The Church was originally constructed as the Tempe Park Methodist Church, opened in 1902, but was re-consecrated in the 1968 following the arrival of the first Coptic Orthodox Priest in Australia. The Church was resumed following the extension to the Sydney Airport.

The red brick building is within the church architectural style. The entrance has a separate pitched roof, set at a lower height so as not to detract from the scale of the structure. The corners of the building are decorated with non-supporting buttresses. The roofline is highlighted with a moulded string course and the corners of the entrance and main body of the church are topped with small steeple-like decorations (**Plate 48**). A weatherboard addition has been added to the rear of the church, forming a 'T' shaped layout (**Plate 49**).

The LEP listing does not contain an assessment against the significance criteria, other than to identify under which criteria it is significant. A brief Statement of Significance is provided. AECOM has prepared the assessment in **Table 31**, incorporating the information from the listing.

In 2015, Marrickville Council determined to demolish the Church as no suitable use for the structure has been found (Marrickville Council, 2015).



Plate 48 St Mary/St Mina Coptic Orthodox Church. View of front façade. View south west.



Plate 49 St Mary/St Mina Coptic Orthodox Church showing rear addition. View north.

Table 31 Significance assessment for the St Marys/St Minas Coptic Orthodox Church (NSW Heritage Division, 1999).

Significance Assessment	
Criterion a (historical)	The church is of local historical significance as it demonstrates the pattern of development and social change within the Sydenham area. Originally constructed as a Methodist Church, its re-consecration as a Coptic Orthodox Church demonstrates the increasing multiculturalism of the Sydney suburbs.
Criterion b (associative)	No associative significance identified.
Criterion c (aesthetic)	The church is not of particular aesthetic significance and does not meet the threshold.
Criterion d (social)	The church is of local social significance to the former parishioners.
Criterion e (technical/research)	No research significance identified.
Criterion f (rare)	No rarity significance identified.
Criterion g (representative)	The church is of local representative significance as a modest church within a suburban setting.
Statement of Significance	
<i>When the Tempe Park Methodist Church was built it represented the growing Methodist congregation in the district. However during the 1950s and 60s the cultural mix of the area changed dramatically, and this has been represented by the re-consecration of a number of local churches including this one.</i>	

6.11.4 Sydenham Village

Sydenham Village, which encompasses the area between Unwins Bridge Road and the Princes Highway and Yelverton Street and Belmore Lane, was identified on the non-statutory Register of the National Estate as an indicative place (#100061). It is identified as an area of worker's cottages, built with bricks from the local brickworks. There is no assessment against criteria and the statement of significance simply reads "Whilst not grand in its scale or architecture, the area is significant as a fine example of working class development in the late nineteenth century" (Australian Heritage Council, n.d.-e).

The central portion of the indicative place was demolished as noise mitigation related to the construction of the third runway at the Kingsford Smith Airport. The front fences and letter boxes were retained along Railway Road (**Plate 51**). The open space has been converted to parkland by the council, yet there remains significant archaeological potential in the area (**Plate 50**).

**Plate 50** Extant front fences along Railway Road.**Plate 51** Sydenham Village open space.

Table 32 Significance assessment for Sydenham Village.

Significance Assessment	
Criterion a (historical)	Sydenham Village does not meet this criterion.
Criterion b (associative)	Sydenham Village does not meet this criterion.
Criterion c (aesthetic)	Sydenham Village is of local aesthetic significance as open space within a densely developed suburb.
Criterion d (social)	Sydenham Village is of local social significance. The acquisition and subsequent demolition of the houses left an indelible mark on the community. The open park land is now of local social significance for the public amenity it provides.
Criterion e (technical/research)	Sydenham Village is of local research significance. The investigation of the archaeological relics and deposits associated with the demolished houses has the potential to yield information regarding life in the suburb from the late 1890s on.
Criterion f (rare)	Sydenham Village does not meet this criterion.
Criterion g (representative)	Sydenham Village does not meet this criterion.
Statement of Significance	
<p><i>Sydenham Village is of local aesthetic, social and research significance. The Village creates an aesthetically appealing area of open green space that juxtaposes with the dense residential development around it. Socially, the area is recognised as being associated with a deeply traumatic period in the local areas history. The acquisition and subsequent demolition of the houses left an indelible mark on the community. The open park land is now of local social significance for the public amenity it provides. The investigation of the archaeological relics and deposits associated with the demolished houses has the potential to yield information regarding life in the suburb from the late 1890s on.</i></p>	

6.12 St Peters and Alexandria

6.12.1 Industrial Building “Frank G Spurway” Including Interior

The Frank G Spurway Building, now the Sydney Park Business Centre, is located on the corner of Maddox Street and Euston Road in Alexandria. The building is listed on the Sydney LEP 2012 as item I20. Constructed of red brick in the Inter-War Functionalist style, the prominent corner location is maximised through the placement of an asymmetrical tower and rounded entrance, which addresses the corner (**Plate 52**). The tower is dominated by the initials “F.G.S.” on each frontage (**Plate 53**). The facades of the two storey building are dominated by almost floor to ceiling aluminium framed windows on the ground floor and smaller, but equally proportioned windows on the second storey.

The building was constructed in 1940 for Frank G. Spurway, who operated an iron foundry and tool making business. The building was designed by architects Stafford Moore & Farrington. The assessed significance can be found in **Table 33**.



Plate 52 Frank G Spurway Building. View south west along Maddox Street.



Plate 53 Detail of the Frank G Spurway Building from Maddox Street.

Table 33 Significance assessment for Industrial building “Frank G Spurway” Including Interior (NSW Heritage Division, 2006b).

Significance Assessment	
Criterion a (historical)	The Frank G. Spurway building is historically significant as it represents later industrial/commercial development c. 1940.
Criterion b (associative)	No assessment provided.
Criterion c (aesthetic)	The building represents a good example of the Inter-War Functionalist architectural style showing Dudock influences.
Criterion d (social)	No assessment provided.
Criterion e (technical/research)	No assessment provided.
Criterion f (rare)	No assessment provided.
Criterion g (representative)	No assessment provided.
Statement of Significance	
<p><i>The Frank G. Spurway building is historically significant as it represents mid-twentieth century industrial/commercial development (1940). The building is of aesthetic significance as it represents a good example of the Inter-War Functionalist architectural style showing Dudock influences, and is representative of the work of Stafford Moore & Farrington.</i></p>	

6.12.2 Former Bedford Brickworks group and Sydney Park

The remnant structures associated with the Former Bedford Brickworks are located on the corner of the Princes Highway and Sydney Park Road. It is identified as an item of local significance on the Sydney LEP 2012 (I27). The site contains two Hoffman kilns, with associated chimneys, two down draught kilns with one chimney and a separate chimney set within a landscaped park. The assessed significance is provided in **Table 34**.

Table 34 Significance assessment for the Former Bedford Brickworks group (NSW Heritage Division, 2007a)

Significance Assessment	
Criterion a (historical)	The Brickworks site is a significant component of one of Sydney's oldest and most important industries. It retains sufficient material and occupies an appropriate site to present clear evidence of the operation of the site as a brickworks. The Brickworks provided vital employment in the St Peters district for several generations and contributed largely to the construction of the district itself.
Criterion b (associative)	The site has general past association with the industrial development of St Peters and South Sydney and with the local working community. Present association with the local community who are users of Sydney Park.
Criterion c (aesthetic)	The site and its structures, particularly the former Brickworks chimneys, are landmarks which can be viewed from a number of locations and contribute to the Princes Highway and Sydney Park Road streetscapes. The site constitutes an architectonic feature of Sydney Park that reinforces its visually distinctive urban man-made character. The robust materials contribute to the interpretation of the history and former uses of the site and park, and generally to the interpretation of the industrial context. The Brickworks, in its Sydney Park setting, reveals the relationship between several types of industrial activity and between the structures and the urban open space.
Criterion d (social)	Socially significant due to association with Bedford Brickworks and with the Austral Brick Company who employed an important specialised labour force.
Criterion e (technical/research)	The entire site constitutes a good example of a local brickworks built taking advantage of the adjacent clay pits, railway facilities and major transport routes, and industrial practises common at the time of the Brickworks' operation. Its layout and arrangement of buildings and items contribute to the interpretation of the various brick making processes. Its associated industrial items and artefacts contribute to the interpretation of former uses and technologies at the site. These include but are not limited to: industrial items, original signage, industrial artefacts (shale crushing mill, boiler, other machinery parts from the processing plant building (currently located at the site of Down Draught Kiln No. 2). Significant archaeological remains may be assumed to exist underground.
Criterion f (rare)	No assessment provided.
Criterion g (representative)	Of brickworks operating in southern Sydney from the late 19th century.
Statement of Significance	
<p><i>The Bedford Brickworks site is a significant component of one of Sydney's oldest and most important industries. It retains sufficient material, and occupies an appropriate site to present a clear indication of the working of the site. The Brickworks formed a vital component of the labour force of the St Peters district for several generations and contributed largely to the construction of the district itself. The Brickworks, in its Sydney Park setting, reveals the relationship between several types of industrial activity and between the structure and urban open space.</i></p> <p><i>The entire site constitutes a landmark that contributes to the stark industrial character of the streetscape. Significant views and vistas that contribute to enhance the significance of the site include the views and vistas along the Princes Highway; along Sydney Park Road; to the site from Sydney Park hills; and from Sydney Park Road to the city to the north and to Sydney Airport to the south.</i></p>	

The former Brickworks sit within Sydney Park, which is bound by Princes Highway, Euston Road and Sydney Park Road. The Park is not listed on a heritage schedule, but given the industrial heritage of the area, does contain areas of archaeological potential pertaining to the former brickworks that operated in the vicinity. The archaeological potential of the Park has been discussed in **Section 5.2.6**.

6.12.3 Sewage Pumping Station No. 39 (SP0039)

The Pump House is located on the corner of Huntley Street and Burrows Road, with a street address of 48 Huntley Street, Alexandria. It is listed on Sydney Water's Section 170 Heritage and Conservation Register (ID#4571730) and the Sydney LEP (I18) as 'Water Board Pump House Including Interior and Substructure'. The Station was constructed in 1925 to combat the increasing pollution caused by the increasing population of Sydney.

The Sydney Water listing provides a description of the item:

SP0039 Alexandria is a low level sewage pumping station located within a Sydney Water works depot. The station consists of two distinct parts: a superstructure comprising a small load bearing brick building; and a circular substructure approximately 10 metres deep constructed of concrete which houses machinery and sewage chambers. Architecturally, the building was designed in a utilitarian version of the Federation Free style (Plate 54). Externally there is a tiled gambrel roof with two gable vents and exposed eaves; gable with barge board, cross rails and roughcast panels; and walls of red-brown coloured tuck pointed brickwork with splayed brick piers (Plate 55). The entrance consists of a steel roller shutter door with applied lettering to the lintel proclaiming A.D.1925. Internally, the ceiling is lined with tongue and grooved boarding and walls are of painted brickwork. The substructure consists of two cylinders, one within the other, the annular space taking the sewage flow and the inner well housing the machinery. The machinery well comprises two vertical spindle centrifugal pumps direct coupled to electric motors. The station is located on the banks of the Alexandra Canal (Sheas Creek) which was built in 1889.

(Sydney Water, 2014)



Plate 54 Huntley Street Sewage Pumping Station.



Plate 55 Huntley Street Sewage Pumping Station.

Table 35 Significance assessment for Sewage Pumping Station No 39 (Sydney Water, 2014)

Significance Assessment	
Criterion a (historical)	SP0039 Alexandria was built in 1925 and is a good example of an inter-war period sewage pumping station. It is associated with the Southern Outfall and later Southern and Western Suburbs Ocean Outfall Sewer No.1 (SWSOOS No.1). Its construction evidences the advances made in the development of municipal services in the Alexandria area in the 1920s.
Criterion b (associative)	No assessment provided.
Criterion c (aesthetic)	SP0039 is a representative example of a small scale late Federation Free style utility building. It has strong streetscape appeal in its location on the corner of two streets.
Criterion d (social)	Item is likely to be held in regard by the local community for its function.

Significance Assessment	
Criterion e (technical/research)	SP0039 has the potential to reveal information about the design and construction of mechanical components. The pumping station still fulfils its role over 75 years after its introduction as a low level sewage pumping station as originally designed and constructed apart from modifications to mechanical and electrical equipment.
Criterion f (rare)	No assessment provided.
Criterion g (representative)	The superstructure is a representative example of a Federation Free style public utility building. SP0039 is a representative example of a low level sewage pumping station on the Southern and Western Suburbs Ocean Outfall Sewer.
Statement of Significance	
<p><i>SP0039 Alexandria is of historic, aesthetic and technical/research significance. Historically, it is associated with the Western and Illawarra Suburbs System (and later SWSOOS No.1) which was a major inter-war period sewage development. The construction of SP0039 and the SWSOOS No.1 formed a part of the major improvement in the public health of Alexandria in the 1920s. Aesthetically it is a good example of a small scale robust and well proportioned late Federation Free style sewage pumping station which displays excellent brickwork, and due to its prominent corner location, has streetscape significance. Technically, the station has the potential to reveal information about construction techniques and sewage pumping technologies employed during the inter-war period. SP0039 is also significant for fulfilling its role continuously after its introduction as a low level sewage pumping station over 75 years ago as originally designed and constructed, albeit with some modifications to mechanical and electrical components.</i></p>	

6.12.4 Cooper Estate

The Cooper Estate conservation area is bound by Fountain Street, Lawrence Street, Hartley Street, Lawrence Lane, Huntley Street and Mitchell Road. It is recognised on the Sydney LEP 2012 as being of local significance (C2). Subdivided in the 1880s, the area contains Victorian style terraces (**Plate 56**) and semi-detached houses with a smaller number of Federation and Interwar houses along tree-lined streets (**Plate 57**). The assessed significance is provided in **Table 36**.



Plate 56 Example of Victorian terrace housing in the Cooper Estate.



Plate 57 Tree-lined streets in the Cooper Estate.

Table 36 Significance assessment for the Cooper Estate Conservation Area (NSW Heritage Division, 2006a)

Significance Assessment	
Criterion a (historical)	Subdivided in the early 1880s, Coopers Waterloo Estate was developed as a working class housing area serving tradespersons employed in local industry. Amalgamated industrial allotments reflect the growing importance of industry in the early twentieth century.
Criterion b (associative)	Working class settlement, corner store communities associated with the Waterloo Industries and the expansion of the railways.
Criterion c (aesthetic)	The area has a diverse array of working class housing, warehouses and industrial development from the Victorian, Federation and Interwar periods.
Criterion d (social)	No assessment provided.
Criterion e (technical/research)	Archaeological potential on redeveloped sites predominantly along Lawrence Street.
Criterion f (rare)	No assessment provided.
Criterion g (representative)	Representative of Victorian residential subdivision with industrial overlay.
Statement of Significance	
<i>The Cooper Estate Heritage Conservation Area has significance as an 1880s subdivision of Cooper's Estate, developed to provide housing for workers of nearby industry at Waterloo, Eveleigh and Alexandria. The area was developed primarily as a residential area in the late Victorian through to Interwar periods and overlain with small industry on amalgamated sites.</i>	

6.12.5 Macdonaldtown stormwater channel

The Macdonaldtown stormwater channel has been identified as an item of potential local heritage significance by the City of Sydney. The item is currently under consideration for listing on the LEP. The item consists of an open channel drain running between Sydney Park Road in the north, crosses under Euston and Burrows Road and terminates at an outlet into the Alexandra Canal. The drain is constructed of brick and concrete, including a brick bull-nose coping. It is open for the majority of its length, but has been covered in sections, for example at Euston and Burrow Roads, to allow for vehicular and pedestrian traffic.

In 1890, the secretary for Public Works had directed that stormwater drainage should be constructed that was separate from the sewerage system and should not be discharged into natural channels. The objective was to lower rates of water-borne diseases such as typhoid, diarrhoea, diphtheria and phthisis (pulmonary tuberculosis). The channel was constructed in around 1904 as part of a program of works to achieve stormwater and sewerage separation.

The significance assessment provided in the draft listing is provided in **Table 37**.

Table 37 Significance assessment in the draft listing of the Macdonaldtown stormwater channel

Significance Assessment	
Criterion a (historical)	<p>Built in approximately 1904, Macdonaldtown stormwater channel, together with the other open stormwater channels draining into Alexandra Canal, represents a period of major improvement to the public infrastructure in the Alexandria area at the turn of the century from 1890s to the 1930s. It forms one of a group of the earliest purpose-built stormwater drains constructed in Sydney following the 1890 direction of the secretary for Public Works to build a stormwater system separate to the sewer. The construction of this channel represents significant government initiatives to alleviate the City's severe public health problems, to control floods and support the development of industry in the area during the early twentieth century.</p> <p>Through its proximity to the major industrial centre of southern Sydney, the channel demonstrates the important role of natural and constructed waterways in the history of Sydney's industrial development. The channel records the catchment of the former natural creek and swamp-lands which initially attracted noxious industries to the area, such as wool washing, tanneries, boiling down works and market gardens. The construction of the channel system provides evidence of the draining of the former swamp-lands and the dramatic changes this brought for the development of the area, in particular by opening up large tracts of land for secondary industry.</p> <p>The extent and scale of this and other stormwater channels in Alexandria reflects the history of major floods in this area. They demonstrate Sydney's flood management engineering during the late nineteenth and early twentieth century to control this natural phenomenon.</p> <p>As supporting built infrastructure, the channel forms part of one of the largest known collections of industrial and warehouse buildings in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.</p>
Criterion b (associative)	The construction of this channel is associated [with] the NSW Public Works Department.
Criterion c (aesthetic)	<p>Aesthetically, the open brick and concrete stormwater channel running through the urban landscape and parkland contributes to the distinctive character of the area derived from its low-lying topography and industrial history when Sydney Park was once large clay pits for major brickworks.</p> <p>Technically, the channel demonstrates flood management engineering of the early twentieth century.</p>
Criterion d (social)	Social significance requires further study to ascertain the value of this channel to communities.
Criterion e (technical/research)	No assessment provided.
Criterion f (rare)	The channel forms one of a group of the earliest purpose-built stormwater drains constructed in Sydney following the 1890 direction of the secretary for Public Works to build a stormwater system separate to the sewer.
Criterion g (representative)	The structure represents an example of an open stormwater channel from the early twentieth century.

Significance Assessment**Statement of Significance**

Built in approximately 1904, Macdonaldtown stormwater channel, together with the other open stormwater channels draining into Alexandra Canal, represents a period of major improvement to the public infrastructure in the Alexandria area at the turn of the century from 1890s to the 1930s. It forms one of a group of the earliest purpose-built stormwater drains constructed in Sydney following the 1890 direction of the secretary for Public Works to build a stormwater system separate to the sewer. The construction of this channel represents significant government initiatives to alleviate the City's severe public health problems, to control floods and support the development of industry in the area during the early twentieth century.

Through its proximity to the major industrial centre of southern Sydney, the channel demonstrates the important role of natural and constructed waterways in the history of Sydney's industrial development. The channel records the catchment of the former natural creek and swamp-lands which initially attracted noxious industries to the area, such as wool washing, tanneries, boiling down works and market gardens. The construction of the channel system provides evidence of the draining of the former swamp-lands and the dramatic changes this brought for the development of the area, in particular by opening up large tracts of land for secondary industry.

The extent and scale of this and other stormwater channels in Alexandria reflects the history of major floods in this area. They demonstrate Sydney's flood management engineering during the late nineteenth and early twentieth century to control this natural phenomenon.

Aesthetically, the open brick and concrete stormwater channel running through the urban landscape and parkland contributes to the distinctive character of the area derived from its low-lying topography and industrial history when Sydney Park was once large clay pits for major brickworks.

As supporting built infrastructure, the channel forms part of one of the largest known collections of industrial and warehouse buildings in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific

The Macdonaldtown stormwater channel is of local heritage significance in terms of its historical, aesthetic and representative values.

6.12.6 Alexandra Canal

The Alexandra Canal runs from Huntley Street in Alexandria to the Cooks River in Tempe. The Canal is listed on the State Heritage Register (SHR #01621) and Sydney Water's Section 170 Heritage and Conservation Register (ID# 4571712). The canal passes through the local government areas of the Botany Bay, City of Sydney and Marrickville and is listed on the respective local environmental plans as item numbers I1, I3 and I270 respectively. The canal is also identified on the non-statutory Register of the National Estate (ID # 103889).

In order to facilitate the development of manufacturing and industrial uses along Sheas Creek, dredging of the Creek began in 1887. The intention was to convert the creek into a canal and thereby attract investment by offering shipping as a mode of transportation. The canal was conceived as the 'Birmingham of Australia'.

Built under an unemployed work relief scheme, the canal was originally formed with fascine dykes. Fascine consists of bundles of sticks, or similar material, which are placed horizontally and held in place with stakes. The bundles are placed on top of each other to form a wall. Smaller sections were formed with sandstone, or later replaced the fascine dykes.

The original section extended between the Sydenham to Botany railway bridge to the Canal Road Bridge. In 1894 plans were floated to extend the canal to Buckland Street, Redfern. However, only part of this was constructed and the canal halted just to the south of Huntley Street, Alexandria, with works completed by 1900. Major alterations were made during the expansion of the Sydney Airport between 1947 and 1970. As part of these alterations, the outlet in to the Cooks River was altered.

The canal was never fully utilized, being subject to silting, tidal factors and limitations on the draft of vessels that could use the passage. Also, by 1930, road transportation had become more prevalent and economical. The closure of the canal to shipping traffic began in the 1930s when two lifting span bridges were replaced with fixed span bridges. In the early 1940s the wharves that had serviced the canal were demolished as the declining use of the canal did not warrant their maintenance.

A Conservation Management Plan (CMP) was prepared by the NSW Government Architect's Office for the canal in 2004 and was endorsed by the Heritage Council of NSW in the same year. A CMP provides policies intended to preserve and enhance the significance of the subject item. Any proposal that impacts on an item must address the policies in the CMP and seek to limit the potential impacts to the heritage significance of the item.

The CMP divided the canal into different 'reaches' in order to address the variable nature of the remnant fabric along the length of the item. The project area sits within the Archives Reach. The CMP identifies this reach as being of high significance. The embankments along this section have been constructed of Broken Range Bond Ashlar Sandstone (**Plate 58** and **Plate 59**). The CMP ranks the fabric as being of high significance and states that the fabric must be preserved and/or restored.

The significance assessment associated with the State Heritage Register listing is provided in **Table 38**.



Plate 58 Alexandra Canal – view north from the Ricketty Street.

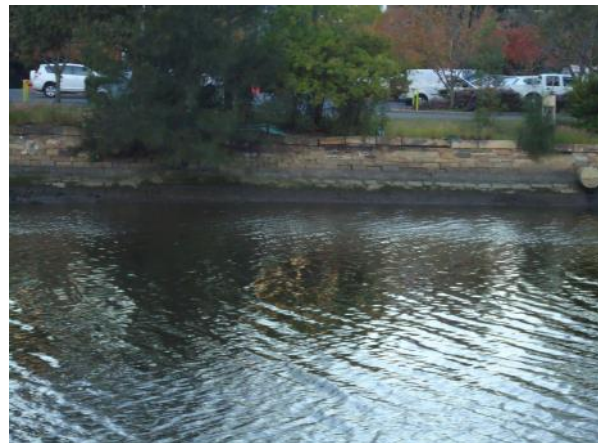


Plate 59 Alexandra Canal – Ashlar sandstone embankment near Ricketty Street.

Table 38 Significance assessment for Alexandra Canal (NSW Heritage Division, 2014)

Significance Assessment	
Criterion a (historical)	Alexandra Canal was built during the 1890s depression using unemployed labour. It is one of two navigational canals built in NSW and is the only canal built to provide access for water transport for the delivery of cargo in NSW. The canal, the warehouses and factories around it the bridges that cross it and the remains of the wharves are evidence of attempts by the government to encourage development in the area.
Criterion b (associative)	No assessed values.
Criterion c (aesthetic)	Sections of the canal exhibit relatively intact sections of ashlar stonework which are excellent examples of late nineteenth century coastal engineering works that provide a pleasantly textured and coloured finish to the canal. The canal is a major visual landmark in the area and has strong landmark appeal, particularly as viewed from the Ricketty Street Bridge.
Criterion d (social)	Item does not have any notable outstanding social values.

Significance Assessment	
Criterion e (technical/research)	The discovery of butchered Dugong bones, Aboriginal axes and the remains of an ancient forest in this area, all of which were found beneath the then low water mark during the excavation of the canal, were the subject of an academic paper. This paper contributed to the scientific understanding of the changing sea-levels along the eastern seaboard and the antiquity of the Aboriginal presence in Australia. The Canal exemplifies and is rare tangible evidence of Government initiatives of canal transportation and implementation of pre twentieth century unemployment relief schemes.
Criterion f (rare)	Alexandra Canal is one of two extant navigational canals in NSW and one of the few built in Australia in the nineteenth and twentieth century. It was the only purpose built canal constructed to provide navigational access in industrial areas in NSW.
Criterion g (representative)	Alexandra Canal is a representative example of a late nineteenth century coastal navigational canal.
Statement of Significance	
<p><i>Alexandra Canal is of high historic, aesthetic and technical/research significance. Historically, it is a rare example of 19th century navigational canal construction in Australia, being one of only two purpose built canals in the State, with one other known example in Victoria. It has the ability to demonstrate the NSW Governments initiative to create water transport as a means of developing an industrial complex in the Alexandria and Botany areas and exploiting the use of unemployed labour to achieve its scheme.</i></p> <p><i>It played a seminal role in the changing pattern and evolution of the occupation and industrial uses of the local area and nearby suburbs, which included filling large areas of low lying land for development.</i></p> <p><i>Aesthetically, intact original sections of the canal, comprising pitched dry packed ashlar sandstone, provides a textured and coloured finish which is aesthetically valuable in the cultural landscape. It is a major landmark and dramatic component of the industrial landscape of the area, particularly as viewed from the Ricketty Street Bridge and along Airport Drive.</i></p> <p><i>Scientifically, the excavation of the canal provided a valuable contribution to the understanding of the changing sea-levels along the eastern seaboard and the antiquity of the Aboriginal presence in Australia. Intact original sections of the fascine dyke sandstone construction are rare examples of late 19th century coastal engineering works.</i></p> <p><i>The area has been assessed as having no potential to contain historical archaeological material associated with the development or occupation of the area, either prior to or since the construction of the canal. As a result, the study area would contain no material of historical significance, or material that could contribute to the significance of Alexandra Canal itself.</i></p>	

6.12.7 Goodsell Estate Heritage Conservation Area – Heritage Conservation Area 16

The Goodsell Estate Heritage Conservation Area is located on the corner of Bedwin Road and May Street, opposite the Waugh and Josephson Industrial Buildings and the Town and Country Hotel. The conservation area backs on to the Illawarra Railway line. It is listed on the Marrickville LEP 2011 as an item of local significance (C16).

The conservation area encompasses the former Goodsell Brickworks. Frederick Goodsell took over the operation of a brickworks run by his brother in 1848. The brickworks within the conservation area were in operation by 1869. It was the first fully steam powered brickworks and produced the first shale plastic bricks in the Colony (NSW Heritage Division, 2012a). In anticipation of the opening of the railway line to Hurstville (1884) the western portion of the Brickworks (now Council and Goodsell Streets) were subdivided and auctioned in 1883. The Brickworks were taken over by P. Speare in 1891 and closed in 1916. Mammoth Incubators & Brooders Ltd used the site from 1917 until it became the Newtown Council Garbage Destructor in 1923. The former brickpit was filled and became the Camdenville Park in 1957.

The north eastern portion of the conservation area is characterised by high density terrace housing, mainly constructed between 1884 and 1910. The central section contains the publically accessible Camdenville Park. The south western portion, located in the project area, is currently fenced and inaccessible to the public. It is used to contain stormwater runoff, sloping towards the centre and forming a basin, which is vegetated with native trees. The area contains a number of concrete pads (Plate 60). The corner of Bedwin Road and May Street contains remnants of earlier sandstone fence foundations (Plate 61).

The significance assessment is provided in Table 39.



Plate 60 South western portion of Goodsell Estate Conservation Area showing vegetation in basin and concrete pads.



Plate 61 Sandstone fence foundations corner of Bedwin Road and May Street, associated with the Goodsell Estate Heritage Conservation Area.

Table 39 Significance assessment for the Goodsell Estate Conservation Area (NSW Heritage Division, 2012a)

Significance Assessment	
Criterion a (historical)	The Goodsell Estate Heritage Conservation Area is historically significant for demonstrating the principles and patterns of Marrickville's development from Colonial to contemporary eras. The Marrickville area contained many brick and pottery works. Frederick Goodsell's Steam Brick Factory and pit, located in the heritage conservation area, was, Sydney's first full steam-powered brickworks and the leading producer of its period (1869 onwards). The footprint of Camdenville Park overlays the site of the brickworks and the surviving terrace facing May Street was built by Goodsell and occupied by brickmakers. The Area is historically significant for the pattern of the built forms in the area has responded to the progressive release of land for development. The terrace groups in the area were built after successive land releases and demonstrate the patterns of subdivision and development in the Marrickville area.
Criterion b (associative)	No assessment provided.
Criterion c (aesthetic)	The conservation area is aesthetically significant for its narrow and dense streetscape development that establishes a tightly described street wall which creates a sense of intimacy and privacy within the area. It also significant for its 19th and early 20th Century terraces, cottages and houses (detached and semi-detached) including several highly cohesive groups.
Criterion d (social)	No assessment provided.
Criterion e (technical/research)	No assessment provided.
Criterion f (rare)	No assessment provided.
Criterion g (representative)	The conservation area is representative of the range of modest housing available to the Victorian worker and is significant for demonstrating the evolution of the terrace typology in Marrickville throughout the second half of the nineteenth Century to its final form before being superseded by the suburban cultural landscape.

Statement of Significance

The Goodsell Estate Heritage Conservation Area is historically significant for demonstrating the principles and patterns of Marrickville's development from Colonial to contemporary eras. The Marrickville area contained many brick and pottery works. Frederick Goodsell's Steam Brick Factory and pit, located in the HCA, was, Sydney's first full steam-powered brickworks and the leading producer of its period (1869 onwards). The footprint of Camdensville Park overlays the site of the brickworks and the surviving terrace facing May Street was built by Goodsell and occupied by brick makers. The Area is historically significant for the pattern of the built forms in the area has responded to the progressive release of land for development. The terrace groups in the area were built after successive land releases and demonstrate the patterns of subdivision and development in the Marrickville area. The Area is aesthetically significant for its narrow and dense streetscape development that establishes a tightly described street wall which creates a sense of intimacy and privacy within the area. It also significant for its 19th and early 20th Century terraces, cottages and houses (detached and semi-detached) including several highly cohesive groups. The area is representative of the range of modest housing available to the Victorian worker and is significant for demonstrating the evolution of the terrace typology in Marrickville throughout the second half of the 19th Century to its final form before being superseded by the suburban cultural landscape.

6.12.8 Terrace group – 28-44 Campbell Street, St Peters

The terrace group at 28-44 Campbell Street, St Peters is listed on Road and Maritime Service's Section 170 Heritage and Conservation Register (ID # 4305629). The terraces were constructed by a local brick maker Henry Woodley for his workers. The first two terraces were constructed in 1882 with two more added in 1887. These first four are now numbers 34 to 40 Campbell Street. The remainder, being numbers 28, 30, 42 and 44, were added in 1906. The Woodley family retained ownership of the terraces until 1972, when they were sold to Wallace Allan Bubb. Bubb subdivided each onto a separate lot and sold the individual terraces in the same year (1972) (Roads and Maritime Services, 2004a).

The terrace group is two storeys with verandah/balconies over both levels. Some variations are evident, with the terraces at 42 and 44, constructed in 1906 being slightly more elaborate in the detailing on the ground floor (**Plate 62**). These two terraces have a stinger course across the front and arching above the twin windows and door, both of which are decorated with a key stone. The other terraces do not have this detailing, having a single window and door on the ground floor (**Plate 63**). The first floor of each terrace has French doors that open out onto the balcony. The balustrades of various terraces have been replaced. The terraces are separated from the street by a cast iron fence across the verandah.

The interiors of 36, 40 and 44 were inspected on 21 May 2015. The survival of original features varied, for example, there was a fire in number 38 in 2014 (not inspected), which caused a secondary fire in the roof cavity of number 40. This resulted in the ceilings on the first floor being replaced with the loss of the original cornices and ceiling roses. Number 36 also has limited original or early features remaining, although this is the result of successive renovations and both addresses have had the fire places boarded up (**Plate 64**). Of those inspected, number 44 contained the most original and early detailing. The ceiling roses on the ground floor included roses and Scottish thistles. **Plate 65** shows one of these ceiling roses, behind which the lathe batons for the ceiling are evident. The majority of the joinery, including the doors appear original and the cornices and picture rails are preserved in the front rooms on both the ground and first floor (**Plate 67**). The two fireplaces on the ground floor have marble mantle pieces with tile insets (**Plate 66**), while the upstairs fireplace has a wooden mantle piece.

Table 40 contains the significance assessment, as assessed by Roads and Maritime (2004).



Plate 62 Terrace Group – 28-44 Campbell Street. No's 42 and 44 at right of image showing detailing to first floor façade



Plate 63 Terrace Group – 28-44 Campbell Street. No. 28 at left of image showing undecorated first floor façade.



Plate 64 Interior of 40 Campbell Street indicating the removal of original features



Plate 65 Interior of 44 Campbell Street. Ceiling rose in living room with lathe batons behind

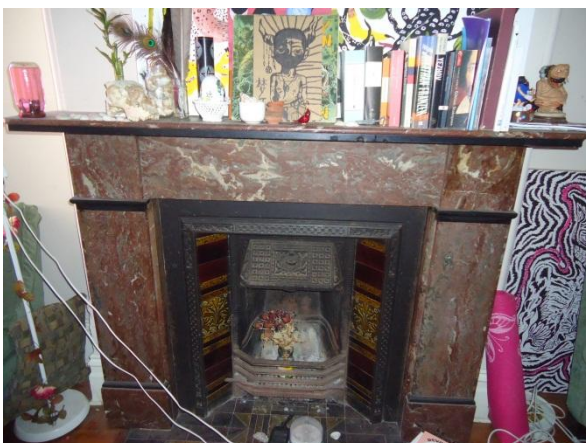


Plate 66 Interior of 44 Campbell Street. Fire surround and mantle piece in living room.



Plate 67 Interior of 44 Campbell Street indicating the preservation of the cornice and picture rails.

Table 40 Significance assessment for 28-44 Campbell Street Terrace Group (Roads and Maritime Services, 2004a)

Significance Assessment	
Criterion a (historical)	The terrace is of local historical value in reflecting a part of the industrial history of the area. Built by a local brickmaker, the terrace housed a number of people who worked in the brickfields, and provides physical evidence for workers' housing, in interesting contrast to the physical remains of the brickworks presently located in Sydney Park, adjacent. The terrace reflects the predominant industry and social class of the local brick industry's most productive period, 1880-1914.
Criterion b (associative)	From its early years, the terrace is associated with workers in the local brickfields. The terrace is also associated with local brickmaker Henry Woodley.
Criterion c (aesthetic)	The terrace is of local aesthetic value as a good example of a Victorian terrace made of locally-manufactured bricks. The subtle differences between the components built in 1882 and those built in 1906 provide interesting contrast in detail. The terrace makes a significant contribution to the local streetscape due to its intactness including cast iron fences and balustrades.
Criterion d (social)	No assessment provided
Criterion e (technical/research)	No assessment provided
Criterion f (rare)	The terrace is rare in the local suburb for the small scale of the individual houses, the number of houses contained in the terrace, and its general intactness.
Criterion g (representative)	The terrace has outstanding ability to demonstrate brickfield workers' housing from the 1880s to the turn of the 20th century.
Statement of Significance	
<i>28-44 Campbell Street has outstanding ability to demonstrate brickfield workers' housing from the 1880s to the turn of the 20th century. Built by local brickmaker Henry Woodley, the terrace reflects the areas industrial history. Generally intact, the terrace has aesthetic value as a representative Victorian terrace constructed with locally manufactured bricks.</i>	

6.12.9 House – 82 Campbell Street, St Peters

The house at 82 Campbell Street, St Peters is listed on the Roads and Maritime Services Section 170 Heritage and Conservation Register as an item of local significance (ID #4305643). The listing contains no specific history of the house, but it is assumed to have been constructed for the working class employed at the local brickpits. The listing dates the year of construction to 1890 (Roads and Maritime Services, 2004b).

The house is a single storey residence of rendered brick. The façade is symmetrical, having a central door flanked by two windows with stone sills. The pitched roof extends out over the verandah, which reaches to the property boundary and is separated from the footpath with a simple fence. The house is conjoined to number 80, but there is a pedestrian laneway between 82 and 84 Campbell Street (**Plate 68**). The house is currently boarded up and said to be in a very poor state, suffering extensive termite and rising damp damage (pers com. 21 May 2015 Robert Taylor, Brough Real Estate).

Table 41 contains the significance assessment, as assessed by Roads and Maritime (2004).



Plate 68 House – 82 Campbell Street, with conjoined number 80 to left of image.

Table 41 Significance assessment for House - 82 Campbell Street (Roads and Maritime Services, 2004b)

Significance Assessment	
Criterion a (historical)	82 Campbell Street is historically significant in the local area for its location within the original village of St Peters as laid out in the 1840s, one of the first planned villages in Australia. The cottage is a reflection of the change in social composition of the suburb as the St Peters brickworks became the dominant industry, attracting a working class who were housed in simple, modest cottages.
Criterion b (associative)	No assessment provided.
Criterion c (aesthetic)	No assessment provided.
Criterion d (social)	No assessment provided.
Criterion e (technical/research)	No assessment provided.
Criterion f (rare)	As an example of the modest workers' cottages which proliferated in St Peters from the 1870s in order to house workers in the local brick yards, 82 Campbell Street is rare.
Criterion g (representative)	82 Campbell Street has the ability to demonstrate the style of worker's cottages to be found in the industrial areas of St Peters from the 1870s to the turn of the twentieth century.
Statement of Significance	
<i>82 Campbell Street, St Peters, has local significance as a rare and representative example of a modest worker's cottage, a type which proliferated in the suburb with the rise of the brick manufacturing industry from the 1870s.</i>	

6.12.10 Narara Terrace – 4-18 Unwins Bridge Road

The Narara Terrace encompasses 4-18 Unwins Bridge Road and is listed as an item of local significance on the Marrickville LEP 2011 (I282). The land was purchased by Henry A. Crause, together with the land on which the adjacent Town and Country Hotel stands, in 1880. Almost immediately, he constructed a hotel on the adjacent site and two terraces – 4 and 6 Unwins Bridge Road (**Plate 69**). The remaining six terraces were constructed between 1890 and 1895. Following Crause's death in 1899 they passed through numerous hands.

The terraces are two storey, constructed in the Victorian Filigree style, having an ornate parapet. Built of brick, they have been rendered with incised lines to give the impression of ashlar sandstone construction. The LEP listing notes the manner in which the terraces curve to follow the frontage of Unwins Bridge Road is unusual (NSW Heritage Division, 2011c). Numbers 4 and 6 differ to the remainder of the Terrace, having a recessed verandah at the ground level, while the remainder feature a full-height balcony (**Plate 70**).

An assessment of significance is provided in **Table 42**.



Plate 69 Narara Terrace and junction with the Town and Country Hotel.



Plate 70 Detail of Narara Terrace, No. 8-18 Unwins Bridge Road.

Table 42 Significance assessment for the Narara Terrace – Victorian Terrace (NSW Heritage Division, 2011c)

Significance Assessment	
Criterion a (historical)	Narara Terrace, built 1880-1895, is of historical significance for association with Henry A. Crause, who established the Town and Country Hotel at 2 Unwins Bridge Road, and association with the hotel. The terrace is an unusual for its close historical association with the hotel.
Criterion b (associative)	No assessment provided.
Criterion c (aesthetic)	Of aesthetic significance as a prominent row of 2 storey Victorian Italianate/Victorian Filigree style terraces, unusual in the manner that the terraces are built to respond to the curve of the road. Along with neighbouring Town & Country Hotel, the terraces form a unifying corner treatment to Unwins Bridge Road.
Criterion d (social)	No assessment provided.
Criterion e (technical/research)	No assessment provided.
Criterion f (rare)	Narara Terrace is rare as a terrace with a close historical association with a hotel (being built as an investment property for the hotel owner).
Criterion g (representative)	Representative examples of Victorian Italianate/Victorian Filigree style terraces
Statement of Significance	
Narara Terrace, built 1880-1895, is of historical significance for association with Henry A. Crause, who established the Town and Country Hotel at 2 Unwins Bridge Road, and association with the hotel. The terrace is an unusual for its close historical association with the hotel. The terrace is of aesthetic significance as a prominent row of 2 storey Victorian Italianate/Victorian Filigree style terraces, representative of their style but unusual in the manner that the terraces are built to respond to the curve of the road. Along with neighbouring Town & Country Hotel, the terraces form a unifying corner treatment to Unwins Bridge Road. Narara Terrace is rare as a terrace with a close historical association with a hotel (being built as an investment property for the hotel owner), and for the siting of the terraces in response to the curve of the road.	

6.12.11 Service Garage – 316 Princes Highway

The Service Garage at 316 Princes Highway, St Peters, is identified on the Marrickville LEP 2011 as item I312. There is no listing sheet associated with the item. It is currently occupied by the Dynamo Auto Electrician business. The architectural style is unusual in the elaborate parapet is shaped in a Moorish style, which is carried through, although less obviously, in the adjacent associated office building (**Plate 72**). The site was previously part of the Austral Brick Company land. A photograph of the site from 1946 indicates that the garage had been constructed by that time (**Plate 72**). The heritage significance has been assessed in **Table 43**.

Table 43 Significance assessment for the Service Garage.

Significance Assessment	
Criterion a (historical)	The service garage appears to have operated in a motor vehicle maintenance role since 1948 and therefore demonstrates a continuity of use that is historically significant.
Criterion b (associative)	No associative significance identified.
Criterion c (aesthetic)	The detailing and architectural style of the Garage is unusual as applied to a mechanical workshop. Paired with the prominent location on a busy intersection, the Service Garage is of local aesthetic significance.
Criterion d (social)	No social significance identified.
Criterion e (technical/research)	No research significance identified.
Criterion f (rare)	The architectural style applied to a mechanical workshop is rare.
Criterion g (representative)	No representative significance identified.
Statement of Significance	
The Service Garage is of local aesthetic and rarity significance. The detailing and architectural style of the Garage is unusual as applied to a mechanical workshop. Paired with the prominent location on a busy intersection, the Service Garage is of local aesthetic significance.	



Plate 71 Service Garage (Dynamo Auto Electrician) View north east



Plate 72 Intersection of Princes Highway and Canal Road in 1946. Service garage highlighted (Source: Mitchell Library Hood Home and Away Collection ID 23897)

6.12.12 Southern Cross Hotel – 340 Princes Highway

Located at 340 Princes Highway, St Peters, the Southern Cross Hotel is identified on the Marrickville LEP 2011 as an item of local significance (I277). The hotel was originally constructed in 1906, but replaced in 1937 with the present structure, which was designed by prolific hotel designer Cyril C. Ruwald. It is constructed in the Inter-War Free Classical style with a rounded corner addressing the Princes Highway and Canal Road intersection (**Plate 73**). The assessed significance is provided in **Table 44**.



Plate 73 Southern Cross Hotel, view from Princes Highway

Table 44 Significance assessment for the Southern Cross Hotel (NSW Heritage Division, 2009c).

Significance Assessment	
Criterion a (historical)	Of historical significance as a site with hotel use since 1906, and for its existing 1936 hotel building designed by architect Cyril C. Ruwald. The hotel is also of historical significance as a place of public recreation since 1936.
Criterion b (associative)	No assessment provided
Criterion c (aesthetic)	Of aesthetic significance as an architect designed example of the Inter war Free Classical style on a prominent corner site.
Criterion d (social)	No assessment provided
Criterion e (technical/research)	No assessment provided
Criterion f (rare)	No assessment provided
Criterion g (representative)	A representative Inter War Free Classical style hotel building.
Statement of Significance	
The Southern Cross Hotel is of historical significance as a site with a hotel use since 1906, and for its existing 1936 hotel building designed by architect Cyril C. Ruwald. The hotel is also of historical significance as a place of public recreation since 1936. The hotel is of aesthetic significance as an architect designed representative example of the Inter war Free Classical style on a prominent corner site.	

6.12.13 Terrace Group Including Interiors – 2-34 Campbell Road

The Terrace Group is located at 2-34 Campbell Road in Alexandria and is listed on the Sydney LEP 2012 as an item of local significance (I12). The terraces appear to have been constructed in 1886 when the land was in the ownership of Ebenezer Vickery and Ebenezer Vickery Junior. The original grant was converted to Torrens title in 1896 and the Vickery's sold the houses to William and Edward Hallet Fieldhouse in 1901. The Terraces were leased to families employed at the nearby brickpits and factories.

The Terraces are two storey and constructed of red brick in the Victorian Regency style (**Plate 74** and **Plate 75**). A red brick parapet forms a continuous frontage above the two storey verandah/balconies. The balustrades of the terraces have been replaced and are now no longer uniform. A fin wall separates the terraces from each other. A brick fence has been constructed across the frontage of some of the Terraces at a later date. The assessed significance is provided in **Table 45**.



Plate 74 Terrace Group – 2-34 Campbell Road.



Plate 75 Terrace Group – 2-34 Campbell Road.

Table 45 Significance assessment for 2-34 Campbell Road Terrace Group (NSW Heritage Division, 2012b)

Significance Assessment	
Criterion a (historical)	The housing represents early c1886 housing associated with the brick making and pottery works in the local area
Criterion b (associative)	The terraces are associated with the adjacent brickpits.
Criterion c (aesthetic)	The terraces are a good example of mid Victorian workers housing which date from the early period of development for the Alexandria area.
Criterion d (social)	No assessment provided.
Criterion e (technical/research)	There is potential for further research on the social history of residents of the terraces and where they worked.
Criterion f (rare)	The houses are located on the hill away from the swampy areas that covered a large proportion of the area. They are rare in terms of its location and context.
Criterion g (representative)	The terraces are representative examples of working class mid Victorian terrace housing.
Statement of Significance	
<p><i>The terrace group are historically significant as they represent early housing associated with the nearby brick making and potting works. They are located on the hill away from the former swampy areas in Waterloo and Alexandria area. Prior to the 1890s group housing is rare within the southern industrial suburbs in the City of Sydney.</i></p>	

6.12.14 Town and Country Hotel – 2 Unwins Bridge Road

The Town and Country Hotel is located on the south western corner of the intersection of Unwins Bridge Road and Campbell Street. It is listed on the Marrickville LEP 2011 as item number I281. The three storey hotel is constructed in the Inter-War Free Classical style in red brick laid in stretcher bond. The façade of the ground floor was originally tiled in yellow and green, however, recently the tiles have been removed and the façade rendered and painted grey. The top of the hotel is decorated with a pediment and a parapet with moulded string coursing picked out in cream and heritage green. The third storey has a recessed balcony centrally located on both facades (**Plate 76**). The hotel was designed by Sidney Warden in 1923 and replaced an earlier hotel constructed in 1880/1 (NSW Heritage Division, 2012c). The assessed significance and Statement of Heritage Impact is provided in **Table 46**.



Plate 76 Town and Country Hotel.

Table 46 Significance assessment for the Town and Country Hotel (NSW Heritage Division, 2012c)

Significance Assessment	
Criterion a (historical)	Of historical significance as a site with a continuous hotel use since 1881, and for its 1923 hotel building. The hotel has historical association with its designer, Sidney Warden, Tooth & Co architect. The existing hotel building has been a place of recreation for this industrial area since 1923.
Criterion b (associative)	No assessment provided.
Criterion c (aesthetic)	Of aesthetic significance as a good example of an Inter war Free Classical style hotel on a prominent corner site.
Criterion d (social)	No assessment provided.
Criterion e (technical/research)	No assessment provided.
Criterion f (rare)	No assessment provided.
Criterion g (representative)	A representative Inter War Free Classical style hotel building.
Statement of Significance	
<p><i>The Town & Country Hotel is of historical significance as a site with a continuous hotel use since 1881, and for its 1923 hotel building. The hotel has historical association with its designer, Sidney Warden, Tooth & Co architect. The existing hotel building has been a place of recreation for this industrial area since 1923. The hotel is of aesthetic significance as a good representative example of an Inter war Free Classical style hotel on a prominent corner site.</i></p>	

6.12.15 Westpac Stores and Penfolds Wine Cellars – 634-808 Princes Highway

Located at 634-808 Princes Highway, the site contains the former Westpac Stores and Penfolds Wine Cellars, assessed as being of local significance on the Marrickville LEP 2011 (I299). The former Penfolds Wine Cellars is a monolithic cream brick structure, broken by a central clock tower with austere art deco styling (**Plate 77**). The plans were drawn by Ross A Lightfoot & Stanton of Bligh Street, Sydney. The windows are recessed with dominant fins. The Cellars were completed in 1959 and were the largest of their type, extending 200 metres to the rear. The show room and offices have been retained and are used by Ikea as a service office, however the warehouse space has been redeveloped into an Ikea store.

The Westpac Store has a tiered frontage to the Princes Highway, stepping back from the south to the north. Constructed of cream brick, the façade is dominated by producing windows, screened with vertical fins (**Plate 78**). The building was constructed by Drug Houses Australia in 1956.

The assessed significance can be found in **Table 47**.



Plate 77 Former Penfolds Cellars. View north.



Plate 78 Former Westpac Stores. View south.

Table 47 Significance assessment for the Westpac Stores and Penfolds Wine Cellars (NSW Heritage Division, 2011d)

Significance Assessment	
Criterion a (historical)	Local. Research with various 20th century authorities indicates that the building may be of higher than local significance. Post war industrial buildings are becoming increasingly less common, especially intact examples and those with such long standing and well recognised landmark values.
Criterion b (associative)	No assessment provided.
Criterion c (aesthetic)	Locally significant post-war industrial building. Designed by architects, Ross A Lightfoot & Stanton of Bligh St, Sydney. Further assessment of architectural merit, streetscape and views required.
Criterion d (social)	Social significance is the landmark value to which the wider community continues to have a firm attachment and the fact that this landmark is within the mental maps of the many thousands who pass the site en route through Sydney.
Criterion e (technical/research)	Local. Includes rear building Bayview; listed on Council's archaeological map as governed by the Heritage Act.
Criterion f (rare)	Possibly rare at the local level as work of Lightfoot and Stanton and as fine example of post-war industrial building.
Criterion g (representative)	Local
Statement of Significance	
<p><i>A modern industrial precinct of better quality than many of the other recent industrial developments in the Municipality. The Penfolds site has already become a local landmark.</i></p> <p><i>Heritage significance includes all phases of site use including the firm that cause the building to be designed, i.e. c1956-1990 by Penfold Wines. Possibly of higher than local significance due to archaeological potential, the history of Penfolds Wines and the architectural significance (history needs researching and heritage assessment).</i></p>	

6.12.16 Waugh and Josephson Industrial Buildings – 1-7 Unwins Bridge Road

The Waugh and Josephson Industrial Buildings are located opposite the Town and Country Hotel at 1-7 Unwins Bridge Road. They are identified on the Marrickville LEP 2011 as an item of local significance (I280). David Waugh and Sydney Josephson had established an engineering works in 1880 in Sydney. They primarily supplied refrigeration and processing equipment to the dairy and meat industries. As demand increased, the company sort larger premises and the site at the corner of Unwins Bridge and Bedwin Roads was selected and were in operation on the site by 1895. In 1923 the company were made the sole dealership for Daniel Holt crawler tractors and following the merger with Charles Best Manufacturing Company two years later, they became the sole agents for Caterpillar in New South Wales and the Australian Commonwealth Territory in 1934. They were licenced to manufacture motor graders, scoops, winches and various other attachments for Caterpillar in about 1939. During World War II, increased demand lead to a need for more space and modernised buildings. Building applications were lodged in 1939 and following approval, the former buildings were demolished, except for a cottage. In their place were constructed a steel workshop and a brick office and show room. The buildings were completed by the end of 1940 and were used by the Company until they moved in 1949. The buildings were then used by Greenway & Banks and today have a number of tenants, including the Greenway Banks Estate, the Sydney Trapeze School and an indoor climbing gym.

The office building and show room dominate the Unwins Bridge Road frontage (**Plate 79**). Constructed of cream brick, it features a 'waterfall' façade with rounded corners and rounded window corners (**Plate 80**), together with porthole windows. The flat roof is hidden by a parapet. Behind this building are two saw-toothed industrial buildings. The assessed significance can be found in **Table 48**.



Plate 79 Central tower of Waugh and Josephson Industrial Buildings.



Plate 80 Eastern end of the Waugh and Josephson Industrial Buildings showing curved glass elements.

Table 48 Significance assessment for the Waugh and Josephson Industrial Buildings (NSW Heritage Division, 2012d)

Significance Assessment	
Criterion a (historical)	The site as a whole is of historical significance for its ability to evoke mid-20th century industrial practices.
Criterion b (associative)	No assessment provided.
Criterion c (aesthetic)	The main Inter-war Functionalist style industrial administration building and showroom which fronts Unwins Bridge Road is of aesthetic significance as an exemplar of the style and the manner in which it forms an important industrial streetscape on a major intersection.
Criterion d (social)	No assessment provided.
Criterion e (technical/research)	The remaining Waugh & Josephson industrial buildings on the site are of research significance for their ability to demonstrate innovative mid-20th century construction techniques.
Criterion f (rare)	No assessment provided.
Criterion g (representative)	Local [it is assumed that the item holds local representative significance as a representative example of a mid-20 th century industrial building complex].
Statement of Significance	
<p><i>The main Inter-war Functionalist style industrial office and showroom building is of aesthetic significance as an architect-designed exemplar of the style, and for the manner in which it forms an important industrial streetscape on a major intersection. The 1940s buildings on the site (office & showroom; central factory building; and building in the northeast corner of the site) are of historical significance for their association with Waugh & Josephson and for their ability to demonstrate mid-20th century industrial practices. The 1940s central factory building and building in the northeast corner of the site are also of technical significance for their innovative architectural design to facilitate mid-20th industry. The multi-bay, rigid frame, all steel workshop which is the latest type of design", designed for "full use of the interior due to the absence of any trusses, also excellent lighting, and an excellent appearance both internally and externally." The site as a whole is of historical significance for its ability to evoke mid-20th century industrial practices, and for the Company's role in the construction industry.</i></p>	

6.12.17 St. Peters Anglican Church

The St. Peters Anglican Church, located at 187-209 Princes Highway, is listed on the State Heritage Register (SHR#00032), the Marrickville LEP 2011 (I275) and was a registered place on the non-statutory Register of the National Estate (#1716). The site contains three main buildings: the church (**Plate 81**) and hall, the 1906 rectory and 1996 rectory. To the north of the church is a graveyard containing many of the earliest settlers (**Plate 82**).



Plate 81 St Peters Anglican Church.



Plate 82 St Peters Cemetery.

Table 49 Significance assessment for the St Peters Anglican Church

Significance Assessment	
Criterion a (historical)	The site, with its landmark church building and graveyard, is an integral part of the former village of St. Peters and village of Tempe, is the derivation of the name of the locale and strongly associated with its identity as a made place. The site has been occupied and used as an Anglican Church facility since 1838. The site contains one of the earliest church buildings constructed by free labour and one of the earliest to be constructed as a result of the Religious Establishment Act 1836.
Criterion b (associative)	The church was designed by the Colonial period architect Thomas Bird and the built fabric added to altered by the work of subsequent notable architects: Edmund Blacket and sons, George Allen Mansfield, Professor Leslie Wilkinson and Morton Herman. Repair and reconstruction of damaged building fabric was supported by the congregation often with donations from local brickmakers. The establishment of the church was associated with Robert Campbell and Alexander Brodie Spark, two prominent Sydney Merchants and local landowners. The graveyard contains graves of prominent Sydney people
Criterion c (aesthetic)	The site contains fabric which demonstrates a high degree of creative achievement in the built form of the church, graveyard and Federation Period parsonage. The church is a good example of Old Colonial Gothick Picturesque despite its various additional works throughout the nineteenth century. The 1906 Parsonage is a good example of residential scale of the Arts and Crafts movement of the Federation Period and the graveyard contains a diversity of expression through the monumental tombs and commemorative gravesite markers. Together they form a landmark cultural landscape within the Marrickville municipality.
Criterion d (social)	The site has local social significance because of its importance to the Church congregation and the community associated with St Peters Church.
Criterion e (technical/research)	The site contains built fabric of a local technical significance for its potential to provide information into early construction methods including the use of sun dried bricks and local timber columns. It also provides good examples of the process of alteration, reconstruction and adaptation and displays an evolution of building and construction techniques. The site contains archaeological potential in the vicinity of the site of the original parsonage building complex as an interred population of known individuals.
Criterion f (rare)	The site contains items of State significance and the church building has rare surviving fabric of the Old Colonial Gothic Picturesque architectural style and a nineteenth century graveyard. The remaining original Church form and some of its fabric is the only surviving built form designed by the Colonial Period architect ,Thomas Bird, in Australia.
Criterion g (representative)	The site has state representative significance because it demonstrates principal characteristics of the work of prominent architects; Thomas Bird, Edmund Blacket, George Allen Mansfield and Professor Leslie Wilkinson.

Statement of Significance

The St Peters Church and grounds is of State heritage significance. It contains a rare and early example of Primitive Gothic Revival Church architecture in Australia. It contains a rare surviving work of the Colonial Period architect Thomas Bird (arrived Australia 1835) It contains one of the earliest churches to be constructed as a result of the Religious establishment Act of 1836. It contains evidence of the work and influence of a number of distinguished Australian architects: Thomas Bird, Edmund Blacket, James Hume, John Bibb, George Allen Mansfield, Blacket Brothers, Professor Leslie Wilkinson and Morton Herman. It contains one of the first churches to be constructed of free labour in NSW. It is a landmark within the Sydney environment contained within the greater landscape of Botany Bay. It formed an integral part of Alexander Brodie (A.B.) Sparke's vision for an appropriate setting for the village of St Peters, Cooks River c.1840. St Peters Church is a unique early form of building construction utilising sun dried bricks and local timber in the form of turpentine columns relating to the indigenous environment of the foreshores of Botany Bay and the Cooks River. The site has social significance due to its continuity of use and importance to the Anglican Church community since its formation in 1838. The site contains graves and remnant grave stones and monuments of significant persons including; A.B Sparke, Henry Knight, Elizabeth Knight, Ann Knight, architect John Bibb, Thomas Gratten, James Raymond, grazier Thomas Icely, Susanna Hensley and descendants of Governor King amongst many local pioneers. The site contains a former rectory which is a good representative of the Federation Period with intact details and materials

6.12.18 St Peters Public School, including interiors

The St Peters Public School is listed on the Marrickville LEP 2011 as an item of local significance (I271). The school is located at 93A Church Street. Constructed of brick, the work is in Flemish bond (vertically off-set rows of alternating header and stretcher laid bricks). The subsequent buildings do not detract from the heritage significance of the building. No images are available of the school due to the sensitivities around photographing the site during school hours. The assessed significance does not contain a statement of significance and therefore one has been provided for the purposes of this project.

Table 50 Significance assessment for St Peters Public School

Significance Assessment	
Criterion a (historical)	The school is of local historical significance, demonstrating the development of the suburb and the provision of education to local families
Criterion b (associative)	The school does not meet this criterion, having no special link with an individual of historical significance
Criterion c (aesthetic)	The school does not meet this criterion as it is not of aesthetic significance
Criterion d (social)	The school is of local social significance to the community who attended or still attends it.
Criterion e (technical/research)	The school does not meet this criterion as it does not have the potential to yield new or substantive information
Criterion f (rare)	The school is not rare and therefore does not meet this criterion
Criterion g (representative)	The school is representative of late nineteenth century school buildings
Statement of Significance	
<i>The St Peters Public School is of local historical, social and representative significance. The school is of local historical significance, demonstrating the development of the suburb and the provision of education to local families. The school is of local social significance to the community who attended or still attends it. The school is representative of late nineteenth century school buildings.</i>	

6.12.19 Terrace Housing, including interiors – 105-119 May Street

Item I273 on the Marrickville LEP 2011 is a set of eight terrace houses located between 105 and 119 May Street. The terraces are constructed of brick, are two-storey, with integrated verandah and balconies covering both storeys. The verandah/balconies are supported on timber posts and decorated with iron lacework. The listing contains no assessment against the criteria and therefore a brief assessment has been undertaken for the purposes of this project (**Table 51**).

Table 51 Significance assessment of Terrace Housing – 105-119 May Street

Significance Assessment	
Criterion a (historical)	The terrace houses are of local historical significance through their ability to demonstrate the course of local history with regard to the provision of accommodation for the working-class, who initially settled in the area to work in the brickworks and other industries
Criterion b (associative)	No associative significance has currently been identified.
Criterion c (aesthetic)	The terrace houses contribute to the streetscape.
Criterion d (social)	No social significance has been identified.
Criterion e (technical/research)	It is considered unlikely that the rear yards would contain significant archaeological deposits. There may be limited sub-floor deposits.
Criterion f (rare)	The terraces are unlikely to be rare, but a comparative study would be needed to determine this.
Criterion g (representative)	The terraces are of local representative significance as a good example of terrace housing built for the working class of the area.
Statement of Significance	
<i>The terrace houses are of local historical and representative significance. They demonstrate the provision of accommodation for the working class, who were drawn to the area by the brickworks and similar opportunities. The terrace houses provide a representative example of this type of accommodation.</i>	

6.12.20 Remaining brick road and footpath paving and stone guttering

Listed on the Marrickville LEP 2011 is a section of brick road with associated footpath paving and stone guttering (I283). The road forms part of Victoria Street, at its south eastern terminus. The bricks have been laid in a herringbone pattern and the guttering is of worked sandstone blocks. The listed significance is provided in **Table 52**.

Table 52 Significance assessment for remaining brick road and footpath paving and stone guttering (NSW Heritage Division, 2011a)

Significance Assessment	
Criterion a (historical)	Local
Criterion b (associative)	No assessment provided
Criterion c (aesthetic)	No assessment provided
Criterion d (social)	No assessment provided
Criterion e (technical/research)	Local
Criterion f (rare)	Local - This brick road, footpath paving and stone guttering is the only example existing in the Municipality.
Criterion g (representative)	Local - This brick road, footpath paving and stone guttering is representative of relief work which was undertaken in the area during the Depression years.
Statement of Significance	
<i>An extremely good example of an early road complex comprising brick pavements, sandstone guttering and brick road surface. No other examples of brick road paving have been identified in the Municipality. The following is from a DES Committee Meeting Report of August 1996 " The brick paved road is an early example of brick paving laid in a herringbone pattern with sandstone kerb and guttering, assumed to be from the 1920s. It is unknown as to whether the road was constructed by the brickworks or as depression relief work in association with the former Town Hall site. The road is associated with the early extractive clay brick industries of the St Peters district for it lead to the former brick pit belonging to Austral/Speares/Central Brick Company Brickworks. The road is located beside the former St Peters Town Hall site and connects to the former Cooks River Road, one of the earliest roads leading from the township of Sydney.</i>	

6.12.21 Warehouse “Rudders Bond Store” Including Interior – 53-57 Campbell Road

The former Rudders Bond Store is located at 53-57 Campbell Road, St Peters (**Plate 83**). The bond store is listed on the Sydney LEP 2012 as I1405. It is ‘L’ shaped in plan, oriented in a north-east/south-westerly direction and having a second frontage on Burrows Road (**Plate 84**). The arm of the store extends from the north western side of the building. The Store is currently divided into three tenancies, the one on Campbell Road being vacant, the central portion being leased by Sita Pty Ltd as a recycling centre and the third, southern most section is used by Dial-a-Dump. Externally, the store is constructed of brick (painted cream) to the first storey height. The front is distinguished with round-edged brick supporting columns evenly spaced. The central span contains an almost full-height access doors. The other spans (eight in all) contain vertically arranged louvres over windows. The roof is of a complex clerestory style, with the pitched corrugated iron and corrugated clear fibreglass roof covering the four central spans. The fall containing the windows is angled in the opposite direction to the pitch of the roof. The final pitch of the roof extends to the walls. The gable is filled with rectangular aluminium windows. In faded paint across the windows is the word ‘RUDDERS’ (**Plate 84**).

On the interior, the roof structure is supported on arched struts of laminated timber. The timber segments are around 15 millimetres thick and of variable length. The timber is held together with bolted ‘D’ shaped brackets held by welded bolts on either side (**Plate 85**). The arched structure leaves the interior space free of columns (**Plate 86**). **Figure 25** shows the site 1943 and indicates the Bond Store was constructed in two sections. The store fronting Campbell Street had been constructed by the time the aerial was flown, but it appears as though early construction works may have been taking place for the second wing as laminated timber segments can be seen in the adjacent yard. The different building phases are evident in the structure, the later section having a different interior form, which includes columns to allow for the increased width (**Plate 87**).

Although not mentioned in the listing, adjacent to the Bond Store is a smaller structure with a corrugated iron pitched roof and similar brickwork and piers. These appear to have been added to the front of the structure and are not part of the load bearing structure. The gable is filled with timber tiles and board in an Arts and Craft style. An interior inspection of the property would seem to indicate it was initially constructed as a residence, probably for the manager of the Bond Store. The internal ceilings each have plaster moulded motifs in each room (**Plate 89**), although the internal walls of the front three rooms have been removed and it appears as though it was used as a café or canteen for a period of time. Evidence of a commercial kitchen is still evident through a large extractor range hood, sinks and a counter with under-bench refrigeration (**Plate 90**).



Plate 83 Overview of Rudders Bond Store. View south from Campbell Road



Plate 84 Rudders Bond Store from Burrows Road entrance. View north.



Plate 85 Detail of the laminated timber supports held together with 'D' bolts.



Plate 86 Interior of former Rudders Bond Store, showing open expanse created by arched form.



Plate 87 Southern section of Rudders Bond Store showing difference in form.



Plate 88 Building associated with the Rudders Bond Store. View south west



Plate 89 Building associated with the Rudders Bond Store. Interior showing moulded plaster ceilings in hallway.



Plate 90 Building associated with the Rudders Bond Store. Interior showing adaptations for café/canteen.

Historical research indicates the land was owned by Ralph Symonds Pty Ltd, who operated a plywood and veneer factory. Symonds opened his company in 1941. The shortage of steel created an ideal environment for the use of laminated timber and it was widely used until steel became more widely available following the close of World War Two. Symonds became a world authority on laminated timber and glued laminated timber. Thought to be Symond's first building venture is the extant former National Springs igloo building at 52-54 O'Riordan Street in Alexandria, constructed in 1941 and used for the engineering and construction of aircraft during the war. This building has been nominated for listing on the Sydney Local Environmental Plan (#5062448). The advantages of

laminated timber were quick construction times and the ability to create wide spans. The Symonds company also contributed to the Melbourne Myer Music Bowl, Glenbawn and Warragamba Dams and his laminated timbers still grace the interior of the Sydney Opera House.

A plan created in the 1930s or early 1940s, indicates the original Symonds factory was located in the north west portion of the site. This was demolished prior to 1943, by which time a new factory had been constructed fronting Campbell Street (**Figure 25**). A document held by the City of Sydney archives (Item No. 710), indicates that the factory shown in the 1943 aerial was substantially rebuilt and extended several times. The archives also hold a development application from 1959 (Item No. 697-59) showing the current configuration of the building. It is unclear from the plans, however, if any of the structures were existing. Nevertheless, the warehouse, in its present form seems to have been formalised in 1959. Shortly after construction was completed, the council granted permission for the premises to be used for general storage by Rudders – with the property being leased to them by Symonds. Rudders appears to have occupied the building until around 1969 or 1970, when it was purchased by Alltrans Storage (SA) Pty Ltd.

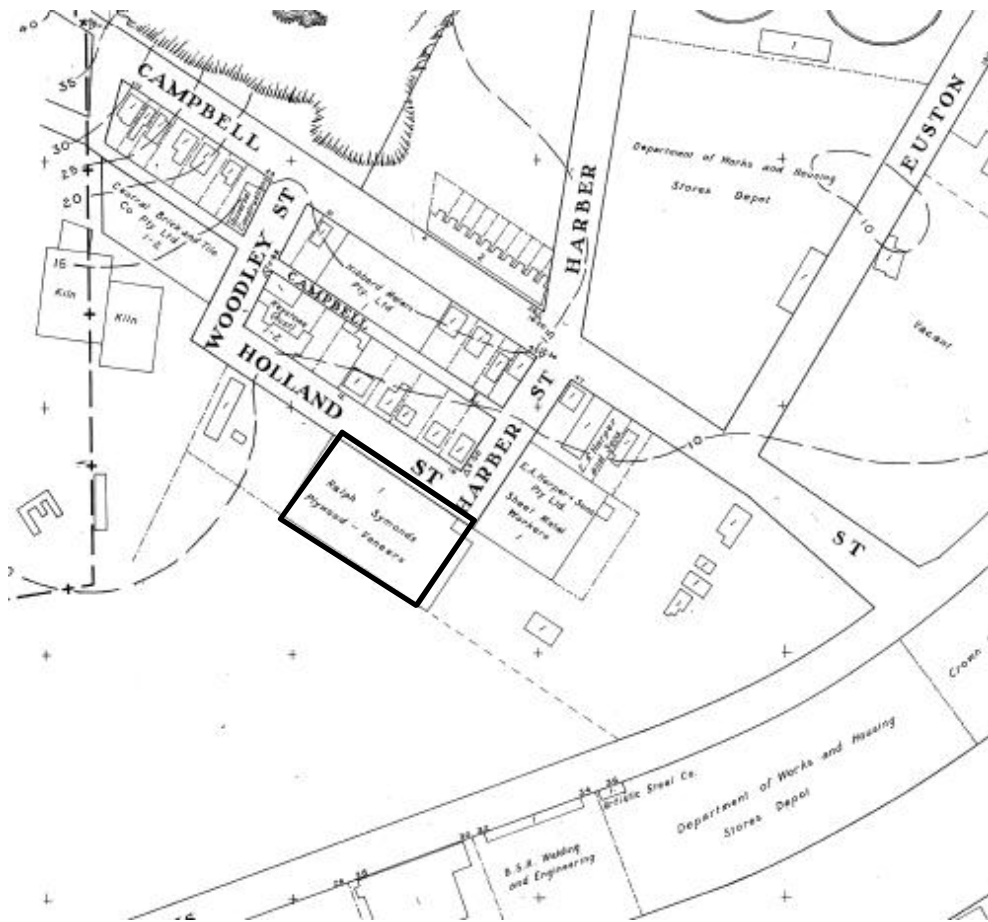


Figure 24 Excerpt of Civic Survey, 1838-1950 – Alexandria West (Source: City of Sydney Archive). Ralph Symonds Factory highlighted.

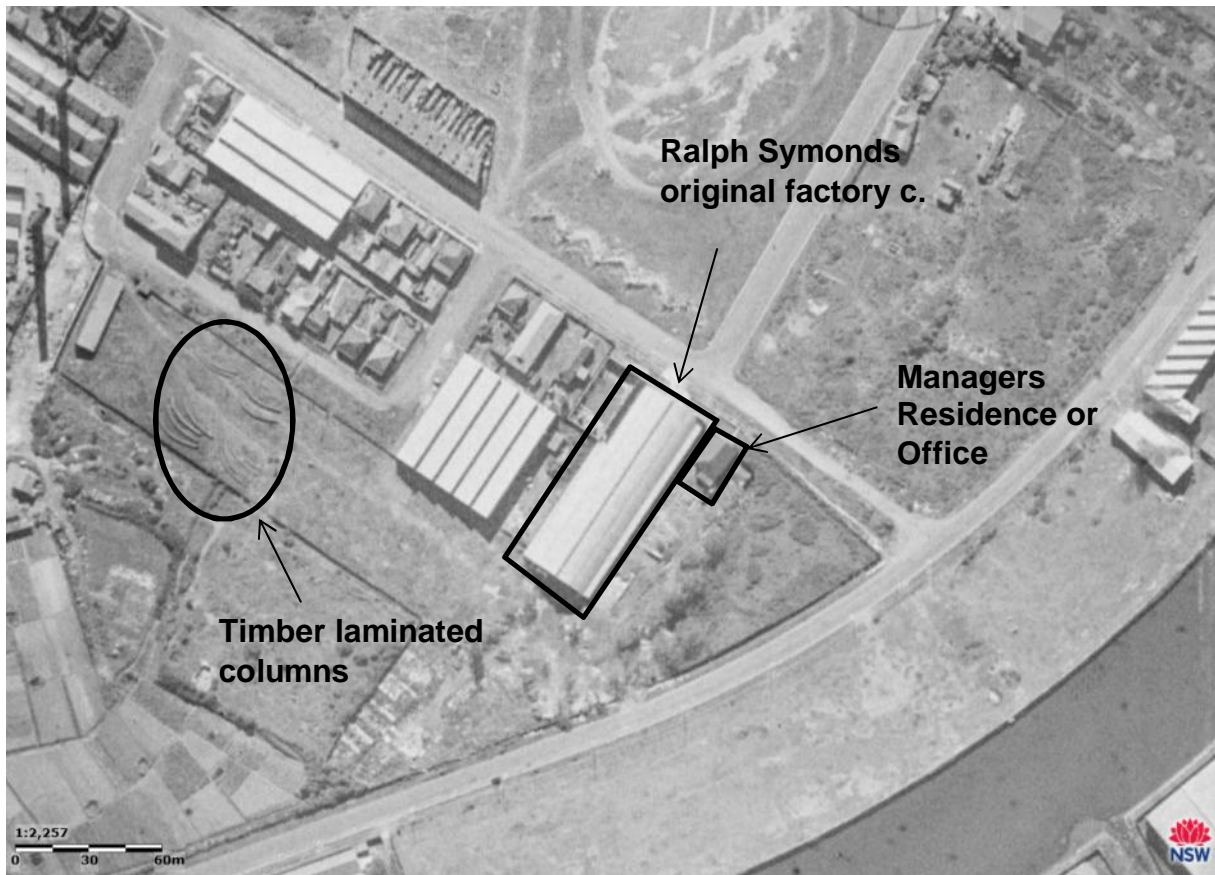


Figure 25 1943 aerial of the Rudders Bond Store with items of interest highlighted (Source: SIX Maps, NSW Land and Property Information).

Table 53 provides an assessment against the criteria for this project, which is a revision of the listed significance, based on the additional historical research and inspection of the interior spaces.

Table 53 Significance assessment for Warehouse “Rudders Bond Store” Including Interior.

Significance Assessment	
Criterion a (historical)	<p>The Rudders Bond Store is of State historical significance through its associations with Ralph Symonds Pty Ltd. The Symonds company were instrumental in the development and wide-spread use of glued structural laminated timber and laminated timber more generally, particularly during the materials shortages of World War Two and the following years.</p> <p>The Rudders Bond Store is of local historical significance as it demonstrates the course of history in St Peters. It is a symbolic site in the move from the ‘dirty industries’ of the brick pits to the warehouse/distribution ‘industrial’ nature of the area now.</p>
Criterion b (associative)	<p>The Rudders Bond Store is to hold State significance under this criterion, being associated with Ralph Symonds and his company. The company constructed several significant buildings during World War Two and in the post-war era were associated with the construction of the Melbourne Myer Music Bowl, Glenbawn and Warragamba Dams and their laminated timbers still grace the interior of the Sydney Opera House.</p>
Criterion c (aesthetic)	<p>The Rudders Bond Store is of State architectural significance, as it reflects an innovative form of construction, being the use of glued laminated timber columns. The curve of the columns allowed the roof to span the width of the Store. The shape of the curves, almost like an inverted hull of a ship, creates an aesthetically pleasing space.</p>
Criterion d (social)	<p>The Rudders Bond Store is not considered to be of social significance.</p>
Criterion e (technical/research)	<p>The Rudders Bond Store is of State technical significance for the use of glued laminated timber columns. Together with the former National Spring Store at 52-54 O’Riordian Street, Alexandria (1941) and the company’s own warehouse (1858-59) on Burroway Road, Homebush, the bond store shows a progression and perfecting of the use of glued laminated timbers, form and function.</p>
Criterion f (rare)	<p>The Rudders Bond Store is of State significance, being a rare example of a warehouse using laminated timber columns. Two other examples have been identified in NSW, being the National Spring Store at 52-54 O’Riordian Street, Alexandria (1941) and the company’s own later warehouse and construction facility (1858-59) on Burroway Road, Homebush (previously listed on Schedule 5 of Sydney Regional Environmental Plan No. 24 – Homebush Bay Area).</p>
Criterion g (representative)	<p>The Rudders Bond Store is not considered to be a representative example as it used an unusual construction technique.</p>
Statement of Significance	
<p>The Rudders Bond Store is of State historical, associative, aesthetic, technical and rarity significance. Historically, the store demonstrates the innovative building techniques developed in response to a lack of materials during World War Two and in the immediate decades following the war. On a local scale, the Bond Store also demonstrates the course of history in St Peters, with the decline of the brickpits and the move towards warehouse and distribution facilities, with some light industrial enterprises. The store is of State significance through its associations with Ralph Symonds, a world expert in the use of glued laminated timber columns and laminated timber in general. The Symonds company was involved in the construction of the Melbourne Myer Music Bowl, Glenbawn and Warragamba Dams and their laminated timbers still grace the interior of the Sydney Opera House. The State aesthetic, technical and rarity significance all relate to the construction method. The use of glued laminated timber columns to allow for a largely column free internal space appears to be rare, only two other extant examples being identified in NSW. The store, together with the examples in Alexandria and Homebush, show the evolution of the design of warehouse space in these materials and is of technical interest. The construction method creates a cathedral-like space that is aesthetically pleasing to the eye.</p>	

6.12.22 St Peters Brickpit Geological Site – corner of Princes Highway and Canal Road

The St Peters Brickpit Geological Site was a registered item on the non-statutory Register of the National Estate (ID # 162040), now a non-statutory register. The site consists of around five hectares on the corner of the Princes Highway and Canal Road. The site was used to as a quarry for shale and clay, used by the nearby Bedford Brickworks (former). The fringes of the site with street frontages are now used by various industrial and light industrial companies, with the curtilage of the item being a 'U' shaped polygon within the central void. The site has been landfilled (refer to **Plate 91**).



Plate 91 St Peters Brickpit Geological Site – eastern wall

The quarry produced Ashfield shale, the lowest known strata within the upper Triassic Wianamatta Group, which sits on top of Hawkesbury Sandstone. The shale formed within the Botany Basin, a sub-basin of the Sydney Basin. According to the non-statutory Register of the National Estate listing, the site “provides an excellent opportunity to observe geological structures in fresh shales in siltstones including features associated with deposition of the sedimentary rocks, later formed fractures such as joints and faults (including normal and reverse faults) and recent mass movements ...” (Australian Heritage Commission, 1991). The shale contains fossils of bivalves, isopods, soft marine organisms (guillemites) and insects as well as plant fragments. Vertebrate fossils have also been identified at the Brickpit and include fish and an amphibian known as *Paracyclotusaurus davidii*. The 2.3 metre long amphibian is thought to have lived in fresh water lakes and have hunted like a crocodile.

The non-statutory Register of the National Estate listing does not contain an assessment against the criteria, however the Statement of Significance summarises the values thus:

St Peter's Brickpit contains a section of prior Botany Bay shoreline sediments of late Pleistocene/early Holocene Age (18,000 to 6,000 years bp). These sediments provide important evidence of the extent to which the waters of Botany Bay rose at the end of the last glaciation. The deposits found within the brickpit are a rare occurrence of this shoreline (Criterion A.1 and B.1). The Ashfield shale in the vicinity of the brickpit has been a rich source of fossils of upper Triassic Age (approximately 210 million years bp). With both vertebrate and invertebrate fossils identified including an amphibian named PARACYCLOTOSAURUS DAVIDII, a member of the sub-class Labyrinthodontia. This species has only been identified from this site. It is one of the few species of this sub-class of this age discovered in Australia to date. This species has contributed to the understanding of the evolution of the Australian amphibian fauna (Criterion A.1). The quarry is used extensively as a teaching resource by local tertiary institutions. It provides an excellent opportunity for students of geology to observe structures in fresh shale and siltstone of the Ashfield formation. These structures include joints, faults and recent mass movement on the edges of the quarry. There is also potential for significant additional fossil finds within the Ashfield formation the former Botany Bay shoreline deposits are of research value, providing evidence of former sea levels around Botany Bay. The shell within the deposit, may yield information on environmental conditions that existed as sea levels rose at the end of the last glaciation (Criterion C.1). The site contains a representative example of Ashfield shale which is the lowest formation of the upper Triassic Wianamatta group of the Sydney Basin the shoreline deposits provide an important example of the former shoreline of Botany Bay (Criterion D.1). The site is of historic interest for the way it demonstrates part of the geographical spread of the St Peter's brick-shale deposits and so complements the restored Bedford Brickworks to the north (Criteria A.4 and B.2).

It is unclear whether the brickpit contains further paleontological specimens of scientific interest. It is recommended that advice from a palaeontologist be sought.

6.12.23 Former Alexandria Spinning Mill

The Former Alexandria Spinning Mill has been identified as an item of potential heritage significance within a proposed draft amendment to the Sydney LEP 2012 (#14). It is currently not on a statutory list. Located at 40A – 42 Maddox Street and 58-68 Euston Road, it was initially constructed in 1924 as a wool and cotton mill. It was later used to manufacture stationery and for printing. The significance assessment provided in the draft listing is provided in **Table 54**.

Table 54 Significance assessment for the Former Alexandria Spinning Mill.

Significance Assessment	
Criterion a (historical)	<p>Built for the Alexandria Spinning Mills from 1924, this complex represents one of Australia's largest wool and cotton mills from the first half of the twentieth century. The complex demonstrates the twentieth-century industrial development of Alexandria and provides evidence of the formerly widespread textiles industry in the City of Sydney.</p> <p>The mills are historically significant for their connection to the Australian production of textiles from the time when Australian-made textiles first began to compete with foreign imports. The scale of the site and its buildings demonstrate the importance of the wool and cotton industry to Sydney and Australia. The construction of these mills provide evidence of the rapid growth of the Australian textile manufacturing industry during the 1920s as the range of production extended to finer qualities of yarn and cloth. Its subsequent expansion demonstrates the growth of the textiles industry to support the war effort for World War II.</p> <p>As a major employer, in particular for girls and women, infamous for its poor working conditions, the former mills are also significant for their connection to the history of employment of women and the development of the labour movement in Sydney. These mills represent the site of major strikes during the 1930s and 1940s, which were a significant event in Sydney's twentieth century movement for improved rights and conditions for the working class, better conditions for women in the workforce and the growth of unions.</p> <p>The former mills complex forms part of one of the largest known collections of industrial and warehouse buildings of its kind in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection of buildings provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.</p>
Criterion b (associative)	<p>The complex has significant associations with the Alexandria Spinning Mills from the 1920s to the 1960s and the knitting wool, knitting books, clothing for the Australian military during World War II, and other products made at this site during this period.</p>
Criterion c (aesthetic)	<p>Dating from 1924 to the 1960s, the collection of buildings within this site represent a good example of a large industrial precinct from the early twentieth century. The buildings on the site demonstrate the distinctive modular building form of inter-war and post-war industrial buildings, characterised by repeated bays of sawtooth roofs containing southern roof lights, load-bearing brick walls and internally exposed timber or steel-framed construction.</p>
Criterion d (social)	<p>Social significance requires further study to ascertain its value to communities. As a major former employer, infamous for its poor working conditions, and site of major strikes of its mostly female workforce in the 1930s and 1940s, the site is likely to have social significance to the community of former workers of the Alexandria Spinning Mills, and their descendants. It may also have significance to the Australian community as the source of the Sug-glo knitting books, Twin-Prufe knitting wool and some clothing that supplied the Australian military during World War II.</p>
Criterion e (technical/research)	<p>No assessment provided.</p>

Significance Assessment	
Criterion f (rare)	No assessment provided.
Criterion g (representative)	The former Alexandria Spinning Mills complex is a good example of a large-scale industrial precinct from the first half of the twentieth century.
Statement of Significance	
<p><i>Built for the Alexandria Spinning Mills from 1924, this complex represents one of Australia's largest wool and cotton mills from the first half of the twentieth century. The complex demonstrates the twentieth-century industrial development of Alexandria and provides evidence of the formerly widespread textiles industry in the City of Sydney.</i></p> <p><i>The mills are historically significant for their connection to the Australian production of textiles from the time when Australian-made textiles first began to compete with foreign imports. The scale of the site and its buildings demonstrate the importance of the wool and cotton industry to Sydney and Australia. The construction of these mills provide evidence of the rapid growth of the Australian textile manufacturing industry during the 1920s as the range of production extended to finer qualities of yarn and cloth. Its subsequent expansion demonstrates the growth of the textiles industry to support the war effort for World War II.</i></p> <p><i>The complex has significant associations with the Alexandria Spinning Mills from the 1920s to the 1960s and the knitting wool, knitting books, Australian military clothing used in World War II, and other products made at this site during this period.</i></p> <p><i>As a major employer, in particular for girls and women, infamous for its poor working conditions, the former mills are also significant for their connection to the history of employment of women and the development of the labour movement in Sydney. These mills represent the site of major strikes during the 1930s and 1940s, which were a significant event in Sydney's twentieth century movement for improved rights and conditions for the working class, better conditions for women in the workforce and the growth of unions. For this reason, the site is likely to have social significance to the community of former workers and their descendants.</i></p> <p><i>Dating from 1924 to the 1960s, the collection of buildings within this site represent a good example of a large industrial precinct from the early twentieth century. The buildings on the site demonstrate the distinctive modular building form of inter-war and post-war industrial buildings, characterised by repeated bays of sawtooth roofs containing southern roof lights, load-bearing brick walls and internally exposed timber or steel-framed construction.</i></p> <p><i>The former mills complex forms part of one of the largest known collections of industrial and warehouse buildings of its kind in Australia, which records City of Sydney's past as one of only two historic industrial heartlands in Australia. This collection of buildings provides evidence of Australia's twentieth century transformation through industrialisation when Sydney became one of the largest industrialised cities in the South Pacific.</i></p> <p><i>The former Alexandria Spinning Mills is of local heritage significance in terms of its historical, aesthetic, social and representative values.</i></p>	

6.13 Non-listed heritage items

During the surveys, areas of potential heritage value were investigated to look for items with heritage value that are not listed and may be impacted by the project. This was achieved via a pedestrian and vehicle survey of the project area. The project area has been previously extensively investigated through heritage surveys commissioned by local councils for the preparation of Local Environmental Plan heritage schedules, as well as by non-statutory organisations such as the National Trust and listings on the non-statutory Register of the National Estate, as nominated by members of the public. In general, it was found that unlisted items, being mainly residential houses, were captured through locally listed heritage conservation areas. Late 19th and early 20th century housing is well represented within the Goodsell Estate Heritage Conservation area (Marrickville Local Environmental Plan C16) and the Cooper Estate (Sydney Local Environmental Plan C2) contains representative examples from the late Victorian era through to the inter-War period. The commercial and retail development of the inner west of Sydney is adequately captured through the King Street conservation areas listed on the Sydney and Marrickville LEP (C47 and C2 respectively, as well as a number of listings for individual corner stores within residential precincts, the group of retail premises listed on the Marrickville LEP 2011 being an example of which. It is therefore considered that the heritage significance of the project area has been well-canvassed and is

adequately captured by the listed heritage items on statutory and non-statutory lists, particularly through the conservation areas.

The pedestrian and vehicle survey identified one item of potential heritage value, being Campbell Street St Peters, within the study area. This should be directly impacted by the project and is described and assessed further in **Section 6.13.1**.

Potential negligible impacts to structures along the preferred project corridor as a result of tunnel construction have also been identified. Nonetheless, existing condition surveys for properties within this corridor would be completed prior to construction and would provide a benchmark against which to measure the condition of the items. So long as the items maintain or are remediated, there would be no impact to their heritage significance. This is discussed further in **Section 7.2**.

6.13.1 Campbell Street, St Peters

The south western side of Campbell Street between Unwins Bridge Road and Church Street is lined with single storey bungalows and terraces interspersed with two storey terraces. With the exception of 82 Campbell Street, which is listed on Road and Maritime's Section 170 Heritage and Conservation Register, numbers 1 to 78 are not listed on a heritage register. The style of the houses indicate they were constructed between the 1880s through to the 1920s or 1930s. In many respects, therefore, the houses on Campbell Street are represented within the Cooper Estate heritage conservation area (Sydney Local Environmental Plan C2). The residences front on to Simpson Park, which on the Campbell Street frontage is lined with a row of mature Moreton Bay Fig trees.

Table 55 Significance assessment for Campbell Street.

Significance Assessment	
Criterion a (historical)	The unlisted residences along Campbell Street have the potential to demonstrate the pattern of development in the area. However, there is no element or feature that elevates this street above others in the area. The item does not meet this criterion.
Criterion b (associative)	Further research into the residents of the houses would be required to determine if any hold associative significance.
Criterion c (aesthetic)	The unlisted residences along Campbell Street demonstrate a diverse range of forms and construction dates. As such the streetscape is not unified. There is no one residence that stands out with regard to form or execution. The item does not meet this criterion
Criterion d (social)	Further research into the community's perception of the street is required to determine its significance under this criterion
Criterion e (technical/research)	There are no known previous structures in the area. The houses have been constructed following the period in which municipal garbage collection was in use. It is therefore considered unlikely the yards contain significant deposits. There is potential for some subfloor deposits to be associated with some of the residences, however, it is considered that such deposits are unlikely to yield new or substantial information that is not available elsewhere.
Criterion f (rare)	The residences are not considered to be rare and therefore do not meet this criterion
Criterion g (representative)	The unlisted residences along Campbell Street could be considered representative of development in the local area, however it is considered this is represented elsewhere within listed conservation areas and items.
Statement of Significance	
<i>The unlisted residences along Campbell Street are not considered to hold heritage significance at a local or State level.</i>	



Appendix D: Historical Archaeological Research Design

EXTENT

**HERITAGE ADVISORS
TO AUSTRALIA AND
THE ASIA PACIFIC**

Incorporating AHMS and Futurepast

WestConnex New M5

Historical Archaeological Research Design

FINAL

Roads and Maritime Services

July 2016



Extent Heritage Pty Ltd

ABN 24 608 666 306
ACN 608 666 306
www.extent.com.au
info@extent.com.au

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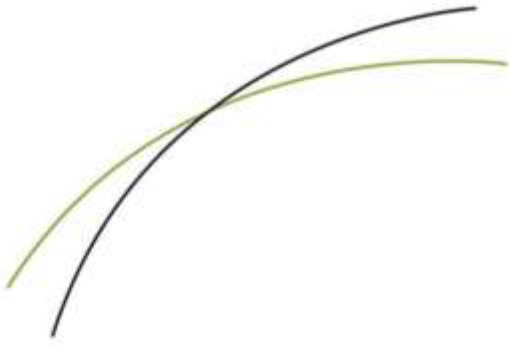
2/729 Elizabeth St
Waterloo NSW 2017
P 02 9555 4000
F 02 9555 7005

MELBOURNE

2/35 Hope St
Brunswick VIC 3056
P 03 9388 0622

PERTH

25/108 St Georges Tce
Perth WA 6000
P 08 9381 5206



Document Control Page

Roads and Maritime Services

WestConnex New M5 – Historical Archaeological Research Design

EXTENT HERITAGE PTY LTD INTERNAL REVIEW/SIGN OFF					
WRITTEN BY	DATE	VERSION	REVIEWED	APPROVED	STATUS
[REDACTED]	08.02.16	1.0	[REDACTED]	12.02.16	Submission to RMS for review prior to receipt of CoAs
[REDACTED]	13.04.16	2.0	[REDACTED]	13.04.16	Submission to RMS for review prior to receipt of CoAs
[REDACTED]	07.07.16	3.0	[REDACTED]		Submission to RMS following receipt of CoAs and OEI comments
[REDACTED]	15.07.16	4.0	[REDACTED]		Submission to RMS in receipt of comments from CDS-JV
[REDACTED]	25.07.16	5.0	[REDACTED]		Submission in response to DPE comments.
[REDACTED]	04.08.16	6.0	[REDACTED]		Submission in response to DPE comments

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Glossary

Aboriginal Cultural Heritage Assessment (ACHA)	A document developed to assess the archaeological and cultural values of an area, generally required as part of an Environmental Assessment (EA).
Aboriginal Heritage Impact Permit (AHIP)	The statutory instrument that the Director General of the Office of Environment and Heritage (OEH) issues under Section 90 of the National Parks and Wildlife Act 1974 to allow the investigation (when not in accordance with certain guidelines), impact and/or destruction of Aboriginal objects. AHIPs are not required for a project seeking approval under Part 3A of the Environmental Planning and Assessment Act 1979.
Aboriginal object	A statutory term defined under the National Parks and Wildlife Act 1974 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'.
Assessing Significance for Historical Archaeological Sites and Relics Department of Planning (2009)	These guidelines provide advice regarding the assessment of the heritage significance of known and potential archaeological resources, features or deposits and the determination of whether they are 'relics' as defined by the Heritage Act. The key issue is whether a deposit, artefact, object or material evidence that survives from the past is significant. If it is significant, it will need to be managed under the 'relics' provisions of the Heritage Act.
Department of Planning and Environment (DPE)	The Consent Authority for development applications made in accordance with Part 3A of the Environmental Planning and Assessment Act 1979.
Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales	Guidelines developed by OEH, outlining the first stage of a two stage process in determining whether Aboriginal objects and/or areas of archaeological interest are present within a subject area. The findings of a due diligence assessment may lead to the development of an Aboriginal Cultural Heritage Assessment.
Environmental Assessment (EA)	A document summarising the assessment of environmental impacts of a development which supports an application for approval under Part 3A of the Environmental Planning and Assessment Act 1979.
Environmental Planning and Assessment Act 1979	Statutory instrument that provides planning controls and requirements for environmental assessment in the development approval process. The Act is administered by the DPI.
Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation (DEC 2005)	Guidelines developed by OEH (then Department of Environment and Conservation) for assessment of Aboriginal heritage when being assessed under Part 3A of the <i>Environmental Planning and Assessment Act 1979</i> . These guidelines are now commonly adopted for assessment in State Significant Development and State Significant Infrastructure projects under Part 4 (Division 4.1) and 5 (Division 5.1) of the <i>Environmental Planning and Assessment Act 1979</i> .

Guidelines for the Preparation of Archaeological Management Plans Department of Planning (2009)	These guidelines aim to assist government authorities, property owners, developers and archaeologists to identify, assess and manage the future development of sites that contain significant historical archaeological remains and deposits. Archaeological Management Plans contain management recommendations and policies for the archaeological resource and identify the procedures to be followed.
Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW	Guidelines developed by OEH to inform the structure and content of an Aboriginal Cultural Heritage Assessment (ACHA).
Heritage Act 1977	The Heritage Act 1977 is a statutory instrument that includes in its objectives the promotion, understanding and conservation of the State's heritage. The purpose of the NSW Heritage Act 1977 (as amended) is to conserve the environmental heritage of the State. Environmental heritage is broadly defined under Section 4 of the Heritage Act as consisting of the following items: 'those places, buildings, works, relics, moveable objects, and precincts, of State or local heritage significance.'
Historical Archaeology Code of Practice Department of Planning (2006)	The Code of Practice is a guide that outlines the roles and areas of responsibility of developers, archaeologists and state and local government authorities. The code proposes an agreed set of procedures that can be accepted voluntarily by all parties.
Isolated Find	An isolated find is usually considered a single artefact or stone tool, but can relate to any product of prehistoric Aboriginal societies. The term "object" is used in the ACHA, to reflect the definitions of Aboriginal stone tools or other products in the National Parks and Wildlife Act 1974.
National Parks and Wildlife Act 1974	The primary piece of legislation for the protection of Aboriginal cultural heritage in NSW. Part 6 of this Act outlines the protection afforded to and offences relating to disturbance of Aboriginal objects. The Act is administered by OEH.
Office of Environment and Heritage (OEH)	The OEH is responsible for managing the provisions of the National Parks and Wildlife Act 1974 and the Heritage Act 1977 (amongst others).
Potential Archaeological Deposit (PAD)	An area assessed as having the potential to contain Aboriginal objects. PADs are commonly identified on the basis of landform types, surface expressions of Aboriginal objects, surrounding archaeological material, disturbance, and a range of other factors. While not defined in the National Parks and Wildlife Act 1974, PADs are generally considered to retain Aboriginal objects and are therefore protected and managed in accordance with that Act.
Proponent	A corporate entity, Government agency or an individual in the private sector which proposes to undertake a development project.
Relic	"relic" means 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.

Site (historical archaeology)

An archaeological site is an area which contains one or more archaeological 'relics'.

Traffic Light Plan

Plan showing levels of historical archaeological research potential and coloured for High, Medium and Low Potential usually with management procedures appropriate to each level of potential.

Unexpected find

A potential 'relic' discovered during the course of work in an area that may have been assessed as having a nil or low potential to contain such material.

Executive Summary

The WestConnex Stage 2 New M5 project has the potential to impact various archaeological resources identified by AECOM Australia Pty Ltd in *WestConnex New M5 Technical Working Paper: Non-Aboriginal Heritage (2015)* - Appendix R to the *WestConnex Environmental Impact Statement*. AECOM identified six areas of potential historic archaeological impact within the project footprint.

These precincts include:

- The western surface works;
- The main alignment tunnels;
- The Kingsgrove Road surface works;
- The Bexley Road surface works;
- The Arncliffe surface works; and
- The St Peters interchange and local road upgrade surface works.

This report has been prepared in accordance with the specific Conditions of Approval attached to the Instrument of Approval (Application SSI 6788) dated 20 April 2016.

As the majority of surface works will occur within the existing M5 road corridor, areas that have been previously disturbed, only two precincts are likely to contain archaeological relics and/or deposits. These include the *Bexley Road surface works* and *St Peters interchange and local road upgrade surface works* precincts:

- Bexley Road Surface Works:
 - Post 1940s relics, Section 1 and south of Section 2.
- St Peters Interchange:
 - Austral Brick Company Ltd, corner of Princes Highway and Canal Road
 - Shea's Creek nineteenth century industries
 - Shea's Creek stream management
- St Peters Local Roads:
 - Historic paving or kerbing throughout (while unlikely, it cannot be ruled out)
 - Air raid trenches, corner of Campbell Road and Euston Road
 - Brickworks Pty Ltd City Yard, Euston Road
 - NSW Brick Company Ltd, intersection of Euston Road and Sydney Park Road
 - Shea's Creek nineteenth century industries

Based on a review of the AECOM (2015) report and further historical research where necessary, this Historical Archaeological Research Design (HARD) determines that although there may be archaeological resources present within the sites outlined above, the ability of these resources to address important research questions is limited. The pattern of land subdivision and residential development in the project area largely dates to the late nineteenth century and the early twentieth century, eras of which there is a pre-existing wealth of information available from other sources. Associated remains, if any, will have limited archaeological research potential. While physical remains associated with local industry in the St Peters area – clay bricks and gasworks – would have more substantive research potential, it would be unlikely that they could provide information that is not already available from other sources. Physical evidence of a number of early industries that made use of Shea's Creek (now the Alexandra Canal) may survive within the St Peters Interchange and St Peters Local Roads work areas. These date from c.1830 to c.1890 and are potentially the earliest industries within the local region. Evidence may also survive, primarily in the form of deposits, of the various stream programs employed during the nineteenth century to manage Shea's Creek.

The management of archaeological resources should be informed by research questions, which are aimed at extracting the maximum information from the resources exposed within the project footprint while allowing for unexpected finds and significant resources with good integrity. They should also be managed in accordance with heritage 'best practice' as identified in the Heritage Council of NSW *Assessing Significance for Historical Archaeological Sites and Relics* (2009), and with one or more of the following strategies:

- Stop work protocol
- Test pits
- Archaeological monitoring

Target open-area manual excavation would only be warranted where relics, deposits or features have been identified as having the significance, integrity and complexity that warrants excavation. Furthermore, the site must be safe for excavation. Given the previous industrial uses of the site, a clear understanding of any soil contamination within any areas of archaeological sensitivity will be required to guide the appropriate, and safe, response to managing that heritage.

The overall strategy for the management of the potential archaeological sites discussed in this HARD is shown in the table below.

SITE	POTENTIAL	STRATEGY	JUSTIFICATION
<i>New M5 project area generally</i>	LOW-NONE	Roads and Maritime Standard Management Procedure: Unexpected Heritage Items	To manage unexpected relics and remains within the broader footprint of the New M5 area
<i>Bexley Road Surface Works</i>	LOW	Roads and Maritime Standard Management Procedure: Unexpected Heritage Items	To manage unexpected relics and remains
<i>St Peters Interchange generally</i>	LOW	Roads and Maritime Standard Management Procedure: Unexpected Heritage Items	To manage unexpected relics and remains
<i>St Peters Interchange - corner of Princes Highway and Canal Road</i>	MODERATE	Archaeological monitoring as specified in HARD	To discern the existence of in-situ remains of the Austral Brick Company Ltd (Ralford Yard)
<i>St Peters Interchange – Burrows Road</i>	MODERATE	Archaeological monitoring as specified in HARD	To discern the existence of in-situ remains of an McNamara's Clear Valley Woolwashing Establishment Shea's Creek and stream management features
<i>St Peters Local Roads – corner of Campbell Road and Euston Road</i>	LOW	Roads and Maritime Standard Management Procedure:	To manage the discovery of any signs of the air raid trenches

		Unexpected Heritage Items	
<i>St Peters Local Roads – corner of Campbell Road and Euston Road</i>	LOW-MODERATE	Roads and Maritime Standard Management Procedure: Unexpected Heritage Items	To manage the discovery of any signs of the Bell's Woolwashing Establishment
<i>St Peters Local Roads – Euston Road</i>	MODERATE	Archaeological monitoring as specified in HARD	To discern the existence of any building fabric associated with the Brickworks Pty Ltd City Yard. To manage the discovery of any building fabric associated with the Brickworks Pty Ltd City Yard.
<i>St Peters Local Roads – Euston Road and Sydney Park Road</i>	LOW	Stop work protocol	To manage the discovery of any building fabric associated with the NSW Brick Company Ltd

Noted above, the historical information on St Peters provided by AECOM is based on a limited examination of the available resources. Additional historical research has been undertaken in this report for the St Peters area to rule out the existence of other structures within the project area. Research shows that the site was primarily used for clay brick production from the 1890s and no additional structures other than the ones identified appear to have been constructed within the project footprint. Nevertheless, if post works Interpretation takes place for the St Peters area, further historical research will be required. This is particularly relevant to the pre-brick making history of the site.

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1 INTRODUCTION

1.1 Background

Extent Heritage Pty Ltd has been commissioned by CPB Contractors on behalf of Roads and Maritime Services (RMS) to prepare a Historical Archaeological Research Design (HARD) for the WestConnex New M5 project (WestConnex Stage 2). This project is part of a larger scheme involving a 33-kilometre motorway that is intended to link Sydney's west with Sydney Airport and the Port Botany precinct.

The road project itself aims to construct and operate the New M5 ('the project'), which would comprise a new, tolled multi-lane road link between the existing M5 East Motorway, east of King Georges Road, and St Peters. The project would also include an interchange at St Peters and connections to the existing road network.

RMS is seeking approval for the project under Part 5.1 of the *Environmental Planning and Assessment Act 1979 (EP&A Act)*. The project is declared to be State significant infrastructure (SSI) under section 115U(2) of the *EP&A Act* by reason of the operation of clause 14 and Schedule 3 of the *State Environmental Planning Policy (State and Regional Development) 2011*. Accordingly, the project is subject to assessment under Part 5.1 of the *EP&A Act* and requires the approval of the Minister for Planning.

1.2 Location

The project is located within the Canterbury, Hurstville, Rockdale, Marrickville, Sydney and Botany Bay local government areas. The project corridor is located between five to twenty kilometres to the south and south-west of the central business district of Sydney. The project will cross the suburbs of Beverly Hills, Kingsgrove, Bexley North, Earlwood, Bardwell Park, Bardwell Valley, Arncliffe, Wolli Creek, Tempe, Sydenham, St Peters, Alexandria and Mascot.

The project area is illustrated in Figure 1 below.

1.3 Project Scope

Specifically, the project scope comprises:

- Twin motorway tunnels between the existing M5 East Motorway (between King Georges Road and Bexley Road) and St Peters. The western portals along the M5 East Motorway would be located east of King Georges Road, and the eastern portals at St Peters would be located in the vicinity of the Princes Highway and Canal Road. Each tunnel would be about nine kilometres in length and would be configured as follows:
 - Between the western portals and Arncliffe, the tunnels would be built to be three lanes but marked for two lanes as part of the project. Any change from two lanes to three lanes would be subject to future environmental assessment and approval.
 - Between the Arncliffe and St Peters, the tunnels would be built to be five lanes but marked for two lanes as part of the project. Any change from two lanes to any of three, four or five lanes would be subject to future environmental assessment and approval.

- The western portals along the M5 East Motorway would be located east of King Georges Road, and the eastern portals at St Peters would be located in the vicinity of the Princes Highway and Canal Road.
- Tunnel stubs to allow for a potential future connection to the future M4-M5 Link and a potential future connection to southern Sydney.
- Surface road widening works along the M5 East Motorway between east of King Georges Road and the new tunnel portals.
- A new road interchange at St Peters, which would initially provide road connections from the main alignment tunnels to Campbell Road and Euston Road, St Peters.
- Two new road bridges across Alexandra Canal which would connect St Peters interchange with Gardeners Road and Bourke Road, Mascot.
- Closure and remediation of the Alexandria Landfill site, to enable the construction and operation of the new St Peters interchange.
- Works to enhance and upgrade local roads near the St Peters interchange.
- Ancillary infrastructure and operational facilities for electronic tolling, signage (including electronic signage), ventilation structures and systems, fire and life safety systems, and emergency evacuation and smoke extraction infrastructure.
- A motorway control centre that would include operation and maintenance facilities
- New service utilities and modifications to existing service utilities.
- Temporary construction facilities and temporary works to facilitate the construction of the project.
- Infrastructure to introduce tolling on the existing M5 East Motorway.
- Surface road upgrade works within the corridor of the M5 East Motorway.

Construction activities associated with the project would generally include:

- Commencement of enabling and temporary works, including construction power, water supply, ancillary site establishment, demolition works, property and utility adjustments and public transport modifications (if required)
- Construction of the road tunnels, interchanges, intersections and roadside infrastructure
- Haulage of spoil generated during tunnelling and excavation activities
- Fitout of the road tunnels and support infrastructure, including ventilation and emergency response systems
- Construction and fitout of the motorway control centre and ancillary operations buildings
- Upgrades to surface roads and construction of bridges
- Implementation of environmental management and pollution control facilities for the project.

1.4 Areas of Potential Archaeological Impact

The *WestConnex New M5 Technical Working Paper: Non-Aboriginal Heritage (2015)* by AECOM Australia Pty Ltd, November 2015, for Roads and Maritime Services is Appendix R to the Environmental Impact Statement for the project. The assessment identified six areas of potential historic archaeological impact within the project footprint. These areas include:

- The western surface works;
- The main alignment tunnels;
- The Kingsgrove Road surface works;
- The Bexley Road surface works;
- The Arncliffe surface works; and
- The St Peters interchange and local road upgrade surface works.

These precincts have been illustrated in Figures 2-7 below.

1.5 Statutory Heritage Context

This *Historical Archaeological Research Design* (HARD) has been prepared in accordance with the recommendations contained in the AECOM *WestConnex New M5 Technical Working Paper: Non-Aboriginal Heritage (2015)* (for state and locally significant archaeological resources). Noted above, the AECOM report includes preliminary assessments of the archaeological significance of the 6 identified areas of potential archaeological impact.

The NSW *Heritage Act* 1977 was enacted to conserve the environmental heritage of NSW. Under section 32 of the *Heritage Act*, places, buildings, works, relics, moveable objects or precincts of heritage significance are protected by means of either Interim Heritage Orders (IHO) or by listing on the NSW State Heritage Register (SHR). Sites that are assessed as having State heritage significance can be listed on the SHR by the Minister on the recommendation of the Heritage Council of NSW. Archaeological relics (i.e. any relics that are buried) are protected by the provisions of Section 139 of the *Heritage Act* (if not protected by listing within a State Heritage Register curtilage). Pursuant to Section 139 of the *Heritage Act*, it is illegal to disturb or excavate any land knowing or suspecting that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed. In such cases, an excavation permit under section 140 of the *Heritage Act* is required. It is to be noted that that no formal listing is required for archaeological relics. Archaeological relics are automatically protected if they are of local significance or higher.

As a State Significant infrastructure project under Part 5.1 of the *EP&A Act*, there are no requirements for permits or approvals under the NSW *Heritage Act* 1977. However, potential archaeological resources and relics within the project footprint are required to be managed in accordance with heritage best practice and the standards established under the NSW *Heritage Act* 1977.

Thus Historical Archaeological Research Design (HARD) has been prepared in accordance with the task appreciate and scope of works document provided by EXTENT Heritage to CPB Contractors:

As part of the construction heritage management plan, an overarching historical archaeological research design would be prepared prior to commencement of construction in consultation with the NSW Heritage Division of OEH. It would describe clear significance thresholds to possible archaeological items that may be uncovered during works and designate when monitoring, testing and / or salvage and excavation should occur in relation to the project works and timing. Post- excavation reporting, including artefact analysis and additional historical research (where necessary), would be required for any historical archaeological investigations undertaken (moderately effective).

1.6 Specific Conditions of Approval

The pertinent conditions of approval detailed in the Instrument of Approval (Application SSI 6788) dated 20 April 2016 are as follows:

Non-Aboriginal Historical Archaeology

D39 Prior to excavation works adjacent to the Alexandra Canal and St Peters Interchange the Proponent must engage a suitably qualified archaeologist whose experience complies with the Heritage Council of NSW's Criteria for Assessment of Excavation Directors (July, 2011) (referred to as the Excavation Director) to oversee and advise on matters associated with historic archaeology and to prepare an Archaeological Research Design and Excavation Methodology. The Archaeological Research Design and Excavation Methodology is to be submitted to the Heritage Council of NSW for review and comment prior to finalisation. The Archaeological Research Design and Excavation Methodology must:

- (a) be consistent with the Heritage Council of NSW's Archaeological Assessment Guideline (1996);
- (b) provide for the detailed analysis of any heritage items discovered during the investigations;
- (c) include management options for discovered heritage items (including options for relocation and display); and
- (d) if the findings of the investigations are significant, provide for the preparation and implementation of a heritage interpretation plan.

Where excavation works are required in the vicinity of potential archaeological sites, the Excavation Director must be present to advise on archaeological issues and oversee excavation works. The Excavation Director must be given the authority to advise on the duration and extent of oversight required during excavation.

D40 In the event that archaeological relics are discovered during construction, all work must cease in the affected area and the Excavation Director must be notified and attend the site to assess the finds, identify their significance level and provide mitigation advice according to the significance level and the impact proposed. In the event that the relics are identified as being of State or local significance, the Heritage Council of NSW must be notified in writing in accordance with section 146 of the Heritage Act 1977. An Archaeological Relics Management Plan specific to the relics or site encountered is to be prepared in consultation with the Heritage Council of NSW which is to outline all feasible and reasonable measures to be implemented to avoid and/or minimise harm to the State or locally significant heritage items.

Works within the vicinity of the find must not recommence without the approval of a suitably qualified and experienced archaeologist in consultation with the Heritage Council of NSW. The Proponent must notify the Secretary in writing of any such encounter of an archaeological relic triggering this condition and must also notify the Secretary of the outcome of consultation with the Heritage Council of NSW.

D41 In the event that archaeological relics are discovered, within 12 months of completing all archaeological investigations, unless otherwise agreed by the Secretary, the Proponent must prepare an Excavation Report containing the findings of any excavations, including artefact analysis and the identification of a final repository of any finds. The Excavation Report must be submitted to the Department, the Heritage Council of NSW, and the local library and the local Historical Society in the relevant local government area(s). A copy of the Excavation Report must be retained with the relics at all times.

D42 The Proponent must undertake photographic and drawn archival recordings of the geological features of the St Peters Brickpit Geological Site prior to undertaking any works that would result in the features being obscured. The recordings should be included in the Heritage Interpretation Plan required by condition 840.

1.7 Approach and Methodology

The aim of this HARD is to:

- Is to present a research methodology and recommended actions, which will be consistent with the Heritage Council of NSW's Archaeological Assessment Guidelines (1996);
- Verify the assessment of archaeological potential outlined in the AECOM Non-Aboriginal Heritage Assessment through an evaluation of identified areas.
- Detail the research themes and questions appropriate to the identified areas of archaeological potential.
- Provide an appropriate strategy for managing the archaeological resources within each identified precinct, including strategies for:
 - Archaeological testing and monitoring;
 - Archaeological open-area excavation and salvage;
 - Managing unexpected archaeological relics exposed during the construction period; and
 - Artefact analysis and reporting;
 - Conservation of archaeological resources; and
 - Heritage interpretation plan.

This report is consistent with the principles and guidelines of the *Burra Charter: The Australian ICOMOS charter for the Conservation of Places of Cultural Significance 2013*. It has been prepared in accordance with the current best-practice guidelines as identified in the *NSW Heritage Manual (1996)*, published by the Heritage Office and Department of Urban Affairs and Planning, and associated supplementary publications, in particular Heritage Council of NSW (2009) *Assessing Significance for Historical Archaeological Sites and 'Relics'*.

1.8 Limitations

This report uses historical documentation and previously established archaeological assessments prepared by third party heritage consultants to describe and assess the heritage significance of land that would be affected by the proposal. This report does not review the Indigenous cultural heritage values of the study area. The quality of some historic maps and aerial photographs used in this report is such that it has not always been possible to accurately identify the locations of potential significant archaeological features.

1.9 Authorship

This report has been prepared by [REDACTED]
[REDACTED] of Extent Heritage Pty Ltd.

[REDACTED]

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1.10 Acknowledgements

EXTENT Heritage acknowledges the aid of AECOM Australia Pty Ltd, CPB Contractors and Roads and Maritime Services in the preparation of this report.

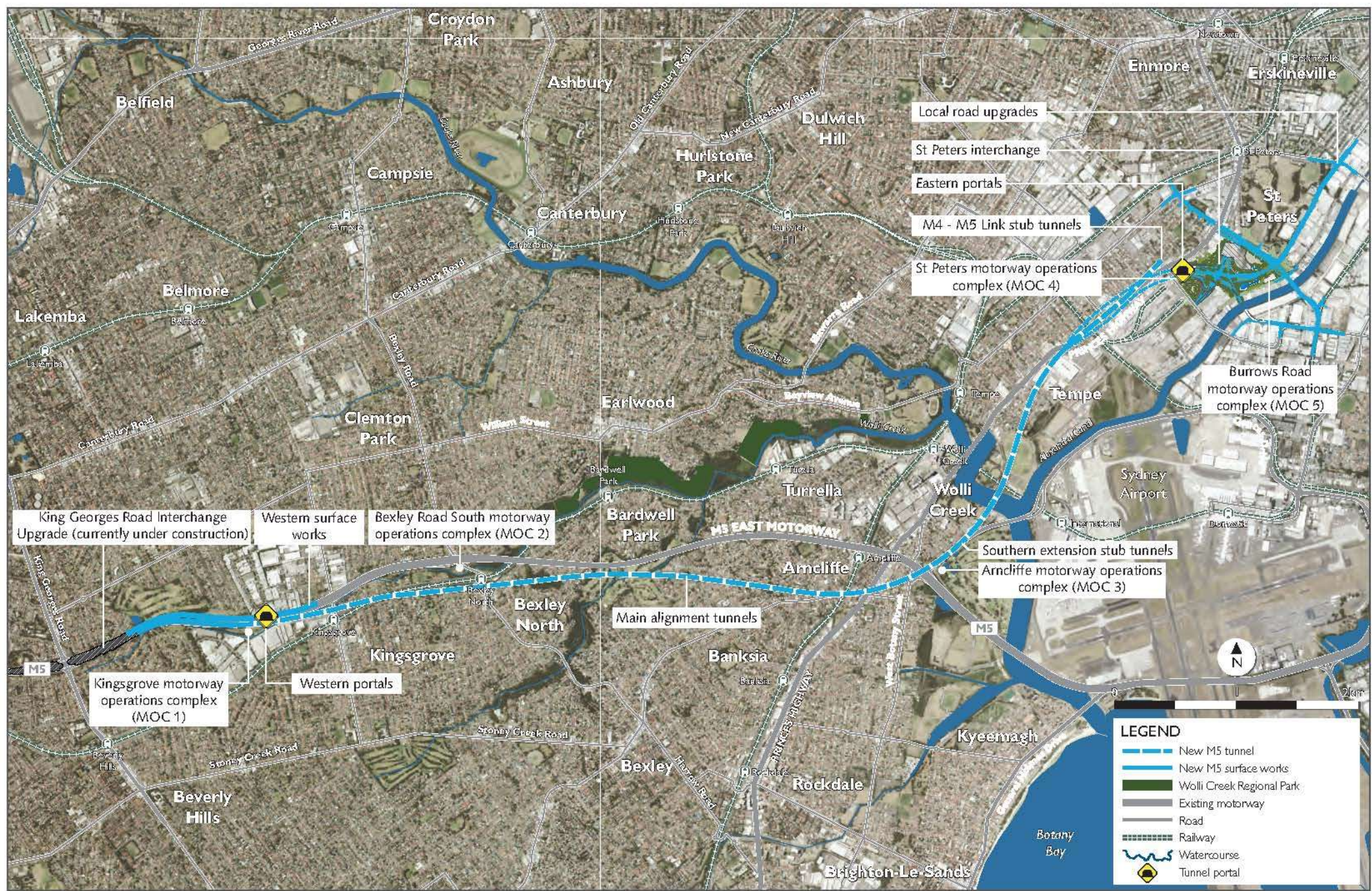


Figure 1 The project

Figure 1. The project area for the New M5. (Source: AECOM (2015), "WestConnex New M5 Technical Working Paper: Non-Aboriginal Heritage", prepared for Roads and Maritime Services, p. 19)



Figure 27 Construction disturbance footprint and heritage inventory results - Map 1 (Western surface works)

Figure 2. Western surface works footprint. (Source: AECOM (2015), "WestConnex New M5 Technical Working Paper: Non-Aboriginal Heritage", prepared for Roads and Maritime Services, p. 121)



Figure 29 Construction disturbance footprint and heritage inventory results - Map 3 (Arncliffe surface works)

Figure 4. Arncliffe surface works footprint. (Source: AECOM (2015), "WestConnex New M5 Technical Working Paper: Non-Aboriginal Heritage", prepared for Roads and Maritime Services, p. 125)



Figure 31 Construction disturbance footprint and heritage inventory results - map 5 (St Peters interchange and local roads)

Figure 6. St Peters interchange and local roads footprints. (Source: AECOM (2015), “WestConnex New M5 Technical Working Paper: Non-Aboriginal Heritage”, prepared for Roads and Maritime Services, p. 129)

2 ARCHAEOLOGICAL POTENTIAL

The *WestConnex New M5 Technical Working Paper: Non-Aboriginal Heritage (2015)* by AECOM Australia Pty Ltd, November 2015, for Roads and Maritime Services is Appendix R to the Environmental Impact Statement for the project. The assessment identified six areas of potential historic archaeological impact within the project footprint (see fig. 7). These areas include:

- The **western surface works**, including:
 - The M5 South West Motorway and M5 East Motorway integration works during construction and operation.
 - The Kingsgrove North construction compound (C1), the Kingsgrove South construction compound (C2) and the Commercial Road construction compound (C3) during construction.
 - The Kingsgrove motorway operations complex (MOC1) during operation.
- The **main alignment tunnels**
- The **Kingsgrove Road surface works**, which would be associated with the installation of tolling infrastructure
- The **Bexley Road surface works**, including:
 - The Bexley Road North construction compound (C4), the Bexley Road South construction compound (C5) and the Bexley Road East construction compound (C6) during construction.
 - The Bexley Road South motorway operations complex (MOC2) during operation.
- The **Arncliffe surface works**, including:
 - The Arncliffe construction compound (C7) during construction.
 - The Arncliffe motorway operations complex (MOC3) during operation, including the Arncliffe ventilation facility.
- The **St Peters interchange and local road upgrade surface works**, including:
 - The St Peters interchange works during construction and operation.
 - The Canal Road construction compound (C8), the Campbell Road construction compound (C9), the Landfill Closure construction compound (C10), the Burrows Road construction compound (C11), the Campbell Road bridge construction compound (C12), the Gardeners Road Bridge construction compound (C13) and the Sydney Park construction compound (C14) during construction.
 - The St Peters motorway operations complex and Burrows Road motorway operations complex, including the motorway control centre and maintenance facility and the interchange ventilation facility, during operation.
 - Local road upgrade works during construction and operation.

The following section reviews and assesses the potential for archaeological relics, sites or places to be present within each of these areas. In addition, the section considers the potential of tram tracks to exist across the project area.

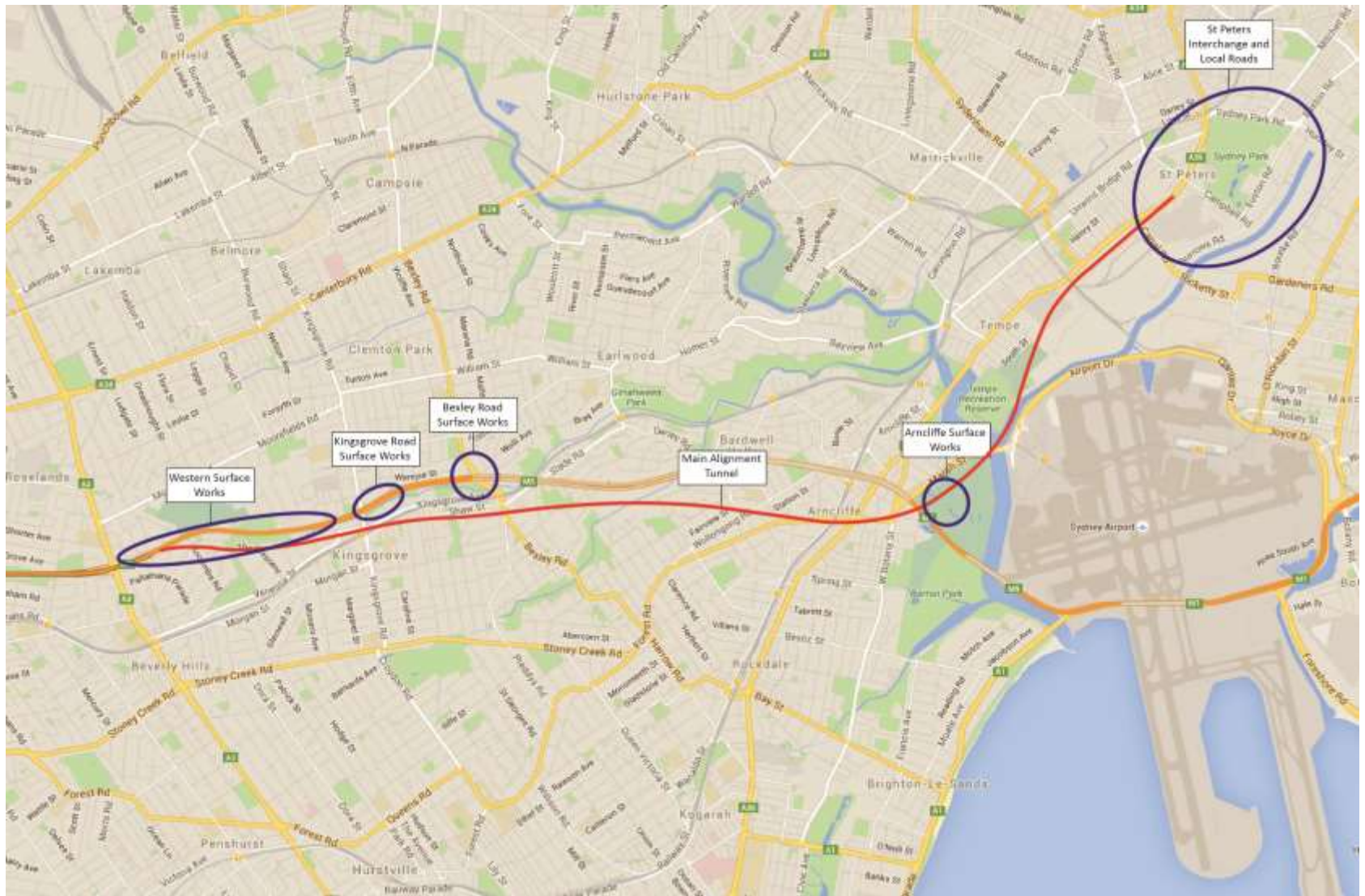


Figure 7. Map showing general areas of archaeological potential within the New M5 project area, as specified by the AECOM Technical Working Paper (Appendix R of EIS). (Source: Nearnap, accessed 04.02.2015)

2.1 Western Surface Works

The archaeological potential for the Western Surface Works, as identified in the RMS EIS summary of AECOM (2015), is as follows:

Historical parish plans and the 1943 aerial photography of Sydney provide evidence of land grants, subdivisions and later residential development in this area. The western surface works would take place within the existing M5 East Motorway road reserve. There is no indication that potential archaeological relics or deposits remain in situ at this location. (p. 13)

Extent Heritage Comment

Parish plans of the site from 1889 and 1903 (see AECOM report, p. 29-32) do not show any structures, although this is not unusual in a semi-rural environment where roads and fences are sufficient markers to position one's self within the landscape. The 1943 aerial (see fig. 8) shows the beginnings of residential development in the area, with two dwellings located on the westernmost section of the project area and a dwelling group located on the easternmost portion of the project area. These dwellings, the historic road alignment and any relics associated with agricultural or domestic activity would have been significantly disturbed and/or removed when the existing M5 Motorway road corridor was established. Therefore, the above statement is concurred with; the works are unlikely to impact any historical archaeological relics or deposits.



Figure 8. 1943 and current (Jan 2016) aerial showing the Western Surface Works footprint (in red). (Source: LPI SIX Maps, accessed 03.02.16 and Nearmap, accessed 04.02.16)

2.2 Main Alignment Tunnels

Each proposed tunnel would be about nine kilometers in length and would be configured as follows:

- Between the western portals and Arncliffe, the tunnels would be built to be three lanes but marked for two lanes as part of the project. Any change from two lanes to three lanes would be subject to future environmental assessment and approval
- Between the Arncliffe and St Peters, the tunnels would be built to be five lanes but marked for two lanes as part of the project. Any change from two lanes to any of three, four or five lanes would be subject to future environmental assessment and approval

The archaeological potential for the main alignment tunnels (see fig. 1 and 7), as identified by AECOM (2015), is as follows:

Archaeological relics or deposits located in the vicinity of the tunnel alignments are unlikely to be impacted by the project. (p. 29)

Extent Heritage Comment

The main alignment tunnels are being constructed using tunnel boring technology and will be at a maximum depth of 40m once the ingress and egress ramps have been constructed. The depth of the tunnel and the construction techniques used will mean that any archaeological relics within this area will be unaffected and above the tunnel alignment.

The areas of the ingress and egress ramps are not in areas which are identified as archaeologically sensitive.

2.3 Kingsgrove Road Surface Works

The archaeological potential for the Kingsgrove Road surface works (see fig. 3), as identified in the RMS EIS summary of AECOM (2015), is as follows:

The Kingsgrove Road surface works would be undertaken within the current road reserve of the M5 East Motorway. There are no identified areas of archaeological potential within the areas likely to be disturbed by the Kingsgrove Road surface works. (p. 13)

Extent Heritage Comment

Located a short distance from the Western Surface Works site, the 1943 aerial (see fig. 9) also shows the beginnings of residential and industrial development in the surrounding area. The site itself, however, does not show any evidence of early historic structures. Furthermore, any historical archaeological relics or deposits would have been significantly disturbed and/or removed when the existing M5 Motorway road corridor was established. The above statement is concurred with; the works are unlikely to impact any historical archaeological relics or deposits.

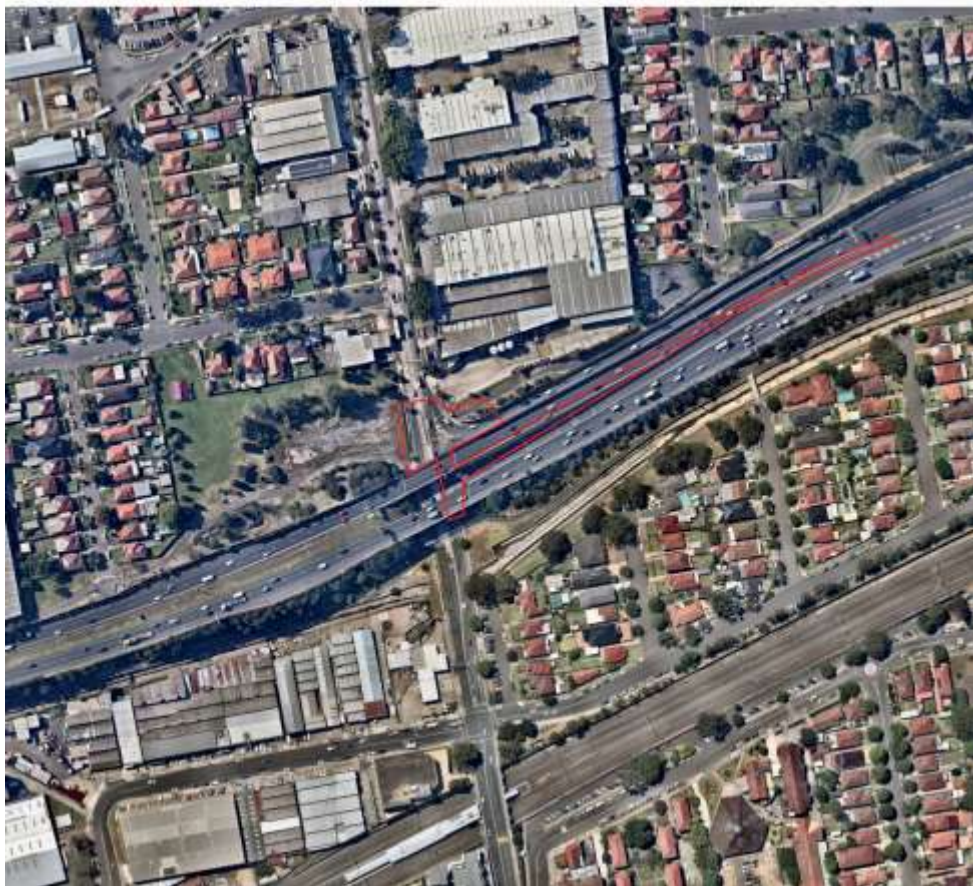


Figure 9. 1943 and current (Jan 2016) aerial overlays showing the Kingsgrove Road Surface Works footprint (in red). (Source: LPI SIX Maps, accessed 03.02.16 and Nearmap, accessed 04.02.16)

2.4 Bexley Road Surface Works

The archaeological potential for the Bexley Road surface works (see fig. 3), as identified in the RMS EIS summary of AECOM (2015), is as follows:

The Bexley Road surface works (which would include construction and operational ancillary facilities) are located within three discrete locations on the eastern and western side of Bexley Road, north of the Bexley North Railway Station. Parish plans and the 1943 aerial photograph indicate that two of the three locations of the Bexley Road surface works remained undeveloped in 1943. Any relics found at these locations would therefore post-date the early 1940s. The Bexley Road east construction compound has been historically occupied by buildings. As the site is currently occupied by the M5 East Motorway trial filtration plant, the potential for remnant relics or deposits is considered to be low. (p. 13)

Extent Heritage Comment

The above assessment is concurred with given a comparison of 1943 and current aerial imagery (see Figure 10). Figure 10 indicates that section 1 and the southern portion of section 2 of the surface works have remained undeveloped since 1943. Furthermore, parish plans shown in the AECOM (2015) report indicate that these areas were open farmland as late as 1903 (AECOM, 2015, p. 33-34). Therefore, it is possible that these areas were never developed. While there is potential for archaeological remains to exist within section 1 and the southern portion of section 2, any finds would most likely post-date the 1940s and be of no significance.

While the northern portion of section 2 shows evidence of previous industrial and/or agricultural use, the site has been previously impacted by the M5 motorway and is unlikely to impact any historical archaeological relics or deposits of local or State heritage significance.

The construction of the M5 Motorway and associated M5 compound saw the removal of at least four structures (most likely dwellings) in Section 3. The New M5 works are therefore unlikely to impact any in-situ historical archaeological relics or deposits in this area.



Figure 10. 1943 and current (Jan 2016) aerial overlays showing the Bexley Road Surface Works footprint (in red). (Source: LPI SIX Maps, accessed 03.02.16 and Nearmap, accessed 04.02.16)

2.5 Arncliffe Surface Works

The archaeological potential for the Arncliffe surface works (see fig. 4), as identified in the RMS EIS summary of AECOM (2015), is as follows:

Parish records show that the area around the Arncliffe surface works area was probably still Crown land before the 1830s. The 1943 aerial photographs show that the surrounding area was used for market gardening, and indicate a number of small structures within the extent of the works. However it is anticipated that relics and deposits associated with those structures would have been removed during the subsequent construction of the golf course and associated reclamation activities. (p. 13)

Extent Heritage Comment

The above assessment is concurred with given the parish plan records shown in the AECOM (2015) report (AECOM, 2015, p. 35) and a comparison of 1943 and current aerial imagery (see fig. 11). No structures or roadways have been constructed within the project footprint. Rather, the site was used for market gardens in the early part of the 20th century. Any remnants of agricultural activity were likely destroyed during the re-landscaping of the area for a golf course; the site would have undergone extensive scrape, level and fill works. Therefore, it is unlikely that the works will impact any historical archaeological relics or deposits associated with any structures, relics or roadways.

Early 20th century market gardens often relied upon processed sewage for fertiliser, from the Botany Sewage Farm and other dumping of human waste. These waste deposits may have contained a variety of small domestic objects and other rubbish mixed in with the waste, however any such materials will lack any historic context. Collected human waste was spread at the Sewage Farm and then often reused as fertiliser on market gardens, thus any relics contained within the waste will have been re-deposited at least twice, and then been subject to tilling during the market garden phase. Thus, while there may be potential for minor domestic relics to exist within the subsurface material, any such objects will lack sufficient historic context or diagnostic value to meet the threshold for State or local heritage significance. Coupled with the subsequent substantial re-landscaping of the area for the gold course, this means this area is considered to have a minimal degree of historical significance and very low integrity.



Figure 11. 1943 and current (Jan 2016) aerial overlays showing the Arnccliffe Surface Works footprint (in red). (Source: LPI SIX Maps, accessed 03.02.16 and Nearmap, accessed 04.02.16)

2.6 St Peters Interchange

The St Peters Interchange and St Peters Local Roads are shown in Figure 12, below.



Figure 12. St Peters Interchange and St Peters Local Roads (red outline) (Basemap: Nearmap)

The archaeological potential for the St Peters Interchange (see Figures. 5-6), as identified by AECOM (2015), is as follows:

Central Brick and Tile Company

It was initially subject to an early colonial land grant. However, the land was swampy and so remained undeveloped for a period. The 1890s parish plan shows Barwon Park, which, according to the 1951 aerial photograph became the Central Brick and Tile Company kilns. Aerial photographs between 1951 and 1997 indicate that the area containing the kilns was used to manage and stockpile wastes and was later disturbed, and that the kilns and associated structures were later demolished. It is unlikely that relics or deposits associated with the Central Brick and Tile Company remain in situ as any remains are likely to have been disturbed by subsequent waste facility related activities.

Austral Brick Company (Ralford Yard)

The Austral Brick Company also established and operated separate kilns and a brickpit in this area in 1975. It is unlikely that relics associated with the Austral Brick Company will remain in these areas, apart from a section on the corner of Princes Highway and Canal Road.

*It is known that the Austral Brick Company established kilns and a brickpit, separate from that operated Central Brick and Tile Company discussed above, on the intersection of Princes Highway and Canal Road, extending south along Canal Road. The extent of the operations can be seen in an excerpt of the 1943 aerial (**Figure 16** – see p. 40). In an aerial from 1986 (**Figure 17** – see p. 41), the extent of earthworks associated with the construction of the currently standing structures, particularly the commercial complex along Canal Road, can be seen. With the exception of a small section on the corner of Princes Highway and Canal Road, these areas were excavated below grade. It is therefore considered unlikely that relics associated with the Austral Brick Company will remain in either of the two areas, other than the previously mentioned section on the corner of Princes Highway and Canal Road. (p. 37-39)*

Extent Heritage Comment

The historical information above is based on a limited examination of the available resources. The assessment does not take into consideration the nineteenth century developmental history of the site – particularly the ‘Barwon Park’ occupancy (see below). This was a significant estate; Barwon Park House stood on the site was later used as the manager’s office for the Central Brick and Tile Company. The building was demolished in 1953. During demolition an Aboriginal shell midden containing a human skeleton was exposed. The sequence of brickyards is also disordered, which highlights issues with dating. Noted in Section 4.4.6 below, if any post works Interpretation takes place for the St Peters area, further historical research will be required.

Central Brick and Tile Company

The Central Brick and Tile Company occupied the site in 1913 and grew to be one of the most important producers of roofing tiles in New South Wales. A fire in 1951 destroyed a large portion of the works. Demolition of most of the fire-damaged building was undertaken in 1953 – the main kiln remained intact but was no longer used for brick or tile production. This structure was removed during the 1960s. Tile production was later restricted to the eastern portion of the Central yard. These remaining structures were removed in 1970 leaving only the boundary walls along Campbell lane and Woodley Street.

That this portion of the St Peters Interchange has undergone significant site disturbance is concurred with. While the site may contain archaeological relics and/or deposits associated with the Central Brick and Tile Company, it is considered unlikely that they will survive to any significant extent. Some subsurface features such as smoke tunnels may be present but such materials will have limited research value.

Austral Brick Company (Ralford Yard)

There is *some potential* for in-situ remains of the Austral Brickworks Company (Ralford Yard) to exist on the corner of the Princes Highway and Canal Road; unlike the remainder of the site, it does not appear to have undergone excavation below grade. The buildings on the site are associated with a 1930s locally listed motor garage, and therefore the potential for other subsurface disturbance such as oil tanks or service pits cannot be discounted (see fig. 18). Historical research shows, however, that the archaeological research potential of the Ralford Yard is limited as the site was not unique among the surrounding brickwork yards. As described in Ron Ringer’s book “The Brickmasters 1788-2008”, Austral Brick purchased the site in 1912 and constructed a shed and chimneystack on site as part of general

enhancements (Ringer, 2008, p. 120-121). In its own right, the Bedford Yard, which is still standing on the corner of Sydney Park Road and the Princes Highway, is a sufficient historical record of the clay brick industry in the area. Maps, images and other historical resources are also widely available for the St Peters area. Therefore, there is little knowledge to be gained by any formal excavation at the Ralford Yard.

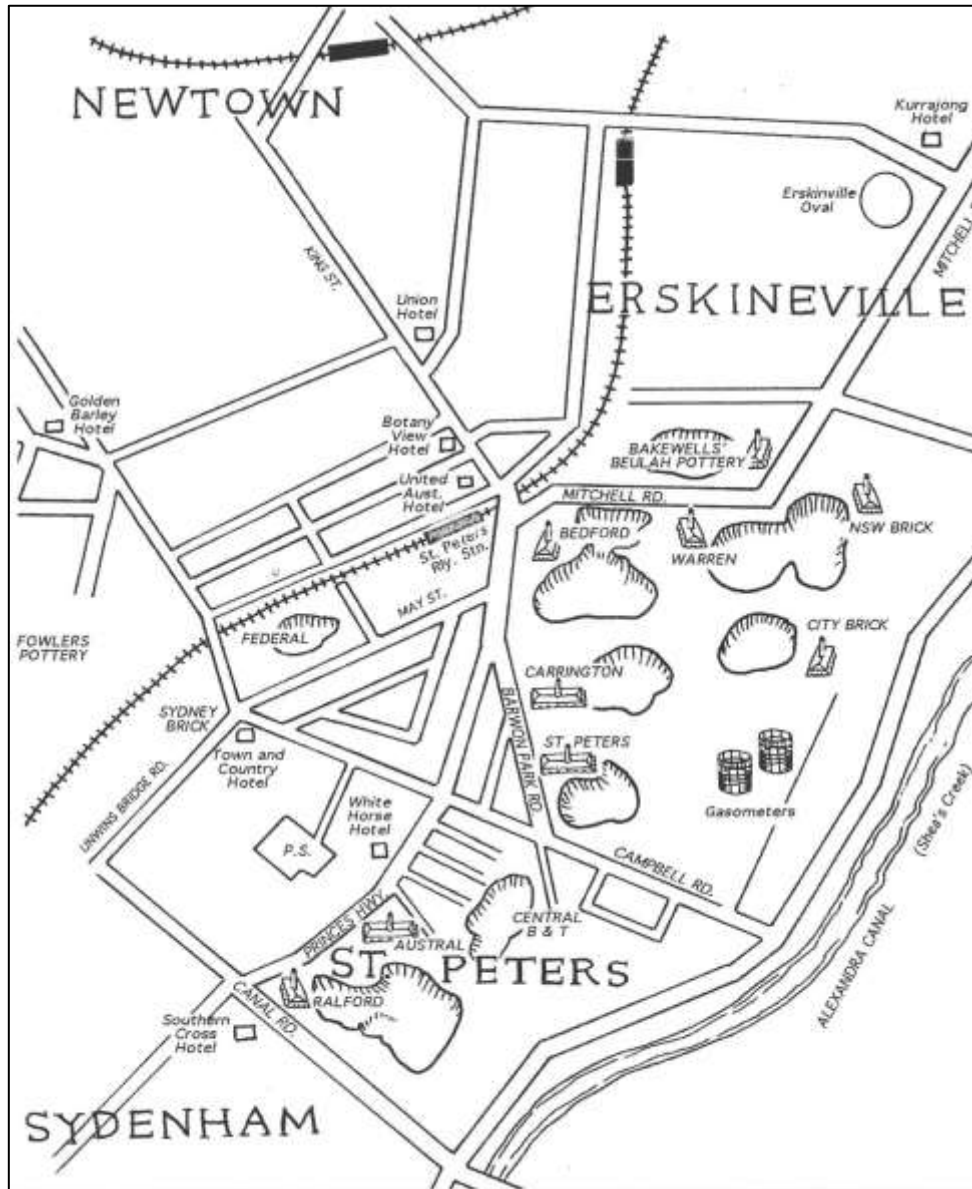


Figure 13. Brickyards and hotels in the district of St Peters, circa 1945. (Source: Ron Ringer (2008) "The Brickmasters 1788-2008", Dry Press Publishing, p. 252)



Excerpt of an 1951 aerial (Source NSW Property & Information)



Excerpt of an 1961 aerial (Source NSW Property & Information)



1978



1986



1989



1997

Figure 14. *Aerial photography of the Central Brick and Tile Company between 1951 and 1997.* (Source: AECOM (2015), "WestConnex New M5 Technical Working Paper: Non-Aboriginal Heritage", prepared for Roads and Maritime Services, p. 38)



Figure 15. *Central Brick and Tile Company, 1929, viewed from northeast (Campbell road in foreground). (Source: Ringer (2008): 154)*



Figure 16. 1943 and current (Jan 2016) overlay showing the location of the Central Brick and Tile Company (east) and the Austral Brick Company (west – corner of Canal Road and Princes Highway). (Source: LPI SIX Maps, accessed 03.02.16 and Nearmap, accessed 04.02.16)



Figure 17. *Looking down into the Austral pit which was shared by The Central Brick and Tile Co Pty Ltd whose four chimney stacks and kilns can be seen to the left. Note: Barwon Park House can be seen in front of the four chimney stacks. Date unknown, but is pre-1953. (Source: Ron Ringer (2008) "The Brickmasters 1788-2008", Dry Press Publishing, p. 251)*

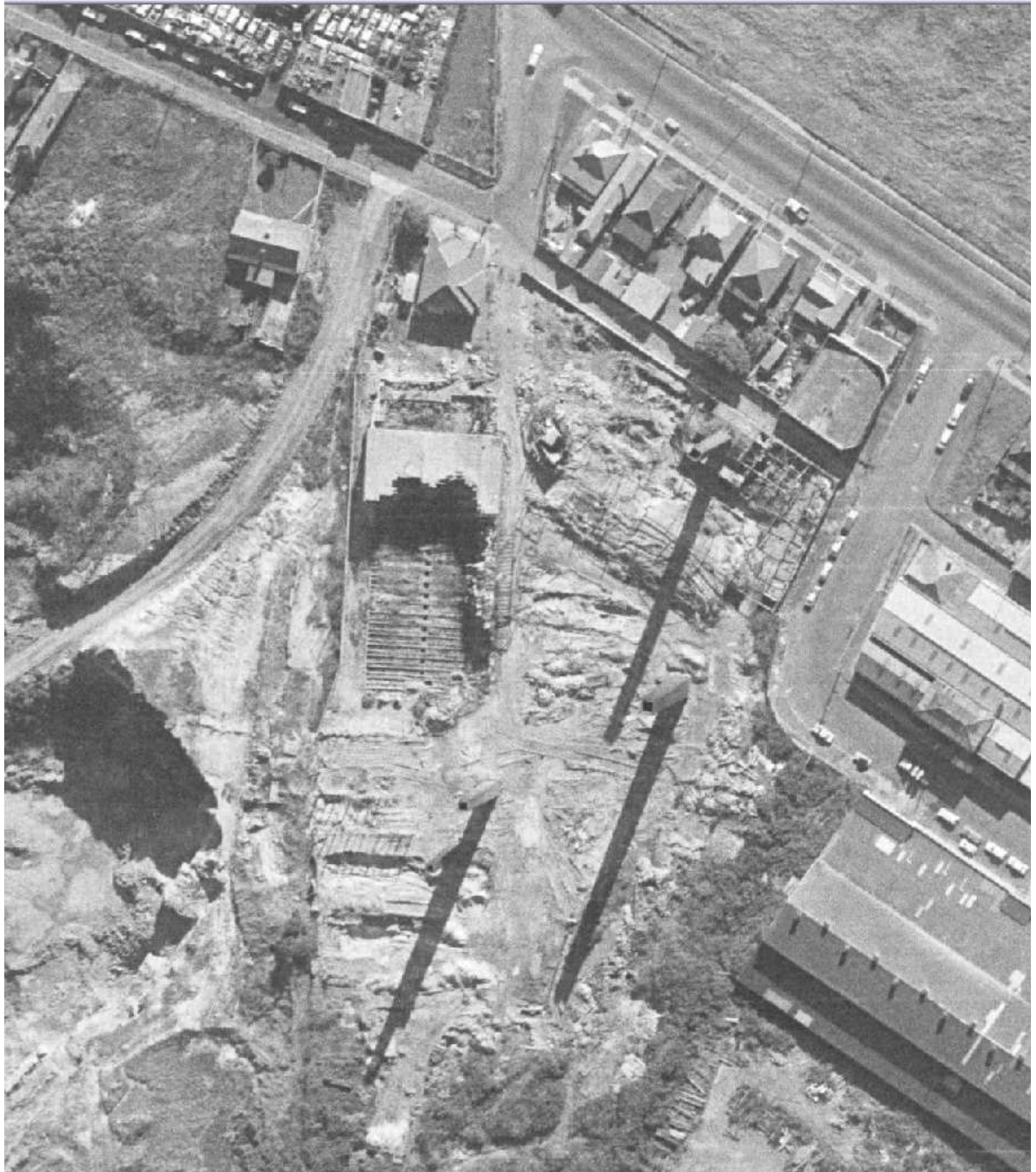


Figure 18. *Central Brick and Tile Company, demolition of the last surviving portion of the works, 1970. (Source: Lands Department)*



Figure 19. Surviving portion of the Central Brick and Tile Company boundary wall, July 2014, looking southeast, Woodley Street in foreground, Campbell Lane at right (Source: Google earth)

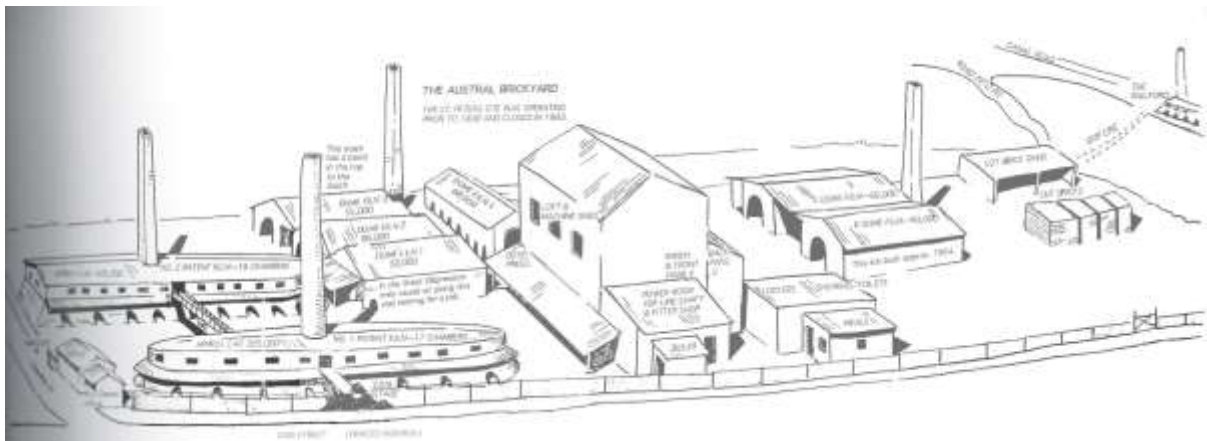


Figure 20. The main yard of Austral Brick, St Peters, circa 1955. (Source: Source: Ron Ringer (2008) "The Brickmasters 1788-2008", Dry Press Publishing, p. 235)



Figure 21. *Austral Brick Co. (Ralford Yard) viewed from the main Austral yard looking south towards Canal Road, May 1946 (Source: SLNSW GPO 1-37370)*



Figure 22. Current aerial image (Jan 2016) indicating the area of archaeological potential (in red) associated with the Austral Brick Co (Ralford Yard) (Source: Nearmap, accessed 04.02.16)



Figure 23. The existing motor garage on the corner of Canal Road and Princes Highway. (Source: Google Maps, streetview, accessed 08.02.16)



Figure 24. *Silent cops [sic] at Cook's River Road and Ricketty Street, St Peters (Princes Highway and Canal Road) 11 January 1946. The extant smaller garage at left with undocumented structure and residence behind. (Source: SLNSW hood_23897)*

Other Issues

Gentlemen's Residences

From the early 1830s to the 1860s Cook's River Road (now the Princes Highway) was lined by the estates of Sydney's merchant class. The St Peters Interchange lies in part on a grant made to Provost Marshal Thomas Smyth in 1799 in what was referred to as the Bulanaming district. The property consisted of 470 acres that extended from what is now St Peters railway Station to Cooks River and encompassed both sides of the Cook's River Road (now Princes Highway). The eastern portion of the Interchange remained un-alienated until 1823 when it became part of William Hutchinson's 'Waterloo Estate'. Most of the valley of Shea's Creek was contained within 'Waterloo Estate' and remained undeveloped until the later nineteenth century.

The Interchange is located on two properties that were formed by a subdivision of Thomas Smyth's grant by Robert Campbell. A large portion of the study area was leased by Alexander Brodie Spark in 1832. The Cook's River Road frontage between Campbell Road and the former Cowper Street (adjacent to the eastern branch of the current Bishop Street) was sublet to Adam Wilson. The section between the former Cowper Street and Canal Road was occupied by Henry Kerrison James. The property occupied by Adam Wilson, a merchant and business associate of Spark was originally leased for the cutting of firewood. Spark constructed a cottage on the site that Wilson later enlarged. The original cottage was referred to as Burwan or Buruwan Cottage and later as Barwon Park House. The building in its final form was a substantial, two-storey residence set in twenty-acres of grounds. Wilson

augmented the site by the construction of a starch manufactory although the precise location is unknown. In 1842 Wilson's business ventures failed and he quit the site although he did claim that the property had been sold to him by Robert Campbell although no proof of such a sale could be produced. The property was subsequently occupied by Thomas John Bown. Bown manufactured plumbers and gasfitters' supplies and fire-extinguishing equipment as well as beer and spirit engines. He served as a City of Sydney alderman between 1864 and 1871 and was instrumental in reforming the Fire Brigade that served the city. Bown obtained the freehold of Barwon Park at some time prior to 1854. He resided here but converted portion of the residence into a public house under the sign of the 'Star and Garter'. The property was used as a pleasure ground and contained a racecourse located on the swampy flat. The hotels amusements included pigeon-shooting and hot-air ballooning (fig. 25). After 1877 the property became a private residence and following occupation of the site by the Central Brick and Tile Company Barwon Park House became the manager's office (fig. 26). The structure was demolished in 1953. The pit formerly located to the west of Barwon Park House has removed most of the Estate except for the former small allotments fronting the Princes Highway, Victoria Street and the southern side of Albert Street. None of these areas are known to contain structural elements that could be attributed to the Barwon Park Estate.

Located immediately to the southwest of the Barwon Park Estate was 'Petersleigh' established by Henry Kerrison James in 1839. The main house was located opposite Silver Street and was set on twelve acres. Henry Kerrison James arrived in New South Wales in 1829 on the same vessel as Alexander Brodie Spark. He became secretary to Bishop William Grant Broughton and Anglican registrar for births, marriages and deaths. The property was later occupied by Michael Metcalfe, merchant and customs agent who died there in 1890. The property then passed to the Boyd family who sold it in 1910 to the Austral Brick Company. The building was demolished soon after and the site subsequently developed for brickworks buildings with part of the site adjacent to the pit being benched. The site of 'Petersleigh' lies outside the development area or has been removed by reductions in ground levels since 1910.

During Metcalfe's occupancy of 'Petersliegh' the eastern section of the property was subdivided in the 1860s to form a separate estate. This was a three-acre property named 'Finningham' occupied by Henry Stephen Bond. This property was also acquired in 1910 by the Austral Brick Company. The site of the main house lies outside the development area.



Figure 25. 'A Steeple Chase at Newtown, Near Sydney 1854' A fanciful rendering of the steeplechase run on 26 December 1854 at Barwon Park, Governor Fitzroy and staff at left. (Source: J. R Clarke *The Australian picture pleasure book* nla pic-an8021489)



Figure 26. Barwon Park House (arrowed), 1943. (Source: NSW LPI)

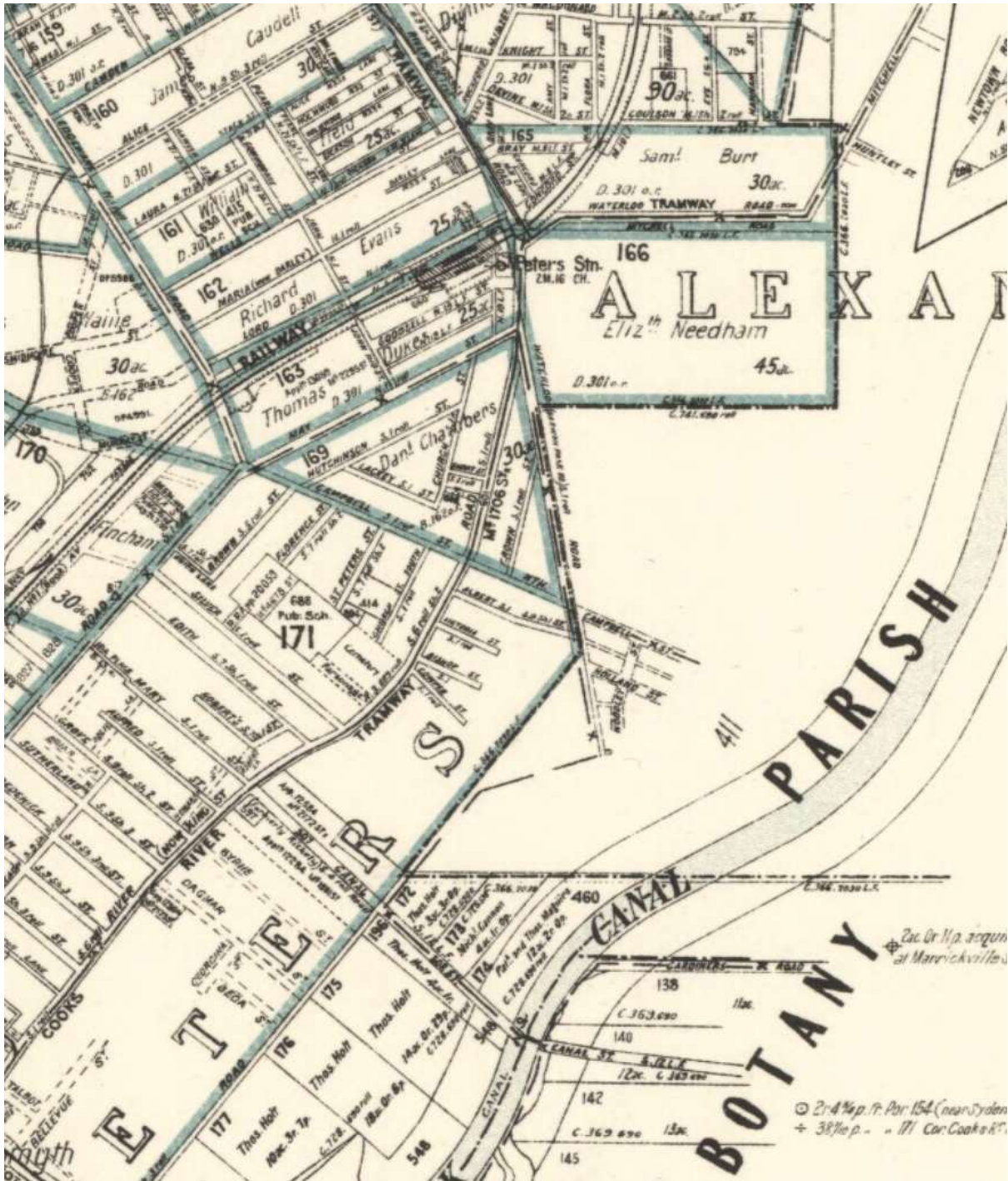


Figure 27. Early land grants in the region of the St Peter's Interchange (blue boundaries). Source: Parish of Petersham County of Cumberland NLA obj-233833962



Figure 28. Subdivision plan showing 'Petersleigh' and 'Finningham' (Source: Marrickville Council Archaeology Summary Sheet – October 2001 PETERSLEIGH, St Peters)

Other Industries

As mentioned above, the Barwon Park Estate contained a starch manufactory. This was in operation by 1832 and is one of the earliest forms of manufacturing in the St Peters district.

A number of industries later used the waters of Shea's Creek. These were generally noxious trades that required both extensive grounds and access to water. The 1848 *Slaughter House Act* effectively removed a number of noxious trades associated with the processing of animals. These were generally located at the head of Shea's Creek in the Waterloo district. By the early 1880s two large establishments that undertook wool-scouring were located within part of the study area near the intersection of Campbell Road and Burrows Road. Bell's Woolwashing Establishment was located on the northern side of Campbell Road between Euston Road and the creek (fig.30).

A second extensive establishment was located on the southern side of the Campbell Road/Burrows Road intersection. This was located, in part, within the current car park behind Rudders Bond. This complex has been tentatively identified as Henry McNamara's Clear Valley Woolwashing Establishment (fig.30). These works are first recorded in 1883 and undertook the processing of fleece and hides. McNamara was a successful carcass butcher who extended his range of activities to include the processing of animal products. Prior to construction of the Alexandra Canal he relocated to the Quatre Bras Dam at Waterloo and was pursued by Inspectors of Nuisances for a number of municipalities into the following century. McNamara was an infamous polluter.

Stream Management

The matter of management of Shea's Creek during the nineteenth century was not examined in detail in the AECOM (2015) report. A small portion of works undertaken during the nineteenth century may have left physical remains within the St Peters Interchange work zone. These include channels, a bund and a dam. These features are only likely to be identified through an analysis of borelogs undertaken for contaminant testing and through monitoring of geotechnical testing in association with the two bridge approaches.

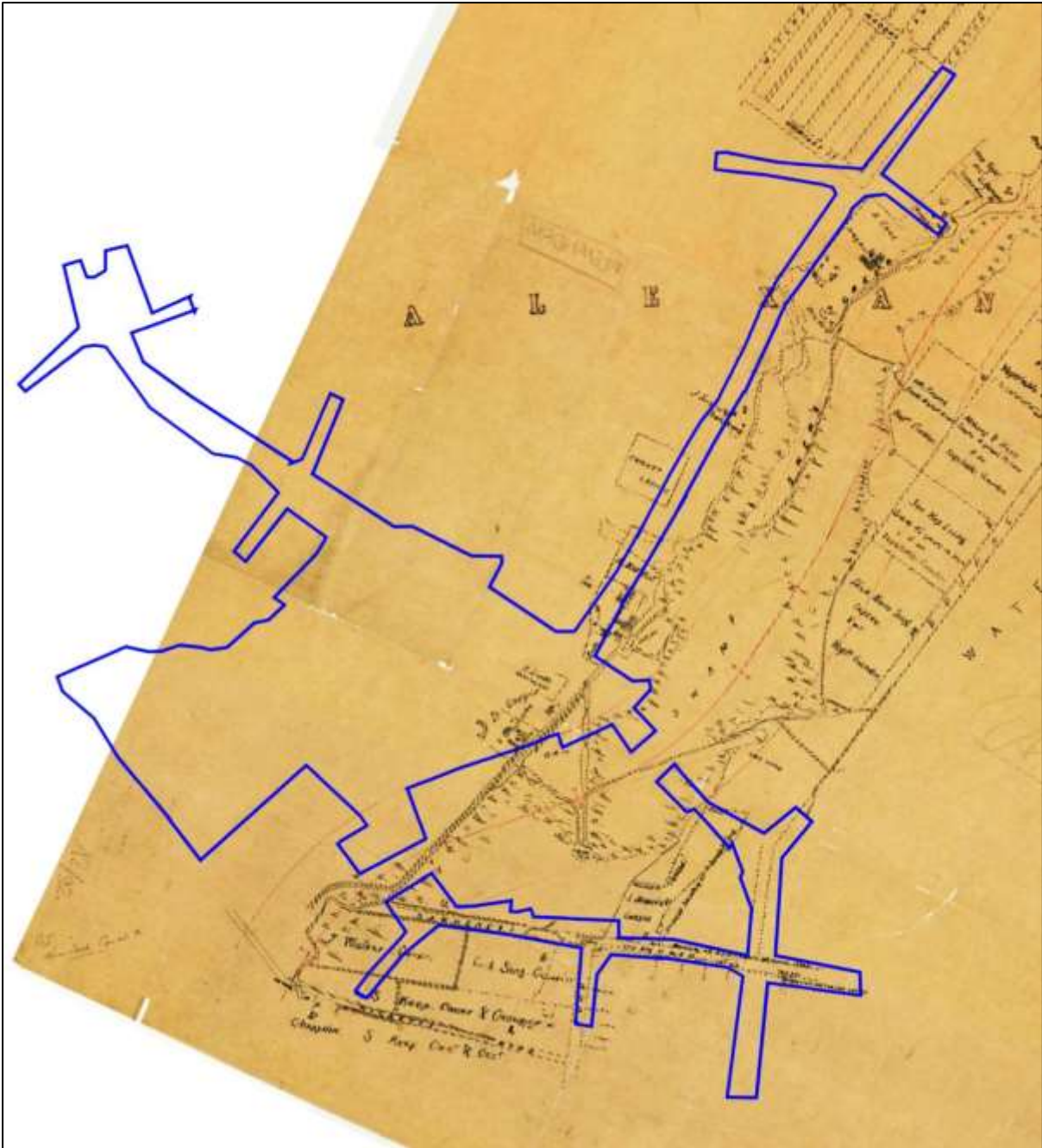


Figure 29. Sheas Creek from Plans compiled in the Survey Office 1888. The interchange and local road works boundary shown in blue. (Source: SLNSW Alexandria subdivision plans a9617094h and a9617095h)

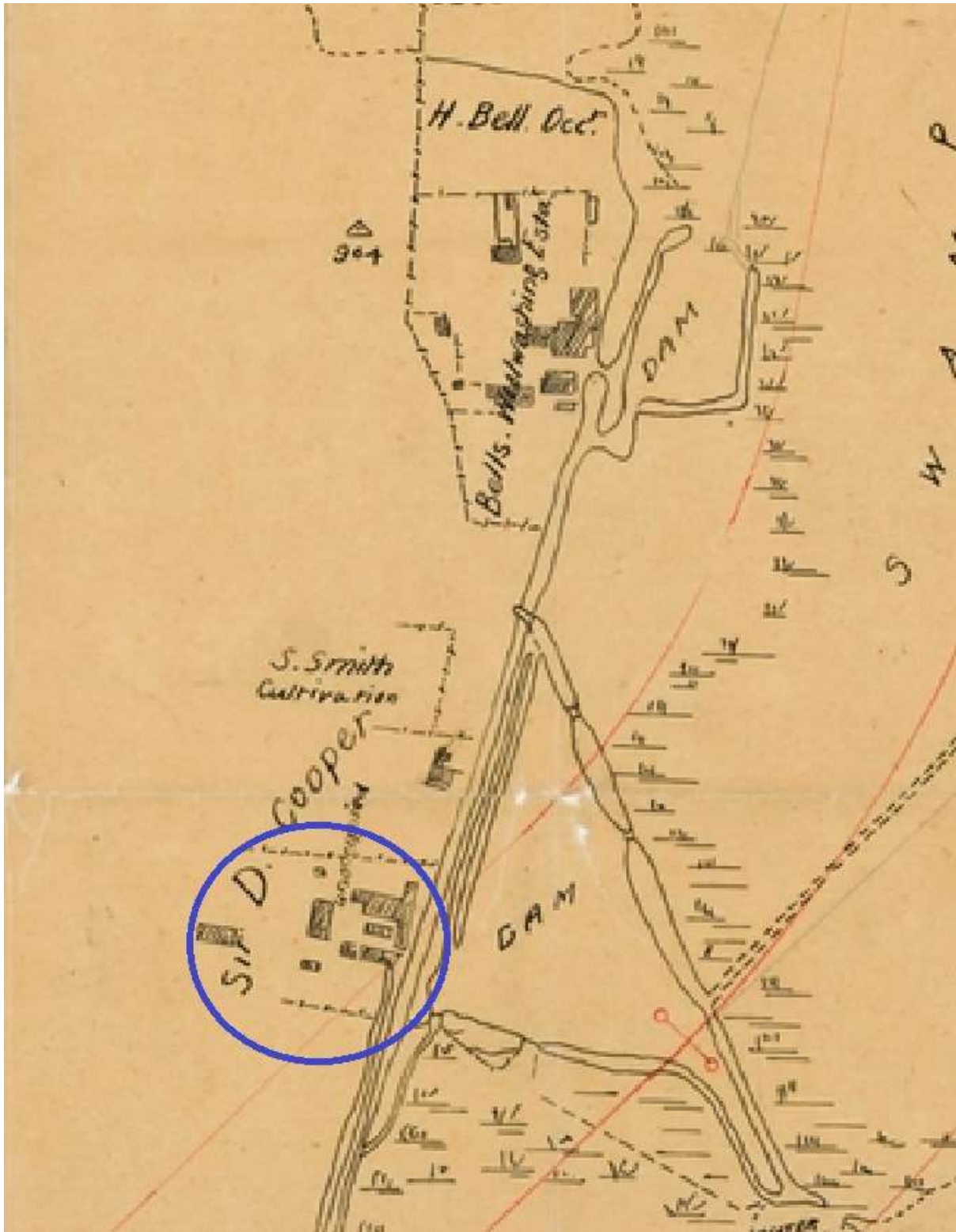


Figure 30. Detail of above map showing features in the vicinity of Campbell Road Euston Road and Burrows Road. The property marked 'Sir D. Cooper' (circled in blue) – formerly McNamara's Woolwashing Establishment, is now occupied in part by the car park at the rear of the Rudders Bond complex. (Source: SLNSW Alexandria subdivision plans a9617094h and a9617095h)

2.7 St Peters Local Road Upgrade Works

The archaeological potential for the St Peters local road upgrade works (see fig. 5-6), as identified by AECOM (2015), is as follows:

The local roads upgrades would be largely undertaken within current road reserves and associated footpaths or in industrial areas that have been developed recently. There are no archaeological areas of potential anticipated within the areas likely to be disturbed by these works.

The exception to this is the works along Campbell and Euston Roads, which includes some works extending into Sydney Park. Historically, this area was used for industrial purposes and contained a number of brickworks and two gas storage tanks. The historic aerial indicates earthworks near the intersection of Campbell and Euston Roads that are indicative of air raid shelters, possibly built to protect those who worked at the gas storage tanks. The construction may uncover evidence of these earthworks.

Historical plans and the aerial indicate the local road upgrade may also impact on archaeological relics associated with two brickworks. The first was located on Euston Road and is referred to as the Brickworks Pty Ltd City Yard on a 1956 plan of the area. The works appears to have consisted of two kilns with three ancillary buildings, with perhaps a residence on the northern boundary. The overlay of the project with the historical aerial indicates that the works would extend into areas where one of the ancillary buildings, the potential residence and possibly the verandah/awning of one of the kiln buildings were located.

The second, The NSW Brick Company Ltd, was located at the intersection of Euston Road and Sydney Park Road (formerly Huntley Street). The 1956 plan indicates the project may impact on areas formerly containing portions of four kilns and what was possibly a warehouse. (p. 41)

Extent Heritage Comment

The above assessment of the local roads is largely concurred with as the proposed works are largely confined within areas that have undergone significant ground disturbance. As they mainly relate to historical road alignments, the first 0.4m of ground is known to be heavily disturbed. It is anticipated that the first 100mm will consist of concrete, under-laid by 300mm of road base and fill. Therefore, any intact soils or relics are likely to survive at depths of greater than 400mm below the existing surface. Existing underground service facilities have also been installed and upgraded over time. Therefore, these areas are considered unlikely to contain historic archaeological relics or deposits, although, the potential for minor elements such as historic kerbing or paving cannot be entirely ruled out.

As identified above, the exception to this assessment includes the following three areas.

1. Intersection of Campbell Road and Euston Road

While the Australian Gaslight Company Co Ltd site on Euston Road has been demolished and re-developed, the area on the corner of Campbell and Euston Roads has remained largely unchanged and may contain traces of WW2 air raid trenches (see fig. 21). It must be noted here that the AECOM (2015) report refers to them as “shelters”; the 1943 aerial shows them as trenches rather than shelters. In addition, the AECOM (2015) report claims that the trenches may have been constructed to protect those who worked at the gas storage tanks. This is unlikely, as air raid facilities were conventionally built for public institutions. As can be seen on a 1950 plan of the area (see fig. 20), the land was owned by the Department of Works and Housing, a Commonwealth body which was formerly named the

Department of the Interior. As the corner site appears to have never been developed, the trenches may have been constructed for three reasons:

- a) In preparation for proposed future use of the wider site by the government body
- b) Protection for the Ralph Symonds Plywood-Veneers company on Campbell Road which may have been contracted by the government to produce WW2 goods
- c) There was a small racetrack between Campbell Street and gasometers

These theories are speculative at this stage and should not be viewed as fact. Further research would be required if any archaeological deposits were to be exposed during works.

Trenches of this type were common in open space throughout Sydney during World War II and may be readily seen in other areas of the city on the 1943 aerial survey. While details of the trench construction are unclear, it is likely they were little more than 1-2m deep by 1-2m with linear and zig-zag cuts into the earth, surmounted with earthen redoubts made from the excavated materials, possibly supplemented with timber shoring or sandbags. As there were never any air raids on Sydney these trenches remained unused for their intended purpose. Any surviving evidence of the trenches would be limited to evidence of the cut of the trench, which was likely backfilled with the previous-excavated redoubt material. There is some minor potential to learn additional information regarding the dimensions and construction techniques associated with the trench construction. However, these would have been built to standard military designed and are largely known from the historical record. There is unlikely to be any use or occupation deposits associated with the trenches.

The intersection of Campbell Road and Euston Road was also the site of Bell's Wool Washing establishment (see figure 30). Some physical remains may survive but are likely to have been compromised by the construction of Euston Road in the period after 1890. The history and physical extent of this complex was not examined in detail in the AECOM (2015) report.

2. Euston Road

Works on Euston Road may encounter building footings of the Brickworks Pty Ltd City Yard (see fig. 27). The works would extend into areas where one of the ancillary buildings, a potential residence and possibly the verandah/awning of one of the kiln buildings were located.

Brickworks Pty Ltd is said to have purchased City Brick Co. Pty Ltd at Euston Road, Alexandria in September 1938¹. Works on Euston Road may encounter a building which most likely served an administrative purpose. Given the date of the Brickworks, any remains are unlikely to contain occupation material or deposits, other than the outline of the building footprint, which is already known from the historical record.

3. Intersection of Euston Road and Sydney Park Road

Although the archaeological potential is low due to residential, commercial and roadway development in the area, proposed works at the intersection of Euston Road and Sydney Park Road may encounter remnants of the NSW Brick Company Ltd (see fig. 23).

¹ Ron Ringer (2008) "The Brickmasters 1788-2008", Dry Press Publishing, p.197

Concluding Note

Noted above, the historical information on St Peters provided by AECOM is based on a limited examination of the available resources. Additional historical research has been undertaken in this report for the St Peters area to rule out the existence of other structures within the project area. Research shows that the site was primarily used for clay brick production from the 1890s and no additional structures other than the ones identified appear to have been constructed within the project footprint. Nevertheless, if post works Interpretation takes place for the St Peters area, further historical research will be required. This is particularly relevant to the pre-brick making history of the site.



Figure 31. 1943 aerial showing the proposed areas of impact (in red) along Campbell and Euston Roads, St Peters. (Source: AECOM (2015), “WestConnex New M5 Technical Working Paper: Non-Aboriginal Heritage”, prepared for Roads and Maritime Services, p. 42)

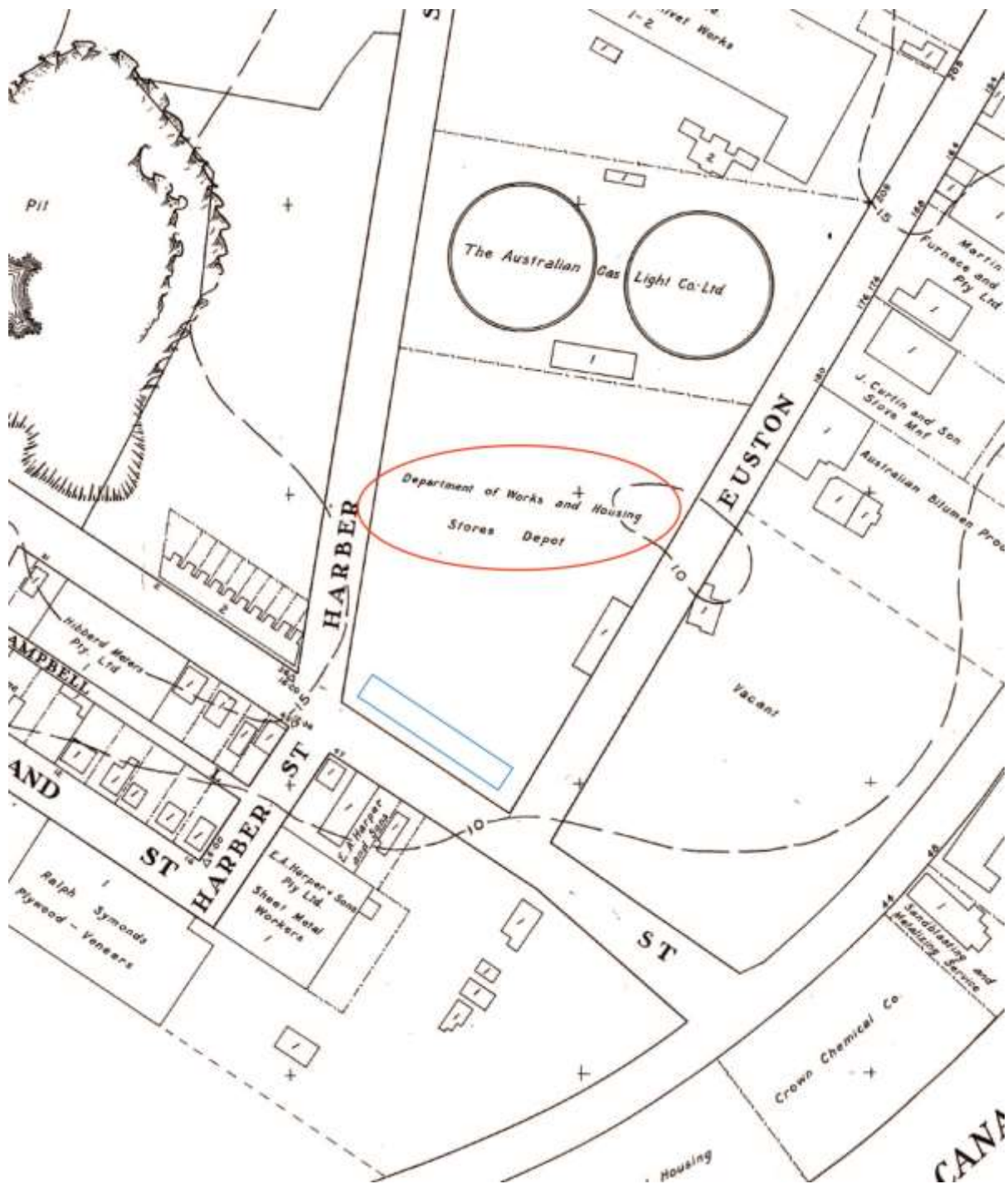


Figure 32. 1950 Civic Survey Map, showing the site on the corner of Campbell Road and Euston Road owned by “Department Works and Housing”. (Source: Civic Survey, 1938-1950 – Alexandria West)



Figure 33. 1943 aerial showing what is likely to be air raid trenches (in red). (Source: LPI SIX Maps, accessed 04.02.16)



Figure 34. 1943 aerial showing the Brickworks Pty Ltd City Yard on Euston Road in conjunction with the proposed roadway works (in red). (Source: AECOM (2015), "WestConnex New M5 Technical Working Paper: Non-Aboriginal Heritage", prepared for Roads and Maritime Services, p. 45)

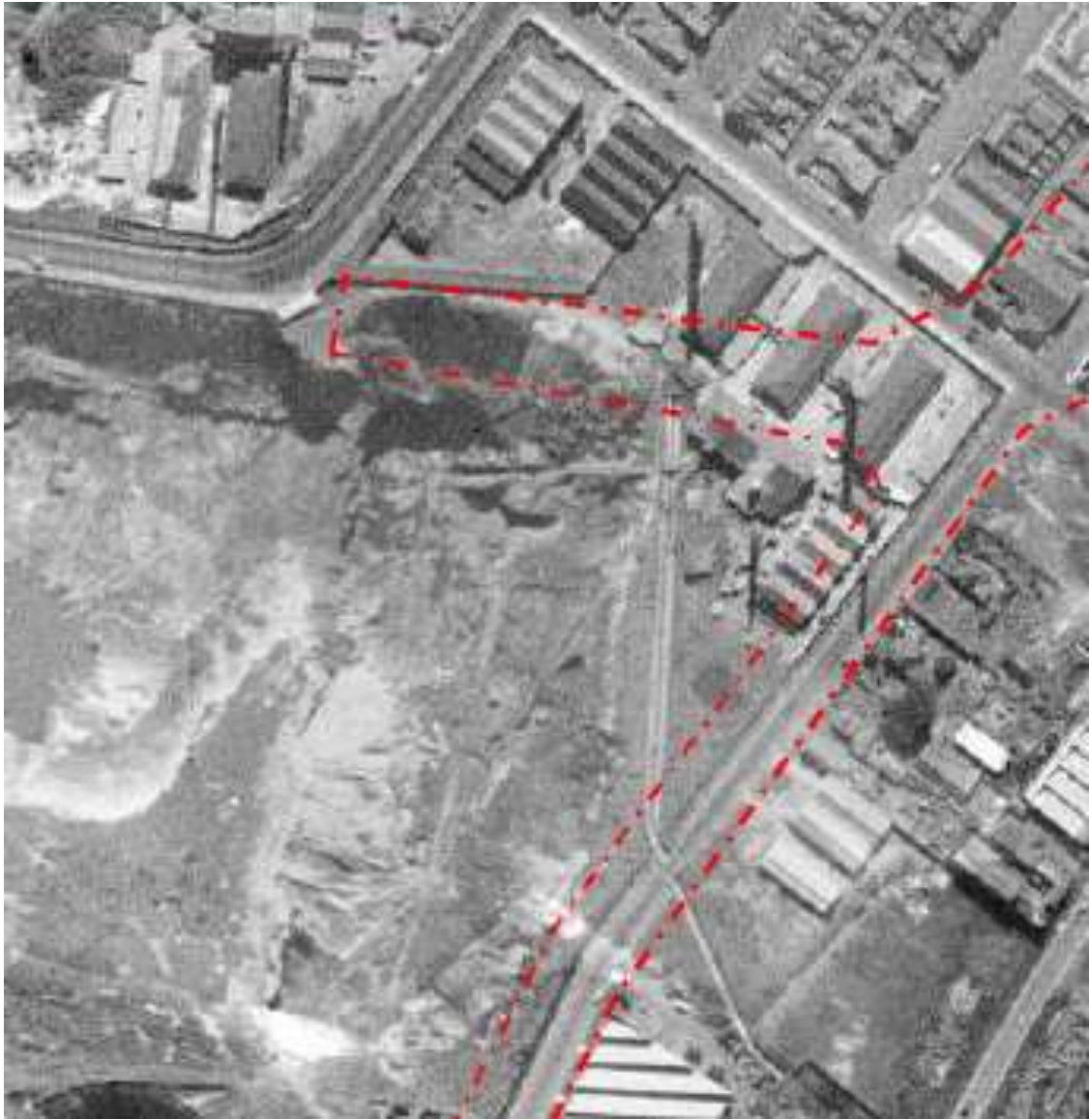


Figure 35. *1943 aerial showing the NSW Brick Company Ltd and the proposed area of impact (in red) at what is now the intersection of Euston Road and Sydney Park Road. (Source: AECOM (2015), “WestConnex New M5 Technical Working Paper: Non-Aboriginal Heritage”, prepared for Roads and Maritime Services, p. 42)*

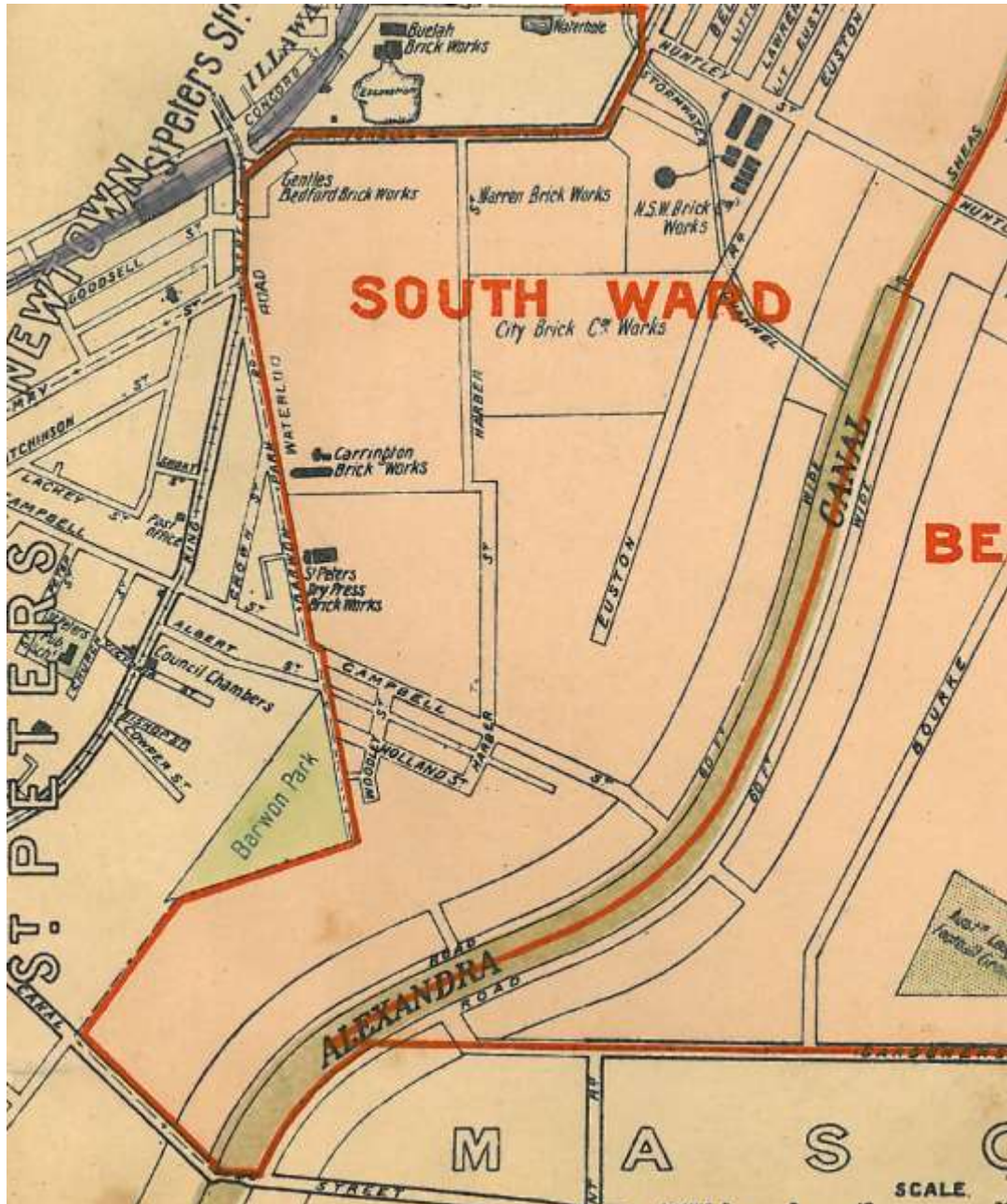


Figure 36. 1920 plan of the St Peter's area showing known brick works companies in what is now Sydney Park. Note: Euston Road does not connect with Campbell Street in 1920. (Source: Robinson's Sydney Street Directory, Alexandria)

2.8 Tram Tracks

In addition to the above precincts, RMS notes in their summary of Appendix R AECOM WestConnex New M5 Technical Working Paper: *Non-Aboriginal Heritage* that it is also relevant to note the potential for historical tram tracks to be intercepted by ground breaking works throughout these areas:

Historically, tram tracks extended throughout the Sydney area, including tracks running from the central business district toward Newtown, Alexandria, Enmore, St Peter's, Marrickville, Tempe and Cooks River. As the historical retention of tram tracks and associated infrastructure

beneath later developments was ad hoc, there is therefore potential to encounter tram tracks wherever those tracks were historically located. (p. 13)

Extent Heritage Comment

While the potential for tram tracks to exist within the study area is viable, tram tracks are not technically classified as “relics” under the NSW *Heritage Act 1977*, but are rather considered ‘works’². While the tracks may have some interpretive value, the nature of tram track construction and the track alignments are well documented in the historical record.

2.9 Archaeological Research Potential

The WestConnex New M5 project has the potential to expose and impact archaeological resources within two of the six zones specified by AECOM (2015). These areas include the *Bexley Road Surface Works* and the *St Peters Interchange and Local Roads* precincts. The evaluation above indicates that there is some potential for archaeological remains associated with local industry (St Peters) and air raid trenches (St Peters). While unlikely, the works may also expose relics associated with historic roadways (St Peters) and post-1940s domestic and/or agricultural activity (Bexley Road). None of these archaeological resources rise above the level of local heritage significance, and all are likely to be partially to heavily disturbed by previous construction, landscaping and roadworks in the project impact zones.

Specifically, potential archaeological remains can be summarised as follows:

- Bexley Road Surface Works:
 - Post 1940s relics, Section 1 and south of Section 2.
- St Peters Interchange:
 - Austral Brick Company Ltd, corner of Princes Highway and Canal Road
 - Shea’s Creek nineteenth century industries
 - Shea’s Creek stream management
- St Peters Local Roads:
 - Historic paving or kerbing throughout (while unlikely, it cannot be ruled out)
 - Air raid trenches, corner of Campbell Road and Euston Road
 - Brickworks Pty Ltd City Yard, Euston Road
 - NSW Brick Company Ltd, intersection of Euston Road and Sydney Park Road
 - Shea’s Creek nineteenth century industries

Based on a review of the AECOM (2015) report, this HARD determines that although there may be archaeological resources present within the sites outlined above, the ability of these resources to address important research questions is limited. Sites not assessed as part of the AECOM (2015) report, including early and mid-nineteenth century industries along Shea’s Creek have some potential to provide physical evidence of these industries. This is particularly the case with the Rudders Bond car park site. Any surviving physical evidence here may have been compromised in part by works associated with the construction of Burrows Road and by the introduction of fill from the 1890s onward.

Evidence of stream management practices is likely to be significantly compromised by the construction of the Alexandra Canal and by subsequent filling. Any physical remains are best investigated through

² Pers. Comm. Siobhan Lavelle, Archaeologist, Heritage Division 2009

an analysis of borelogs and through monitoring of geotechnical investigations conducted for the two sets of bridge approaches.

The pattern of land subdivision and residential development in the project area largely dates to the late nineteenth century and the early twentieth century, eras in which there is a pre-existing wealth of information available from other sources. Exposed remains, if any, will be fragmentary and have limited research potential. Any such remains do not meet even a local level of heritage significance.

The project impact areas near St Peters and Sydney Park have the potential to have fragmentary remains of early to late 20th century industrial activities (the Brickworks) and commonplace World War II area activities (the air raid trenches). While these remains will have local heritage significance, there is a great deal of information regarding the location, extent and nature of these activities in the historical record. The archaeological research potential of these areas is therefore low.

Other ancillary elements, such as early road alignments, kerbing, guttering or tram track are commonplace urban elements, which are both well documented in the historical record and have minimal archaeological research potential in their own rights. Better in situ examples of these types of urban fabric exist throughout the Sydney metropolitan area.

3 ASSESSMENT OF SIGNIFICANCE

The physical evidence of past activities is a valuable resource that is embodied in the fabric, setting, history, broader environment of an item, place or archaeological site. The evaluation has identified that there is some potential for archaeological resources within two areas of the project. The value of this resource to the community and historical significance of the project area can be evaluated by assessing its cultural heritage values against the NSW Heritage Criterion.

3.1 Assessment of Significance

Identified Site	NSW HERITAGE CRITERION				Significance	Conclusion
	Archaeological Research Potential (NSW Heritage Criterion E)	Associations with individuals, events or groups of historical importance (NSW Heritage Criterion A, B & D)	Aesthetic or technical significance (NSW Heritage Criterion C)	Ability to demonstrate the past through archaeological remains (NSW Heritage Criteria A, C, F & G).		
Bexley Road Surface Works - Post 1940s relics, Section 1 and south of Section 2.	Archaeological remains would have little research potential. There is a pre-existing wealth of information available from other sources on land subdivision and development for the area.	No association with individuals, events or groups.	No aesthetic or technical significance.	Low potential for archaeological remains due to historic site use and previous ground disturbance.	LOW	Section 1 and 2 of the Bexley Road project area has low potential for archaeological remains. Any remains will have limited research potential.
St Peters Interchange - Austral Brick Company Ltd (Ralford Yard), corner of Princes Highway and Canal Road - Subsurface remains of existing motor garage	It would be unlikely that the site would provide information that is not already available from other sources. The St Peters area, in particular the clay	Austral Brick Company Ltd	No aesthetic or technical significance likely.	Some potential for archaeological remains associated with the Austral Brick Company Pty Ltd and the existing motor garage.	MODERATE	There is some potential for archaeological remains associated with the Austral Brick Company Pty Ltd and the existing motor garage. It would be unlikely that the site could provide information that is not

	brick factories, is well documented.					already available from other sources.
St Peters Interchange - Central Brick and Tile Company Ltd Campbell Lane and Woodley Street	It would be unlikely that the site would provide information that is not already available from other sources. The St Peters area, in particular the clay brick factories, is well documented.	Central Brick and Tile Company Ltd	No aesthetic or technical significance likely.	Some potential for archaeological remains associated with the Central Brick and Tile Company Ltd	MODERATE	There is some potential for archaeological remains associated with the Central Brick and Tile Company Ltd . It would be unlikely that the site could provide information that is not already available from other sources.
St Peters Interchange – McNamara’s Clear Valley Woolwashing Establishment.	There is some potential for the survival of remains associated with McNamara’s Clear Valley Woolwashing Establishment. These remains may have been compromised in part by roadmaking activities.	Associations with Henry McNamara, a noted creator of nuisances	Potential for some technical significance.	Some potential to demonstrate industrial activities undertaken in the valley of Shea’s Creek during the late nineteenth century.	MODERATE	At present the documented history of early nineteenth century industries in this region is not well understood. There is some potential for the archaeological evidence to provide greater detail of the operation of these various industries.
St Peters Interchange – stream management	There is some potential for the survival of remains associated with stream management activities undertaken prior to 1890.	No identified associations.	Potential for some technical significance.	Some potential to demonstrate the way in which Shea’s Creek was modified from the 1830s to the 1890s to prevent flooding of cultivated land and to provide fresh water for the industries located along the Creek.	MODERATE	At present the documented history of these pre-Canal mitigative measures is not well understood. Any physical evidence associated with these works may provide some degree of clarity.
St Peters Local Roads - Historic paving or kerbing throughout	Archaeological remains would have little research potential.	No association with individuals, events or groups.	No aesthetic or technical significance likely.	Low potential for archaeological remains due to extensive road and property	LOW	There is low potential for historic paving or kerbing to exist in the St Peters area. Any remains will

				development in the area.		have limited research potential.
St Peters Local Roads - Air raid trenches, corner of Campbell Road and Euston Road	There is minor potential to learn additional information regarding the dimensions and construction techniques associated with the trench construction. Air raid trenches are largely known from the historical record.	Likely to be associated with the Department Works and Housing.	No aesthetic or technical significance likely.	Any surviving evidence of the trenches would be limited to evidence of the cut of the trench, which was likely backfilled with the previous-excavated redoubt material.	LOW	There is low potential for evidence of air raid trenches in the St Peters Campbell Road and Euston Road intersection. Any surviving evidence of the trenches would be limited to the cut of the trench. Air raid trenches are largely known from the historical record.
St Peters Local Roads – Bell’s Woolwashing Establishment	Any remains are likely to have been heavily compromised by roadworks. Much of the complex lies outside the development footprint	Associations with particular individuals has not been investigated	No aesthetic significance, some minor technical significance.	Some potential to demonstrate industrial activities undertaken in the valley of Shea’s Creek during the nineteenth century.	LOW-MODERATE	At present the documented history of early nineteenth century industries in this region is not well understood. There is some potential for the archaeological evidence to provide greater detail regarding the operation of this particular facility.
St Peters Local Roads - Brickworks Pty Ltd City Yard, Euston Road	Any remains are unlikely to contain occupation material or deposits. It would be unlikely that the site could provide information that is not already available from other sources.	Brickworks Pty Ltd City Yard	No aesthetic or technical significance, remnants likely to consist of building footings of an administration building.	Some potential for archaeological remains associated with the Brickworks Pty Ltd City Yard to remain on site. Works most likely to encounter.	MODERATE	There is some potential for archaeological remains associated with the Brickworks Pty Ltd City Yard. It would be unlikely that the site could provide information that is not already available from other sources.
St Peters Local Roads - NSW Brick Company Ltd, intersection of	It would be unlikely that the site could provide information that is not already available from other	NSW Brick Company Ltd	No aesthetic or technical significance likely.	Low potential for archaeological remains due to extensive road and property	LOW	There is low potential for archaeological remains associated with the NSW Brick Company Ltd. It would be unlikely that the

Euston Road and Sydney Park Road	sources. The St Peters area, in particular the clay brick factories, is well documented.			development in the area.		site could provide information that is not already available from other sources.
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3.2 Statement of Archaeological Significance

The potential historical archaeological remains within this portion of the WestConnex project impact area are largely the fragmentary remains of late 19th and early 20th century subdivision and roadwork activities, which are commonplace, fragmentary and well documented in the historical record. Any such remains do not meet even a local level of heritage significance.

The project impact areas near St Peters and Sydney Park have the potential to have fragmentary remains of early to late 20th century industrial activities (the Brickworks) and commonplace World War II area activities (the air raid trenches). While these remains will have local heritage significance, there is a great deal of information regarding the location, extent and nature of these activities in the historical record. The archaeological research potential of these areas is therefore low.

Any remains associated with the nineteenth century industries located along Shea's Creek between c.1830 and c.1890 are likely to have been compromised to some extent by post-1890 activities. There is some potential for the survival of some of the earliest industrial undertakings in the region. These include Adam Wilson's Starch Manufactory and the later Bell's Woolwashing Establishment. The research potential for these sites is moderate. The heritage significance of these sites is local.

Evidence of the way in which Shea's Creek was managed throughout the nineteenth century is important at a local level since it had impacts on both agriculture and industry. Most, if not all, of the features associated with stream management that rose above the general landscape, such as dykes have been removed and are unlikely to leave physical traces. A number of dam were constructed along the line of the Creek and these may be indicated in geotechnical cores by the presence or absence of organic silts that do not form part of the sequence of naturally occurring interbedded sands and peat deposits. The heritage significance of these deposits is local with a moderate research potential.

Other ancillary elements, such as early road alignments, kerbing, guttering or tram track are commonplace urban elements which are both well documented in the historical record and have minimal archaeological research potential in their own rights. Better in situ examples of these types of urban fabric exist throughout the Sydney metropolitan area.

4 RESEARCH DESIGN AND ARCHAEOLOGICAL STRATEGY

4.1 Identification of Research Themes/Design

A research design is a set of questions developed for a specific site, which contribute to current and relevant knowledge. The research questions posed must be responsive to the nature of the archaeological evidence that is likely to be encountered. This research design details the appropriate methodology that will be undertaken so that the archaeological investigations can reveal information not available from any other source.

The NSW research themes relating to the subject sites include:

- Agriculture
- Commerce
- Environment – cultural landscape
- Industry
- Pastoralism
- Technology
- Transport
- Towns, suburbs and villages
- Labour
- Housing

4.2 Research Questions

The archaeological resources of any site can be limited but have the potential to provide insights into everyday life that may not be available from any other resource. Archaeological resources may also provide evidence that would enhance the historical record and, as such, make a contribution to an understanding of the history and settlement of a region. In view of the substantial costs involved in archaeological excavation, the research design should be problem-orientated: that is, archaeological investigation should aim to address substantive research themes during the background research and assessment of significance. Archaeological research questions provide a framework for an archaeological investigation and the analysis of the results of the excavation. The project footprint is extensive, with the potential to expose ephemeral and substantive archaeological remains associated with local industry, air raid protection, historic road alignments and post 1940s domestic and/or agricultural activity.

Research questions should guide the approach and determination of what constitutes significant archaeological remains; however, allowance should always be made for new questions to respond to unexpected archaeological evidence. The following research questions would form the foundation of archaeological investigation within each of the precincts identified within the New M5 footprint. As one question can relate to multiple locations, the questions have been organised by theme, with the relevant precinct noted where applicable.

General:

- What is the condition and extent of the surviving archaeological evidence?
- What is the nature of extant archaeological features?
- Can the site(s) contribute knowledge that no other resource can? If no, what is the extent of knowledge that can be provided from that resource?
- Can the site(s) contribute knowledge that no other site(s) can? If no, what is the extent of knowledge that can be provided from that site(s)?
- Can the archaeological remains contribute to other major research questions?
- Is the site rare or representative in terms of the extent, nature, integrity and preservation of the deposits (if known)?
- Is there a large number of similar sites 'and what is the proximity of these sites to the subject site (s)?'
- Has the site(s) been previously identified in literature or oral history – to the extent that this information is readily available, including NSW Heritage Council and/or the local relevant Councils'database?

Settlement and Agriculture (St Peters Interchange, St Peters local roads, Bexley Road Surface Works, Arncliffe Surface Works)

- Does evidence of early agriculture or market gardening survive such that it would provide a better understanding of the pre- and post-contact landscape and associated activities? (St Peters local roads, Bexley Road, Arncliffe)

Subdivision and Housing (St Peters local roads, Bexley Road Surface Works)

- Is the site likely to contain the mixed remains of several occupations and eras, or is it expected that the site has the remains of a single occupation or a short-time period?

Transport

- Are the Newtown, Alexandria, Enmore, St Peters, Marrickville, Tempe and Cooks River regions of the project area likely to contain historic tram tracks?
- Does any historic paving or kerbing survive through the St Peters local roads area?

Commerce and Industry (St Peters Interchange and Local Roads)

- Is the site likely to contain the mixed remains of several occupations and periods, or is it expected that the site has the remains of a single occupation or a short-time period?
- Is the project area likely to contain relics that can contribute knowledge about local industry that no other site or resource can?
- Does any physical evidence of air raid trenches survive on the corner of Campbell Road and Euston Road? Does any evidence survive of their size, configuration or construction methods? Who were they constructed to protect?
- What physical evidence of the Austral Brick Company Ltd (Ralford Yard) site survives at the corner of the Princes Highway and Canal Road?
- What physical evidence of the Brickworks Pty Ltd City Yard site survives on Euston Road?
- What physical evidence of the NSW Brick Company Ltd site survives on the corner of Euston Road and Sydney Park Road?
- What physical evidence survives of the early industries located along Shea's Creek?

- What physical evidence survives of early stream management practices along Shea's Creek?
- Does specific physical evidence exist that demonstrates the manner in which the Waterloo Estate was managed for both agricultural (early nineteenth century) and industrial (late nineteenth century) purposes?

Environment (St Peters Interchange and Local Roads)

- What physical evidence survives for the practices employed to manage Shea's Creek for both agricultural and industrial purposes during the period before 1890 (i.e. prior to the construction of the Alexandra Canal)?

4.3 Archaeological Management Strategy

The key archaeological management strategy for the archaeological sensitive areas would involve a stop-work protocol, monitoring of mechanical excavation and, if appropriate, test pits or targeted open-area excavation where archaeological remains are found to have good integrity and significance. The approved Excavation Director will manage the archaeological resources within the project footprint.

Prior to any site works involving potential disturbance of sub-surface archaeological remains, the Excavation Director should brief all on-site contractors on the 'relics' provisions of the NSW *Heritage Act 1977*, the research questions outlined in this HARD and the proposed archaeological management strategy for archaeological sensitive areas. As new archaeologically sensitive areas are opened up for excavation, a similar briefing should be given by the Excavation Director, which in this instance would be a refresher to ensure that all contractors are aware of the heritage requirements.

4.4 Managing the Archaeological Resources

The six areas of archaeological potential encompass a wide area, within which there are several specific sites identified as particularly archaeologically sensitive, these include sites that have the potential to contain "relics" of local or State significance. To recap, these sites include but are not limited to:

- Bexley Road Surface Works:
 - Post 1940s relics, Section 1 and south of Section 2.
- St Peters Interchange:
 - Austral Brick Company Ltd, corner of Princes Highway and Canal Road
 - McNamara's Clear Valley Woolwashing Establishment Shea's Creek
 - Stream management features along Shea's Creek
- St Peters Local Roads:
 - Historic paving or kerbing throughout (while unlikely, it cannot be ruled out)
 - Air raid trenches, corner of Campbell Road and Euston Road
 - Bell's Woolwashing Establishment (Campbell Road and Euston Road)
 - Brickworks Pty Ltd City Yard, Euston Road
 - NSW Brick Company Ltd, intersection of Euston Road and Sydney Park Road

The following strategies are identified for managing the archaeological resources within the project footprint.

SITE	POTENTIAL	STRATEGY	JUSTIFICATION
<i>New M5 project area generally</i>	LOW-NONE	Roads and Maritime Standard Management Procedure: Unexpected Heritage Items	To manage unexpected relics and remains within the broader footprint of the New M5 area
<i>Bexley Road Surface Works</i>	LOW	Roads and Maritime Standard Management Procedure: Unexpected Heritage Items	To manage unexpected relics and remains
<i>St Peters Interchange generally</i>	LOW	Roads and Maritime Standard Management Procedure: Unexpected Heritage Items	To manage unexpected relics and remains
<i>St Peters Interchange - corner of Princes Highway and Canal Road</i>	MODERATE	Archaeological monitoring as specified in HARD	To discern the existence of in-situ remains of the Austral Brick Company Ltd (Ralford Yard)
<i>St Peters Interchange – Burrows Road</i>	MODERATE	Archaeological monitoring as specified in HARD	To discern the existence of in-situ remains of an McNamara's Clear Valley Woolwashing Establishment Shea's Creek and stream management features
<i>St Peters Local Roads – corner of Campbell Road and Euston Road</i>	LOW	Roads and Maritime Standard Management Procedure: Unexpected Heritage Items	To manage the discovery of any signs of the air raid trenches
<i>St Peters Local Roads – corner of Campbell Road and Euston Road</i>	LOW-MODERATE	Roads and Maritime Standard Management Procedure: Unexpected Heritage Items	To manage the discovery of any signs of the Bell's Woolwashing Establishment
<i>St Peters Local Roads – Euston Road</i>	MODERATE	Archaeological monitoring as specified in HARD	To discern the existence of any building fabric associated with the Brickworks Pty Ltd City Yard. To manage the discovery of any building fabric associated with the Brickworks Pty Ltd City Yard.
<i>St Peters Local Roads – Euston Road and Sydney Park Road</i>	LOW	Stop work protocol	To manage the discovery of any building fabric associated with the NSW Brick Company Ltd

Archaeological management options are shown in Figure 37.

4.4.1 General Archaeological Methodology

The following general archaeological methodology has been adapted from the Australian Museum Consulting *WestConnex M4 East Motorway Project: Historical Archaeological Research Design* (2015), prepared for Leighton Samsung John Holland Joint Venture.

The general archaeological methodology would be informed by the site conditions, proposed strategy and unexpected finds, and would include the following methods:

- Adequate time should be factored into the excavation and clearance process to allow for the Excavation Director to assess and record any known or unexpected relics, deposits and/or structural remains that are exposed. The record would ensure a comprehensive understanding of the archaeological resources of the project area and would include:
 - Use of pro-forma recording sheets based on attributing context numbers to record the details of the location, dimensions and characterises of all archaeological relics, deposits and features. The pro-forma recording sheets would prompt descriptions of each contact, Munsell and brief Harris Matrix to feed into the site matrix of the stratigraphic relationships between all archaeological features and deposits and to ensure detailed records are maintained
 - Cleaning of all features and deposits to facilitate photographic recording and planning
 - Photographic recording (digital), to scale, of all before and after exposure phases, features and deposits
 - Preparation of scaled site plans and profile or cross-section drawings, showing the location of all archaeological deposits and features revealed
- Soil contamination reports must be provided prior to any manual excavation
- Sequential numbering of any features and deposits should occur to facilitate the preparation of Harris Matrix and artefact labelling
- Collection of all artefacts for analysis, except from unstratified fill
- Artefacts would be cleaned, bagged, labelled in accordance with the archaeological context, and appropriately stored for analysis
- If necessary, specialist analysis of soil samples, pollen or other deposits may also be undertaken as part of the excavation and recording process
- Target open-area manual excavation would only be required where relics, deposits or features have been identified as having high significance, integrity and complexity. Furthermore, the site must be safe for excavation.
- The project team should make the service of a surveyor available to record any archaeological features or structures exposed during excavations in archaeological sensitive areas.

4.4.2 Archaeological Monitoring

The integrity of potential archaeological resources within the project area is such that archaeological testing is not proposed for any sites at this stage. As outlined in the strategy table above, the Excavation Director will be required to monitor works at three sites; Burrows Road at the rear of Rudders Bond, Euston Road and the corner of Canal Road and Princes Highway, as well as monitoring works that have resulted in the exposure of potential archaeological resources (see Section 4.4.3). Once standing structures have been demolished and all above ground debris removed, the Excavation Director would monitor mechanical removal of overburden to test the potential for underlying intact deposits.

If areas are shown to present sufficient integrity, works must stop and appropriate recording and analysis completed. All exposed archaeological resources would be recorded in accordance with the methodology outlined in Sections 4.4.1 and 4.4.5. When the Excavation Director is satisfied that no

archaeological resources are present, or those areas which have presented remains have little integrity or significance, the project team would be informed and work would continue. If considered to be of local or State significance avoidance and retention in situ would be proposed as the first option.

4.4.3 Managing Unexpected Relics

In areas that have been identified as having little, if any, possibility of archaeological remains, testing or monitoring would not be required. However, if unexpected relics or archaeological features are exposed, a stop-work protocol should be implemented and the Excavation Director contacted to assess the integrity and significance of the exposed relics.

A detailed works schedule and timing would be required so that the Excavation Director can plan for any such events. If the unexpected material is assessed as having potential research potential further clearance would be monitored by the Excavation Director in order to allow a more considered assessment. If considered to be of local or State significance avoidance and retention in situ would be proposed as the first option.

4.4.4 Targeted Open-Area Manual Excavation

Open-area excavation would only be required where archaeological relics, deposits or features have been identified by the Excavation Director as having significance, good integrity and complexity and the site is made safe for excavation. Open-area excavation would be under the direction of the Excavation Director, assisted by one or more archaeologists, depending on the extent and complexity of the resource. All archaeological relics, deposits and features would be excavated and recorded stratigraphically. The methodology would follow that outlined above and would also include gridding and sieving any significant occupation deposits.

Based on the research undertaken to date, it is not anticipated any areas within this portion of the WestConnex project impact area will require open area excavation.

4.4.5 Artefact Analysis and Reporting

Detailed analysis of any exposed artefacts would include the preparation of a site database that accurately identifies each artefact and, where relevant, specialists would produce reports on the artefacts, which outlines key issues or themes. In addition, important artefacts may be the subject of materials conservation.

A final report would be prepared detailing the results of any excavations, and post excavation analyses of significant features, deposits, and artefacts. The report would also include a synthetic analysis of each identified area of potential and would address the research questions outlined above. The report would be prepared in accordance with current heritage best practice guidelines as identified in the standard permit conditions.

During the analysis stage of the project, artefacts would be safely stored by the archaeologist. Following the reporting stage of the project, the artefacts will be returned to the client to arrange appropriate storage depending on significance.

4.4.6 Interpretation

The nature of the works for the New M5 project is such that it is unlikely that dissemination of information regarding the potential archaeological resources to the public during works would be warranted. The uncertainty regarding the integrity of any archaeological resources is also such that there may be little revealed that would excite public interest. However, if it is determined that there is merit in interpreting the air raid trenches which may be located on the corner of Campbell Road and Euston Road, the following should be considered:

- Poster(s) with information about the history of the site should be fixed to external hoardings;
- Explore the possibility of having a supervised open day on site. Access should be determined based on the excavation of the site and consideration of public safety.
- Where the air raid trenches remain, and if deemed to be of State significance, consideration may be required for on-site interpretation of in situ remains.
- 3D digital modelling and scans of the air raid trenches provide the opportunity for interactive interpretation as a part of the overall heritage interpretation plan for the site.

Depending on the archaeological results of the St Peters Interchange, there may also be merit in interpreting aspects of the Central Brick and Tile Company or Austral Brick Company (Ralford Yard), which include:

- Revision of the sites history with respect to the brick pit;
- Interpretative signage or display which demonstrates the brick making process and its relationship to the site;
- The display of any found relics or artefacts within a coordinated heritage interpretation plan;
- Design site hoardings to allow for 'look-in' points. These should be situated at safe junctures along the exterior of the site.

The pre-brickworks phase of the history of the St Peters Interchange requires further analysis and should be included in any heritage interpretation plan. Similarly, the nineteenth century management programs developed for Shea's Creek should figure in the interpretation of the eastern portion of the Interchange, particularly in relation to any heritage interpretation plan developed for the Alexandra Canal.

The final overall strategy and approach to heritage interpretation throughout the site will be considered as a part of the heritage interpretation plan, which will be revised to reflect the findings of the archaeological investigations into these areas specified.



Figure 37. St Peters Interchange – Archaeology Management

5 CONSOLIDATED RECOMMENDATIONS

Preparation of this Research Design has identified a number of issues relating to the historical development of the project areas that were not identified in the original assessment. On-going, targeted research and the results of the geophysical surveys and archaeological site works are anticipated to extend our knowledge of the historical development of the project areas. In a number of instances, particularly in regard to the St Peters Interchange, much of the archaeological potential has already been lost.

Below is a broad summary of the recommendations provided in this report. All recommendations made throughout the report will be adopted. It is recommended that:

- Data recovered through documentary and physical investigations (both archaeological and geophysical) be synthesised to create a report and database that will better inform our understanding of the historical development of the project areas
- All significant aspects of the project areas' developmental; history be considered for interpretation even if no physical remains of these aspects have survived or have been observed
- Targeted documentary investigation be undertaken throughout the works program in order to refine assessments of significance and to inform the heritage interpretation plan.
- Subject to results of contamination investigations and subsequent report the HARD is to be updated to address the outcomes of the investigations.
- Further historical investigations should be undertaken for the area of the St Peters Interchange – Burrows Road. These findings should feed into the archaeological research design and the heritage interpretation plan.

6 CONCLUSION

The project impact area for this portion of WestConnex will have relatively minor historical archaeological impacts. The project area is heavily disturbed, and identified potential archaeological resources are at best fragmentary. Furthermore, most elements identified are well-understood items which are well documented in the historical record. While there may be some minor additional historical archaeological information gleaned from archaeological investigation, this can be achieved through the use of stop work protocols and archaeological monitoring. It is considered unlikely that there will be any areas requiring open area excavation or in situ conservation of archaeological materials.

Noted above, the historical information on the St Peters area provided by AECOM is based on a limited examination of the available resources. The assessment does not take into consideration the nineteenth century developmental history of the site. The sequence of brickyards is also disordered, which highlights issues with dating. As a result, any future heritage interpretation plan should be informed by both the archaeological program and further in-depth historical research.

7 REFERENCES

AECOM (2015), "WestConnex New M5 Technical Working Paper: Non-Aboriginal Heritage", prepared for Roads and Maritime Services

Australian Museum Consulting (2015), "WestConnex M4 East Motorway Project: Historical Archaeological Research Design", prepared for Leighton Samsung John Holland Joint Venture.

City of Sydney, Civic Survey Plans 1938-1950

Heritage Council of NSW (2009), "Assessing Significance for Historical Archaeological Sites and Relics".

Land and Property Information, SIX Maps Viewer, <https://maps.six.nsw.gov.au/>

Nearmap, <http://au.nearmap.com/>

Ron Ringer (2008) "The Brickmasters 1788-2008", Dry Press Publishing.



Appendix E: Photographs of Alexandra Canal

All parts of the Alexandra Canal to be impacted by construction shall be photographed prior to commencement of works in this location and will be provided in this section in an update to this CHSP. The wall is currently obscured with vegetation and debris. Photographs will be taken once establishment works commence in this area and vegetation and debris is cleared. Establishment works are expected to commence in this area in January 2017. An update to this plan will be provided prior to the commencement of any works that would impact on the embankment wall.



Appendix F: Manage Cultural Heritage Procedure

Manage Cultural Heritage Procedure

Project Name: WestConnex New M5

Project number:	15.7020.2597
Document number:	M5N-ES-PRC-PWD-0039
Revision date:	6/07/2016
Revision:	02

Document Approval

Rev.	Date	Prepared by	Reviewed by	Recommended by	Approved by	Remarks
00	19/04/16	██████	██████		██████	
01	29/04/16	██████	██████		██████	
02	06/07/16	██████	██████		██████	
Signature:						

Manage Cultural Heritage Procedure



Details of Revision Amendments

Document Control

The Project Director is responsible for ensuring that this Procedure is reviewed and approved. The Support Services Director (SSD) is responsible for updating this procedure to reflect changes to the Project, legal and other requirements, as required.

Amendments

Any revisions or amendments must be approved by the Project Director before being distributed or implemented.

Revision Details

Revision	Details
00	Prepared for internal review
01	Additional permit included in procedure.
02	Updates to Flowchart and addition of Working within close proximity to a sensitive area flowchart.

Manage Cultural Heritage Procedure



Contents

This Manage Cultural Heritage Procedure has been produced from CPB Management System documents and project specific information documents. Each of these documents are available individually from the Project Management System and Incite. These documents are presented as one procedure here to support the onsite implementation of these procedures and to facilitate the communication of project specific requirements.

This Manage Cultural Heritage Procedure includes:

- Manage Cultural Heritage (MSID-2-247),
- Permit to Enter Protected or 'No-Go' Areas (MSID-4-199),
- Manage Identified Heritage Flowchart (M5N-ES-FLC-PWD-0012),
- Working Within Close Proximity to Sensitive Areas Flowchart (M5N-ES-FLC-PWD-0013),
- Unexpected Heritage Item Flowchart (M5N-ES-FLC-PWD-0002),
- Unexpected Heritage Item Information Document (M5N-ES-INF-PWD-0004), and
- Unexpected Heritage Item Recording Form (M5N-ES-FRM-PWD-0009).

Manage Cultural Heritage

Purpose

This procedure describes how to minimise the impact of construction activities on cultural heritage. This refers to places or objects of significance or value for the community and future generations. There are social, spiritual, ethical and legal obligations to protect cultural heritage.

Procedure

1 Include Controls in Construction Area Plan and Work Pack(s)

Accountability: Senior Project Engineer

- Ensure all risks to cultural heritage are considered as part of the development of Construction Area Plans.
 - Refer to Procedure: Develop Construction Area Plan.
- Ensure Work Packs include relevant environmental control information including a Site Environment Plan where required.
 - Refer to Procedure: Develop Work Pack.

2 Undertake Work

Accountability: Supervisor

- Obtain required permit before undertaking any ground disturbance work, using Tool: Permit to Clear Land or Vegetation.
- Obtain permit required to transfer/discharge water using Tool: Permit to Dewater.
 - Refer to Procedure: Manage Work Permits.
- Ensure that prior to work activities all cultural heritage items and places to be preserved are fenced/flagged and sign posted as No-Go Zones.
- Communicate areas or items of cultural heritage and No-Go Zones to all workers.
- Stop work if an object is discovered that may be a suspected heritage item until an inspection has occurred, any required controls are put in place and approval to recommence work is given from the Environment Manager/Representative.
- Ensure workers required to work in close proximity to heritage items or values are appropriately trained.

Accountability: Worker

- Comply with No-Go Zones at all times. If entering a No-Go Zone obtain required permit using Tool: Permit to Enter Protected or 'No-Go' Areas.
 - Refer to Procedure: Manage Work Permits.
- Notify the Supervisor of damage to No-Go Zone fencing or signage immediately.
- Notify your supervisor of any unexpected discovery/disturbance of known or possible heritage items or places.

Perform Task Observations

Accountability: Line Manager, SH&E Manager or Subcontractor Supervisor

- Conduct task observations as per project schedule to ensure ongoing effectiveness of environmental control measures.
 - Refer to Procedure: Conduct Task Observation.



Permit to Enter Protected or 'No-Go' Areas

Note: *Permit to Enter Protected or 'No-Go' Areas* to be submitted to Environmental Manager 2 days prior to entry. Entry must not occur to any part of the area until this permit has been approved.

Project Name: []	Project No.: []
Organisation Name: []	Permit No.: []
Start Date: []	Expected Completion Date: []

PROTECTED AREA LOCATION (S) – ATTACH DRAWINGS / SKETCHES IF NECESSARY

Ch. From	Ch. To	UP/DOWN	Location	Comments
[]	[]	[]	[]	[]
[]	[]	[]	[]	[]

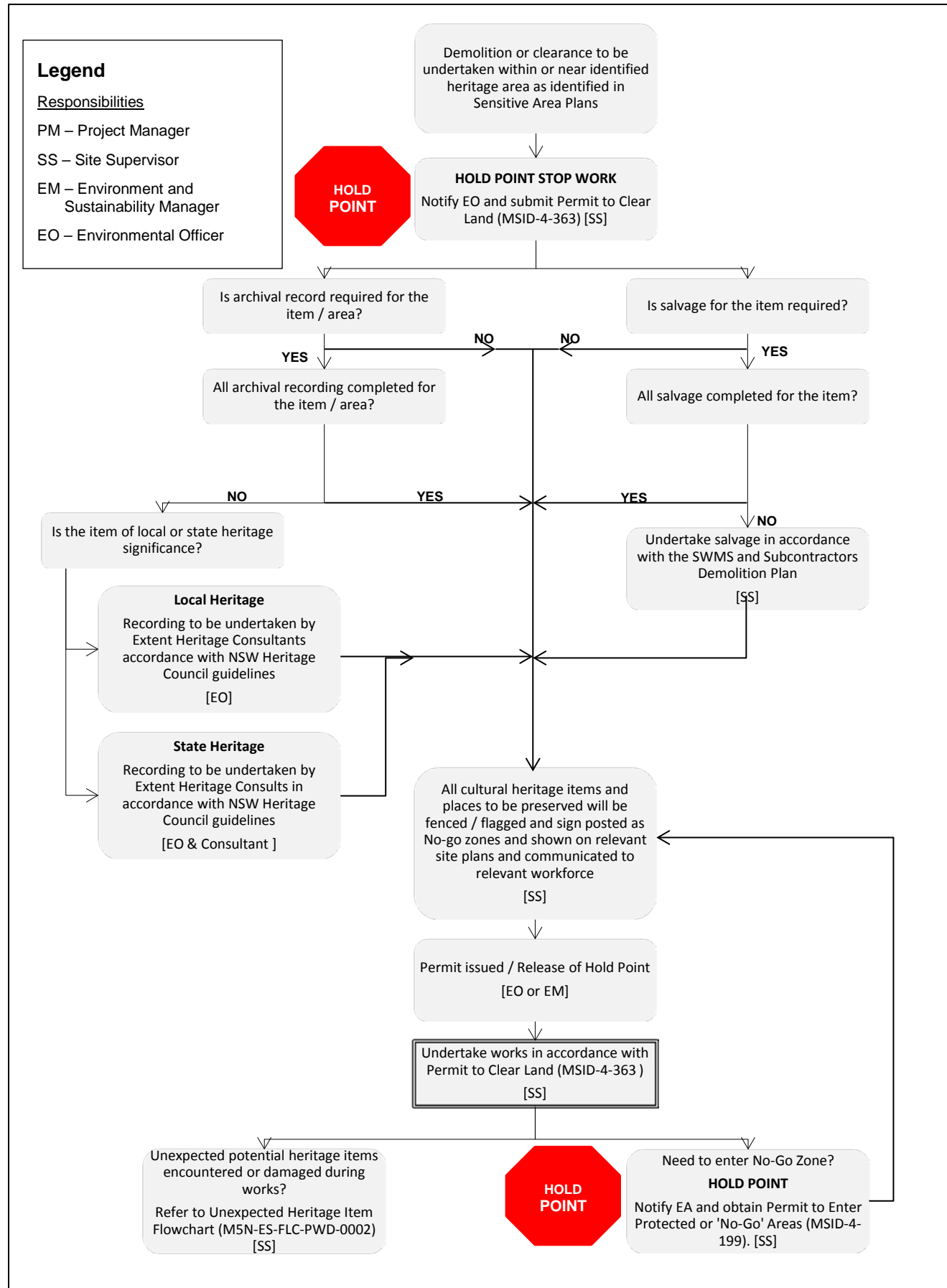
PART A: NOTIFICATION (To be completed by Site or Project Engineer or Site Environmental Officer)

Description of Works: []	
Justification as to why entry is required: []	
Protected Area:	
EECs <input type="checkbox"/>	Cultural / Heritage Sites <input type="checkbox"/>
Contaminated / Hazardous Land <input type="checkbox"/>	Riparian Areas outside footprint <input type="checkbox"/>
Habitat Trees <input type="checkbox"/>	Threatened Species <input type="checkbox"/>
Other Environmentally Sensitive Area <input type="checkbox"/>	Other, specify..... <input type="checkbox"/>
Map included with approximate location marked?	Yes <input type="checkbox"/> No <input type="checkbox"/>
Specify plant to be used, number of workers and whether any vegetation or ground disturbance is proposed: []	

PART B: INVESTIGATION (To be completed by Site Environmental Co-ordinator / Manager)

Items	YES	NO	Comments
Is entry into the protected area absolutely necessary to complete construction works? Consider other methods that reduce the need to enter the protected areas.	<input type="checkbox"/>	<input type="checkbox"/>	[]
Will the works impact on the protected area in any way?	<input type="checkbox"/>	<input type="checkbox"/>	[]
Is a pre-entry assessment required to determine the condition of the habitat? Are photos required to compare with post-entry condition?	<input type="checkbox"/>	<input type="checkbox"/>	[]
Have relevant authorities been consulted?	<input type="checkbox"/>	<input type="checkbox"/>	[]
Is approval required from an authority prior to entry	<input type="checkbox"/>	<input type="checkbox"/>	[]
Is a justification report required?	<input type="checkbox"/>	<input type="checkbox"/>	[]

Manage Identified Heritage Flowchart



Scope

This flowchart is to be implemented the management of known heritage areas and items, as shown on the Sensitive Area Plans. It does not cover the process to be followed in the event of an unexpected heritage find – refer to the Unexpected Heritage Item Flowchart (M5N-ES-FLC-PWD-0002) located in the Manage Cultural Heritage Procedure (M5N-ES-PRC-PWD-0039).

Training

All personnel to receive heritage training and inductions.

Internal notifications

The following occurrences must be reported to the Supervisor immediately:

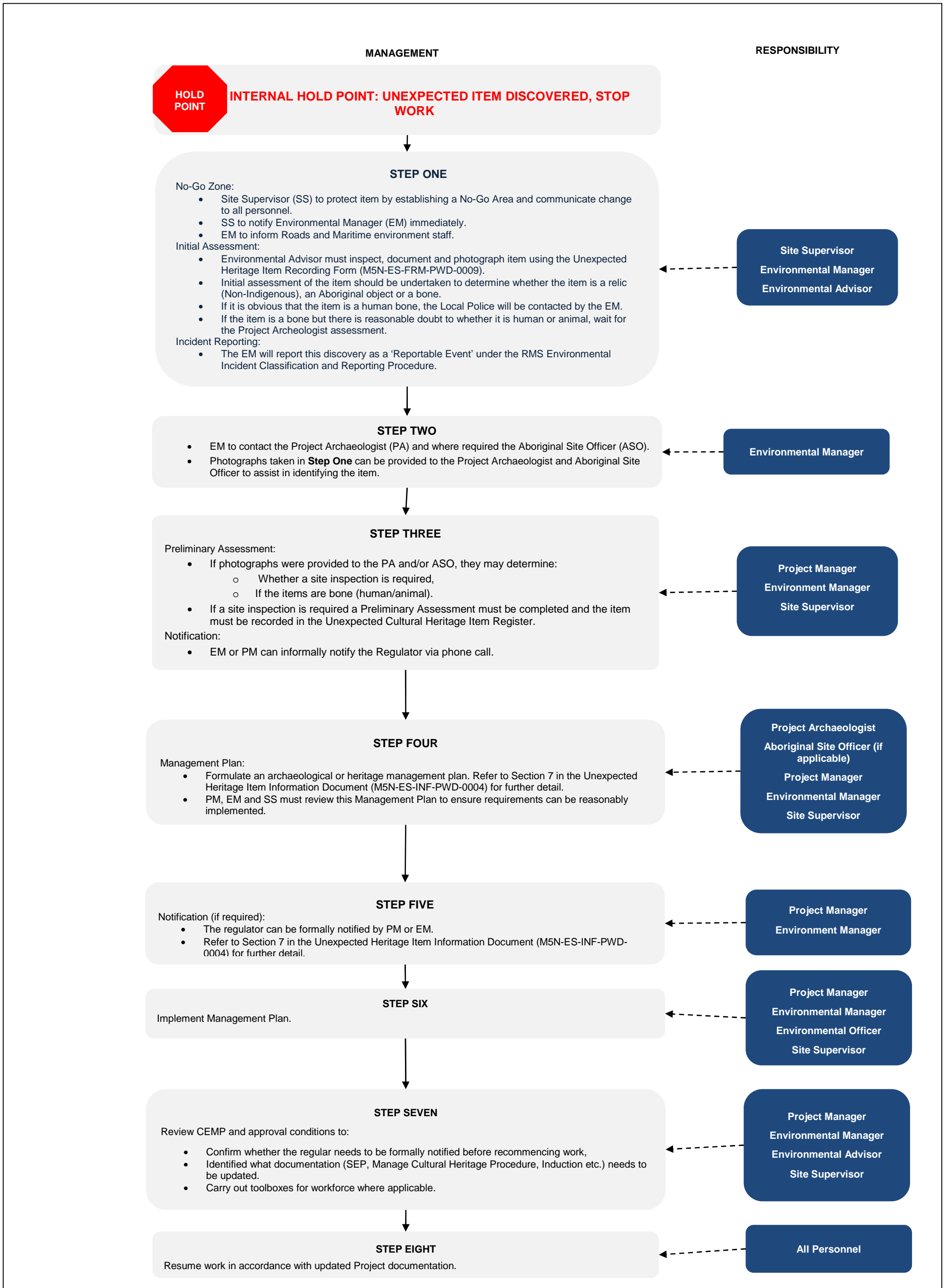
- Discovery / disturbance of known or possible heritage items or places,
- Entering or modifying a no-go zone, and
- Damage to no-go zone fencing or signage.

Archival recording

Any required archival recording is to be undertaken in accordance with the guidelines, *Photographic Recording Of Heritage Items Using Film or Digital Capture* (NSW Heritage Office, 2006). Archival recordings are prepared to record the environment, aesthetic, technical skills and customs associated with the creation and use of heritage items before they are lost. Requirements for recording of items involving historical archaeological evidence, industrial archaeological evidence, significant underwater archaeological evidence, evidence of significant social customs and significant cultural landscapes are also considered in this guideline. This will be undertaken by Extent Heritage Advisors.

Salvage

Items requiring salvage will be identified by the Environment and Sustainability Manager and Extent Heritage Advisors. Any required salvage will be completed in accordance with a Work Method Statement and the demolition subcontractor's Demolition Plan, which will be reviewed by the Environment and Sustainability Manager prior to works commencing.



Unexpected Heritage Item Information Document



Unexpected Heritage Item Information Document

In the event an unexpected heritage item is discovered, CDSJV will act in accordance with the Unexpected Heritage Item Flow Chart (M5N-ES-FLC-PWD-0002). This Flowchart is based on the NSW Transport Roads and Maritime Services (RMS) Standard Management Procedure: Unexpected Heritage Items. This document is featured below and should be referred to in the event of the discovery of an unexpected heritage item.

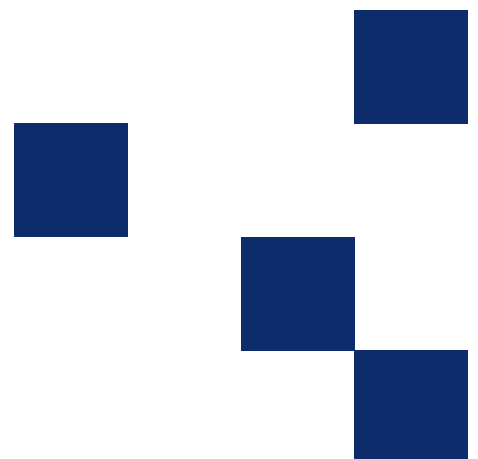


Transport
Roads & Maritime
Services

STANDARD MANAGEMENT PROCEDURE

Unexpected Heritage Items

March 2015



About this release

RMS/ISBN numbers	RMS 12.003 ISBN 9781922040305
Title	Unexpected Heritage Items Procedure

Approval and authorisation		Name
Prepared by	Environmental Officer (Heritage)	Gretta Logue
Revised by	Environmental Officer (Heritage)	Daniel Percival
Approved by	Manager Environmental Policy	Michael Crowley

File location	File name
Objective - SF2013/153770	Unexpected heritage items procedure.doc

Document status	Date
Final	16 March 2015

Version	Date	Revision Description
Final	1 November 2011	First Draft
Revised	23 July 2012	Amended to reflect that (a) unexpected finds do not include items covered by a relevant approval; (b) Aboriginal people must be consulted where an unexpected find is likely to be an Aboriginal object; (c) the Department of Planning and Environment must be notified in accordance with Step 5 of this procedure for Part 3A and Part 5.1 projects.
Revised	09 October 2013	Amended to clarify that the procedure applies to all types of unexpected heritage items, not just archaeological items. The procedure introduces the term 'Historic Items' to cover both 'archaeological relics' and 'other historic items' such as works, structures, buildings and movable objects. The title of the document has been amended to better reflect this clarification.
Revised	16 March 2015	The procedure was streamlined to address all project types including maintenance works. The separate maintenance procedure (formerly Appendix B) was removed. Names and titles updated throughout.

Prepared by
Environment Branch
Roads and Maritime Services
Level 17, 101 Miller Street
North Sydney, NSW 2060
T 02 8588 5726

Please note

This procedure applies to all development and activities concerning roads, road infrastructure and road related assets undertaken by Roads and Maritime.

For advice on how to manage unexpected heritage items as a result of activities related to maritime infrastructure projects, please contact the Senior Environmental Specialist (Heritage).

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Unexpected heritage items procedure

1. Purpose

This procedure has been developed to provide a consistent method for managing unexpected heritage items (both Aboriginal and non-Aboriginal) that are discovered during Roads and Maritime activities. This procedure includes Roads and Maritime's heritage notification obligations under the *Heritage Act 1977* (NSW), *National Parks and Wildlife Act 1974* (NSW), *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cth) and the *Coroner's Act 2009* (NSW).

This document provides relevant background information in Section 3, followed by the technical procedure in Sections 6 and 7. Associated guidance referred to in the procedure can be found in Appendices A-H.

2. Scope

This procedure assumes that an appropriate level of Aboriginal and non-Aboriginal heritage assessment has been undertaken prior to on site project work commencing. In some case, such as exempt development, detailed heritage assessment may not be required.

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

This procedure applies to all Road and Maritime construction and maintenance activities

This procedure **applies to**:

- The discovery of any unexpected heritage item (usually during construction), where Roads and Maritime does not have approval to disturb the item or where safeguards for managing the disturbance (apart from this procedure) are not contained in the environmental impact assessment.
- All Roads and Maritime projects that are approved or determined under Part 3A (including Transitional Part 3A Projects), Part 4, Part 5 or Part 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), or any development that is exempt under the Act.

This procedure must be followed by Roads and Maritime staff, alliance partners (including local council staff working under Road Maintenance Council Contracts, [RMCC]), developers under works authorisation deeds or any person undertaking Part 5 assessment for Roads and Maritime.

This procedure **does not apply** to:

- The legal discovery and disturbance of heritage items as a result of investigations being undertaken in accordance with OEH's *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW* (2010); an Aboriginal Heritage Impact Permit (AHIP) issued under the *National Parks and Wildlife Act*

1974; or an approval issued under the *Heritage Act 1977*¹.

- The legal discovery and disturbance of heritage items as a result of investigations (or other activities) that are required to be carried out for the purpose of complying with any environmental assessment requirements under Part 3A (including Transitional Part 3A Projects) or Part 5.1 of the EP&A Act.
- The legal discovery and disturbance of heritage items as a result of construction related activities, where the disturbance is permissible in accordance with an AHIP²; an approval issued under the *Heritage Act 1977*; the Minister for Planning's conditions of project approval; or safeguards (apart from this procedure) that are contained in the relevant environmental impact assessment.

All construction environment management plans (CEMPs) must make reference to and/or include this procedure (often included as a heritage sub-plan). Where approved CEMPs exist they 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 additional guidance. When in doubt always seek environment and legal advice on varying approved CEMPs.

3. Types of unexpected heritage items and their legal protection

The roles of project, field and environmental staff are critical to the early identification and protection of unexpected heritage items. **Appendix A** illustrates the wide range of heritage discoveries found on Roads and Maritime projects and provides a useful photographic guide. Subsequent confirmation of heritage discoveries must then be identified and assessed by technical specialists (usually an archaeologist).

An 'unexpected heritage item' means any unanticipated discovery of an actual or potential heritage item, for which Roads and Maritime does not have approval to disturb³ or does not have a safeguard in place (apart from this procedure) to manage the disturbance.

These discoveries are categorised as either:

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

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

3.1 Aboriginal objects

The *National Park and Wildlife Act 1974* protects *Aboriginal objects* which are defined as:

¹ RMS' heritage obligations are incorporated into the conditions of heritage approvals.

² RMS *Procedure for Aboriginal cultural heritage consultation and investigation* (2011) recommends that Part 4 and Part 5 projects that are likely to impact Aboriginal objects during construction seek a whole-of-project AHIP. This type of AHIP generally allows a project to impact known and potential Aboriginal objects within the entire project area, without the need to stop works. It should be noted that an AHIP may exclude impact to certain objects and areas, such as burials or ceremonial sites. In such cases, the project must follow this procedure.

³ Disturbance is considered to be any physical interference with the item that results in it being destroyed, defaced, damaged, harmed, impacted or altered in any way (this includes archaeological investigation activities).

“any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non Aboriginal extraction, and includes Aboriginal remains”⁴.

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

IMPORTANT!

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

If any impact is expected to an Aboriginal object, an Aboriginal Heritage Impact Permit (AHIP) is usually required from the Office of Environment and Heritage (OEH)⁵. Also, when a person becomes aware of an Aboriginal object they must notify the Director-General of OEH about its location⁶. Assistance on how to do this is provided in Section 7 (Step 5).

3.2 Historic heritage items

Historic (non-Aboriginal) heritage items may include:

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

3.2.1 Archaeological relics

The *Heritage Act 1977* protects *relics* which are defined as:

“any deposit, artefact, object or material evidence that relates to the settlement of the area that comprises NSW, not being Aboriginal settlement; and is of State or local heritage significance”⁷.

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

⁴ Section 5(1) *National Park and Wildlife Act 1974*.

⁵ Except when Part 3A, Division 4.1 of Part 4 or Part 5.1 of the *EP&A Act* applies.

⁶ This is required under s89(A) of the *National Park and Wildlife Act 1974* and applies to **all projects** assessed under Part 3A, Part 4, Part 5 and Part 5.1 of the *EP&A Act*, including exempt development.

⁷ Section 4(1) *Heritage Act 1977*.

IMPORTANT!

All relics are subject to statutory controls and protections.

If a relic is likely to be disturbed, a heritage approval is usually required from the NSW Heritage Council⁸. Also, when a person discovers a relic they must notify the NSW Heritage Council of its location⁹. Advice on how to do this is provided in Section 7 (Step 5).

3.2.2 Other historic items

Some historic heritage items are not considered to be ‘relics’; but are instead referred to as works, buildings, structures or movable objects. Examples of these items that Roads and Maritime may encounter include culverts, historic road formations, historic pavements, buried roads, retaining walls, tramlines, cisterns, fences, sheds, buildings and conduits. Although an approval under the *Heritage Act 1977* may not be required to disturb these items, their discovery must be managed in accordance with this procedure.

As a general rule, an archaeological relic requires discovery or examination through the act of excavation. An archaeological excavation permit under Section 140 of the *Heritage Act 1977* is required to do this. In contrast, ‘other historic items’ either exist above the ground’s surface (e.g. a shed), or they are designed to operate and exist beneath the ground’s surface (e.g. a culvert).

Despite this difference, it should be remembered that relics can often be associated with ‘other heritage items’, such as archaeological deposits within cisterns and underfloor deposits under buildings.

3.3 Human skeletal remains

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

As a simple example, a pre-contact archaeological Aboriginal burial would be protected under the *National Park and Wildlife Act 1974*, while a historic (non-Aboriginal) archaeological burial within a cemetery would be protected under the *Heritage Act 1977*. For these cases, the relevant heritage approval and notification requirements described in the above sections 3.1 and 3.2 would apply. In addition to the *National Park and Wildlife Act 1974*, finding 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* (Cth).

⁸ Except when Part 3A, Division 4.1 of Part 4 or Part 5.1 of the *EP&A Act* applies.

⁹ This is required under s146 of the *Heritage Act 1977* and applies to **all projects** assessed under Part 3A, Part 4, Part 5 and Part 5.1 of the *EP&A Act*, including exempt development.

 **IMPORTANT!**

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

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

However, where it is suspected that less than 100 years has elapsed since death, the human skeletal remains come under the jurisdiction of the State Coroner and the *Coroners Act 2009* (NSW). Such a case would be considered a 'reportable death' and under legal notification obligations set out in 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 old¹⁰ regardless of ancestry (ie both Aboriginal and non-Aboriginal remains). Public health controls may also apply.

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

¹⁰ Under s19 of the *Coroners Act 2009*, the coroner has no jurisdiction to conduct an inquest into reportable death unless it appears to the coroner that (or that there is reasonable cause to suspect that) the death or suspected death occurred within the last 100 years.

4. Responsibilities

The following roles and responsibilities are relevant to this procedure.

Role	Definition/responsibility
Aboriginal Cultural Heritage Advisor (ACHA)	Provides Aboriginal cultural heritage advice to project teams. Acts as Aboriginal community liaison for projects on cultural heritage matters. Engages and consults with the Aboriginal community as per the Roads and Maritime <i>Procedure for Aboriginal Cultural Heritage Consultation and Investigation</i> .
Aboriginal Sites Officer (ASO)	Is an appropriately trained and skilled Aboriginal person whose role is to identify and assess Aboriginal objects and cultural values. For details on engaging Aboriginal Sites Officers, refer to Roads and Maritime <i>Procedure for Aboriginal Cultural Heritage Consultation and Investigation</i> .
Archaeologist (A)	Professional consultant, contracted on a case-by-case basis to provide heritage and archaeological advice and technical services (such as reports, heritage approval documentation etc). Major projects with complex heritage issues often have an on call Project archaeologist.
Project Manager (PM)	Ensures all aspects of this procedure are implemented. The PM can delegate specific tasks to a construction environment manager, Roads and Maritime site representatives or regional environment staff, where appropriate.
Regional Environment Staff (RES)	Provides advice on this procedure to project teams. Ensuring this procedure is implemented consistently by supporting the PM. Supporting project teams during the uncovering of unexpected finds. Reviewing archaeological management plans and liaising with heritage staff and archaeological consultants as needed.
Registered Aboriginal Parties (RAPs)	RAPs are Aboriginal people who have registered with Roads and Maritime to be consulted about a proposed Roads and Maritime project or activity in accordance with OEH's Aboriginal cultural heritage consultation requirements for proponents (2010).
Senior Environmental Specialist (Heritage) (SES(H))	Provides technical assistance on this procedure and archaeological technical matters, as required. Reviewing the archaeological management plans and facilitating heritage approval applications, where required. Assists with regulator engagement, where required.
Team Leader - Regional Maintenance Delivery (TL-RMD)	Ensures Regional Maintenance Delivery staff stop work in the vicinity of an unexpected heritage item. Completes Unexpected Heritage Item Recording Form 418 and notifies WS-RMD.
Technical Specialist	Professional consultant contracted to provide specific technical advice that relates to the specific type of

	unexpected heritage find (eg a forensic or physical anthropologist who can identify and analyse human skeletal remains).
Works Supervisor - Regional Maintenance Delivery (WS-RMD)	Ensures Regional Maintenance Delivery staff are aware of this procedure. Supports the Team Leader - Regional Maintenance Delivery during the implementation of this procedure and ensures reporting of unexpected heritage items through environment management systems.

5. Acronyms

The following acronyms are relevant to this procedure.

Acronym	Meaning
A	Archaeologist
ACHA	Aboriginal Cultural Heritage Advisor
AHIP	Aboriginal Heritage Impact Permit
ASO	Aboriginal Site Officer
CEMP	Construction Environment Management Plan
OEH	Office of Environment and Heritage.
PACHCI	Procedure for Aboriginal Cultural Heritage Consultation and Investigation
PM	Project Manager
RAP	Registered Aboriginal Parties
RES	Regional Environmental Staff
SES(H)	Senior Environmental Specialist (Heritage)
TL-RMD	Team Leader – Regional Maintenance Division
RMD	Regional Maintenance Delivery
RMS	Roads and Maritime
WS-RMD	Works Supervisor - Regional Maintenance Division

6. Overview of the procedure

On discovering something that could be an unexpected heritage item ('the item'), the following procedure must be followed. There are eight steps in the procedure. These steps are summarised in **Figure 1** below and explained in detail in Section 7.

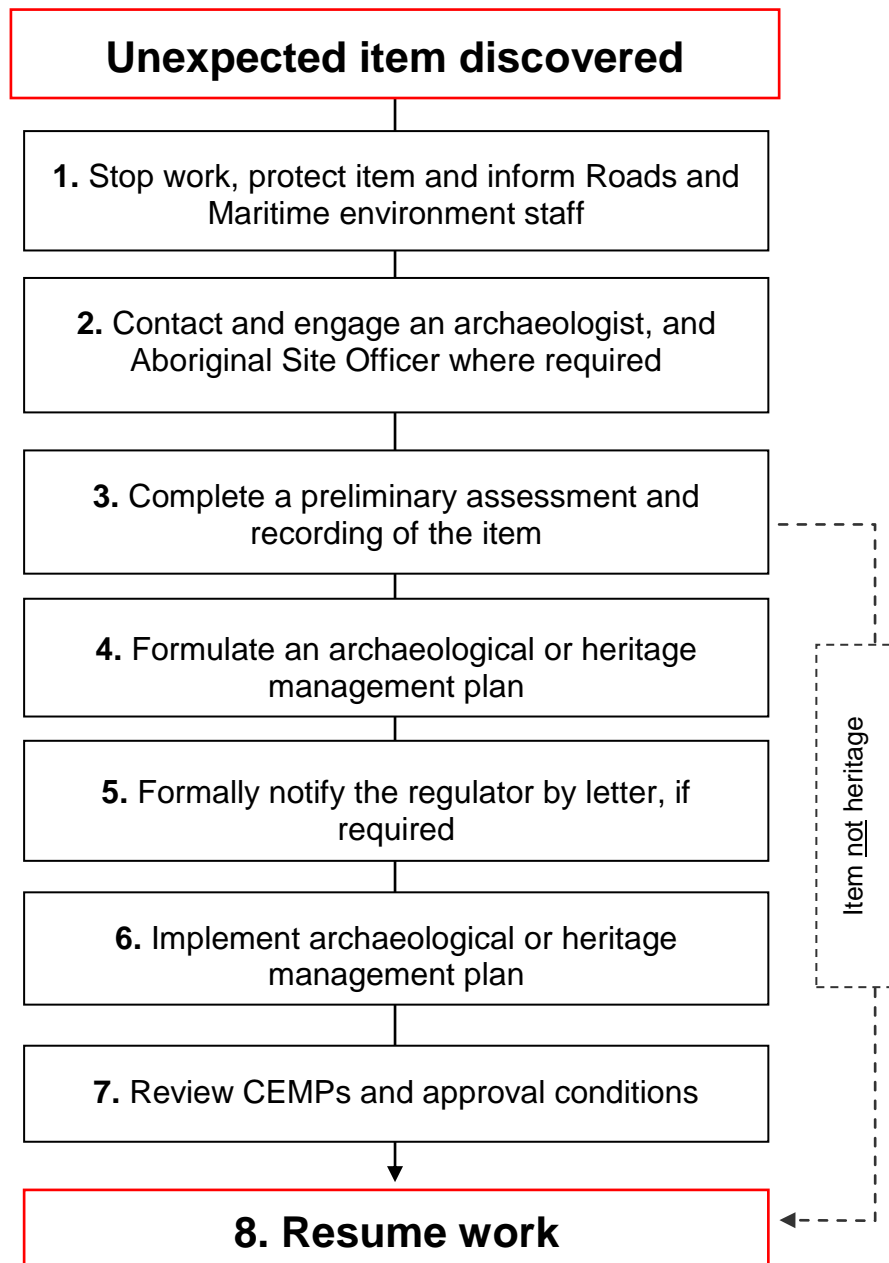


Figure 1: Overview of steps to be undertaken on the discovery of an unexpected heritage item.

IMPORTANT!

RMS may have approval or specific safeguards in place (apart from this procedure) to impact on certain heritage items during construction. If you discover a heritage item and you are unsure whether an approval or safeguard is in place, STOP works and follow this procedure.

7. Unexpected heritage items procedure

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

Aboriginal Cultural Heritage Advisor (ACHA); Aboriginal Sites Officer (ASO); Archaeologist (A); Project Manager (PM); Regional Environment Staff (RES); Registered Aboriginal Parties (RAPs); Senior Environmental Specialist (Heritage) (SES(H)); Team leader – Roads and Maintenance Division (TL - RMD); Works supervisor – Roads and Maintenance Division (WS - RMD).

Step	Task	Responsibility	Guidance & Tools
1	Stop work, protect item and inform Roads and Maritime environment staff		
1.1	Stop all work in the immediate area of the item and notify the Project Manager or Team Leader-RMD. (For maintenance activities, the Team Leader is to also notify the Works Supervisor-RMD)	All	Appendix A (Identifying Unexpected Heritage items)
1.2	Establish a 'no-go zone' around the item. Use high visibility fencing, where practical.	PM or TL-RMD	
1.3	Inform all site personnel about the no-go zone. No further interference, including works, ground disturbance, touching or moving the item must occur within the no-go zone.	PM or TL-RMD	
1.4	Inspect, document and photograph the item using 'Unexpected Heritage Item Recording Form 418'.	PM or TL-RMD	Appendix B (Unexpected Heritage Item Recording Form 418) Appendix C (Photographing Unexpected Heritage items)

Step	Task	Responsibility	Guidance & Tools
1.5	<p>Is the item likely to be bone?</p> <p>If yes, follow the steps in Appendix E – ‘Uncovering bones’. Where it is obvious that the bones are human remains, you must notify the local police by telephone immediately. They may take command of all or part of the site.</p> <p>If no, proceed to next step.</p>	PM or WS-RMD	Appendix E (Uncovering Bones)
1.6	<p>Is the item likely to be:</p> <p>a) A relic? (A relic is evidence of past human activity which has local or state heritage significance. It may include items such as bottles, utensils, remnants of clothing, crockery, personal effects, tools, machinery and domestic or industrial refuse) and/or</p> <p>b) An Aboriginal object? (An Aboriginal object may include a shell midden, stone tools, bones, rock art or a scarred tree).</p> <p>If yes, proceed directly to Step 1.8</p> <p>If no, proceed to next step.</p>	PM or WS-RMD	Appendix A (Identifying heritage items)
1.7	<p>Is the item likely to be a “work”, building or standing structure? (This may include tram tracks, kerbing, historic road pavement, fences, sheds or building foundations).</p> <p>If yes, can works avoid further disturbance to the item? (E.g. if historic road base/tram tracks have been exposed, can they be left in place?) If yes, works may proceed without further disturbance to the item. Complete Step 1.8 within 24 hours.</p> <p>If works cannot avoid further disturbance to the item, works must not recommence at this time. Complete the remaining steps in this procedure.</p>	PM or WS-RMD	Appendix A (Identifying heritage items)

Step	Task	Responsibility	Guidance & Tools
1.8	Inform relevant Roads and Maritime Regional Environmental Staff of item by providing them with the completed 'Form 418'.	PM or WS-RMD (RES)	Appendix D (Key Environmental Contacts)
1.9	Regional Environmental Staff to advise Project Manager or Works Supervisor whether RMS has an approval or safeguard in place (apart from this procedure) to impact on the 'item'. (An approval may include an approval under the <i>Heritage Act</i> , the <i>National Parks and Wildlife Act</i> or the <i>Planning and Assessment Act</i>). Does RMS have an approval, permit or appropriate safeguard in place to impact on the item? If yes , work may recommence in accordance with the approval, permit or safeguard. There is no further requirement to follow this procedure. If no , continue to next step.		
1.10	Liaise with Traffic Management Centre where the delay is likely to affect traffic flow.	PM or WS-RMD	
1.11	Report the item as a 'Reportable Event' in accordance with the Roads and Maritime <i>Environmental Incident Classification and Reporting Procedure</i> . Implement any additional reporting requirements related to the project's approval and CEMP, where relevant.	PM or WS-RMD	RMS Environmental Incident Classification and Reporting Procedure
2	Contact and engage an archaeologist and, where required, an Aboriginal site officer		
2.1	Contact the Project (on-call) Archaeologist to discuss the location and extent of the item and to arrange a site inspection, if required. The project CEMP may contain contact details of the Project Archaeologist. OR	PM or WS-RMD (A; RES; SES(H))	Also see Appendix D (Key Environmental Contacts)

Step	Task	Responsibility	Guidance & Tools
	Where there is no project archaeologist engaged for the works, engage a suitably qualified and experienced archaeological consultant to assess the find. A list of heritage consultants is available on the RMS contractor panels on the Buyways homepage. Regional environment staff and Roads and Maritime heritage staff can also advise on appropriate consultants.		<u>Buyways</u>
2.2	Where the item is likely to be an Aboriginal object, speak with your Aboriginal Cultural Heritage Advisor to arrange for an Aboriginal Sites Officer to assess the find. Generally, an Aboriginal Sites Officer would be from the relevant local Aboriginal land council. If an alternative contact person (ie a RAP) has been nominated as a result of previous consultation, then that person is to be contacted.	PM or WS-RMD (ACHA; ASO)	
2.3	If requested, provide photographs of the item taken at Step 1.4 to the archaeologist, and Aboriginal Sites Officer if relevant.	PM or WS-RMD (RES)	Appendix C (Photographing Unexpected Heritage items)
3	Preliminary assessment and recording of the find		
3.1	In a minority of cases, the archaeologist (and Aboriginal Sites Officer, if relevant) may determine from the photographs that no site inspection is required because no archaeological constraint exists for the project (<i>eg the item is not a 'relic', a 'heritage item' or an 'Aboriginal object'</i>). Any such advice should be provided in writing (eg via email) and confirmed by the Project Manager or Works Supervisor - RMD.	A/PM/ASO/ WS-RMD	Proceed to Step 8
3.2	Arrange site access for the archaeologist (and Aboriginal Sites Officer, if relevant) to inspect the item as soon as practicable. In the majority of cases a site inspection is required to conduct a preliminary assessment.	PM or WS-RMD	
3.3	Subject to the archaeologist's assessment (and the Aboriginal Sites Officer's assessment, if relevant), work may recommence at a set distance from the item. This is to protect any other archaeological material that may exist in the vicinity, which has not yet been uncovered. Existing protective fencing established in Step 1.2 may need to be adjusted to	A/PM/ASO/ WS-RMD	

Step	Task	Responsibility	Guidance & Tools
	reflect the extent of the newly assessed protective area. No works are to take place within this area once established.		
3.4	The archaeologist (and Aboriginal Sites Officer, if relevant) may provide advice after the site inspection and preliminary assessment that no archaeological constraint exists for the project (<i>eg the item is not a 'relic', a 'heritage item' or an 'Aboriginal object'</i>). Any such advice should be provided in writing (eg via email) and confirmed by the Project Manager or Works Supervisor - RMD.	A/PM/ASO/ WS-RMD	Proceed to Step 8
3.5	Where required, seek additional specialist technical advice (such as a forensic or physical anthropologist to identify skeletal remains). Regional environment staff and/or Roads and Maritime heritage staff can provide contacts for such specialist consultants.	RES/SES(H)	Appendix D (Key Environmental Contacts)
3.6	Where the item has been identified as a 'relic', 'heritage item' or an 'Aboriginal object' the archaeologist should formally record the item.	A	
3.7	The regulator can be notified informally by telephone at this stage by the archaeologist, Project Manager (or delegate) or Works Supervisor - RMD. Any verbal conversations with regulators must be noted on the project file for future reference.	PM/A/WS-RMD	
4	Prepare an archaeological or heritage management plan		
4.1	The archaeologist must prepare an archaeological or heritage management plan (with input from the Aboriginal Sites Officer, where relevant) shortly after the site inspection. This plan is a brief overview of the following: (a) description of the feature, (b) historic context, if data is easily accessible, (c) likely significance, (d) heritage approval and regulatory notification requirements, (e) heritage reporting requirements, (f) stakeholder consultation requirements, (g) relevance to other project approvals and management plans etc.	A/ASO	Appendix F (Archaeological/ Heritage Advice Checklist)
4.2	In preparing the plan, the archaeologist with the assistance of regional environment staff must review the CEMP, any heritage sub-plans, any conditions of heritage approvals, conditions of project approval (and or Minister's Conditions of Approval) and heritage assessment documentation (eg Aboriginal Cultural Heritage Assessment Report). This will outline if the unexpected item is consistent with previous heritage/project approval(s)	A/RES/PM	Appendix F (Archaeological/ Heritage Advice Checklist)

Step	Task	Responsibility	Guidance & Tools
	and/or previously agreed management strategies. The Project Manager and regional environment staff must provide all relevant documents to the archaeologist to assist with this. Discussions should occur with design engineers to consider if re-design options exist and are appropriate.		
4.3	The archaeologist must submit this plan as a letter, brief report or email to the Project Manager outlining all relevant archaeological or heritage issues. This plan should be submitted to the Project Manager as soon as practicable. Given that the archaeological management plan is an overview of all the necessary requirements (and the urgency of the situation), it should take no longer than two working days to submit to the Project Manager.	A	
4.4	The Project Manager or Works Supervisor must review the archaeological or heritage management plan to ensure all requirements can reasonably be implemented. Seek additional advice from regional environment staff and Roads and Maritime heritage staff, if required.	PM/RES/SES(H)/ WS-RMD	
5	Notify the regulator, if required.		
5.1	Review the archaeological or heritage management plan to confirm if regulator notification is required. Is notification required? If no , proceed directly to Step 6 If yes , proceed to next step.	PM/RES/SES(H)/ WS-RMD	
5.2	If notification is required, complete the template notification letter.	PM or WS-RMD	Appendix G (Template Notification Letter)
5.3	Forward the draft notification letter, archaeological or heritage management plan and the site recording form to regional environment staff and Senior Environmental Specialist (Heritage) for review, and consider any suggested amendments.	PM/RES/SES(H)/ WS-RMD	

Step	Task	Responsibility	Guidance & Tools
5.4	Forward the signed notification letter to the relevant regulator (ie notification of relics must be given to the Heritage Division, Office of Environment and Heritage (OEH), while notification for Aboriginal objects must be given to the relevant Aboriginal section of OEH). Informal notification (via a phone call or email) to the regulator prior to sending the letter is appropriate. The archaeological management plan and the completed site recording form must be submitted with the notification letter. For Part 3A and Part 5.1 projects, the Department of Planning and Environment must also be notified.	PM or WS-RMD	Appendix D (Key Environmental Contacts)
5.5	A copy of the final signed notification letter, archaeological or heritage management plan and the site recording form should be kept on file by the Project Manager or Works Supervisor- RMD and a copy sent to the Senior Environmental Specialist (Heritage).	PM or WS-RMD	
6	Implement archaeological or heritage management plan		
6.1	Modify the archaeological or heritage management plan to take into account any additional advice resulting from notification and discussions with the regulator.	A/PM or WS-RMD (RES)	
6.2	Implement the archaeological or heritage management plan. Where impact is expected, this would include such things as a formal assessment of significance and heritage impact assessment, preparation of excavation or recording methodologies, consultation with registered Aboriginal parties, obtaining heritage approvals etc, if required.	PM or WS-RMD (RAPs and RES)	PACHCI Stage 3
6.3	Where heritage approval is required contact regional environment staff for further advice and support material. Please note time constraints associated with heritage approval preparation and processing. Project scheduling may need to be revised where extensive delays are expected.	PM/RES/WS-RMD	
6.4	For Part 3A/Part 5.1 projects, assess whether heritage impact is consistent with the project approval or if project approval modification is required from the Department of Planning and Environment. Seek advice from regional environment staff and Environment Branch specialist staff if unsure.	PM/RES	

Step	Task	Responsibility	Guidance & Tools
6.5	Where statutory approvals (or project approval modification) are required, impact upon relics and/or Aboriginal objects must not occur until heritage approvals are issued by the appropriate regulator.	PM or WS-RMD	
6.6	Where statutory approval (or Part 3A/Part 5.1 project modification) is not required and where recording is recommended by the archaeologist, sufficient time must be allowed for this to occur.	PM or WS-RMD	
6.7	Ensure short term and permanent storage locations are identified for archaeological material or other heritage material is removed from site, where required. Interested third parties (eg museums or local councils) should be consulted on this issue. Contact regional environment staff and Senior Environmental Specialist (Heritage) for advice on this matter, if required.	PM or WS-RMD	
7	Review CEMPs and approval conditions		
7.1	Check whether written notification is required to be sent to the regulator before re-commencing work. Where this is not explicit in heritage approval conditions, expectations should be clarified directly with the regulator.	PM	
7.2	Update the CEMP, site mapping and project delivery program as appropriate with any project changes resulting from final heritage management (eg retention of heritage item, salvage of item). Updated CEMPs must incorporate additional conditions arising from any heritage approvals, and Aboriginal community consultation if relevant. Include any changes to CEMP in site induction material and update site workers during toolbox talks.	PM	
8	Resume work		
8.1	Seek written clearance to resume project work from regional environment staff and the archaeologist (and regulator, if required). Clearance would only be given once all archaeological excavation and/or heritage recommendations (where required) are complete. Resumption of project work must be in accordance with the all relevant project/heritage approvals/determinations.	RES/A/PM/WS-RMD	
8.2	If required, ensure archaeological excavation/heritage reporting and other heritage	PM/A/WS-RMD	

Step	Task	Responsibility	Guidance & Tools
	approval conditions are completed in the required timeframes. This includes artefact retention repositories, conservation and/or disposal strategies.		
8.3	Forward all heritage/archaeological assessments, heritage location data and its ownership status to the Senior Environmental Specialist (Heritage). They will ensure all heritage items in Roads and Maritime ownership and/or control are considered for the Roads and Maritime S170 Heritage and Conservation Register.	PM/SES(H)/ WS-RMD	
8.4	If additional unexpected items are discovered this procedure must begin again from Step 1.	PM/TL-RMD	

8. Seeking advice

Advice on this procedure should be sought from Roads and Maritime regional environment staff in the first instance. Contractors and alliance partners should ensure their own project environment managers are aware of and understand this procedure. Regional environment staff can assist non-Roads and Maritime project environment managers with enquires concerning this procedure.

IMPORTANT!

Roads and Maritime Services staff and contractors are not to seek advice on this procedure directly from the Office of Environment and Heritage without first seeking advice from regional environment staff and heritage policy staff.

Technical archaeological or heritage advice regarding an unexpected heritage item should be sought from the contracted archaeologist. Technical specialist advice can also be sought from heritage policy staff within Environment Branch to assist with the preliminary archaeological identification and technical reviews of heritage/archaeological reports.

9. Related information

Contact details: Senior Environmental Specialist (Heritage), Environment Branch, 02 8588 5754

Effective date: 01 February 2015

Review date: 01 February 2016

This procedure should be read in conjunction with:

- Roads and Maritimes' *Heritage Guidelines 2015*.
- Roads and Maritime Services *Environmental Incident Classification and Reporting Procedure*
- Roads and Maritime's *Procedure for Aboriginal Cultural Heritage Consultation and Investigation*
- RTA *Environmental Impact Assessment Guidelines*.

This procedure replaces:

- Procedure 5.5 ("*unexpected discovery of an archaeological relic or Aboriginal object*") outlined in the RTA's *Heritage Guidelines 2004*.

Other relevant reading material:

- NSW Heritage Office (1998), *Skeletal remains: guidelines for the management of human skeletal remains*.
- Department of Environment and Conservation NSW (2006), *Manual for the identification of Aboriginal remains*.
- Department of Health (April 2008), *Policy Directive: Burials - exhumation of human remains*¹¹.

¹¹ http://www.health.nsw.gov.au/policies/pd/2008/pdf/PD2008_022.pdf

10. List of appendices

The following appendices are included to support this procedure.

Appendix A	Identifying Unexpected Heritage items
Appendix B	Unexpected Heritage Item Recording Form 418
Appendix C	Photographing Unexpected Heritage Items
Appendix D	Key Environment Contacts
Appendix E	Uncovering Bones
Appendix F	Archaeological Advice Checklist
Appendix G	Template Notification Letter

Appendix A

Identifying unexpected heritage items

The following images can be used to assist in the preliminary identification of potential unexpected items (both Aboriginal and non-Aboriginal) during construction and maintenance works. Please note this is not a comprehensive typology.



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).



Wood stave water pipe



Tram tracks



Retaining wall



Cistern

Top left hand picture continuing clockwise: Woodstave water pipe with tar and wire sealing (Horsley Drive); Tram tracks (Sydney); Brick lined cistern (Clyde); Retaining wall (Great Western Highway, Leura).



Road pavement



Kerbing



Telford road base



Corduroy timber road base



Culvert

Top left hand picture continuing clockwise: Road pavement (Great Western Highway, Lawson); Sandstone kerbing and guttering (Parramatta Road, Mays Hill); Telford road (sandstone road base, Great Western Highway, Leura); Ceramic conduit and sandstone culvert headwall (Blue Mountains, NSW); Corduroy road (timber road base, Entrance Road, Wamberai).



Alignment pin



Survey tree



Alignment stone



Survey tree



Milestone



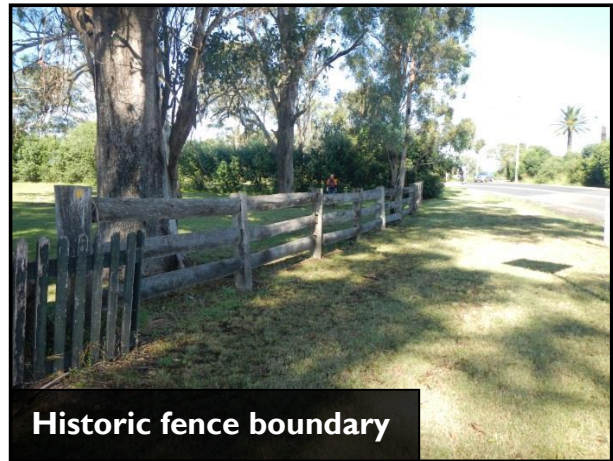
Top left hand corner continuing clockwise: Alignment Pin (Great Western Highway, Wentworth Falls); Survey tree (MR7, Albury); Survey tree (Kidman Way, Darlington Point, Murrumbidgee); Survey tree (Cobb Highway, Deniliquin); Milestone (Great Western Highway, Kingswood, Penrith); Alignment Stone (near Guntawong Road, Riverstone). Please note survey marks may have additional statutory protection under the *Surveying and Spatial Information Act 2002*.



Remnant Bridge Piers



Mine Shaft



Historic fence boundary



Dairy shed

Top left hand corner continuing clockwise: Remnant bridge piers (Putty Road, Bulga); Wooden boundary fence (Campbelltown Road, Denham Court); Dairy shed (Ballina); Golden Arrow Mine Shaft.



Top left hand corner: Culturally modified stone discovered on Main Road 92, about two kilometres west of Sassafras. The remaining images show 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 item recording form 418

This form is to be filled in by a project manager (or their delegate) or a team leader – Road and Maintenance Division, on the discovery of an unexpected heritage item during construction or maintenance works.

Date:		Recorded by: (Include name and position)	
Project name:			
Description of works being undertaken (eg Removal of failed pavement by excavation and pouring concrete slabs in 1m x 1m replacement sections).			
Description of exact location of item (eg Within the road formation on Parramatta Road, east bound lane, at the corner of Johnston Street, Annandale, Sydney).			
Description of item found (What type of item is it likely to be? Tick the relevant boxes).			
A. A relic	<input type="checkbox"/>	A 'relic' is evidence of a past human activity relating to the settlement of NSW with local or state heritage significance. A relic might include bottles, utensils, plates, cups, household items, tools, implements, and similar items.	
B. A 'work, building or structure'	<input type="checkbox"/>	A 'work' can generally be defined as a form infrastructure such as tram tracks, a culvert, road base, a bridge pier, kerbing, and similar items.	
C. An Aboriginal object	<input type="checkbox"/>	An 'Aboriginal object' may include stone tools, stone flakes, shell middens, rock art, scarred trees and human bones.	
D. Bone	<input type="checkbox"/>	Bones can either be human or animal remains. Remember that you must contact the local police immediately by telephone if you are <u>certain</u> that the bone(s) are <u>human remains</u>.	
E. Other	<input type="checkbox"/>		

<p>Provide short description of item (eg Metal tram tracks running parallel to road alignment. Good condition. Tracks set in concrete, approximately 10cms (100 mm) below the current ground surface).</p>	
<p>Sketch (Provide a sketch of the item's general location in relation to other road features so its approximate location can be mapped without having to re-excavate it. In addition, please include details of the location and direction of any photographs of the item taken).</p>	
<p>Action taken (Tick either A or B)</p>	
<p>A. Unexpected item would not be further impacted on by works <input type="checkbox"/></p>	
<p>Describe how works would avoid impact on the item. (eg The tram tracks will be left <i>in situ</i>, and recovered with road paving).</p>	
<p>B. Unexpected item would be further impacted on by works <input type="checkbox"/></p>	
<p>Describe how works would impact on the item. (eg Milling is required to be continued to 200 mm depth to ensure road pavement requirements are met. Tram tracks will need to be removed).</p>	
<p>Important: It is a statutory offence to disturb Aboriginal objects and historic relics (including human remains) without an approval. All works affecting objects and relics must cease until an approval is sought. Approvals may also be required to impact on certain works. Contact your regional environment staff for guidance.</p>	
<p>Project manager / works supervisor signature</p>	

Appendix C

Photographing unexpected heritage items

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

Photographs of unexpected items in their current context (*in situ*) may assist heritage staff and archaeologists 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) and a note describing the direction of the photograph.

Context and detailed photographs

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

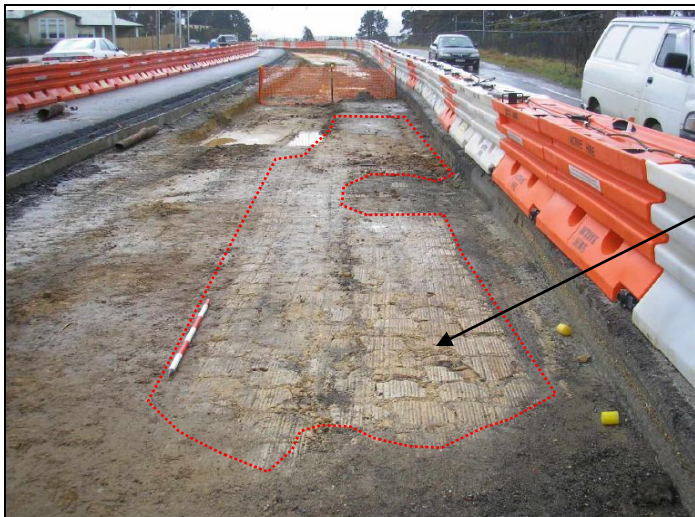


Figure 2: Close up detail of the sandstone surface showing material type, formation and construction detail. This is essential for establishing date of the feature.

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

Photographing distinguishing features

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



Figure 3: Ceramic bottle artefact with stamp.

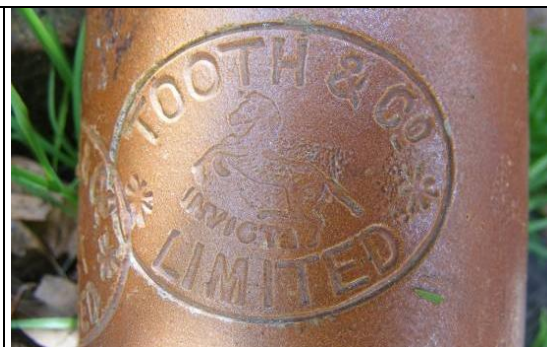


Figure 4: Detail of the stamp allows 'Tooth & Co Limited' to be made out. This is helpful to a specialist in gauging the artefact's origin, manufacturing date and likely significance.

Photographing bones

The majority of bones found on site will those of be recently deceased animal bones often requiring no further assessment (unless they are in archaeological context). However, if bones are human, Roads and Maritime must contact the police immediately (see Appendix F for detailed guidance). Taking quality photographs of the bones can often resolve this issue quickly. Heritage staff in Environment Branch can confirm if bones are human or non-human if provided with appropriate photographs. Ensure that photographs of bones are not concealed by foliage (Figure 5) as this makes it difficult to identify. Minor hand removal of foliage can be undertaken as long as disturbance of the bone does not occur. Excavation of the ground to remove bone(s) should not occur, nor should they be pulled out of the ground if partially exposed. Where sediment (adhering to a bone found on the ground surface) conceals portions of a bone (Figure 6) ensure the photograph is taken of the bone (if any) that is not concealed by sediment.



Figure 5: Bone concealed by foliage.



Figure 6: Bone covered in sediment

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



Figure 7: Photograph showing complete bone.



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

Appendix D

Key environmental contacts

Hunter region	Environmental Manager (Hunter)	4924 0440
	Aboriginal Cultural Heritage Advisor	4924 0383
Northern region	Environment Manager (North)	6640 1072
	Aboriginal Cultural Heritage Advisor	6604 9305
Southern region	Environmental Manager (South)	6492 9515
	Aboriginal Cultural Heritage Advisor	4221 2767
South West region	Environment Manager (South West)	6937 1634
	Aboriginal Cultural Heritage Advisor	6937 1647
Sydney region	Environment Manager (Sydney)	8849 2516
	Aboriginal Cultural Heritage Advisor	8849 2583
Western region	Environment Manager (West)	6861 1628
	Aboriginal Cultural Heritage Advisor	6861 1658
Pacific Highway Office	Environment Manager	6640 1375
Regional Maintenance Delivery	Environment Manager	9598 7721
Environment Branch	Senior Environmental Specialist (Heritage)	8588 5754

Heritage Regulators

Heritage Division Office of Environment and Heritage Locked Bag 5020 Parramatta NSW 2124 Phone: (02) 9873 8500	Department of the Environment (Clth) GPO Box 787 Canberra ACT 2601 Phone: (02) 6274 1111
Office of Environment and Heritage (Sydney Metropolitan) Planning and Aboriginal Heritage Section PO Box 668 Parramatta NSW 2124 Phone: (02) 9995 5000	Office of Environment and Heritage (North Eastern NSW) Planning and Aboriginal Heritage Section Locked Bag 914 Coffs Harbour NSW 2450 Phone: (02) 6651 5946
Office of Environment and Heritage (North Western NSW) Environment and Conservation Programs PO Box 2111 Dubbo NSW 2830 Phone: (02) 6883 5330	Office of Environment and Heritage (Southern NSW) Landscape and Aboriginal Heritage Protection Section PO Box 733 Queanbeyan NSW 2620 Phone: (02) 6229 7188

Project-Specific Contacts

Position	Name	Phone Number
Project Manager		
Site/Alliance Environment Manager		
Regional Environmental Officer		
Aboriginal Cultural Heritage Advisor		
Consultant Archaeologist		
Local Police Station		
OEH: Environment Line		131 555

Appendix E

Uncovering bones

Hand icon All matters relating to uncovering bones and RMS' human remains notification obligations should involve RMS regional environment and heritage staff. They will guide Project Managers through occurrences of uncovering bones.

This appendix provides Project Managers with advice (1) on what to do on first uncovering bones (2) the range of human skeletal notification pathways and (3) additional considerations and requirements when managing the discovery of human remains.

1. First uncovering bones

Stop all work in the vicinity of the find. All bones uncovered during project works should be **treated with care and urgency** as they have the potential to be human remains. Therefore they must be identified as either human or non-human as soon as possible by a qualified forensic or physical anthropologist. These specialist consultants can be sought by contacting regional environment staff and/or heritage staff at Environment Branch.

On the very rare occasion where it is *instantly obvious* from the remains that they are human, the Project Manager (or a delegate) should **inform the police by telephone** prior to seeking specialist advice. It will be obvious that it is human skeletal remains where there is no doubt, as demonstrated by the example in Figure 1. Often skeletal elements in isolation (such as a skull) can also clearly be identified as human. Note it may also be obvious that human remains have been uncovered when soft tissue and clothing are present.

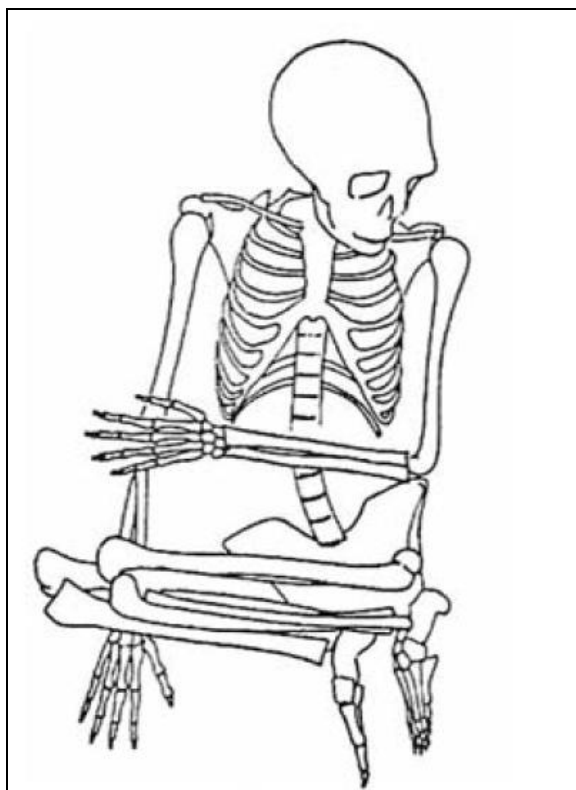


Figure 1: Schematic of a complete skeleton that is 'obviously' human¹².



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

¹² After Department of Environment and Conservation NSW (2006), *Manual for the identification of Aboriginal Remains*: 17.

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

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

If the bones are identified as human (either by photographs or an on-site inspection) a technical specialist must determine the likely ancestry (Aboriginal or non-Aboriginal) and burial context (archaeological or forensic). This assessment is required to identify the legal regulator of the human remains so **urgent notification** (as below) can occur. Preliminary telephone or verbal notification by the Project Manager or regional environment staff is considered appropriate. This must be followed up later by Roads and Maritime's formal letter notification as per Appendix G when a management plan has been developed and agreed to by the relevant parties.

2. Range of human skeletal notification pathways

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

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

Action

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

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

Action

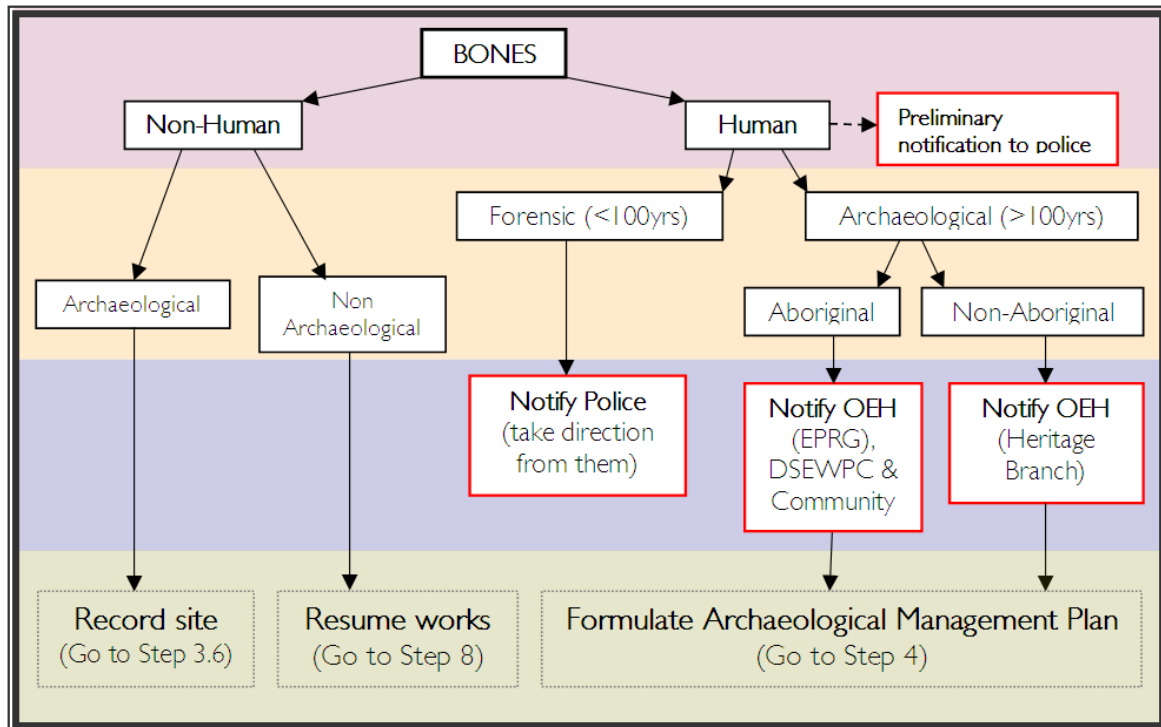
The OEH and the RMS Aboriginal Cultural Heritage Advisor (ACHA) must be notified immediately. The ACHA must contact and inform the relevant Aboriginal community stakeholders who may request to be present on site. Relevant stakeholders are determined by the RTA's *Procedure for Aboriginal Cultural Heritage Consultation and Investigation*.

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

Action

The OEH (Heritage Branch, Conservation Team) must be notified immediately.

The simple diagram below summarises the notification pathways on finding bones.



After the appropriate verbal notifications (as described in B and C), the Project Manager must proceed through the *Unexpected Heritage Items Procedure* to formulate an archaeological management plan (Step 4). Note no archaeological management plan is required for forensic cases (A), as all future management is a police matter. Non-human skeletal remains must be treated like any other unexpected archaeological find and so must proceed to recording the find as per Step 3.6.

3. Additional considerations and requirements

Uncovering archaeological human remains must be managed intensively and needs to consider a number of additional specific issues. These issues might include facilitating culturally appropriate processes when dealing with Aboriginal remains (such as repatriation and cultural ceremonies). Roads and Maritime's ACHA can provide advice on this and how to engage with the relevant Aboriginal community. Project Managers, more generally, may also need to consider overnight site security of any exposed remains and may need to manage the onsite attendance of a number of different external stakeholders during assessment and/or investigation of remains. Project Managers may also be advised to liaise with local church/religious groups and the media to manage community issues arising from the find. Additional investigations may be required to identify living descendants, particularly if the remains are to be removed and relocated.

If exhumation of the remains (from a formal burial or a vault) is required, Project Managers should also be aware of additional approval requirements under the *Public Health Act 1991* (NSW). Specifically, Roads and Maritime is required to apply to the Director General of NSW Department of Health for approval to exhume human remains as per Clause 26 of the *Public Health (Disposal of Bodies) Regulation 2002* (NSW)¹³. Further, the exhumation of such remains needs to consider health risks such as infectious disease control, exhumation procedures and reburial approval and registration. Further guidance on this matter can be found at the NSW Department of Health [website](#).

In addition, due to the potential significant statutory and common law controls and prohibitions associated with interfering with a public cemetery, project teams are

¹³ This requirement is in addition to heritage approvals under the *Heritage Act 1977*.

advised, when works uncover human remains adjacent to cemeteries, to confirm the cemetery's exact boundaries.

Appendix F

Archaeological/heritage advice checklist

The archaeologist must advise the Project Manager of an appropriate archaeological or heritage management plan as soon as possible after site inspection (see Step 4). An archaeological or heritage management plan can include a range of activities and processes, which differ depending on the find and its significance. In discussions with the archaeologist the following checklist can be used by the Project Manager and the archaeologist as a prompt to ensure all relevant archaeological issues are considered when developing this plan. This will allow the project team to receive clear and full advice to move forward quickly and in the right direction. Archaeological and/or heritage advice on how to proceed can be received in a letter or email outlining all relevant archaeological and/or heritage issues.

	Required	Outcome/notes
Assessment and investigation		
• Assessment of significance	Yes/No	
• Assessment of heritage impact	Yes/No	
• Archaeological excavation	Yes/No	
• Archival photographic recording	Yes/No	
Heritage approvals and notifications		
• AHIPs, Section 140, S139 exceptions etc	Yes/No	
• Regulator relics/objects notification	Yes/No	
• Roads and Maritime's S170 Heritage and Conservation Register listing requirements	Yes/No	
• Compliance with CEMP or other project heritage approvals	Yes/No	
Stakeholder consultation		
• Aboriginal stakeholder consultation requirements and how it relates to RTA <i>Procedure for Aboriginal Cultural Heritage Consultation and Investigation (PACHCI)</i> .	Yes/No	
• Advice from regional environmental staff, Aboriginal Cultural Heritage Advisor, Roads and Maritime heritage team.	Yes/No	
Artefact/ heritage item management		
• Retention or conservation strategy (eg items may be subject to long conservation and interpretation) • Disposal strategy (eg former road pavement) • Short term and permanent storage locations (interested third parties should be	Yes/No	

Roads & Maritime Services

consulted on this issue).		
• Control Agreement for Aboriginal objects.	Yes/No	
Program and budget		
• Time estimate associated with archaeological or heritage conservation work.		
• Total cost of archaeological/heritage work.		

Appendix G

Template notification letter

[Select and type date]

[Select and type reference number]

[Select and type file number]

[Insert recipient's name and address, see **Appendix D**]

[Select and type salutation and name],

Re: Unexpected heritage item discovered during Roads and Maritime Services project works.

I write to inform you of an unexpected [select: relic, heritage item or Aboriginal object] found during Roads and Maritime Services construction works at [insert location] on [insert date]. [Where the regulator has been informally notified at an earlier date by telephone, this should be referred to here].

This letter is in accordance with the notification requirement under [select: Section 146 of the *Heritage Act 1977* (NSW) or Section 89(A) of the *National Parks and Wildlife Act 1974* (NSW)] **NB:** There may be not be statutory requirement to notify of the discovery of a 'heritage Item that is not a relic or Aboriginal object].

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

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

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

Resulting from these preliminary findings, Roads and Maritime Services [or contractor] is proposing [provide a summary of the proposed archaeological/heritage approach (eg develop archaeological research design (where relevant), seek heritage approvals, undertake archaeological investigation or conservation/interpretation strategy). Also include preliminary justification of such heritage impact with regard to project design constraints and delivery program].

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

Please contact me if you have any input on this approach or if you require any further information.

Yours sincerely

[Sender name and position]

[Attach the archaeological/heritage management plan and site recording form].

This form is to be filled in by a project manager (or their delegate) or a team leader – Road and Maintenance Division, on the discovery of an unexpected heritage item during construction or maintenance works.

Date:		Recorded by: (Include name and position)	
Project name:			
Description of works being undertaken (eg Removal of failed pavement by excavation and pouring concrete slabs in 1m x 1m replacement sections).			
Description of exact location of item (eg Within the road formation on Parramatta Road, east bound lane, at the corner of Johnston Street, Annandale, Sydney).			
Description of item found (What type of item is it likely to be? Tick the relevant boxes).			
A. A relic	<input type="checkbox"/>	A 'relic' is evidence of a past human activity relating to the settlement of NSW with local or state heritage significance. A relic might include bottles, utensils, plates, cups, household items, tools, implements, and similar items.	
B. A 'work, building or structure'	<input type="checkbox"/>	A 'work' can generally be defined as a form infrastructure such as tram tracks, a culvert, road base, a bridge pier, kerbing, and similar items.	
C. An Aboriginal object	<input type="checkbox"/>	An 'Aboriginal object' may include stone tools, stone flakes, shell middens, rock art, scarred trees and human bones.	
D. Bone	<input type="checkbox"/>	Bones can either be human or animal remains. Remember that you must contact the local police immediately by telephone if you are <u>certain</u> that the bone(s) are <u>human remains</u>.	
E. Other	<input type="checkbox"/>		

<p>Provide short description of item (eg Metal tram tracks running parallel to road alignment. Good condition. Tracks set in concrete, approximately 10cms (100 mm) below the current ground surface).</p>	
<p>Sketch (Provide a sketch of the item's general location in relation to other road features so its approximate location can be mapped without having to re-excavate it. In addition, please include details of the location and direction of any photographs of the item taken).</p>	
<p>Action taken (Tick either A or B)</p>	
<p>A. Unexpected item would not be further impacted on by works <input type="checkbox"/></p>	
<p>Describe how works would avoid impact on the item. (eg The tram tracks will be left <i>in situ</i>, and recovered with road paving).</p>	
<p>B. Unexpected item would be further impacted on by works <input type="checkbox"/></p>	
<p>Describe how works would impact on the item. (eg Milling is required to be continued to 200 mm depth to ensure road pavement requirements are met. Tram tracks will need to be removed).</p>	
<p>Important: It is a statutory offence to disturb Aboriginal objects and historic relics (including human remains) without an approval. All works affecting objects and relics must cease until an approval is sought. Approvals may also be required to impact on certain works. Contact your regional environment staff for guidance.</p>	
<p>Project manager / works supervisor signature</p>	



Appendix G: Roads and Maritime Procedure for Aboriginal Cultural Heritage Consultation and Investigation



**Roads and Maritime Services
procedure for**

Aboriginal

**cultural heritage consultation
and investigation**

November 2011

RMS/Pub. 11.012

ISBN 978 | 922040 18 3

 **PLEASE NOTE:**

This procedure applies to all development and activities concerning roads, road infrastructure and road related assets undertaken by Roads and Maritime Services.

For advice on how to manage known and potential impacts on Aboriginal cultural heritage as a result of maritime related activities, please contact the Senior Environmental Specialist (Heritage).

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Glossary

Set out below is a glossary of words and phrases used in this procedure.

Aboriginal person	Aboriginal person means a person who: (a) is a member of the Aboriginal race of Australia, and (b) identifies as an Aboriginal person, and (c) is accepted by the Aboriginal community as an Aboriginal person. (<i>Aboriginal Land Rights Act 1973</i>)
Aboriginal cultural heritage	The tangible (objects) and intangible (dreaming stories, songlines, and places) cultural practices and traditions associated with past and present-day Aboriginal communities.
Aboriginal focus group meeting	A meeting convened by RMS or its agents or contractors to consult with Aboriginal parties who have registered their interest to be consulted regarding a RMS project or activity.
Aboriginal land	Land identified in schedule 14 of the <i>National Parks and Wildlife Act 1974</i> as being of cultural significance to Aboriginal persons
Aboriginal object	Any deposit, object or material evidence (not being a handicraft made for sale), including Aboriginal remains, relating to the Aboriginal habitation of NSW. (<i>National Parks and Wildlife Act 1974</i>)
Aboriginal Owners	“Aboriginal owners of land” means the Aboriginal persons whose names are entered on the Register of Aboriginal Owners maintained under the <i>Aboriginal Lands Right Act 1983</i> because of the persons’ cultural association with particular land. (<i>Aboriginal Land Rights Act 1983</i> and <i>National Parks and Wildlife Act 1974</i>). Registration however does not confer any land title rights on that person.
Aboriginal parties	Aboriginal persons or organisations who have registered with the RMS to be consulted about a proposed RMS project or activity in accordance with OEH’s <i>Aboriginal cultural heritage consultation requirements for proponents 2010</i> .
Aboriginal place	Any place declared to be an Aboriginal place under Section 84 of the <i>National Parks and Wildlife Act 1974</i> because it is or was of special significance with respect to Aboriginal culture. A register of Aboriginal Places is available on the Office of Environment and Heritage website.
ACHA	Aboriginal cultural heritage advisor
AHIMS register	The Aboriginal heritage information management system register maintained by the Office of Environment and Heritage.



Aboriginal Heritage Impact Permit (AHIP)	A statutory permit issued to harm an Aboriginal object or place under Section 90 of the <i>National Parks and Wildlife Act 1974</i> .
Archaeological report	A report that assesses the archaeological significance of Aboriginal objects, and assesses known and potential project impacts. Archaeological reports may be prepared following (a) archaeological surveys, (b) archaeological test excavations and (c) archaeological salvage excavations.
Cultural heritage assessment report (CHAR)	<p>A report about Aboriginal objects and places likely to be impacted by an activity in accordance with Clause 80D of the National Parks and Wildlife Regulation 2009. A proponent must prepare the report (i) when seeking an AHIP from the NSW Office of Environment and Heritage; or (ii) where required when undertaking archaeological investigations in accordance with the <i>Code of practice for archaeological investigation of Aboriginal Objects in NSW 2010</i>; or (iii) for projects being assessed under Part 5.1 of the <i>Environmental Planning and Assessment Act 1979</i> where Aboriginal cultural heritage would be affected.</p> <p>The report is prepared in consultation with Aboriginal parties and may include an archaeological report and/or a detailed cultural assessment as an appendix. A cultural heritage assessment report must be completed for all projects that proceed to Stage 3 of this procedure, even if there would be no impact to objects and places.</p>
Cultural heritage constraints mapping	A report that broadly maps the archaeological and cultural values of a study area. This includes the results of a baseline archaeological assessment and cultural assessment.
Cultural knowledge holders	Aboriginal people identified by the registered Aboriginal parties who have specific knowledge about objects, places or cultural features. Cultural knowledge holders may be asked to provide information in the preparation of a cultural assessment.
DoPI	Department of Planning and Infrastructure (formerly the Department of Planning)
Detailed cultural assessment	A detailed cultural assessment may be prepared as part of Stage 2 cultural heritage constraints mapping or a Stage 3 cultural heritage assessment report. A detailed cultural assessment contains cultural information about a study area sourced from primary and secondary sources, including Aboriginal cultural knowledge holders.
Director General's Requirements (DGRs)	The formal environmental assessment requirements issued by the Director General of Planning and Infrastructure that provide the framework for the proponent's environmental assessment for a Part 5.1 application.



Disturbed land	Land that has been the subject of a human activity that has changed the land's surface, being changes that remain clear and observable. ¹
Environmental impact assessment (EIS)	The investigations carried out for, and the reports comprising 'environmental impact assessment' for projects being assessed under Division 4.1 of Part 4 and Part 5.1 of the <i>Environmental Planning and Assessment Act 1979</i> .
Harm	Harm, is defined by the <i>National Parks and Wildlife Act 1974</i> , includes destroying, defacing or damaging an object; to move an object from the land on which it is situated; or cause or permit an object to be harmed.
Indigenous land use agreement	An indigenous land use agreement is an agreement under Commonwealth law between a native title group and others about the use and management of land and waters. An indigenous land use agreement can be negotiated over areas where native title has, or has not yet, been determined to exist. They can be part of a native title determination, or settled separately from a native title claim. When registered with the Tribunal, indigenous land use agreements bind all parties and all native title holders to the terms of the agreement. (National Native title Tribunal)
Native Title claimant	Refers to Aboriginal people with a registered native title claim application under the <i>Native Title Act 1993</i> . Registered claims are listed on the Register of Native Title Claims.
Native Title holder	Refers to Aboriginal people who are registered as native title holders for a determined native title interest under the <i>Native Title Act 1993</i> .
OEH	Office of Environment and Heritage is a separate office within the NSW Department of Premier and Cabinet. It was formerly known as the Department of Environment, Climate Change and Water, and now includes the Heritage Branch.
Part 4 consent	Development consent granted by a consent authority to a development application that is not State significant development (SSD), under Part 4 of the <i>Environmental Planning and Assessment Act 1974</i> . Involves the preparation of either a Statement of Environmental Effects (SEE) or an Environmental Impact Statement (EIS).
Part 5 assessment	Relates to an activity that requires environmental assessment by a determining authority under Part 5 of the <i>Environmental Planning and Assessment Act 1979</i> . Usually involves the preparation and determination of a Review of Environmental Factors (REF).

¹ Regulation 80B(4) National Parks and Wildlife Regulation 2009 and OEH's *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW*, 2010, p 11



Project	Refers to planning, field investigations, development and construction of RMS' infrastructure projects, including minor works and maintenance activities.
Project manager	Person responsible for the development and/or implementation of any RMS project including maintenance (includes 'project development manager').
REF	A review of environmental factors. A report that documents the environmental impact assessment process for a Part 5 assessment, and is prepared to satisfy RMS' obligations under section 111 of the Environmental Planning and Assessment Act 1979.
RES	Regional environmental staff
RMS	Roads and Maritime Services
SEE	A 'statement of environmental effects' for a project being assessed as a development application under Part 4 of the <i>Environmental Planning and Assessment Act 1979</i> .
SES(H)	Senior Environmental Specialist (Heritage)
Site officer	An Aboriginal person contracted by RMS for the provision of archaeological field services. A site officer is expected to have completed the Aboriginal Sites Identification course provided by the NSW Office of Environment and Heritage or have equivalent demonstrable site identification experience.
Site survey	A survey undertaken by site officers and an archaeologist for the purpose of identifying known or potential Aboriginal objects and places.
Site visit	An inspection undertaken to familiarise Aboriginal parties with a study area and the proposed scope of works.
SSD	'State significant development' (SSD) requires development consent from the Minister for Planning and Infrastructure, their delegate or the Planning Assessment Commission (PAC) under Division 4.1 of Part 4 of the <i>Environmental Planning and Assessment Act 1979</i> . Involves the preparation of an Environmental Impact Statement (EIS).
SSI	'State significant infrastructure' (SSI) requires approval by the Minister for Planning and Infrastructure under Part 5.1 of the <i>Environmental Planning and Assessment Act 1979</i> . Involves the preparation and determination of an Environmental Impact Statement (EIS).



Trainee site officer	An Aboriginal person contracted for the provision of archaeological field services. A trainee site officer generally has less experience, skills and/or qualifications to undertake the required work compared with a site officer.
Waters	The whole or any part of any river, stream, lake, lagoon, swamp, wetlands, natural watercourse or tidal waters (including the sea) ² .

² OEH *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW*, 2010, p21



Chapter 1: Introduction

Roads and Maritime Services (RMS) recognises that the development and delivery of its projects has the potential to impact Aboriginal cultural heritage. This impact needs to be managed in a manner which meets its business, legislative and social responsibilities, while being culturally sensitive, appropriate, practical and cost-effective.

It is essential that before RMS projects commence, the potential impacts on Aboriginal cultural heritage are identified and managed appropriately. Effective consultation with Aboriginal people is an important step in the process of identifying and minimising cultural heritage impacts.

This procedure outlines a four stage process for investigating potential impacts to Aboriginal cultural heritage as a result of RMS' road planning, development, construction and maintenance activities. It includes a process of community consultation that aims to ensure that the role, function and views of Aboriginal people are considered and respected by RMS.

Undertaking Aboriginal community consultation and cultural heritage investigations, as well as seeking the appropriate legislative approvals, can be complex and time-consuming. Relevant regulations prescribe minimum consultation processes and timeframes that must be followed. Therefore this procedure must be commenced early in a project's development to help minimise potential delays and costs to projects.

This procedure guides you through the actions that are required to investigate impacts on Aboriginal cultural heritage, and to consult with the Aboriginal community.



Chapter 2: Aims

This procedure aims to:

- Assist RMS to meet its legislative responsibilities regarding consultation and investigation of the potential impacts of RMS' projects on Aboriginal cultural heritage.
- Ensure that RMS projects likely to affect Aboriginal cultural heritage receive the appropriate level of assessment and community involvement.
- Ensure that a suitable and consistent standard of cultural and archaeological assessment and reporting is met by RMS and its consultants on projects across NSW.
- Achieve best practice management associated with Aboriginal cultural heritage.
- Enable RMS to establish a due diligence defence for the strict liability offence of harming an Aboriginal object under the *National Parks and Wildlife Act 1974*.



Chapter 3: Implementation of this procedure

This procedure must be implemented for every RMS project that would disturb the ground surface or involve the removal of mature native vegetation. This includes any project to be assessed, or that is exempt from assessment, under the *Environmental Planning and Assessment Act 1979*.

It sets out a consultation process that is consistent with the NSW Office of Environment and Heritage (OEH) *Aboriginal cultural heritage consultation requirements for proponents 2010* and the National Parks and Wildlife Amendment Regulation 2009.

Implementation of this procedure will help RMS to meet its legal obligations concerning Aboriginal cultural heritage, and in particular to:

- Identify appropriate Aboriginal stakeholders for each project to assist with the early identification of potential cultural heritage issues.
- Consult with Aboriginal stakeholders regarding proposed RMS projects where potential cultural heritage impacts have been identified.
- Demonstrate due diligence when assessing potential harm to Aboriginal objects and places by RMS projects.
- Seek the appropriate approvals and permits where required when impacting on or interacting with Aboriginal objects and places.

This procedure includes:

- RMS' policy on payments to Aboriginal site officers and knowledge holders (Appendix A).
- A contact list of relevant RMS officers (Appendix B).
- The list of low impact activities prescribed in the National Parks and Wildlife Regulation 2009 (Appendix C).
- Guidance on preparing a cultural heritage assessment report (Appendix D)
- Guidance on engaging Aboriginal site officers (Appendix E)
- Resources to be used in the implementation of this procedure. These resources include checklists, template letters, model briefs and contracts for the provision of services for use in RMS projects (Appendix F).



Chapter 4: Legislative responsibilities

4.1 Relevant legislation

RMS has a responsibility under State and (where appropriate) Commonwealth legislation to consider and assess the impacts of its activities on the environment. This procedure addresses the requirements for assessing impacts on Aboriginal cultural heritage under the *National Parks and Wildlife Act 1974* and the *Environmental Planning and Assessment Act 1979*.

4.2 National Parks and Wildlife Act 1974 (NSW)

The principal legislation for the protection, conservation and management of Aboriginal objects and places in NSW is the *National Parks and Wildlife Act 1974*, administered by OEH.

An objective of the Act is to conserve Aboriginal objects, places or features of cultural value, including, but not limited to:

- Places, objects and features of significance to Aboriginal people.
- Places of social value to the people of NSW.
- Places of historic, architectural or scientific significance.

An 'Aboriginal object' is any deposit, object or material evidence (not being a handicraft made for sale), including Aboriginal remains, relating to the Aboriginal habitation of NSW, before or concurrent with occupation by non-Aboriginal people.

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).

4.2.1 Offences under Part 6 of the National Parks and Wildlife Act 1974 (NSW)

Section 86 of the Act provides for two offences relating to Aboriginal objects, and one offence concerning Aboriginal places

- Section 86(1) provides that a person must not harm or desecrate an object that the person knows is an Aboriginal object. This is an offence requiring proof of knowledge and may involve a maximum penalty of \$275,000 and/or 1 years imprisonment, or (in circumstances of aggravation) \$550,000 and/or two years imprisonment for individuals, or \$1,100,000 for corporations.
- Section 86(2) provides that a person must not harm an Aboriginal object. This is a strict liability offence where intent or knowledge does not need to be proved, only that the harm occurred. The maximum penalty for an individual is \$55,000 or \$110,000 in circumstances of aggravation. The maximum penalty for a corporation is \$220,000.
- Section 86(4) of the Act provides that a person must not harm or desecrate an Aboriginal place. This is also a strict liability offence where intent or knowledge does not need to be proved. The maximum penalty for an individual is \$550,000 and/or 2 years imprisonment or \$1,100,000 for a corporation.

Note that the definition of harm in the Act does not include something that is 'trivial or negligible'. The OEH *Due diligence code of practice for the protection of Aboriginal objects in NSW 2010* (see below) provides examples of what might constitute a trivial



or negligible act including picking up and replacing a small stone artefact, unknowingly breaking a small Aboriginal object below the ground surface when gardening or crushing a small stone artefact when walking on a track.

4.2.2 Exemptions under Part 6 of the National Parks and Wildlife Act 1974 (NSW)

The Act provides exemptions to the offences of harming Aboriginal objects and places in certain circumstances³. These are for:

- Aboriginal people and their dependants when carrying out non-commercial traditional cultural activities.
- Any emergency fire fighting or bush fire hazard reduction work within the meaning of the *Rural Fires Act 1997* that is authorised or required to be carried out under that Act.
- Emergency activities authorised under the *State Emergency and Rescue Management Act 1989* that are reasonably necessary in order to avoid an actual or imminent threat to life or property.
- Works by, or directed by, authorised OEH officers to protect or conserve Aboriginal objects.
- Anything specifically required or permitted under the express terms of a conservation agreement entered into under Division 12 of Part 4 of the Act.

4.2.3 Defences under Part 6 of the National Parks and Wildlife Act 1974 (NSW)

The Act and *National Parks and Wildlife Regulation 2009* provide a number of statutory defences that may apply where an Aboriginal object or place is harmed or desecrated in contravention of section 86. These include:

Aboriginal heritage impact permits (AHIP)

The Director General of OEH may issue a proponent with an AHIP under Section 90C of the Act to which authorises the harm of an Aboriginal object or place. AHIPs can be used to:

- Undertake sub-surface investigations
- Move or collect an object
- Harm object or place
- Harm object or place and undertake salvage.

An AHIP provides a defence against any offence relating to the harm of an Aboriginal object or place, provided that there have been no breaches of any of the conditions of the AHIP. All AHIP applications must be signed by RMS Chief Executive or authorised delegate prior to submission to OEH.

Due diligence

It is a defence to the strict liability offence of harming an Aboriginal object if it can be shown that the defendant exercised due diligence in determining whether their actions would cause harm and it was reasonably determined that no Aboriginal object would be harmed (Section 87(2)).

Note that the due diligence defence **does not apply to:**

³ Sections 87A and 87B of the Act



- Knowingly harming or desecrating an Aboriginal object;
- Harming or desecrating an Aboriginal place (with or without knowledge).

Due diligence may be established by following a person's own due diligence process, certain prescribed codes of practice or the generic OEH *Due diligence code of practice for the protection of Aboriginal objects in NSW 2010*. No prescribed due diligence code of practice currently applies to RMS. Rather than rely on the generic OEH due diligence code of practice, RMS has developed this procedure. This procedure constitutes RMS' due diligence process for the purposes of Section 87(2) of the Act. It is intended to provide, if followed, a due diligence defence for RMS against a possible strict liability prosecution if harm is caused to an Aboriginal object when carrying out road projects and activities.

Where the due diligence process indicates that an activity is likely to cause harm to an Aboriginal object, the harm should be avoided where practicable. Where this is not practicable, a person is required to apply for an AHIP.

Low impact activities

The National Parks and Wildlife Regulation 2009 lists ten categories of "low impact activities". Undertaking a low impact activity provides a defence against the strict liability offence of harming an Aboriginal object.

Note that the low impact activities defence **does not apply to:**

- Knowingly harming or desecrating an Aboriginal object;
- Harming or desecrating an Aboriginal place (with or without knowledge).

However, if an Aboriginal object is discovered in the course of undertaking any of the prescribed low impact activities, the object must not be harmed. It is an offence under Section 86(1) of the Act to knowingly harm an Aboriginal object. If an Aboriginal object is discovered, all works must cease, and an AHIP must be obtained if harm to the object cannot be avoided⁴.

RMS Environmental assessment procedure for routine and minor works outlines a range of exempt development that is consistent in scope with the low impact activities in the regulation.

Archaeological code of practice

The National Parks and Wildlife Regulation 2009 excludes from the definition of 'harm' under the Act, any act carried out in accordance with the *Code of practice for archaeological investigation of Aboriginal objects in NSW 2010*. The code allows a person to undertake archaeological test excavations without an AHIP provided that the excavations are carried out in accordance with the code. Where archaeological test excavations cannot be undertaken in accordance with the code, an AHIP must be obtained from OEH for the works⁵.

⁴ Under the *Environmental Planning and Assessment Act 1979*, Part 4.1 projects authorised with development consent and approved Part 5.1 projects are exempted from obtaining AHIPs. This also applies to any investigative or other activities that are required to be carried out for the purpose of complying with any environmental assessment requirements for approval to carry out the project or of a concept plan for the project.

⁵ *ibid*



Note that the Code does not apply to acts of desecration.

Honest and reasonable mistake

Section 86(5) of the Act states that the defence of “honest and reasonable mistake of fact” applies to the strict liability offences of:

- Harming an Aboriginal object, or
- Harming or desecrating an Aboriginal place.

The defence **does not apply** to the offence of **knowingly** harming or desecrating an Aboriginal object.

Despite the potential availability of this defence RMS requires all staff to follow this procedure. This will ensure that the risk inadvertently impacting on Aboriginal objects and places because of a mistake of fact is minimised.

4.2.4 Aboriginal community consultation requirements

Clause 80C of the National Parks and Wildlife Regulation 2009 imposes a legal requirement for Aboriginal community consultation to be undertaken when applying for an AHIP.

This consultation process is further described in OEH's *Aboriginal cultural heritage consultation requirements for proponents 2010*. Under the consultation requirements, when applying for an AHIP RMS must undertake a prescribed consultation process with (among others) Aboriginal people who hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects and places. In determining whether to grant an application for an AHIP, the Director General is required to consider (among other things) the results of any consultation with Aboriginal people and whether that consultation substantially complied with requirements set out in the regulations.

4.3 Environmental Planning and Assessment Act 1979 (NSW)

The *Environmental Planning and Assessment Act 1979* provides a framework for environmental planning and assessment in NSW. The Act requires RMS to examine and take into account the impact or likely impact of its projects on the environment – including Aboriginal cultural heritage.

Planning assessment and authorisation to carry out RMS projects under the Act will generally proceed in one of the following four ways:

- Part 4 of the Act applies to the undertaking of development that is not State significant development or infrastructure. This type of development requires the consent of a consent authority (usually a local council or joint regional planning panel). Usually, RMS projects requiring Part 4 consent will fall within the “crown development” provisions of Division 4 of Part 4. RMS’ environmental impact assessment of a Part 4 project is documented in a statement of environmental effects (SEE). A SEE is submitted with the development application and may be incorporated into the development consent.
- Division 4.1 of Part 4 of the Act applies to development that is State significant development (SSD) as defined by a State Environmental Planning Policy. This type of development requires the consent of the Minister for Planning and Infrastructure (DoPI) or their delegate. RMS environmental impact assessment of a Division 4.1 project is documented in an environmental impact statement (EIS).



An EIS is submitted with the project application and may be incorporated into the development consent.

- Part 5 of the Act applies to activities where Part 4 consent is not required, but either some form of statutory approval is required from a public authority, or the activity is being carried out by a public authority. The environmental impact assessment of a Part 5 project is usually documented in a review of environmental factors (REF) and (internal RMS) determination to proceed with the activity.
- Part 5.1 of the Act applies to development that is State significant infrastructure (SSI) as defined by State Environmental Planning Policy (State and Regional Development) 2011. This type of development requires the approval of the Minister for Planning and Infrastructure or delegate. RMS' environmental impact assessment of a SSI project is documented in an EIS. An EIS is publicly exhibited by DoPI and may be incorporated into the approval.

If a project is a transitional Part 3A project, this procedure will apply in the same way as it does for a SSI project, You should consult with the Manager Environmental Planning and Assessment for specific assistance.

📌 Exemptions from the need to seek an AHIP

A range of approvals (including AHIPs) may not be required in the following instances:

- For SSD projects (Division 4.1 of Part 4) authorised by a development consent under Section 89J of the Act.
- For approved Part 5.1 projects under Section 115ZG of the Act.
- For approved transitional Part 3A projects. That is, any project for which a project approval was granted under the now repealed Part 3A provisions.

Where SSD consent or SSI approval is sought and environmental assessment requirements have been provided by the Director General of DoPI, RMS may not be required to obtain AHIPs. This is also the case for transitional Part 3A project applications. You should not assume that this exemption automatically applies. Please refer to the Manager Environmental Planning and Assessment to confirm whether a specific Part 4 SSD or Part 5.1 SSI project has this exemption. An AHIP is not required for a SSD project that has received consent or a SSI project that has received approval under the Act. For staged SSD that has received development consent or an approved staged SSI project, please refer to the Manager Environmental Planning and Assessment for confirmation on whether the exemption applies.

Even if an AHIP is not required for a Part 4 SSD or Part 5.1 SSI project (or a transitional Part 3A project), this procedure must still be followed. Note also that the Director General's formal environmental assessment requirements may impose additional or specific consultation or other requirements concerning Aboriginal cultural heritage. If this happens, please seek advice from regional environmental staff or Environment Branch.



4.4 Heritage Act 1977 (NSW)

The *Heritage Act 1977*, administered by the NSW Office of Environment and Heritage (OEH) protects NSW's natural and cultural heritage. Aboriginal heritage is primarily protected under the *National Parks and Wildlife Act 1974* but may also be subject to the provisions of the *Heritage Act 1977* if the item is listed on the State Heritage Register or subject to an interim heritage order⁶. In such cases, Aboriginal objects and places are protected under Section 60 of the Act and approval from the Heritage Council may also be required in addition to an AHIP. Note that section 60 approvals are not required for an approved Part 5.1 project.

4.5 Aboriginal Land Rights Act 1983 (NSW)

The NSW *Aboriginal Land Rights Act 1983*, administered by the Department of Human Services: Aboriginal Affairs NSW establishes the NSW Aboriginal Land Council and local Aboriginal land councils. The Act requires these bodies to:

- Take action to protect the culture and heritage of Aboriginal persons in the council's area, subject to any other law.
- Promote awareness in the community of the culture and heritage of Aboriginal persons in the council's area.

The Act also establishes the Registrar whose functions include maintaining the Register of Aboriginal Land Claims and the Register of Aboriginal Owners. Registration as an Aboriginal owner does not confer land title rights but acknowledges the person's cultural association with the land.

Under the Act, the Registrar is to give priority to the entry in the Register of the names of Aboriginal persons who have a cultural association with:

- Lands listed in Schedule 14 to the *National Parks and Wildlife Act 1974*
- Lands to which Section 36A of the *Aboriginal Land Rights Act 1983* applies.⁷

4.6 Native title legislation

The *Native Title Act 1993* (Cwlth) provides the legislative framework that:

- Recognises and protects native title.
- Establishes ways in which future dealings affecting native title may proceed, and to set standards for those dealings, including providing certain procedural rights for registered native title claimants and native title holders in relation to acts which affect native title.
- Establishes the National Native Title Tribunal.

The National Native Title Tribunal has a number of functions under the Act including maintaining the Register of Native Title Claims, the National Native Title Register and the Register of Indigenous Land Use Agreements and mediating native title claims.⁸ The NSW *Native Title Act 1994* was introduced to ensure that the laws of NSW are consistent with the *Commonwealth Native Title Act 1993*.

The Native Title Services Corporation (NTSCorp) provides professional services to support Aboriginal people and organisation in meeting the requirements of native title legislation. NTSCorp may be aware of Aboriginal stakeholders who have an interest in a specific area of land.

⁶ OEH, *Aboriginal cultural heritage consultation requirements for proponents* 2010, p 4

⁷ *ibid*

⁸ *Ibid*, p5



4.7 Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Cwlth)

The *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cwlth) enables the Australian Government to respond to applications by or on behalf of Aboriginal persons to protect traditionally important areas and objects that are under threat. In determining whether to grant such protection, the Federal Minister must consider a range of specific matters, including whether state or territory laws have not provided effective protection. The government can make emergency and permanent declarations to protect significant Aboriginal areas, objects and classes of objects from threats of injury or desecration. The power to make declarations is meant to be used as a last resort, after the relevant processes of the state or territory have been exhausted.⁹

⁹ Refer to Department Sustainability, Environment, Water, Population and Communities: <http://www.environment.gov.au/heritage/laws/indigenous/index.html>



Chapter 5: Four stages for RMS staff to follow for the consultation and assessment process

5.1 Overview

This procedure involves four stages of consultation and investigation that assess known or potential impacts to Aboriginal cultural heritage. Projects that can avoid impacts to Aboriginal cultural heritage may only be required to complete some stages of this procedure. However, projects that would harm Aboriginal objects or places are required to complete all stages. An overview of the stages of this procedure is shown in the flowchart in Section 5.3.

The four stages of this procedure are:

- **Stage 1: Initial RMS assessment**
The aim of Stage 1 is to undertake a desktop risk assessment to determine whether a RMS project is likely to harm Aboriginal cultural heritage or not, and whether further assessment or investigation is required.
- **Stage 2: Further assessment and site survey**
The aim of Stage 2 is to undertake further assessment and a survey with specific Aboriginal stakeholders and an archaeologist to assess a project's potential to harm Aboriginal cultural heritage, and to determine whether formal Aboriginal community consultation and a cultural heritage assessment report is required.
- **Stage 3: Formal consultation and preparation of a cultural heritage assessment report.**
Where Stages 1 and 2 have led to the preliminary view that harm to Aboriginal objects or places will occur or is likely to occur, the statutory consultation process must take place and a cultural heritage assessment report must be prepared. Aboriginal parties must be involved in the preparation of the report in accordance with legislative requirements and OEH's *Aboriginal cultural heritage consultation requirements for proponents 2010*.

Stage 3 may also involve archaeological testing in accordance with an AHIP, the *Code of practice for archaeological investigation of Aboriginal objects in NSW 2010* or environmental assessment requirements issued by the Director General of DoPI for a Part 5.1 project application.
- **Stage 4: Implement project mitigation measures**
The aim of Stage 4 is to undertake any salvage and/or project implementation in accordance with an AHIP and/or a project approval or determination under the *Environmental Planning and Assessment Act 1979*.

Resources

- Appendix F – Resource 1: Activity checklist
- Appendix F – Resource 2: Statutory time constraints for the procedure

5.2 Application of these stages to the environmental impact assessment process

Exempt development (as defined under the *Environmental Planning and Assessment Act 1979* which does not require assessment under Part 4, Division 4.1 of Part 4, Part 5 or Part 5.1 of the *Environmental Planning and Assessment Act 1979*) must follow this procedure and address the relevant steps of the Environmental assessment procedure for routine and minor works.

For all other development, information gathered at Stages 1 to 3 can be incorporated in the environmental impact assessment documentation being prepared at that time. Depending on the size and complexity of the project, this documentation may take the form of a preliminary environmental investigation (PEI), an EIS for projects being assessed under Division 4.1 of Part 4 or 5.1 of the Act, a SEE for projects seeking consent under Part 4 of the Act, an environmental assessment for transitional Part 3A projects or an REF for projects being assessed and determined under Part 5 of the Act.

Where an EIS, SEE or REF is being prepared, and Stage 3 of this procedure has been triggered, the statutory Aboriginal cultural heritage consultation provisions must be followed and an Aboriginal cultural heritage assessment report **must** be prepared. Apart from satisfying legal requirements (including obligations to adequately assess cultural heritage impacts at the appropriate time in the assessment or determination process), there are other benefits in preparing a cultural heritage assessment report before an EIS, SEE or REF is determined, put on public display or submitted for adequacy. This ensures that cultural heritage management options based on an appropriate level of investigation are considered. This reduces uncertainty and risk for the project. It also avoids potential delays and increased costs to the project that may arise if the Aboriginal cultural heritage assessment process is not finalised prior to construction, planning and scheduling. It also reduces the risk of potential legal challenge.

If archaeological investigations are required at Stage 3 to understand the significance of Aboriginal objects, then they should be completed, and the results included in the cultural heritage assessment report **before** the environmental impact assessment is determined, put on public display or submitted for adequacy.

5.3 Exemption to allow for the delayed completion of the cultural heritage assessment report

In exceptional circumstances, the project EIS, SEE, or REF may be determined, put on public display or submitted for adequacy before finalising the cultural heritage assessment report, and any associated archaeological test excavations. However, this cannot be done if to do so would mean RMS could not comply with its statutory obligations under the *Environmental Planning and Assessment Act 1979*. As this approach involves a departure from the procedure, Chief Executive approval is required at the earliest opportunity. The procedure for seeking Chief Executive approval is as follows.

The project manager must contact the Senior Environmental Specialist (Heritage) at the earliest opportunity, and ideally before the EIS, SEE or REF is commenced. The Senior Environmental Specialist (Heritage) will then consult with the General Manager Environment Branch, Manager Aboriginal Programs, Manager Environmental Planning and Assessment, and Legal Branch to decide whether the cultural heritage assessment report (and any associated archaeological test



excavations) needs to be completed prior to the EIS, SEE or REF being determined, put on public display or submitted for adequacy.

If the exemption is considered to be appropriate, the General Manager Environment Branch will submit the proposal to the Chief Executive, and seek endorsement. It should not be assumed that the endorsement will be given. Unless the Chief Executive endorses the proposal, the cultural heritage assessment report and any associated archaeological test excavations will need to be undertaken before the environmental impact assessment is determined, put on public display or submitted for adequacy.

If supported by the Chief Executive the Senior Environmental Specialist (Heritage) will provide a strategy to the project team for finalising the environmental impact assessment process. This strategy will outline the minimum requirements to be addressed in the EIS, SEE or REF to ensure that the cultural heritage assessment is adequate for the purposes of the *Environmental Planning and Assessment Act 1979*. For SSD and SSI projects, consultation may also need to be undertaken with the DoPI and OEH on the proposed approach.

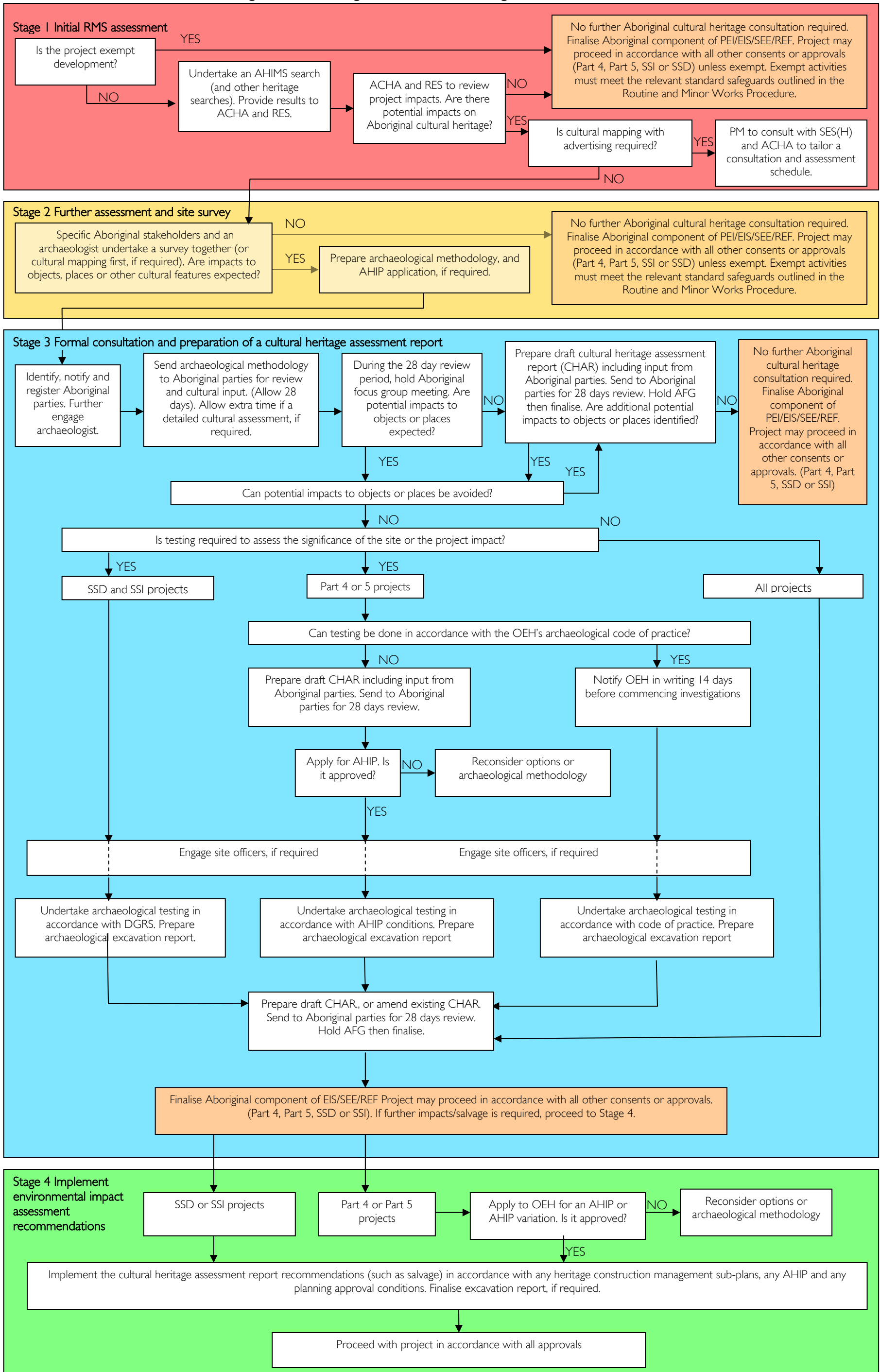
♯ Where an archaeological activity (such as salvage) is not being undertaken for the purpose of assessing environmental impact, the activity would be done after planning approval or a determination has been obtained.

For projects being assessed as SSD or SSI of the Act, salvage activities and site impacts (other than test excavations) would occur in accordance with the consent or approval conditions.

For Part 4 or Part 5 projects, salvage activities and site impacts (other than test excavations) would occur after the SEE is approved (for Part 4) or the REF is determined (for Part 5), and an AHIP has been obtained.



5.4 Flowchart for the Procedure for Aboriginal cultural heritage consultation and investigation



5.5 Stage 1 Initial RMS assessment

Aim

The aim of Stage 1 is to undertake a desktop risk assessment to determine whether a RMS project would potentially impact on Aboriginal cultural heritage and require further assessment or investigation. This includes impacts on Aboriginal lands, objects and places defined under the *National Parks and Wildlife Act 1974*, and intangible cultural heritage values.

👉 Stage 1 must be followed for any RMS activity that would disturb the ground surface or mature vegetation.

Ground disturbance includes digging, grading, bulldozing, scraping, drilling, building of a structure or removal of vegetation. Any activity that does not involve the disturbance of the ground surface is unlikely to impact Aboriginal objects or places. Such activities may proceed in accordance with all other relevant approvals and processes, which may include the Environmental assessment procedure for routine and minor works.

Vehicle movements over or across rock engravings may also result in harm to the object. Where a project is in close proximity to a rock engraving, particularly in the Sydney basin, Stage 1 of this procedure must be followed.

No ground disturbance including geotechnical investigations is to occur as part of any project unless the potential impacts to Aboriginal objects and places have been considered. Where known objects, places or potential archaeological deposits have been identified, these should be documented in the environmental impact assessment process, and measures taken to either avoid impact or proceed to Stage 2 of this procedure.

☑ Action 1- Determine whether the activity falls within Step 1 or Step 2 of the Environmental assessment procedure for routine and minor works

The project manager must refer to the Environmental assessment procedure for routine and minor works. For any project that clearly falls outside the scope of a routine or minor work, proceed directly to Action 2.

The Environmental assessment procedure for routine and minor works provides a risk assessment framework for assessing the potential environmental impact of routine and minor works carried out by RMS and its contractors.

Routine and minor works is categorised under the *Environmental Planning and Assessment Act 1979*, *State Environmental Planning Policy (Infrastructure) 2007* and the *Roads Act 1993* depending on its nature and impacts. This includes:

- Routine and minor works that are not activities or development under the *Environmental Planning and Assessment Act 1979*.
- Routine and minor works that are categorised as exempt development under the *Environmental Planning and Assessment Act 1979*.
- Routine and minor works that fall under Part 5 of the *Environmental Planning and*

Assessment Act 1979.

- Removal or lopping of trees and vegetation that is on or overhanging a public road for the purpose of removing a traffic hazard.

Routine and minor works, by their nature, are unlikely to have a significant impact on the environment and must meet the following requirements:

- They must occur within the disturbed zone of the road corridor (except for servicing vacant properties).
- They must be included on the routine and minor works activity checklist.
- They must all the relevant standard environmental safeguards.

Outcomes

Either:

1. The project falls within Step 1 or Step 2 of the Environmental assessment procedure for routine and minor works. That is, it is unlikely to harm Aboriginal cultural heritage. No Aboriginal cultural heritage consultation is required at this stage. The project may proceed in accordance with all other relevant approvals.

OR

2. The project is not in Step 1 or Step 2 of the Environmental assessment procedure for routine and minor works. Further assessment is required to determine whether the project may harm Aboriginal cultural heritage. Proceed to Action 2.

IMPORTANT!

Clause 80B of the National Parks and Wildlife Regulation 2009 prescribes a number of low impact activities that provide a defence to the strictly liability offence of harming an Aboriginal object. The rationale for this defence is that the designated “low impact” activities are unlikely to harm Aboriginal objects. Appendix C includes a full list of the low impact activities covered by the Regulation.

For the purposes of this procedure, a range of low impact activities most applicable to RMS are addressed in the Environmental assessment procedure for routine and minor works. Any activity or work determined to be exempt development under the Environmental assessment procedure for routine and minor works would satisfy a low impact activity defence.

The “low impact activities” defence does not apply if you know that an Aboriginal object is likely to be harmed. It is an offence under the *National Parks and Wildlife Act 1974* to proceed with a low impact activity if you know that it would harm an Aboriginal object or place.

For example, if works are proposed in an area that includes a known shell midden, scarred or carved tree, rock carving, stone artefact deposit, ceremonial area or potential archaeological deposit, it is likely that an Aboriginal object would be harmed and the clause 80B defence could not be invoked. Advice should be sought from the regional Aboriginal cultural heritage advisor and regional environmental staff in such circumstances. If a potential Aboriginal object is identified during the activity, all works must cease, and the appropriate approvals must be sought. Contact the regional Aboriginal cultural heritage advisor for assistance.

☑ Action 2– Undertake a search of AHIMS and the register of Aboriginal lands

The project manager must ensure that a search of the Aboriginal Heritage Information Management System (AHIMS) is done. The AHIMS is a database managed by OEH containing the location and description of known Aboriginal objects and places in NSW. The search should include a reasonable buffer, which may be dependant upon the scale of the project or activity. For example, small to medium sized projects may use a buffer of 100 metres, while larger projects may use a buffer of 1 kilometre.

The initial web-based Basic Search of AHIMS is free. If the results of the Basic Search indicate that objects or places occur within the project area, the project manager must ensure that an Extensive Search is carried out. Information on undertaking these searches is available on OEH's [website](#).

If an AHIMS search has previously been conducted for the project and the search is over 12 months old, a new search of the database must be conducted to ensure that the information obtained is still current. All records of AHIMS searches must be retained on the project file and detailed in the relevant environmental impact assessment documentation.

The project manager must also ensure that a search of Schedule 14 of the *National Parks and Wildlife Act 1974* is done. Land listed under Schedule 14 may not necessarily be defined as an Aboriginal place (see glossary); however it is land that is recognised by the Act as being of Aboriginal cultural significance.

👉 The project manager should also undertake a free web-based search of the Australian Heritage Database (managed by the Commonwealth Department of Sustainability, Environment, Water, Population and Communities) and the State Heritage Register (managed by OEH) to identify any further potential Aboriginal and non-Aboriginal heritage constraints for the project.

☑ Action 3 – Consult with Aboriginal cultural heritage advisor and regional environmental staff

The following information is to be provided to the regional Aboriginal cultural heritage advisor and regional environmental staff:

- The results of the AHIMS search and schedule 14 of the *National Parks and Wildlife Act 1974* search including site records (and any additional searches). The results should be provided as an overlay on a plan of the study area.
- Details of the scope and status of the proposed works.
- Details of the location of the project (including the proposed compound sites, service relocation and vehicle and plant access if known).
- A map of the project area covering the extent of works.
- Aerial photographs with contours (if available). A site visit may also be arranged for the Aboriginal cultural heritage advisor and environmental staff to better understand the scope of the works and to assess the study area.
- The work breakdown structure (WBS) number for the project.


Resources

- Appendix F – Resource 03: Stage 1 assessment checklist

Action 4 – Assess the potential harm to Aboriginal objects and places

In determining whether the project is likely to impact Aboriginal cultural heritage, the regional Aboriginal cultural heritage advisor and regional environmental staff must consider:

- Whether the project would affect known Aboriginal objects or places shown by the AHIMS search, and any additional searches.
- Whether high or low concentrations of known Aboriginal objects or places occur within the surrounding landscape as identified by the AHIMS search, and any additional searches.
- Whether the project is in a location where Aboriginal objects and places are likely to be located. (**See shaded box below**)
- Whether natural landforms likely to have significant Aboriginal cultural values are present.
- The extent of known disturbance to the study area.
- Observations from a site visit, if undertaken.
- Whether a sandstone outcrop or exposure is present on any land.

 Aboriginal objects are likely to occur on land that is not 'disturbed' and is:

- Within 200m of waters; or
- Located within a sand dune system; or
- Located on a ridge top, ridge line or headland; or
- Located within 200m below or above a cliff face; or
- Within 20m of, or in a cave, rock shelter or a cave mouth.
- Remnant, mature stands of vegetation.

Aboriginal rock engravings may occur on sandstone exposures or outcrops, particularly in the Sydney basin, **whether the land is disturbed or not**.

Resources

Appendix F – Resource 04: Stage 1 assessment outcome – template letter

Outcomes

The Aboriginal cultural heritage advisor and/or the regional environmental staff will advise the project manager, based on a consideration of the above information, about the following potential outcomes:

1. The project is unlikely to impact Aboriginal cultural heritage, or can be redesigned to avoid impact to Aboriginal cultural heritage. Aboriginal community consultation is not required. The project may proceed in accordance with the environmental impact assessment process and all other relevant approvals. This outcome must be documented in the project

PEI/EIS/SEE/REF or in accordance with the Environmental assessment procedure for routine and minor works.

OR

2. The project would harm, or has potential to harm, Aboriginal cultural heritage. A survey of the project area is required to determine the likely extent of impact by the project, and appropriate mitigation measures. Proceed to Stage 2.

OR

3. The project has potential to harm Aboriginal cultural heritage, but it is not feasible to undertake a survey due to the size or inaccessibility of the study area. This might be the case where multiple route options are under consideration. In such cases, the project would undertake a desktop-based cultural constraints mapping report to identify known tangible and intangible cultural heritage values. See the shaded box on page 25 for further details.

Cultural heritage constraints mapping

Cultural heritage constraints mapping may be undertaken where it is not feasible to undertake an archaeological survey due to the size or inaccessible nature of the study area. Constraints mapping may assist large or complex projects (particularly those that involve route selection) by providing general information about known archaeological values and intangible cultural values, and how these might be affected by the project.

Constraints mapping combines information gathered from the Aboriginal community and an archaeological baseline assessment prepared by an archaeologist.

- **Aboriginal community consultation**

The Aboriginal community would identify key cultural values or features within the study area. Cultural values may relate to known or potential archaeological sites, spiritual or ceremonial areas, natural resource zones, and areas of historical and social significance.

Generally, consultation would be undertaken with the key Aboriginal stakeholders listed at Stage 2, Action 1. However, the project manager may advertise and seek broader Aboriginal community involvement at this early stage. A benefit in undertaking an inclusive form of consultation at this early stage is that it provides an opportunity for other interested members of the Aboriginal community to be involved in the preliminary assessment phase for the project, and to contribute to route selection decision-making.

As early advertising represents a variation of the consultation process outlined in this procedure, it is recommended that the project manager consult with the Senior Environmental Specialist (Heritage) and the regional Aboriginal cultural heritage advisor to assist with tailoring a schedule for ongoing consultation and assessment for the project.

- **Archaeological baseline assessment**

The archaeological baseline assessment provides a general desktop overview of known and potential Aboriginal objects and places within the study area, and how these could be affected by the project.

Due to its limited scope, an archaeological baseline assessment does not satisfy OEH's assessment standards as outlined in the *Code of practice for archaeological investigation of Aboriginal objects in NSW 2010*. As such, a formal survey of the preferred route/project area may be required at a later date, as described in Stage 2 of this procedure.

Resources

- Appendix F – Resource 05: Aboriginal cultural heritage constraints mapping report - standard brief

5.6 Stage 2 Site survey and further assessment

Aim

The aim of Stage 2 is to test the preliminary findings made in stage 1 that a project may harm Aboriginal cultural heritage. This would generally be done through the completion of further desktop studies and a site survey. To do this, the project manager must engage with specific Aboriginal stakeholders and an archaeologist.

Action 1 – Identify key Aboriginal stakeholders

Identify key Aboriginal stakeholders to be consulted with. To do this, the Aboriginal cultural heritage advisor will:

- Search the National Native Title Register to identify any registered native title claimants or native title holders for the study area. This would include any group with an active Indigenous Land Use Agreement.
- Identify the local Aboriginal land councils within the study area. Where a local Aboriginal land council is under administration, the project manager is to contact the administrator.
- Search the Register of Aboriginal Owners established under the *Aboriginal Land Rights Act 1983*.

👉 If a native title holder is identified, the RMS' project team is not required to consult with other Aboriginal parties at this stage for the portion of land subject to the native title determination.

Action 2 – Engage Aboriginal stakeholders to undertake a site survey

The project manager and Aboriginal cultural heritage advisor will ensure that the Aboriginal stakeholders identified at Action 1 are engaged to identify known and potential Aboriginal cultural heritage features within the project area.

Each Aboriginal stakeholder identified at Action 1 would be invited to provide a site officer to do the survey. The archaeologist may indicate that additional site officers are required. In such cases, each stakeholder would be invited to provide additional site officers as appropriate. Unlike Stage 3 of this procedure, the Aboriginal stakeholders are not required to submit site officer applications forms to be considered for the Stage 2 survey.

The site officers nominated by their group to participate in the survey will be provided with a template cultural heritage survey report prior to doing the survey. The project manager should explain to the site officers that this stage of investigation (and their role in it) is separate to any formal statutory consultation which may take place in Stage 3 in accordance with OEH's consultation requirements. All participants in a survey must adhere to the relevant safe work method statement and wear appropriate personal protective equipment.

Resources

- Appendix F – Resource 06: Template invitation to Aboriginal stakeholders to undertake Stage 2 survey.
- Appendix F – Resource 07: Template Aboriginal stakeholder cultural heritage survey report.
- Appendix F – Resource 08: Agreement to provide services. Aboriginal Archaeological Investigations

Action 3 – Engage an archaeologist to undertake a site survey

The project manager will engage an archaeologist to prepare an Aboriginal archaeological (survey) report. This type of report is most applicable for assessing known or potential Aboriginal objects or places within a preferred route or corridor, and for assessing potential impacts arising from the project, and recommending appropriate mitigation measures.

Resource

- APPENDIX F – Resource 09: Aboriginal archaeological (survey) report – standard brief

Action 4 – Undertake the site survey

The archaeologist, Aboriginal stakeholders and the RMS' regional Aboriginal cultural heritage advisor must undertake the site survey together. The project manager must ensure that all participants in the survey are made aware of occupational health and safety procedures relevant to the survey area, such as safe work method statements or site induction procedures. The project manager must ensure that access to non-RMS owned land has been approved by the relevant landowner. If the landowner does not consent to access, the project manager should consult with regional property staff and also Legal Branch if required to ascertain whether statutory powers of entry to land under the Roads Act 1993 can be used. Unless the scope of the project area changes, the survey would not generally be repeated at a later stage of this procedure.

Action 5 – Aboriginal stakeholder(s) prepare cultural heritage survey report

The Aboriginal stakeholders will provide a cultural heritage survey report to RMS within an agreed timeframe (as negotiated depending upon the size and complexity of the project) advising on Aboriginal cultural heritage issues that may arise as a result of the proposed project. The cultural heritage survey report is a template document designed to assist Aboriginal stakeholders identify and record Aboriginal cultural values within a study area. Written responses must be kept on file. The project manager is to ensure that a copy of the report is provided to the archaeologist so that the information can be combined with the archaeological survey report.

Action 6 – Archaeologist prepares archaeological survey report, and AHIP application if required.

The archaeologist will prepare the draft archaeological (survey) report which would incorporate information provided by the Aboriginal stakeholder's cultural heritage

survey report This must be provided to RMS within an agreed timeframe (as negotiated depending upon the size and complexity of the project). The report must clearly state whether Aboriginal objects and places would be affected, or potentially affected by the project.

As part of the archaeological (survey) report, the archaeologist must prepare a draft archaeological methodology for impacting the Aboriginal objects and places. The methodology may allow for archaeological testing, salvage or project implementation without salvage. Where an AHIP would be required to implement the methodology, the archaeologist must also prepare an AHIP application. The methodology must state how many Aboriginal site officers would be required, if any.

👉 **What is an archaeological methodology?**

An archaeological report will make recommendations about the likely harm to Aboriginal cultural heritage resulting from a project, and how that harm is to be managed. The archaeological methodology describes how the recommendations will be implemented.

Generally, there are four types of recommendations:

1. *Harm to Aboriginal cultural heritage is likely and is unacceptable.* The scope of the project must be reconsidered to avoid or minimise harm. The proposed methodology may describe measures to avoid harm such as the use of buffer zones, no-go areas, signage, fencing or similar.
2. *Harm to Aboriginal cultural heritage is unlikely.* The proposed methodology may still recommend that mitigation measures be put in place to ensure that potential for harm is minimised. This may include the use of buffer zones, no-go areas, signage, fencing or similar.
3. *Further investigation is required to understand the nature and significance of the Aboriginal cultural heritage resource, and how this may be affected by the project.* The proposed methodology would describe how archaeological investigations are to occur.
4. *Harm to Aboriginal cultural heritage is likely and acceptable.* Depending on the degree of impact, and the significance of the Aboriginal cultural heritage resource, the proposed methodology may describe a salvage strategy, in which Aboriginal objects are collected prior to a site being impacted by the project.

Where archaeological investigation or salvage is proposed, the methodologies must describe how the site would be affected. This may include manual or machine excavation, tools to be used (including water tanks and sediment controls for wet sieving), test excavation strategies, salvage strategies, the location of test pits, the method and scope of proposed excavations, the method of recording, the storage of cultural material, the estimated team size (including the number of Aboriginal site officers required), the investigation timeframe, and strategies for post-excavation analysis, etc.

Where archaeological test excavations are proposed, the methodology must include valid research questions, and describe how the investigation would answer these questions. Where test excavation methodologies are consistent with OEH's *Code of practice for archaeological investigation of Aboriginal objects in NSW 2010*, AHIPs are not required to undertake the testing.

☑ Action 7 – RMS review of archaeological survey report and archaeological methodology

The project manager, regional environmental staff and Aboriginal cultural heritage advisor are to review and provide comment to the archaeologist on the draft archaeological report and methodology. The purpose of the review is to check whether the report accurately reflects and addresses the scope of the proposal.

☑ Action 8 – Aboriginal cultural heritage advisor and regional environmental staff will assess project impacts

The Aboriginal cultural heritage advisor and regional environmental staff will consider any impacts identified by the finalised archaeological survey report.

Outcomes

1. Where it is determined that the project would not impact Aboriginal objects or places, then an AHIP (or equivalent consultation and assessment for SSD or SSI projects) is not required. Where no other Aboriginal cultural heritage constraints are identified, the works may proceed without further regard to this procedure.

OR

2. Where, in the opinion of the Aboriginal cultural heritage advisor and regional environmental staff, there may be an impact on Aboriginal objects, places, or significant intangible Aboriginal cultural values, a cultural heritage assessment report must be prepared. Proceed to Stage 3.

☞ Where a project route selection or options analysis includes a value management study (or similar) involving external stakeholder participation, a representative from each Aboriginal group identified at Action 1 is to be invited. The Aboriginal cultural heritage advisor will attend these workshops as part of the project team.

Where broader, inclusive Aboriginal community consultation has taken place, representatives may be selected from the registered Aboriginal party group.

5.7 Stage 3 Formal consultation and preparation of a cultural heritage assessment report

Aim

To assist RMS to comply with its legislative obligations and OEH's policy requirements regarding the:

- Assessment of potential project impacts on Aboriginal objects and places, and development of appropriate mitigation measures, in consultation with the Aboriginal community.
- Preparation of cultural heritage assessment reports for proposed projects and activities.
- Submission to OEH of all prescribed documentation for AHIP applications, where required.

In the case of Part 4 or Part 5 projects, the cultural heritage assessment report will:

- Form the basis of the assessment of the potential impacts of the project on Aboriginal objects and places in consultation with the Aboriginal community; and
- Accompany any AHIP required for the project.

In the case of SSD and SSI projects, the cultural heritage assessment report will form the basis of the assessment of the potential impacts of the project on Aboriginal heritage. It must be prepared in consultation with the Aboriginal community for the purposes of any relevant environmental assessment requirements (generally these will be set out in the DGRs).

Background

A cultural heritage assessment report must be prepared for all projects (Part 4, SSD, Part 5 or SSI) that have been identified in Stage 2 as having the potential to impact on Aboriginal objects or places. The cultural heritage assessment report must include the results of the archaeological report with cultural input from the registered Aboriginal parties.

The findings of the cultural heritage assessment report will also form the basis of the Aboriginal cultural heritage section of the EIS (SSD and SSI projects), the SEE (Part 4 development) or the REF (Part 5 activities). A cultural heritage assessment report must accompany an application to OEH for an AHIP.

The following Stage 3 actions are required to satisfy the statutory consultation process. They must be completed if a project has been assessed at stage 2 as having the potential to harm an Aboriginal object or place, unless an agreement of the following kind specifies an alternative Aboriginal community consultation process to be followed:

- A registered Indigenous Land Use Agreement under the *Native Title Act 1993*.
- A lease entered into under Part 4A of the *National Parks and Wildlife Act 1974*.
- An agreement entered into by the Chief Executive of OEH and a board of management for land reserved under Part 4A of the Act.
- An agreement entered into between the Aboriginal community and OEH.

IMPORTANT

As a general rule, **gaps in Aboriginal community consultation of 6 months or more will not constitute continuous consultation**. Project managers should therefore ensure that registered parties are kept informed of any delays to the project schedule. Failure to maintain a continuous consultation process may result in the need to readvertise for Aboriginal parties. Project managers should ensure that a copy of all correspondence between RMS and Aboriginal parties is kept on file as evidence of ongoing consultation.

Action 1 - Seek the names of Aboriginal people with cultural knowledge by letter or notify native title holders

a) If an approved determination of native title exists over the entire project area:

Proceed directly to Action 2.

b) If no approved determination of native title exists over the entire project area:

The regional Aboriginal cultural heritage advisor must write to the following organisations, seeking the details of Aboriginal people who may have an interest in the proposed project and who hold cultural knowledge about objects and places in the project area:

- The relevant OEH Environment Protection Regulation Group regional office
- The New South Wales Aboriginal Land Council
- The relevant local Aboriginal land council(s).
- The Registrar appointed under the *Aboriginal Land Rights Act 1983*
- The National Native Title Tribunal
- The Native Title Services Corporation Limited
- The local council(s) in the study area.
- The relevant catchment management authorities for contact details of any established Aboriginal reference group.

The RMS should allow at least 14 days for a response before proceeding to Action 2. A copy of all correspondence must be retained as evidence of the consultation process.

Resources

- Appendix F – Resource 10: Template letter seeking names of Aboriginal people who hold cultural knowledge about objects and places in the project area.

Action 2 - Notify Aboriginal people with cultural knowledge by letter

a) If an approved determination of native title exists over the entire project area:

Where there is an approved determination of title over the whole of the project area, consultation ***need only occur with the native title holders***. Notice must be given to:

- The registered native title body corporate for that land,
- If no such body corporate exists, the native title holders of that land.

Then proceed directly to Action 7.

Resources

- Appendix F – Resource 11: Template letter of notification to native title holders

b) If no approved determination of native title exists over the entire project area:

The regional Aboriginal cultural heritage advisor is to ensure that a letter of notification is sent to the relevant Aboriginal groups or persons identified by Action 1. RMS must allow 14 days for a response. Action 3 may be done concurrently with this action. A copy of all correspondence must be retained as evidence of the consultation process.

Resources

- Appendix F – Resource 12: Template letter of notification

Action 3 – Notify Aboriginal people with cultural knowledge by advertisement


If native title does not exist across the whole project area, RMS must place advertisements in the public notices section of the following newspapers for those areas of the project not covered by a native title determination:

- The Koori Mail (fortnightly publication).
- The National Indigenous Times (fortnightly publication).
- The local newspaper(s) within the project area.

RMS must allow a minimum of 14 days following the date of the last advertisement appearing for a response from any Aboriginal group or person wishing to register an interest. The project manager should confirm with the Aboriginal cultural heritage advisor and regional environmental staff whether the minimum response time provided is appropriate in the circumstances or should be extended. The time allowed should reflect the project's size and complexity. Action 2 may be done concurrently with this action.

Resources

- Appendix F – Resource 13: Template advertisement for print media.

 In addition, depending on the size of the project, the project manager may also make use of community and Aboriginal radio programs and place an invitation for consultation on the RMS website. Infrastructure Communications staff and the Aboriginal cultural heritage advisor may assist with this.

☑ Action 4 – Engage an archaeologist to implement the archaeological methodology and prepare a cultural heritage assessment report

The project manager must engage an archaeologist to implement the archaeological methodology prepared as a result of the survey. This will also include participation at Aboriginal focus group meetings and the preparation of a cultural heritage assessment report. Depending upon the scope of the methodology, the archaeologist may also be required to:

- Undertake archaeological investigations and prepare an archaeological survey report
- Undertake salvage excavations and prepare an archaeological salvage report
- Prepare an AHIP application.

Where the methodology prepared at Stage 2 recommends archaeological testing, engage an archaeologist under Resource 14. Where the methodology prepared at Stage 2 does not recommend archaeological testing, engage an archaeologist under Resource 15.

📖 Resources

- Appendix F – Resource 14: Aboriginal archaeological reporting (including test excavations) – standard brief
- Appendix F – Resource 15: Aboriginal archaeological reporting – standard brief

☑ Action 5 - Prepare register of Aboriginal parties

The Aboriginal cultural heritage advisor will prepare a register of Aboriginal parties who responded to the notification letters or advertisement. They will also respond to all registrants confirming receipt of their registration. The register must include all responses received, both verbal and written. The register should include:

- The name of each registrant. A registrant may be an individual or an organisation. Local Aboriginal land councils must register their interest as organisations rather than as individual members.
- The name and contact details for each registrant.
- The date of registration.

The Aboriginal cultural heritage advisor must inform all registered Aboriginal parties that their names will be forwarded to OEH and the local Aboriginal land council(s), unless they state that they do not want their details released.

📖 Resources

- Appendix F – Resource 16: Template letter – receipt of registration
- Appendix F – Resource 17: Template register of Aboriginal parties

☑ Action 6 – Send the names of registered parties to OEH and local Aboriginal land council(s)

The Aboriginal cultural heritage advisor must forward the names (only) of the registered Aboriginal parties (excluding the names of any person who stated that they do not want their details released), a copy of the advertisement and copies of the notification letters to the relevant OEH Environment Protection Regulation Group regional office and the relevant local Aboriginal land council(s) within 28 days of the closing date for registration. Note that the personal contact details of the registered parties (except for the names) are not to be provided to OEH or the local Aboriginal land council(s). The project team may accept late registrations. Speak to the Aboriginal cultural heritage advisor for advice on this matter. The names of any late registrants are also to be sent to OEH and the local Aboriginal land council(s).

☑ Action 7 – Send invitation to attend an Aboriginal focus group meeting and draft methodology for review

The project manager must ensure that all Aboriginal parties are invited to attend a focus group meeting to discuss the project and the draft methodology. The project manager must ensure that the draft archaeological methodology, relevant heritage reports, and site officer application form, where appropriate, are included with the invitation (Resource 18).

The Aboriginal parties will be given at least 28 days to review the archaeological methodology. During this period, the Aboriginal parties should review the results of the archaeological survey, the proposed archaeological methodology for undertaking further investigation or management of Aboriginal objects and places, and consider the likely impacts of the project.

This same 28 day period is also the opportunity for the Aboriginal parties to provide:

- Cultural knowledge that would assist RMS and OEH to understand the cultural significance of any objects or places which have been identified during Stages 1 and 2 and their cultural context.
- Details of any Aboriginal objects or places which have not been previously identified during Stages 1 and 2 which are known to the Aboriginal parties.

The Aboriginal parties may provide cultural knowledge and comments on the archaeological methodology at the Aboriginal focus group meetings, or through alternative means such as letters, email or telephone.

See shaded text box on page 36 for further information about cultural assessments.

📖 Resources

- Appendix F – Resource 18: Template invitation to participate in the heritage assessment process and to attend an Aboriginal focus group meeting.
- Appendix F – Resource 19: Aboriginal site officer application form.

☑ Action 8 - Hold an Aboriginal focus group meeting

The project manager and/or Aboriginal cultural heritage advisor must ensure that an Aboriginal focus group meeting is held and that all registered Aboriginal parties are invited. A focus group meeting would generally be held **seven to fourteen days** after

sending out the archaeological methodology. This will ensure that the Aboriginal parties have an appropriate opportunity to understand the scope of the project and archaeological methodology, prior to providing their comments to RMS. In certain circumstances, it may be more appropriate to explore an alternative to holding a meeting such as a video-link, teleconference or similar.

At the first Aboriginal focus group meeting the project manager (or their representative) must:

- Ensure that an appropriate Aboriginal person is invited to acknowledge the traditional owners of the study area at the commencement of the meeting.
- Provide an opportunity for RMS and the Aboriginal parties to clearly define their roles, functions and responsibilities. This is also an opportunity for participants to discuss how they want future meetings held, such as preferred times, venues, terms of reference, etc.
- Present an introduction and overview of the project, including a map/plan of the proposed project/study area.
- Outline the impact assessment process. Where consent for an SSD project or approval for an SSI project has been or is to be sought, the project manager (or their representative) will explain the EIS process and the Director General's environmental assessment requirements, if available.
- Discuss whether investigations are able to be done in accordance with the *Code of practice for archaeological investigation of Aboriginal objects in NSW 2010*. For Part 4 and Part 5 projects, investigations carried out complying with the code would not require an AHIP for this stage.
- Outline critical timelines and milestones for the completion of the assessment activities and the delivery of reports.
- Discuss the draft methodology for the preparation of the cultural heritage assessment report. This will require the archaeologist to present the results of the preliminary site survey and the draft archaeological methodology. That is, the proposed method for undertaking further archaeological investigations and/or mitigation management.
- Provide an opportunity for the Aboriginal parties to identify, raise and discuss their cultural concerns, perspectives and assessment requirements. Aboriginal parties may not wish to share information with other registered parties. Where this is the case, RMS will respect the sensitive nature of the information provided, and will use this information in a manner agreeable to the provider. (See the shaded text box on page 36 for more information on cultural assessments).
- Discuss the need for a site visit to familiarise the Aboriginal parties with the scope of the project and the potential impacts on the study area.
- If further archaeological fieldwork is required, invite the Aboriginal parties to nominate people (including self-nomination) to be considered for engagement in the following archaeological roles:
 1. Site officer.
 2. Trainee site officer.
- Advise the Aboriginal parties that participation as a registered party in the consultation process is separate to any engagement as a site officer. Payments will only be made to people who are engaged by RMS as Aboriginal site officers, or engaged by a consultant as a knowledge holder. Payment will not be made to Aboriginal parties as part of the general consultation process. Details regarding payments for the provision of services can be found in Appendix A.

Resources

- Appendix F – Resource 19: Aboriginal site officer application form.
- Appendix F – Resource 20: Template focus group meeting agenda

Detailed cultural assessments

The project manager must ensure that the Aboriginal parties are asked whether a detailed cultural assessment is required to determine the cultural significance of identified objects, places or features. Not all projects will require a detailed cultural assessment. For many projects, Aboriginal parties will simply identify the location of known and potential cultural heritage features, identify their significance, and assist RMS to manage the project impacts in an appropriate manner.

A detailed cultural assessment may be required where 'specialist' cultural knowledge is required from an appropriate Aboriginal cultural knowledge holder to assist in assessing and managing project impacts. For example, specialist knowledge may be required to understand the cultural values of a ceremonial area, the relationship between significant landscape features, or the size, extent or significance of a cultural heritage feature. The detailed cultural assessment may also assist with the development of appropriate management and mitigation measures.

Where a detailed cultural assessment is requested, the project manager may engage the archaeologist (or an independent consultant such as an anthropologist, historian or other relevant specialist) to liaise with appropriate cultural knowledge holders nominated by the Aboriginal parties. Cultural information may be gathered through interviews, oral histories and site visits, as well as secondary sources such as historical and ethnographic research.

The results of the detailed cultural assessment must be addressed in the cultural heritage assessment report, along with the result of any archaeological assessment.

RMS does not pay Aboriginal parties for their role in the statutory consultation process. Statutory consultation includes reviewing reports and methodologies, attending Aboriginal focus group meetings, and identifying Aboriginal objects, places and cultural features. However, nominated cultural knowledge holders may be paid by the consultant, on a one-off basis, for their time in providing cultural information for the purposes of preparing a cultural assessment (as opposed to reviewing that document).

Resources

- Appendix F – Resource 21: Model consultants brief to prepare a detailed cultural assessment.

Action 9 – Provide meeting minutes to Aboriginal parties

The project manager must ensure that a written summary of comments/minutes made at all Aboriginal focus group meetings is kept and made available to all

Aboriginal parties – not just those who attended. The summary should detail agreed outcomes, contentious issues and any actions that were raised.

☑ Action 10 – Finalise methodology

After the 28 day review period, the project manager must forward all comments received from the Aboriginal parties to the archaeologist. The comments must be considered and where appropriate be used to refine and finalise the archaeological methodology.

Outcomes

Outcomes will include:

1. Where it is determined that Aboriginal objects or places would not likely be harmed, a cultural heritage assessment report must still be prepared. (See Appendix D for the steps required to prepare a cultural heritage assessment report).

OR

2. Where it is determined that Aboriginal objects or places would be harmed, or would likely be harmed, the scope of the project should be reconsidered to avoid or minimise the extent of the impact. Where harm or likely harm to Aboriginal objects or places can be avoided, prepare and finalise a cultural heritage assessment report in accordance with Outcome 1. Works may proceed without further regard to this procedure. However, if harm or likely harm to Aboriginal objects or places cannot be avoided, see Outcome 3 or 4 for further guidance.

OR

3. There would be an impact to known Aboriginal objects and places, and archaeological investigations (i.e. test excavations) are not required to determine the extent of the impact or the significance of the objects or places. An Aboriginal cultural heritage assessment report must be prepared. (See Appendix D for the steps required to prepare a cultural heritage assessment report).

Note that these impacts and any related salvage activities would occur after the EIS, SEE or REF is finalised and project approval has been obtained, in accordance with any applicable conditions of approval. For Part 4 and Part 5 projects, an AHIP would be required for impacts to be caused during project implementation

OR

4. Impacts to Aboriginal objects and places would occur or are likely to occur, and further archaeological investigations (i.e. test excavations) are required to determine the significance of the objects and places and the nature or extent of any anticipated impacts Proceed to Action 11 below.

☑ Action 11 - Provide the archaeological methodology (and the cultural heritage assessment report where required) to Senior Environmental Specialist (Heritage)

☞ For Part 4 and Part 5 projects, archaeological investigations may be conducted without an AHIP if the excavations will not harm any known Aboriginal objects and are able to be undertaken in accordance with OEH's *Code of practice for archaeological investigation of Aboriginal objects in NSW 2010*. If the investigations will not meet the requirements of the code of practice, an AHIP must be obtained before the investigations are undertaken. Note in particular that the code of practice provides strict requirements for test excavations, and that failure to observe these may result in a potential prosecution should an Aboriginal object be harmed.

For SSD and SSI projects, archaeological investigations may not require an AHIP but any investigations must be undertaken in accordance with the Director General of DoPI's requirements.

a) For Part 4 or Part 5 projects following the Code of practice for archaeological investigation of Aboriginal objects in NSW 2010:

The project manager must provide a copy of the archaeological methodology/sampling strategy (which addresses all Aboriginal party comments) to the Senior Environmental Specialist (Heritage) for review. Refer to Resource 22 for a checklist of information that must be provided to the Senior Environmental Specialist (Heritage).

OR

b) For Part 4 or Part 5 projects seeking an AHIP to undertake archaeological investigations:

A cultural heritage assessment report must first be prepared. (See Appendix D for the steps required to prepare a cultural heritage assessment report). The archaeologist will provide a completed AHIP application and supporting documentation (including the cultural heritage assessment report) to the project manager. The supporting materials required are listed in a checklist in Section 5 of the [AHIP application](#).

The project manager is to raise a cheque and forward the completed AHIP application and supporting documentation to the Senior Environmental Specialist (Heritage), Environment Branch. The project manager must ensure that one hard copy version and one electronic version of the completed package are provided.

OR

c) For SSD and SSI projects:

The project manager must provide a copy of the archaeological methodology/sampling strategy (which addresses all Aboriginal party comments) to the Senior Environmental Specialist (Heritage) for review. Refer to Resource 22 for a checklist of information that must be provided to the Senior Environmental Specialist (Heritage).

Resource

- Appendix F – Resource 22: Checklist of supporting information required before undertaking archaeological test excavations
- [AHIP application](#)

Action 12 – Senior Environmental Specialist (Heritage) reviews archaeological methodology (and cultural heritage assessment report where required).

a) For Part 4 or Part 5 projects following the Code of practice for archaeological investigation Aboriginal objects in NSW 2010:

The Senior Environmental Specialist (Heritage) will review the archaeological methodology/sampling strategy for adequacy. Where the methodology/sampling strategy is inadequate, this must be addressed before proceeding to Action 13.

OR

b) For Part 4 or Part 5 projects seeking an AHIP to undertake archaeological investigations:

The Senior Environmental Specialist (Heritage) will check the AHIP application, the cultural heritage assessment report and supporting documentation for adequacy. If satisfied, they will forward the AHIP application to the Chief Executive Officer or the relevant delegated Director for sign-off. Where the AHIP application and/or supporting information is inadequate, this must be addressed before proceeding to Action 13.

OR

c) For SSD and SSI projects:

The Senior Environmental Specialist (Heritage) will review the archaeological methodology/sampling strategy for adequacy. Where the methodology/sampling strategy is inadequate, this must be addressed before proceeding to Action 14.

Action 13 - Notify OEH that the Code of practice for archaeological investigation Aboriginal objects in NSW 2010 will be followed OR submit an AHIP application to OEH

a) For Part 4 or Part 5 projects following the Code of practice for archaeological investigation of Aboriginal objects in NSW 2010:

The Senior Environmental Specialist (Heritage) will notify OEH of RMS' intention to follow the *code*.

OR

b) For Part 4 or Part 5 projects seeking an AHIP to undertake archaeological investigations:

Once the AHIP is signed by the Chief Executive Officer or the relevant delegated Director, the Senior Environmental Specialist (Heritage) will send the application to OEH for approval. Note that a copy of the final cultural heritage assessment report and AHIP application must be provided to the registered Aboriginal parties and the relevant local Aboriginal land council(s) (whether or not they are a registered party), within 14 days of submitting the application to OEH. See Appendix D on how to

prepare a cultural heritage assessment report.

☑ Action 14 – Engage Aboriginal site officers

Refer to Appendix E for the steps required to engage Aboriginal sites officers.

☑ Action 15 – Implement archaeological testing methodologies

a) For Part 4 or Part 5 projects following the Code of practice for archaeological investigation Aboriginal objects in NSW 2010:

The archaeological methodology may be implemented 14 days after notifying OEH.

OR


b) For Part 4 or Part 5 projects seeking an AHIP to undertake archaeological investigations:

Where an AHIP has been obtained after a processing period of 60 days, the archaeological methodology may be implemented subject to the AHIP conditions of approval.

OR

c) For SSD and SSI projects:

Implement the archaeological methodology.

 Under the *National Parks and Wildlife Act 1974*, a person is required to notify OEH within a reasonable time of the discovery of an Aboriginal object that is not already recorded on AHIMS. It is an offence to breach this obligation. The consultant's brief (Resource 14 and 15) directs the archaeologist to take this action as required.

☑ Action 16 - Prepare draft archaeological excavation report

Following the completion of the archaeological testing program, the archaeologist is to prepare a draft archaeological (excavation) report. This will include and/or address:

- A description of the location and scope of the proposed project (including ancillary works).
- A description of the study area, clearly indicating the assessed area (a map is to be included).
- The results of the previous archaeological (survey) report, the methodologies adopted, and the scientific values of any identified Aboriginal objects or places, and the likely impacts of the project having regard to the results of the assessment.
- A description of any social and cultural values (spiritual, traditional, historical or other) that the place or area has for the present-day Aboriginal community, where appropriate.
- An assessment of how the known or likely cultural heritage values would be affected by the proposal.
- Management and mitigation recommendations including the requirement for further AHIPs.
- For SSD and SSI projects, the relevant Director General of the DoPI's environmental assessment requirements (DGRs).

The project manager may ask the archaeologist to provide a preliminary summary

report pending completion of the full excavation report. This preliminary report may be used to address the Aboriginal cultural heritage section of the EIS, SEE or REF for the project.

☑ Action 17 – RMS review of archaeological report

Once prepared, the project manager, regional environmental staff and Aboriginal cultural heritage advisor are to review and provide comment on the draft archaeological (excavation) report.

☑ Action 18 – Archaeologist to finalise archaeological report

The archaeologist is to provide the project manager with a completed archaeological (excavation) report.

☑ Action 19 Prepare cultural heritage assessment report OR amend existing cultural heritage assessment report.

See Appendix D for the steps required to prepare a cultural heritage assessment report. Proceed in accordance with the relevant outcome.

5.8 Stage 4 Implement environmental impact assessment recommendations

Aim

To implement the cultural heritage assessment report recommendations developed in Stage 3, and obtain an AHIP, if required.

Background

Stage 4 applies to RMS' projects where planning approval has been obtained, based on the findings of the cultural heritage assessments and investigations undertaken in Stages 1 to 3.

Stage 4 must be undertaken where the Stage 3 outcomes identified that Aboriginal objects or places would be impacted by the project. For projects approved under Part 4 or determined under Part 5 of the *Environmental Planning and Assessment Act 1979*, this means that an AHIP is required to carry out the project. For SSD projects granted consent under Division 4.1 of Part 4 of the Act, or approved SSI projects under Part 5.1 of the Act, any further impacts or activities must be undertaken in accordance with the Minister for Department of Planning and Infrastructure's conditions of approval.

Any mitigation measures or safeguards from the cultural heritage assessment report must be included in any heritage management sub-plan of a construction environment management plan (CEMP) for the implementation phase of the project.

Action 1 - Provide the AHIP application to Senior Environmental Specialist (Heritage)

👉 **SSD and SSI** projects may skip this action and proceed directly to Action 4.

For Part 4 and Part 5 projects, the archaeologist will provide a completed AHIP application or AHIP variation application and supporting documentation to the project manager. The supporting materials required are documented in Part III of the [application](#). The project manager is to raise a cheque and forward the completed AHIP application and documentation (including the cultural heritage assessment report) to the Senior Environmental Specialist (Heritage), Environment Branch.

If an AHIP variation is sought, the Senior Environmental Specialist (Heritage) must consult with OEH to ensure that the scope of the variation is appropriate. If the proposed variation amounts to a totally new activity rather than a variation of an existing activity, then a new AHIP application may be required. The archaeologist should also check whether any specific consultation steps are required with the Aboriginal community. Any specified consultation steps must be completed before submitting the AHIP variation application.

Resources


- [AHIP application](#)

Action 2 – Senior Environmental Specialist (Heritage) reviews AHIP application

The Senior Environmental Specialist (Heritage) will check the AHIP application or AHIP variation application, the cultural heritage assessment report and supporting documentation for adequacy. If satisfied, they will forward the AHIP application to the Chief Executive Officer or the relevant Director delegate for sign-off.

Action 3 - Submit AHIP application to OEH and local Aboriginal land council(s)


Once the AHIP is signed by the Chief Executive or the relevant delegated Director, the Senior Environmental Specialist (Heritage) will send the application to OEH for approval.

 A copy of the final cultural heritage assessment report and AHIP application **must** be provided to the registered Aboriginal parties and the relevant local Aboriginal land council(s) (whether or not they are a registered party), **within 14 days** of submitting the application to OEH. AHIP applications are generally processed by OEH within a 60 day period.

Action 4 – Implement environmental impact assessment recommendations in accordance with the relevant approval

a) For Part 4 or Part 5 projects:

Impacts on Aboriginal objects must be done in accordance with the AHIP approval. Impacts may involve project construction only, or the completion of a program of archaeological salvage **prior** to the commencement of construction.

 A copy of the AHIP **must** be provided to the Senior Environmental Specialist (Heritage) to retain on file.

OR

b) For SSD and SSI projects:

Impacts on Aboriginal objects must be done in accordance with the project conditions of approval. Impacts may involve project construction only, or the completion of a program of archaeological salvage **prior** to the commencement of construction.

Things to consider when implementing the project

Project implementation must address any cultural heritage management sub-plans contained in the construction environmental management plan for the project. (See shaded text box on page 45 for more information).

Where the salvage of Aboriginal objects is required, you may need to engage Aboriginal site officers. Refer to Appendix E for the steps required to engage Aboriginal site officers and then proceed to Action 5.

Action 5 - Prepare the draft archaeological (salvage) report

Following the completion of the salvage program, the archaeologist is to prepare a draft archaeological salvage report.

Action 6 - RMS review of archaeological (salvage) report

Once prepared, the project manager, regional environmental staff and Aboriginal cultural heritage advisor are to review and provide comment on the draft report.

Action 7 – Finalise archaeological (salvage) report

Following a consideration of RMS' comments the archaeologist will provide the project manager with a final archaeological salvage report. A copy of the final report (including an executive summary in plain English) is to be provided to all Aboriginal parties.

Outcome

The project may proceed in accordance with the project approvals. For ongoing project advice regarding Aboriginal community consultation, refer to the regional Aboriginal cultural heritage advisor and regional environmental staff.

↳ Constraints and opportunities associated with project implementation

- **Construction Environmental Management Plans (CEMPs)**

CEMPs outline those management strategies that are required to manage and minimise impacts to the environment during project implementation. Cultural heritage management sub-plans provide specific guidance on how to manage impacts to Aboriginal cultural heritage, including consultation with the Aboriginal community. The cultural heritage management sub-plan must include any mitigation measures or safeguards contained in the cultural heritage assessment report produced in Stage 3 of this procedure. For advice on preparing a cultural heritage management sub-plan, contact the Senior Environmental Specialist (Heritage).

- **Ongoing Aboriginal community consultation**

RMS' requirement to formally consult with registered Aboriginal parties under Clause 80C of the National Parks and Wildlife Regulation 2009 can be considered to be satisfied after all consultation steps set out in the regulation have been carried out and all relevant commitments in the final cultural heritage assessment report have been met.

The project manager may seek ongoing Aboriginal community consultation during the implementation phase of the project to assist with minimising project impacts, or identifying unexpected finds. In such cases, the project team may be able to consult directly with the Aboriginal parties previously registered for the project.

For SSD and SSI projects, the conditions of approval or statement of commitments may also impose further consultation requirements.

- **Unexpected finds**

If any unanticipated impacts to Aboriginal objects or places are identified during the implementation of the project which are not covered by an existing AHIP approval, SSD consent or Part 5.1 SSI approval, relevant works must cease until further advice/approvals have been obtained. For any unexpected finds during project implementation, please refer to RMS' Unexpected archaeological finds procedure.

- **Project files**

The project manager must ensure that all environmental impact assessment documentation and all legislative approvals are retained on the project file. Apart from statutory record keeping obligations, this documentation may be required at a later date, and often provides a valuable resource for future projects.

Appendix A:

Payments relating to Aboriginal cultural heritage

This section sets out the RMS policy on payments related to Aboriginal cultural heritage. The table below identifies where payments may be made under this procedure.

Procedure section	Activity	Hourly rate ¹⁰	Expenses? ¹¹	Process	Contract with RMS required?
Stage 2	Preliminary site survey by local Aboriginal land council, native title claimant and/or Aboriginal owners (1/2 day minimum – ie 4 hours)	\$110 per hour (inc GST) – paid to the service provider.	Yes	Service provision	Yes
	Production of survey report stating any cultural constraints and recommendations.	\$500 (inc GST) (one off payment upon receipt of survey report). Paid to the service provider.	No	Service provision	Yes
Stages 3-4	Reviewing draft reports and methodologies; attending Aboriginal focus group meetings, and identifying cultural objects, places or features	NA	No	Consultation	No
	Provision of detailed cultural information by knowledge holders in the preparation of a detailed cultural assessment.	\$100 per hour (no GST). – paid to knowledge holders by consultant.	No	Service provision	No
	Site officers	\$110 (inc GST) – paid to the service provider	Yes	Service provision	Yes
	Trainee site officers	\$77 (inc GST) - paid to the service provider.			

¹⁰ The quoted hourly rate is the rate to be paid by the RTA to the Service Provider - not to the individual site officer/trainee site officer. The site officer/trainee site officer will be paid by the service provider at a rate agreed to by the service provider and the site officer/trainee site officer.

¹¹ Expenses will be reimbursed as per Item 8 of the Letter of Engagement

Appendix B:

Key RMS contacts

Officer	Region/Directorate	Contact number
Aboriginal cultural heritage advisors	Hunter region	(02) 4907 6408
	Northern region	(02) 6562 0051; 6604 9305
	Southern region	(02) 4221 2767
	South West region	(02) 6937 1647
	Sydney region	(02) 8849 2006
	Western region	(02) 6861 1658
Manager Aboriginal Programs	Aboriginal Programs	(02) 8849 2426
Senior environmental officers	Hunter region	(02) 4924 0281
	Northern region	(02) 6640 1072
	Southern region	(02) 4221 2765
	South West region	(02) 6938 1143
	Sydney region	(02) 8849 2516
	Western region	(02) 6861 1628
	Hume Highway	(02) 6923 3419
Environmental Services Manager	Pacific Highway	(02) 6640 1375
Client and Environment Liaison Manager	Road and Fleet Services	(02) 9598 7721
Senior Environmental Specialist (Heritage)	Environment Branch	(02) 8588 5754

Manager Environmental Planning and Assessment	Environment Branch	(02) 8588 5735
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Appendix C:

Low impact activities (refer to page 11)

Below is an excerpt of Clause 80B of the National Parks and Wildlife Regulation 2009 setting out “low impact activities”. In essence, a person carrying out a low impact activity has a statutory defence against the strict liability offence of harming an Aboriginal object (without knowledge). Low impact activities, by their nature, are unlikely to impact Aboriginal objects. Note this defence does not authorise harm to **known** Aboriginal objects.

“80B Defence of carrying out certain low impact activities: section 87 (4)

(1) It is a defence to a prosecution for an offence under section 86 (2) of the Act, if the defendant establishes that the act or omission concerned:

(a) was maintenance work of the following kind on land that has been disturbed:

- (i) maintenance of existing roads, fire and other trails and tracks,
- (ii) maintenance of existing utilities and other similar services (such as above or below ground electrical infrastructure, water or sewerage pipelines), or

(b) was farming and land management work of the following kind on land that has been disturbed:

- (i) cropping and leaving paddocks fallow,
- (ii) the construction of water storage works (such as farm dams or water tanks),
- (iii) the construction of fences,
- (iv) the construction of irrigation infrastructure, groundwater bores or flood mitigation works,
- (v) the construction of erosion control or soil conservation works (such as contour banks), but not temporary silt fencing, or

(c) was farming and land management work that involved the maintenance of the following existing infrastructure:

- (i) grain, fibre or fertiliser storage areas,
- (ii) water storage works (such as farm dams or water tanks),
- (iii) irrigation infrastructure, ground water bores or flood mitigation works,
- (iv) fences,
- (v) erosion control or soil conservation works (such as contour banks), but not temporary silt fencing, or

(d) was the grazing of animals, or

(e) was an activity on land that has been disturbed that comprises exempt development or was the subject of a complying development certificate issued under the *Environmental Planning and Assessment Act 1979*, or

(f) was mining exploration work of the following kind on land that has been disturbed:

- (i) costeaning,
- (ii) bulk sampling,
- (iii) drilling, or

- (g) was work of the following kind:
- (i) geological mapping,
 - (ii) surface geophysical surveys (including gravity surveys, radiometric surveys, magnetic surveys and electrical surveys), but not including seismic surveys,
 - (iii) sub-surface geophysical surveys that involve downhole logging,
 - (iv) sampling and coring using hand-held equipment, except where carried out as part of an archaeological investigation, or

Note. Clause 3A of this Regulation provides that act carried out in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* is excluded from meaning of **harm** an object or place for the purposes of the Act.

(h) was the removal of isolated, dead or dying vegetation, but only if there is minimal disturbance to the surrounding ground surface, or

(i) was work of the following kind on land that has been disturbed:

- (i) seismic surveying,
- (ii) the construction and maintenance of ground water monitoring bores, or

(j) was environmental rehabilitation work, including temporary silt fencing, tree planting, bush regeneration and weed removal, but not including erosion control or soil conservation works (such as contour banks).

(2) Subclause (1) does not apply in relation to harm to an Aboriginal culturally modified tree.

(3) In this clause, **Aboriginal culturally modified tree** means a tree that, before or concurrent with (or both) the occupation of the area in which the tree is located by persons of non-Aboriginal extraction, has been scarred, carved or modified by an Aboriginal person by:

(a) the deliberate removal, by traditional methods, of bark or wood from the tree, or

(b) the deliberate modification, by traditional methods, of the wood of the tree.

(4) For the purposes of this clause, land is **disturbed** if it has been the subject of a human activity that has changed the land's surface, being changes that remain clear and observable.

Note 1. Examples of activities that may have disturbed land include the following:

- (a) soil ploughing,
- (b) construction of rural infrastructure (such as dams and fences),
- (c) construction of roads, trails and tracks (including fire trails and tracks and walking tracks),
- (d) clearing of vegetation,
- (e) construction of buildings and the erection of other structures,
- (f) construction or installation of utilities and other similar services (such as above or below ground electrical infrastructure, water or sewerage pipelines, stormwater drainage and other similar infrastructure),
- (g) substantial grazing involving the construction of rural infrastructure,
- (h) construction of earthworks associated with any thing referred to in paragraphs (a)–(g).

Note 2. This clause creates a defence to the strict liability offence in section 86 (2) of the Act (being the offence of harming an Aboriginal object whether or not the person knows it is an Aboriginal object). The defence does not apply to the separate offence under section 86 (1) of the Act of harming or desecrating an object that a person knows is an Aboriginal object. If a person discovers an Aboriginal object in the course of

undertaking any of the activities listed above, the person should not harm the object—as the person may be committing an offence under section 86 (1) of the Act (the offence of knowingly harming an Aboriginal object)—and should obtain an Aboriginal heritage impact permit, if needed.”

Appendix D:

Preparing a cultural heritage assessment report

Background

A cultural heritage assessment report **must** be prepared for any project that has proceeded to Stage 3 of this procedure. It must document the outcomes of the investigation and consultation process, even if impacts to Aboriginal objects or places will be avoided. The cultural heritage assessment report must incorporate the results of any archaeological report (this may include a survey report and/or a test excavation report), the proposed archaeological methodology for any further impacts to Aboriginal object and places, input from the Aboriginal parties about the cultural values of objects and places within the project area (including a detailed cultural assessment where required), and the strategies for the management of the objects and places. The consultation required for, and preparation of, a cultural heritage assessment report are prescribed by statute and regulation for an AHIP, and may be required for SSD and SSI projects by the DGRs. See the shaded text box on page 55 for the statutory requirements of a cultural heritage assessment report.

The cultural heritage assessment report may be prepared at different points of Stage 3 depending on the nature of the project and the environmental assessment specific to a project. For example, projects that are unable to undertake Stage 3 test excavations in accordance with the *Code of practice for archaeological investigation of Aboriginal objects in NSW 2010* must prepare a cultural heritage assessment report before undertaking testing **AND** after completing the test excavations. In such cases, the report should be considered an evolving document that incorporates the additional information acquired through the consultation and investigation process.

A cultural heritage assessment report may contain cultural information of a sensitive nature. An EIS, SEE or REF or that is put on public display should not include any specific cultural information that the Aboriginal parties have stated is confidential or identify individuals contrary to their privacy requests. In such cases the project manager must ensure that a public version and a confidential version of the report is produced. Sensitive information is to be deleted from the public version – not blacked out. Otherwise, the usual privacy considerations apply.

Action 1- Prepare the draft cultural heritage assessment report

The archaeologist will prepare the draft cultural heritage assessment report. For Part 4 or Part 5 projects that would harm Aboriginal objects and places, an AHIP application must also be prepared. The report must show how the Aboriginal parties' input has been addressed in terms of influencing the development of the cultural heritage assessment report, in understanding the significance of objects and places, and the development of management or mitigation measures, as required. The report must also document why the objects and places cannot be avoided, and discuss why alternative options were not feasible or justified.

☑ Action 2 - RMS review of draft cultural heritage assessment report

The project manager, regional environmental staff and Aboriginal cultural heritage advisor will review and provide comment to the consultant on the draft cultural heritage assessment report (and AHIP application, if required).

☑ Action 3 - Aboriginal party review of draft cultural heritage assessment report

Once RMS is satisfied with the draft, all registered Aboriginal parties are to be sent the draft cultural heritage assessment report. Where there would be further impacts to Aboriginal objects and places, the report must include the methodology for these further impacts. They are then to be given 28 days to review the draft and provide any comments. Comments may be received either in writing or verbally. All comments received within this period are to be considered in finalising the cultural heritage assessment report. The final report must document and append all comments received and RMS responses to those comments.

Action 4 – Hold an Aboriginal focus group meeting

During the 28 day review period (Action 3), the project manager is to invite all Aboriginal parties to attend another Aboriginal focus group meeting to discuss the draft cultural heritage assessment report. The purpose of the meeting (and review period generally) is to ensure that the Aboriginal parties:

- Are made aware of the results of any archaeological investigations
- Have an opportunity to indicate whether their earlier comments have been appropriately addressed.
- Have an opportunity to identify or comment on the cultural significance of any Aboriginal objects and places, if relevant.
- Have an opportunity to contribute to, and comment on the proposed strategies or methodologies for managing impacts to Aboriginal cultural heritage.

Action 5 – Finalise the cultural heritage assessment report

Following a consideration of RMS' comments and received Aboriginal party comments, the archaeologist will provide the project manager with a final cultural heritage assessment report. A copy of the final cultural heritage assessment report (including the standard OEH report cover sheet) is to be provided to all Aboriginal parties.

📖 Resources

OEH Cultural heritage report cover sheet – web link <http://www.environment.nsw.gov.au/resources/cultureheritage/HeritageReportCoversheet.doc>

Outcomes

1. The cultural heritage assessment report identifies that there would be **no further impacts** to Aboriginal objects and places. The outcomes of the report are to be addressed in the EIS, SEE or REF for the project. Environment Branch must also review any SEE or REF that is to be put on public display, or any EIS being prepared for SSD or SSI projects. The project may proceed in accordance with the environmental impact assessment process and all other relevant approvals once obtained.

OR

2. The cultural heritage assessment report identifies that the project would have a **major impact** on significant Aboriginal objects and places that if feasible should be avoided or minimised. Consider project modifications to reduce or avoid this impact.

OR

3. **Archaeological testing is required.** An AHIP will be required for Part 4 or Part 5 projects that cannot undertake archaeological testing under the *Code of practice for archaeological investigation of Aboriginal objects in NSW 2010*. Proceed to Stage 3 Action 11 to complete the stages of testing.

OR

4. For all projects where **archaeological testing is not required** (or has already been completed) and impacts to Aboriginal objects or places are anticipated, the outcomes of the cultural heritage assessment report are to be addressed in the EIS, SEE or REF for the project. Environment Branch staff must review any SEE or REF that is to be put on public display, or any EIS being prepared under Part 5.1. The project may proceed in accordance with the environmental impact assessment process and all other relevant approvals once obtained. Proceed to Stage 4 to implement mitigation measures.

↳ Legislative requirements for a cultural heritage assessment report

Clause 80D (2) and (3) of the National Parks and Wildlife Regulation 2009 prescribes the requirements of a cultural heritage assessment report as follows:

80D (2) A cultural heritage assessment report is to deal with the following matters:

- (a) the significance of the Aboriginal objects or Aboriginal places that are the subject of the application,
- (b) the actual or likely harm to those Aboriginal objects or Aboriginal places from the proposed activity that is the subject of the application,
- (c) any practical measures that may be taken to protect and conserve those Aboriginal objects or Aboriginal places,
- (d) any practical measures that may be taken to avoid or mitigate any actual or likely harm to those Aboriginal objects or Aboriginal places.

80D (3) A cultural heritage assessment report must include:

- (a) if any submission has been received from a registered Aboriginal party under clause 80C (including any submission on the proposed methodology to be used in the preparation of the report and any submission on the draft report), a copy of the submission, and
- (b) the applicant's response to each such submission.

Appendix E:

Engaging site officers

Background

In consultation with RMS, the archaeologist will estimate in the archaeological methodology the number of Aboriginal site officers required to provide archaeological services.

All applicants for a site officer role must demonstrate that they have satisfactorily participated in previous archaeological fieldwork, and nominate the name of an archaeologist who can be contacted as a referee. Applicants for a trainee site officer role do not need to demonstrate previous archaeological experience.

RMS will assess applications and offer positions based on an individual's capability, availability, experience and cultural knowledge. In addition to a consideration of the key selection criteria, RMS may give preference to applicants who live locally.

The project manager is to ensure, where practicable, that male and female Aboriginal people are contracted to address any gender-specific cultural issues associated with the study area.

In order to maintain a consistent standard for the archaeological process, it is recommended that Aboriginal site officer roles not be rotated or substituted within a single project. However, a rostering system may be employed if determined to be appropriate by the project manager and the Aboriginal cultural heritage advisor.

Note that site officer applications are provided to the Aboriginal parties at Stage 3, Action 7

Action 1 – Review applications

The project manager and Aboriginal cultural heritage advisor will review the applications and select the successful candidates. Positions will be awarded based on the following:

- Site officer applications must satisfactorily meet the key selection criteria, including a reference check where required.
- The number of site officer positions awarded will be based on the archaeological methodology.

Action 2 – Notify successful and unsuccessful site officer applicants

Aboriginal site officer roles must be contracted to RMS through a corporate entity such as an Aboriginal land council, 'skill hire' or similar organisation. Contracts with individuals will not be entered into.

Each person that applied for a site officer or trainee site officer role is to be advised in writing whether or not they are to be offered a contract to provide these services.

If the successful applicant is employed by a corporation, then a copy of the contract to provide services and any other relevant policies must be sent to the corporation.


If the successful applicant is not employed by a corporation, then they must be engaged through a skill hire company. The project manager may engage a skill hire company by using RMS Form 916. A copy of the contract to provide services and any other relevant policies must be provided to the skill hire company. The skill hire company is to ensure that the site officer is provided with the relevant policy documentation.

Signed contracts are to be returned to RMS prior to further engagement.

Unsuccessful applicants are to be informed by letter, or other appropriate method, that their application has been unsuccessful on this occasion, or that they have been put on a stand-by list in case successful applicants do not accept their offers.

Resources

- Appendix F – Resource 08: Agreement to provide services: Aboriginal archaeological investigations.
- Appendix F – Resource 19: Aboriginal site officer application form.
- Appendix F – Resource 23: Template letter for unsuccessful site officer applicants.
- Intranet – See Form 916: Skill hire engagement and acknowledgement form

 The project manager must follow this procedure in relation to the contracting of Aboriginal site officers and ensure that all the relevant insurances are held when engaging workers to undertake fieldwork. The project manager is to ensure that all OH&S responsibilities are met by the participants.

Appendix F:

Resources

Resource	Title	Relevant stage
01	Activity checklist	All stages
02	Generic timeframe for the procedure	All stages
03	Stage 1 assessment checklist	Stage 1, Action3
04	Stage 1 assessment outcome – template letter	Stage 1, Action 4
05	Aboriginal cultural heritage constraints mapping report - standard brief	Stage 1, Action 4 (as required)
06	Template invitation to Aboriginal stakeholders to undertake Stage 2 survey	Stage 2, Action 2
07	Template Aboriginal stakeholder cultural heritage survey report	Stage 2, Action 2
08	Aboriginal site officer/Trainee site officer Letter of engagement.	Stage 2, Action 2; Stage 4, Action 4
09	Aboriginal archaeological survey report – standard brief	Stage 2, Action 3
10	Template letter seeking names of Aboriginal people who hold cultural knowledge about objects and places in the project area	Stage 3, Action 1

11	Template letter of notification to native title holders	Stage 3, Action 2
12	Template letter of notification	Stage 3, Action 2
13	Template advertisement for print media	Stage 3, Action 3
14	Aboriginal archaeological reporting (with test excavations)– standard brief	Stage 3, Action 4 (as required)
15	Aboriginal archaeological reporting – standard brief	Stage 3, Action 4 (as required)
16	Template letter – receipt of registration	Stage 3, Action 5
17	Template register of Aboriginal parties	Stage 3, Action 5
18	Template invitation to participate in the heritage assessment process and to attend an Aboriginal focus group meeting	Stage 3, Action 7
19	Aboriginal site officer application form	Stage 3, Action 8
20	Template focus group meeting agenda	Stage 3, Action 8
21	Detailed cultural assessment – standard brief	Stage 3, Action 8 (May be done earlier if required)
22	Checklist of supporting information required before undertaking archaeological	Stage 3, Action 11

	test excavations	
23	Template letter for unsuccessful site officer applicants	Stage 3, Action 14 Stage 4, Action 4

Appendix H: Glossary of Terms

Term / abbreviation	Definition
AHIMS	Aboriginal Heritage Information Management System
CCS	Community Communication Strategy
CDS-JV	CPB Contractors Dragados Samsung Joint Venture (Contractor)
CEMP	Construction Environmental Management Plan
CHSP	Construction Heritage Sub-plan
CoA	Minister's Condition of Approval (to be obtained with Infrastructure Approval)
Construction Area	A separable portion of work that is identified early in construction planning to help drive early definition of construction methodology and alignment of design activities. Work Areas should be listed in the overall construction methodology. The planning document for a work area is called a Construction Area Plan.
Construction Area Plan (CAP)	The main document prepared during the construction planning for that work area. Includes construction methodology, risk assessment, constructability reviews and Work Pack listing.
D&C	Design and Construction
Deed	As appropriate to the defined scope of the WestConnex Stage New M5 Main Works D&C Deed.
DMP	Dust Management Plan
DP&E	NSW Department of Planning and Environment
EIS	Environmental Impact Statement
EMM	Environmental management measures (proposed in the Environmental Impact Assessment)
EMS	Environmental Management System
Environmental aspect	Element of an organisation's activities, products or services that can interact with the environment.
Environmental impact	Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's activities, products or services.
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EPA	Environment Protection Authority
EPL	Environment Protection Licence
ER	Environmental Representative
EWMS	Environmental Work Method Statement – a component of the environmental management system that addresses environmental management issues relevant to a specific site and/or activity.
HARD	Historical Archaeological Research Design



Term / abbreviation	Definition
Heritage item	Defined under Infrastructure Approval (SSI 6788) as: A place, building, work, relic, archaeological site, tree, movable object or precinct of heritage significance, that is listed under one or more of the following registers: the State Heritage Register under the Heritage Act 1977; a State agency heritage and conservation register under section 170 of the Heritage Act 1977; a Local Environmental Plan under the Environmental Planning and Assessment Act 1979; the World, National or Commonwealth Heritage lists under the Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth); and/or an Aboriginal object or Aboriginal place as defined in Section 5 of the National Parks and Wildlife Act 1974.
IC	Independent Certifier
ISCA IS Rating Tool	Rating tool developed by the Infrastructure Sustainability Council of Australia (ISCA) to evaluate sustainability across design, construction and operation of infrastructure. The Infrastructure Sustainability rating scheme evaluates the sustainability (including environmental, social, economic and governance aspects) of infrastructure Projects and assets.
Infrastructure Approval	Approval under the <i>Environmental Planning & Assessment Act 1979</i> for SSI 6788 (obtained 20 April 2016).
CDS-JV	CPB Dragados Samsung Joint Venture (Contractor)
NPW Act	National Parks and Wildlife Act 1974
OEH	NSW Office of Environment and Heritage
PACHCI	Roads and Maritime Procedure for Aboriginal Cultural Heritage Consultation and Investigation
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Project	WestConnex New M5 Project
Project Company	WCX M5 AT
Project requirements	The project requirements include all CoA (pursuant to Infrastructure Approval), REMMs, EMMs, SWTC and EPL.
REMM	Revised environmental management measure (from the SPIR)
RMS, Roads and Maritime	Roads and Maritime Services
SAP	Sensitive Area Plan – consolidation of environmental and socially sensitive areas, sites or places shown on a series of map-based sheets that extend the length of the site, used to assist with the planning and management of Work Under the deed.
SEP	Site Environment Plan – prepared for each work site to show the location of environmental constraints. Used to inform construction Planning and are included in the applicable Work Packs.
SMC	Sydney Motorway Corporation, formally WestConnex Development Authority (WDA)
SPIR	Submission and Preferred Infrastructure Report



Term / abbreviation	Definition
SWTC	As appropriate to the defined scope of the Scope of Works & Technical Criteria defined under the New M5 D&C Deed
WCX	WestConnex
WDA	WestConnex Delivery Authority, now Sydney Motorway Corporation (SMC)
Work Pack	Assembly of documents that contain relevant information for the field delivery team to undertake a specific package of works. Inputs include safety, environment, design, temporary works, Project control, approvals/permits and community notices.
Work Procedure	A document that provides a detailed step-by-step description for how work activities will be carried out. May document Risks & Controls associated with each step.