

SYDNEY METRO CITY & SOUTHWEST VICTORIA CROSS INTEGRATED STATION DEVELOPMENT CONSTRUCTION HERITAGE MANAGEMENT PLAN



REVISION STATUS

Rev	Date	Details / Description
A	10/03/20	Initial CHMP for consultation
B	01/05/20	Addressing stakeholder comments
C	11/05/20	Addressing ER comments

D	20/05/20	Addressing ER and Sydney Metro comments
E	26/06/20	Addressing DPIE comments

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A	10/03/20	Initial CHMP for consultation
B	27/04/20	Address stakeholder comments
C	12/05/20	Address ER comments
D	20/05/20	Addressing ER and Sydney Metro comments
E	26/06/20	Addressing DPIE comments

GENERAL INFORMATION

Acronyms

Term	Description
AHIP	Aboriginal Heritage Impact Permit
AHIMS	Archaeological Heritage Information Management Service
ARD	Archaeological Research Design
AMS	Archaeological Method Statement
CEMP	Construction Environmental Management Plan
CHAR	Cultural Heritage Assessment Report
CHL	Commonwealth Heritage List
CHMP	Construction Heritage Management Plan
CoA	Conditions of Approval
CSSI	Critical State Significant Infrastructure
DPE	Department of Planning & Environment
EIS	Environmental Impact Statement
ER	Environmental Representative
Heritage DPC	Heritage - Department of Premier and Cabinet
HIA	Heritage Impact Assessment
HIP	Heritage Interpretation Plan
HIS	Heritage Interpretation Strategy
LEP	Local Environment Plan
Minister, the	NSW Minister for Planning
NHL	National Heritage List
OEH	Office of Environment and Heritage
PAD	Potential Archaeological Deposit
The Burra Charter	The Australia ICOMOS Charter for Places of Cultural Significance (Adopted 31 October 2013)
RAPs	Registered Aboriginal Parties. As defined in the Aboriginal cultural heritage consultation requirements for proponents 2010
Research Potential	An item has potential to yield information that will contribute to an understanding of the NSWs (or the local area's) cultural or natural history. It is possible for an area to be of high archaeological potential but low research potential.
SHR	State Heritage Register

Term	Description
ISD	Integrated Station Development
LEP	Local Environmental Plan
MCoA	Minister’s Condition(s) of Approval
NSW	New South Wales
OEH	NSW Office of Environment and Heritage
PIR	The Sydney Metro City and Southwest Chatswood to Sydenham Submissions and Preferred Infrastructure Report
Proponent	The person or organisation identified as the proponent in Schedule 1 of the planning approval
REMM	Revised Environmental Mitigation Measure
Secretary	The Secretary of the Department of Planning and Environment
SPIR	Submissions and Preferred Infrastructure Report
SSI	State Significant Infrastructure
SWMS	Safe Works Method Statement
TSE	Tunnelling and Station Excavations
VCISD	Victoria Cross Integrated Station Development

Table 1 - Acronyms

1 PROJECT REQUIREMENTS

The Sydney Metro City and South West, Chatswood to Sydenham project was assessed as a Critical State Significance Infrastructure (CSSI) by the Minister for Planning and Environment under Section 115ZB of the EP&A Act. The Victoria Cross Integrated Station Development (VCISD) works form part of this. The Minister's Conditions of Approval (CoA) were granted on 9 January 2017 with conditions. A heritage sub-plan is required as part of the Construction Environmental Management Plan (CEMP) for the project under CoA C3(g). The heritage conditions of approval are outlined and addressed in this plan. Additionally, the Revised Environmental Mitigation Measures also provides guidance on required actions during construction works and have been referenced accordingly.

Note that only CoA and REMMS relevant to the VCISD site have been included in this CHMP.

1.1 CSSI Planning Approval Conditions

Critical State Significant Infrastructure, Sydney Metro City and South West, Chatswood to Sydenham, Conditions of Approval SSI 15_7400

CoA	Condition Details	Ref						
C3(g)	<p>The following CEMP sub-plans must be prepared in consultation with the relevant government agencies identified for each CEMP sub-plan and be consistent with the CEMF and CEMP referred to in Condition C1.</p> <table> <tr> <th></th><th>Required CEMP sub-plan</th><th>Relevant government agencies to be consulted for each CEMP sub-plan</th></tr> <tr> <td>(g)</td><td>Heritage</td><td>Heritage Council (or its delegate) and Relevant Council(s)</td></tr> </table>		Required CEMP sub-plan	Relevant government agencies to be consulted for each CEMP sub-plan	(g)	Heritage	Heritage Council (or its delegate) and Relevant Council(s)	This Plan Section 4 Appendix B
	Required CEMP sub-plan	Relevant government agencies to be consulted for each CEMP sub-plan						
(g)	Heritage	Heritage Council (or its delegate) and Relevant Council(s)						
C4	<p>The CEMP sub-plans must state how:</p> <ul style="list-style-type: none"> (a) the environmental performance outcomes identified in the EIS as amended by the documents listed in A1 will be achieved; (b) the mitigation measures identified in the EIS as amended by the PIR as modified by these conditions will be implemented; (c) the relevant terms of this approval will be complied with; and (d) issues requiring management during construction, as identified through ongoing environmental risk analysis, will be managed. 	This Plan (a) Table 5 (b) Section 1 (c) Section 1 (d) Sections 6, 7, 8, 11						
C5	The CEMP sub-plans must be developed in consultation with relevant government agencies. Where an agency(cies) request(s) is not included, the Proponent must provide the Secretary justification as to why. Details of all information requested by an agency to be included in a CEMP sub-plan as a result of consultation and copies of all correspondence from those agencies, must be provided with the relevant CEMP sub-plan.	This Plan Section 4 Appendix B						
C6	Any of the CEMP sub-plans may be submitted to the Secretary along with, or subsequent to, the submission of the CEMP but in any event, no later than one month before commencement of construction.	This Plan Section 4.1						
C8	Construction must not commence until the CEMP and all CEMP sub-plans have been approved by the Secretary. The CEMP and CEMP sub-plans, as approved by the Secretary, including any minor amendments approved by the ER (or AA in regards to the Noise and Vibration sub-plan), must be implemented for the duration of construction. Where the CSSI is being staged, construction of that stage is not to commence until the relevant CEMP and sub-plans have been approved by the Secretary.	This Plan Section 4.1 Section 9						

E10	The Proponent must not destroy, modify or otherwise physically affect any Heritage item not identified in documents referred to in Condition A1	Sydney Metro AARD This Plan Section 3.2 Broadly covered by Sections 7, 8, 10
E12	Bus shelters to be temporarily removed at Victoria Cross and Blues Point must be reinstated prior to operation, in consultation with North Sydney Council.	From changes to the VCISD north site location in Mod 1, removal of bus shelters is not required.
E13	<p>The Proponent must prepare a Heritage Archival Recording Report, including photographic recording of the heritage items identified in documents referred to in Condition A1.</p> <p>Archival recording must include but not be limited to the following heritage items:</p> <ul style="list-style-type: none"> (a) any component of the Blues Point Waterfront Group and the McMahons Point South heritage conservation area to be directly affected or altered, including vegetation and significant landscape features; (b) Hickson Road wall in the vicinity of proposed ventilation risers and skylights for Barangaroo Station or any other project elements to be located in front of the Hickson Road wall; (c) Martin Place, between Elizabeth and Castlereagh Streets, Sydney; (d) the Rolling Stock Officers' Garden, Rolling Stock Officers' Building and Cleaners' Amenities Building in Sydney Yard and any other component of the Sydney Terminal and Central Railway Stations group to be removed or altered; (e) Any component of the Sydenham Station or Sydenham Pit and Pumping Station to be removed and altered; (f) views from Mortuary Station before construction of the Sydney Yard Access Bridge; and (g) Former "Metro Goldwyn Mayer" building including interior, 22-28 Chalmers Street, Surry Hills. <p>The archival recording must be undertaken by a suitably qualified heritage specialist and prepared in accordance with NSW Heritage Office's <i>How to Prepare Archival Records of Heritage Items</i> (1998) and <i>Photographic Recording of Heritage Items Using Film or Digital Capture</i> (2006).</p> <p>Within two (2) years of completing the archival recording, or any other later time agreed by the Secretary, the Proponent must submit the Heritage Archival Recording Report to the Department, the OEH, Heritage Council of NSW, Relevant Council(s), relevant local libraries and local historical societies in the respective local government area(s).</p>	<p>Not applicable to VCISD as per Staging Report.</p> <p>An archival recording report has been separately developed by Sydney Metro.</p> <p>VCISD Denson Street archaeological monitoring results and records obtained by Lendlease will be issued to Sydney Metro for incorporation into any required overarching Sydney Metro City Southwest Heritage Archival Recording Report, as required.</p>
E14	In addition to the archival recording as required by Condition E13, the Proponent must, prior to demolition, undertake external photography of all buildings and structures to be demolished, in consultation with and to the	Not applicable to VCISD as per Staging Report.

	standards of the relevant Council. The recordings must be made available to the relevant Council.	No buildings or structures to be demolished by VCISD. Any requirements of E14 has been completed by Sydney Metro and/or the TSE contractor.
E15	The Proponent must salvage items of heritage value from heritage listed buildings and structures to be demolished before demolition, and assess options for its sympathetic reuse (including integrated heritage displays) on the project or other options for repository, reuse and display. Suitable repository locations must be established in consultation with relevant councils. Any State listed items or elements suitable for salvage must be determined in consultation with the Heritage Division of the OEH.	VCISD will assess options for sympathetic reuse or for repository, reuse and display within the VCISD Heritage Interpretation Plan required by CoA E21 – separate to this CHMP
E16	The Proponent must prepare a Salvage Report, including photographic recording of the heritage items identified for salvage in documents referred to in Condition A1. The salvage report must include: (a) The internal heritage fabric removed from within the curtilage of Mowbray House, Chatswood; (b) The interior, exterior and setting of the shop at 187 Miller Street, North Sydney (c) The fabric and setting of the North Sydney bus shelters; (d) The Interior, exterior and setting of the 'flat building' at 7 Elizabeth Street, Sydney (e) The heritage fabric of the existing Martin Place Station affected by the project the heritage fabric of the existing Sydenham Station affected by the project; (f) Directly impacted parts of the Congregational Church at Waterloo The former Metro Goldwyn Mayer building including interior, 22-28 Chalmers Street Surry Hills	Not applicable to VCISD as per Staging Report. The requirements of this condition are outside the scope of this VCISD CHMP. Any demolition and/or salvage works will be completed by Sydney Metro or the TSE contractor.
E17	The Archaeological Assessment Research Design Report (AARD) in the documents listed in A1 must be implemented. Final Archaeological Method Statements must be prepared in consultation with the Heritage Council of NSW (or its delegate) before commencement of archaeological excavation works. The final methodology must: (a) provide for the detailed analysis of any heritage items discovered during the investigations; (b) include detailed site specific archaeological management and artefact management strategies; (c) include cored soil samples for soil and pollen for the Pitt Street site within the Tank Stream Valley; and (d) provide for a sieving strategy.	Sydney Metro ARD Sections 7.3, 8.4 Appendix C <u>Note:</u> No excavation of archaeological management sites identified in the project AARD for VCISD works. A separate archaeological method statement completed for Denison St stormwater work is included in Appendix C

E18	<p>Before excavation of archaeological management sites, the Proponent must nominate a suitably qualified Excavation Director who complies with the Heritage Council of NSW's <i>Criteria for Assessment of Excavation Directors</i> (July 2011) to oversee and advise on matters associated with historic archaeology and advise the Department and OEH.</p> <p>Where archaeological excavation is required, the Excavation Director must be present to oversee excavation and advise on archaeological issues. The Excavation Director must be given the authority to advise on the duration and extent of oversight required as informed by the provisions of the approved AARD and Excavation Methodology.</p> <p>A final archaeological report must be submitted to the Heritage Council of NSW within two (2) years of the completion of archaeological excavation on the project. The report must include information on the entire historical archaeological program relating to the CSSI.</p>	<p>Sections 6, 7.1, 7.2, 7.3, 8</p> <p>Appendix C</p> <p><u>Note:</u> No excavation of archaeological management sites identified in the project AARD for VC-1SD works.</p> <p>A separate archaeological method statement completed for Denison St stormwater work is included in Appendix C</p>
E19	<p>An Unexpected Heritage Finds Procedure must be prepared:</p> <p>(a) to manage unexpected heritage finds in accordance with any guidelines and standards prepared by the Heritage Council of NSW or OEH; and</p> <p>(b) by a suitably qualified and experienced heritage specialist.</p> <p>The procedure must be included in the AARD and must be implemented for the life of the project.</p>	<p>Sydney Metro Unexpected Finds Procedure</p> <p>Sections 6.3, 7.1, 7.3, 8.2, 8.4</p> <p>Appendix A</p>
E20	<p>In the event that a potential relic/s is/are discovered, relevant construction must cease in the affected area and the Excavation Director must be notified and assess the significance level of the find/s and provide mitigation advice according to the significance level and the impact proposed. The Excavation Director must attend the site in accordance with E18 to oversee the excavation where relics of State significance are found.</p> <p>The Secretary must be notified at the same time as the Heritage Council of NSW (or its delegate) of any relic of State Significance found.</p> <p>An Archaeological Relic Management Plan specific to the relic of State significance must be prepared in consultation with the Heritage Council of NSW (or its delegate) to outline measures to be implemented to avoid and/or minimise harm to and/or salvage the relic of State significance.</p> <p>Construction in the vicinity of the discovery must not recommence until the requirements of the ARMP have been implemented, in consultation with the Excavation Director. The Proponent must notify the Secretary in writing of the outcome of consultation on the Archaeological Relic Management Plan with the Heritage Council of NSW</p>	<p>Sections 7.3.3, 7.3.4, 8.4</p>
E21	<p>The Proponent must prepare a Heritage Interpretation Plan which identifies and interprets the key Aboriginal and Non-Aboriginal heritage values and stories of heritage items and heritage conservation areas</p>	<p>Sections, 7.2.3, 7.2.4, 8.3, 8.4</p>

	<p>impacted by the CSSI. The Heritage Interpretation Plan must inform the Station Design and Precinct Plan referred to in Condition E101. The Heritage Interpretation Plan must be prepared in accordance with the <i>NSW Heritage Manual</i>, the <i>NSW Heritage Office's Interpreting Heritage Places and Items: Guidelines</i> (August 2005), and the <i>NSW Heritage Council's Heritage Interpretation Policy</i> and include, but not be limited to:</p> <p>(a) a discussion of 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 the Sydney terminal and Central Railway Station Group, and Martin Place Station, Sydenham Station and Sydenham Pit and Drainage Pumping Station Precincts;</p> <p>(b) identification and confirmation of interpretive initiatives implemented to mitigate impacts to archaeological Relics, heritage items and conservation areas affected by the CSSI including;</p> <ol style="list-style-type: none"> i. use of interpretative hoardings during construction ii. community open days iii. community updates iv. station and precinct design; and <p>(c) Aboriginal cultural and heritage values of the project area including the results of any archaeological investigations undertaken.</p> <p>The Heritage Interpretation Plan must be prepared in consultation with the Heritage Council of NSW (or its delegate), Relevant Councils and Registered Aboriginal Parties, and must be submitted to the Secretary before commencement of construction.</p>	
E23	<p>The Proponent must take all reasonable steps so as not to harm, modify or otherwise impact any Aboriginal object associated with the CSSI except as authorised by this approval.</p>	<p>This Plan</p> <p>Sydney Metro CHAR</p> <p>Sections 3.1, 7.1.3, 7.1.4, 7.3.4</p>
E24	<p>Before excavation, the Proponent must implement the Aboriginal Cultural Heritage Assessment prepared for the CSSI and included in the PIR. Excavation and/or salvage must be undertaken by a qualified archaeologist in consultation with the Registered Aboriginal Parties for the CSSI.</p>	<p>Sections 2.3, 4.2, 6.1, 7.1.2, 7.2.2, 7.3.2</p> <p>Sydney Metro CHAR</p>
E25	<p>Where previously unidentified Aboriginal objects are discovered during construction of the CSSI, construction must stop in the vicinity of the affected area and a suitably qualified and experienced Aboriginal heritage expert must be contacted to provide specialist heritage advice, before works recommence. The measures to consider and manage this process must be specified in the Heritage Management sub-plan required by Condition C3 and, where relevant, include registration in the OEH's Aboriginal Heritage Information Management System (AHIMS)</p>	<p>Sections 6.1, 7.1, 8.1, 8.2</p>
E26	<p>This approval does not allow the Proponent to harm, modify, or otherwise impact human remains uncovered during the construction and operation of the CSSI, except in accordance with the Exhumation Management Plan (Condition E27)</p>	<p>Sections 4.3, 7.1.3, 7.3.6, 8.2</p> <p>Sydney Metro Exhumation Management Plan</p>

E27	<p>An Exhumation Management Plan must be prepared to guide the relocation of recovered human remains. The Exhumation Management Plan must be prepared:</p> <p>(a) in consultation with, and meeting the requirements of, the OEH and NSW Health; and</p> <p>(b) in accordance with the <i>Guidelines for Management of Human Skeletal Remains</i> (NSW Heritage Office, 1998b) and <i>NSW Health Policy Directive – Exhumation of human remains</i> (December, 2013), and other relevant guidelines and standards prepared by the Heritage Council of NSW or OEH.</p> <p>The Exhumation Management Plan must be provided to the Secretary for information before the commencement of excavation works.</p> <p><i>Note: Human remains that are found unexpectedly during works are under the jurisdiction of the NSW State Coroner and must be reported to the NSW Police immediately.</i></p>	<p>Sections 4.3, 7.1.3, 7.3.6, 8.2</p> <p>Sydney Metro Exhumation Management Plan</p>
E30	<p>The Proponent must conduct vibration testing before and during vibration generating activities that have the potential to impact on heritage items to identify minimum working distances to prevent cosmetic damage. 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 mitigation measures.</p>	<p>Sections 11, 8.3, 7.2.5</p> <p>VCISD Construction Noise and Vibration Management Plan</p>
E31	<p>The Proponent must seek the advice of a heritage specialist on methods and locations for installing equipment used for vibration, movement and noise monitoring of heritage-listed structures.</p>	<p>Sections 7.2.5, 8.3</p> <p>VCISD Construction Noise and Vibration Management Plan</p>
E100	<p>The Proponent must establish a Design Review Panel (DRP) to refine design objectives for place making, public realm and urban and heritage integration applicable to the length of the project and provide advice on the application of the objectives to key design elements in relation to place making, architecture, heritage, urban and landscape design and artistic aspects of the CSSI. The DRP must:</p> <p>(a) comprise five members who are experts in one of the identified design elements;</p> <p>(b) include:</p> <ol style="list-style-type: none"> i. the NSW Government Architect as Chair or their representative); ii. a representative from the Heritage Council, <p>(c) meet at least four times a year, or any other timeframe agreed by the DRP; and</p> <p>(d) keep meeting minutes and a schedule of action items arising from each meeting.</p> <p>Relevant Council(s) and other key stakeholders such as UrbanGrowth NSW and must be invited to participate in DRP meetings to advise on local issues and applicability of design review outcomes as they relate to the local context of each station location.</p>	<p>Sections 7.2.3, 8.3, 9</p>

Table 2 - CSSI Planning Approval Conditions

1.2 Revised Environmental Mitigation Measures (REMMs)

REMM	Mitigation Measure	Reference
NAH1	<p>Archival recording and reporting of the following heritage items would be carried out in accordance with the NSW Heritage Office's <i>How to Prepare Archival Records of Heritage Items</i> (1998a), and <i>Photographic Recording of Heritage Items Using Film or Digital Capture</i> (2006):</p> <ul style="list-style-type: none"> • The internal heritage fabric and any non-original elements removed from within the curtilage of Mowbray House, Chatswood • The interior, exterior and setting of the shop at 187 Miller Street, North Sydney • The fabric and setting of the North Sydney bus shelters requiring removal and temporary relocation at Victoria Cross Station and Blues Point temporary site • Any component of the Blues Point Waterfront Group and the McMahons Point South heritage conservation area to be directly affected or altered, including vegetation and significant landscape features • Hickson Road wall in the vicinity of proposed ventilation risers and skylights for Barangaroo Station • The interior, exterior and setting of the 'Flat Building' at 7 Elizabeth Street, Sydney • Martin Place, between Elizabeth and Castlereagh streets, Sydney • The heritage fabric of areas of the existing Martin Place Station affected by the project • The Rolling Stock Officers' Garden, Rolling Stock Officers' Building and Cleaners' Amenities Building in Sydney Yard and any other component of the Sydney Terminal and Central Railway Stations group to be removed or altered • The Bounce Hostel building (former MGM building) • Directly impacted parts of the Congregational Church at Waterloo • Sydenham Pit and Drainage Pumping Station 1 • Sydenham Railway Station Group: Platform 6 building and Platform 1 Parcels Office. 	<p>Not applicable to VCISD works as per Staging Report.</p> <p>Note: All archival recording required in the Victoria Cross location to be completed by others, prior to VCISD works commencing.</p>
NAH2	<p>The archaeological research design would be implemented. Significant archaeological findings would be considered for inclusion in heritage interpretation (as per NAH8) for the project and be developed in consultation with the relevant local council.</p>	<p>Sydney Metro ARD</p> <p>Sections 7.3, 8.4, 7.2.3, 7.2.4, 8.3</p> <p>A site specific HIP will be prepared separately to this CHMP, and is not required until commencement of permanent above ground works, as per the Staging Report. The HIP will include consideration of inclusion of any</p>

REMM	Mitigation Measure	Reference
		significant archaeological finds.
NAH3	An Exhumation Policy and Guideline would be prepared and implemented. It would be developed in accordance with the <i>Guidelines for Management of Human Skeletal Remains</i> (NSW Heritage Office, 1998b) and NSW Health Policy Directive – Exhumation of human remains (December, 2013). It would be prepared in consultation with NSW Heritage Office and NSW Health	Sections 4.3, 7.1.3, 7.3.6, 8.2 Sydney Metro Exhumation Management Plan
NAH4	The method for the demolition of existing buildings and / or structures at Chatswood dive site, Victoria Cross Station, Martin Place Station, Pitt Street Station, Central Station and Waterloo Station would be developed to minimise direct and indirect impacts to adjacent and / or adjoining heritage items.	No demolition of existing buildings within the VCISD scope.
NAH5	Prior to total or partial demolition of heritage items at Victoria Cross and Martin Place stations, and the Bounce Hostel building (former MGM building at Central Station) heritage fabric for salvage would be identified and reuse opportunities for salvage of fabric considered. This would include salvage and reuse of heritage tiles to be impacted at Martin Place Station.	No demolition of heritage items within the VCISD scope. Sections, 7.2.3, 7.2.4, 8.3, 8.4 A site specific HIP will be prepared separately to this CHMP. The HIP will include consideration of inclusion of salvaged heritage fabric.
NAH6	An appropriately qualified and experienced heritage architect would form part of the Sydney Metro Design Review Panel and would provide independent review periodically throughout detailed design.	The Design Review Panel has been established by Sydney Metro prior to VCISD works commencing. Sections 7.2.3, 8.3, 9
NAH7	The project design would be sympathetic to heritage items and, where reasonable and feasible, minimise impacts to the setting of heritage items. The detailed design for Martin Place Station and Central Station would be developed with input from a heritage architect.	Sections 6, 7.2.3, 7.2.4, 8.3, 8.4, 9 A site specific HIP will be prepared separately to this CHMP.
NAH8	Appropriate heritage interpretation would be incorporated into the design for the project in accordance with the NSW Heritage Manual, the NSW Heritage Office's <i>Interpreting Heritage Places and Items: Guidelines</i> (August 2005), and the NSW Heritage Council's <i>Heritage Interpretation Policy</i> .	Sections 6, 7.2.3, 7.2.4, 8.3, 8.4 A site specific HIP will be prepared separately to this CHMP.

REMM	Mitigation Measure	Reference
NAH17	Opportunities for the salvage and reuse of the bus shelters temporarily removed at Victoria Cross and Blues Point would be investigated in consultation with North Sydney Council.	From changes to the VCISD north site location in Mod 1, removal of bus shelters is not required.
AH1	Aboriginal stakeholder consultation would be carried out in accordance with the NSW Office of Environment and Heritage's Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010.	CHAR Sections 4.2, 4.3
AH2	The cultural heritage assessment report would be implemented.	Sections 2.3, 4.2, 6.1, 7.1.2, 7.2.2, 7.3.2 Sydney Metro CHAR
AH4	Appropriate Aboriginal heritage interpretation would be incorporated into the design for the project in consultation with Aboriginal stakeholders.	Sections 6, 7.2.3, 7.2.4, 8.3, 8.4, 9 A site specific HIP will be prepared separately to this CHMP.
NV3	Where vibration levels are predicted to exceed the screening criteria, a more detailed assessment of the structure and attended vibration monitoring would be carried out to ensure vibration levels remain below appropriate limits for that structure. For heritage items, the more detailed assessment would specifically consider the heritage values of the structure in consultation with a heritage specialist to ensure sensitive heritage fabric is adequately monitored and managed.	Sections 11, 8.3 VCISD Construction Noise and Vibration Management Plan

Table 3 - Revised Environmental Mitigation Measures

1.3 Construction Environmental Management Framework (CEMF)

Section	Details	Ref
10.1	Heritage Management Objectives a. The following heritage management objectives will apply to construction: i. Embed significant heritage values through any architectural design, education or physical interpretation; ii. Minimise impacts on items or places of heritage value; iii. Avoid accidental impacts on heritage items; and iv. Maximise worker's awareness of indigenous and non-indigenous heritage.	In general – this CHMP. i. Sections 6, 7.2.3, 7.2.4, 8.3, 8.4, 9 ii. Sections 3.1, 3.2, 7, 8 iii. Sections 3.1, 3.2, 7, 8, Sydney Metro ARD iv. Section 10
10.2	Heritage Management Implementation a. Principal Contractors will develop and implement a Heritage Management Plan which will include as a minimum: i. Evidence of consultation with Registered Aboriginal Parties and the NSW Heritage Council; ii. Identify initiatives that will be implemented for the enhancement of heritage values and minimisation of heritage impacts,	In general – this CHMP. i. CHAR, Sections 4.2, 4.3 ii. Sections 6, 7.2.3, 7.2.4, 8.3, 8.4, 9, 10

Section	Details	Ref
	<p>including procedures and processes that will be used to implement and document heritage management initiatives;</p> <p>iii. The heritage mitigation measures as detailed in the environmental approval documentation;</p> <p>iv. The responsibilities of key project personnel with respect to the implementation of the plan;</p> <p>v. Procedures for interpretation of heritage values uncovered through salvage or excavation during detailed design;</p> <p>vi. Procedures for undertaking salvage or excavation of heritage relics or sites (where relevant), consistent with and any recordings of heritage relics prior to works commencing that would affect them;</p> <p>vii. Details for the short and / or long term management of artefacts or movable heritage;</p> <p>viii. Details of management measures to be implemented to prevent and minimise impacts on heritage items (including further heritage investigations, archival recordings and/or measures to protect unaffected sites during construction works in the vicinity);</p> <p>ix. Procedures for unexpected heritage finds, including procedures for dealing with human remains;</p> <p>x. Heritage monitoring requirements; and</p> <p>Compliance record generation and management.</p>	<p>iii. This Plan, Sections 7, 8</p> <p>iv. Section 9</p> <p>v. Sections 7, 8</p> <p>vi. Sections 7.3.3, 7.3.4, 8.4</p> <p>vii. Section 7.3.7</p> <p>viii. Section 7, 8</p> <p>ix. Sydney Metro Unexpected Finds Procedure, Sections 6.3, 7.1, 7.3, 8.2, 8.4, Appendix A, Sections 4.3, 7.1.3, 7.3.6, 8.2, Sydney Metro Exhumation Management Plan</p> <p>x. Sections 7, 8, 11</p>
10.2	b. The Contractor's regular inspections will include checking of heritage mitigation measures.	Sections 8.1, 11, 12
10.2	<p>c. Compliance records will be retained by the Contractor. These will include:</p> <p>i. Inspections undertaken in relation to heritage management measures;</p> <p>ii. Archival recordings undertaken of any heritage item;</p> <p>iii. Unexpected finds and stop work orders; and</p> <p>iv. Records of any impacts avoided or minimised through design or construction methods.</p>	<p>i. Sections 8.1, 11, 12, 13</p> <p>ii. All archival recording required in the Victoria Cross location to be completed by others, prior to VCISD works commencing.</p> <p>iii. Sydney Metro Unexpected Finds Procedure, Sections 6.3, 7.1, 7.3, 8.2, 8.4, 12, 13</p> <p>iv. Sections 11, 12, 13</p>
10.3	<p>Heritage Mitigation</p> <p>a. Examples of heritage mitigation measures include:</p> <p>i. Any heritage item not affected by the works will be retained and protected throughout construction;</p>	<p>In general - this CHMP</p> <p>Sections 7, 8, 9</p>

Section	Details	Ref
	<p>ii. During construction undertake professional archaeological investigation, excavation, and reporting of any historical Indigenous heritage sites of state significance which will be affected. Reporting may be completed as construction progresses;</p> <p>iii. Undertake archival recordings of all non-Indigenous heritage items affected by the works prior to commencement of works; and</p> <p>iv. Implement unexpected heritage find procedures for Indigenous and non-Indigenous heritage items.</p>	

Table 4 - Construction Environmental Management Framework

1.4 EIS Environmental Performance Outcomes

Aspect	Details	Ref
Non-Aboriginal heritage	The project would be sympathetic to heritage items and, where feasible and reasonable, avoid and minimise impacts to non-Aboriginal heritage items and archaeology	Sections, 7.2.3, 7.2.4, 8.3, 8.4 A site specific Heritage Interpretation Plan will be prepared separately to this CHMP
	The design of the project would reflect the input of an independent heritage architect, relevant stakeholders and the design review panel.	Sections 7.2.3, 8.3, 9
Aboriginal heritage	The project would be sympathetic to heritage items and, where feasible and reasonable, avoid and minimise impacts to Aboriginal heritage items and archaeology	Sections, 7.2.3, 7.2.4, 8.3, 8.4 A site specific Heritage Interpretation Plan will be prepared separately to this CHMP Sydney Metro CHAR Note: No known Aboriginal sites are located within the project area. The CHAR outlines appropriate methodologies to manage Aboriginal heritage.
	The design of the project would reflect the input of an independent heritage architect, relevant stakeholders and the design review panel	Sections 7.2.3, 8.3, 9

Table 5 - EIS Environmental Performance Outcomes

It is noted that the City and Southwest Chatswood to Sydenham Staging Report (Staging Report) details extent of applicability of the various aspects of the planning approval, Construction Environmental Management Framework (CEMF) and Revised Environmental Mitigation Measures. The Staging Report also outlines how these aspects will be covered in the project documentation (aspect specific sub plan or addressed within the Construction Environmental Management Plan). This is summarised in Figure 1 below, including for each environmental management category:

- Whether a stand-alone 'Construction Environmental Management Plan sub-plan', 'Construction Traffic Management Plan', 'Sustainability Management Plan sub-plan' or 'Workforce Development and Industry Participation Plan' will be prepared.
- Whether the category risks will be addressed in the main CEMP/SMP document in the form of a procedure ('CEMP-P' or 'SMP-P'),
- Whether the category risks will be addressed in the main CEMP/SMP document only ('CEMP' or 'SMP'), or
- Whether the category risks are not applicable to the stage ('N/A').

CEMF Environmental Management Category	SYAB	NCW-P7	Demolition A & B	TSE	CSM	SSJ	MP ISD – Demolition	ISD	BS	LW	TSOM
Spoil	N/A	N/A	N/A	CEMP sub-plan	CEMP sub-plan	CEMP sub-plan	N/A	CEMP sub-plan	CEMP	CEMP sub-plan	CEMP
Groundwater	N/A	N/A	N/A	CEMP sub-plan	CEMP sub-plan	CEMP -P	N/A	CEMP sub-plan	CEMP	CEMP	CEMP
Traffic	CoA E82 CTMP	CoA E82 CTMP	CoA E82 CTMP	CoA E82 CTMP	CoA E82 CTMP	CoA E82 CTMP	CoA E82 CTMP	CoA E82 CTMP	CoA E82 CTMP	CoA E82 CTMP	CoA E82 CTMP
Noise & Vibration	CEMP sub-plan	CEMP sub-plan	CEMP sub-plan	CEMP sub-plan	CEMP sub-plan	CEMP sub-plan	CEMP sub-plan	CEMP sub-plan	CEMP sub-plan	CEMP sub-plan	CEMP sub-plan
Heritage	CEMP sub-plan	CEMP -P	CEMP sub-plan	CEMP sub-plan	CEMP sub-plan	CEMP sub-plan	CEMP sub-plan	CEMP sub-plan	CEMP sub-plan	CEMP sub-plan	CEMP -P
Flora & Fauna / Biodiversity	CEMP -P	CEMP -P	CEMP -P	CEMP sub-plan	CEMP sub-plan	CEMP -P	CEMP -P	CEMP -P	CEMP -P	CEMP -P	CEMP -P
Visual Amenity	CEMP -P	CEMP -P	CEMP -P	CEMP sub-plan	CEMP sub-plan	CEMP sub-plan	CEMP -P	CEMP sub-plan	CEMP sub-plan	CEMP sub-plan	CEMP sub-plan
Carbon & Energy	N/A	N/A	N/A	SMP sub-plan	SMP sub-plan	SMP sub-plan	N/A	SMP sub-plan	SMP sub-plan	SMP sub-plan	SMP sub-plan
Materials	N/A	N/A	N/A	SMP sub-plan	SMP sub-plan	SMP sub-plan	N/A	SMP sub-plan	SMP sub-plan	SMP sub-plan	SMP sub-plan
Soil & Water	CEMP -P	CEMP -P	CEMP -P	CEMP sub-plan	CEMP sub-plan	CEMP sub-plan	CEMP -P	CEMP -P	CEMP -P	CEMP sub-plan	CEMP -P
Air Quality	CEMP -P	CEMP -P	CEMP -P	CEMP sub-plan	CEMP sub-plan	CEMP sub-plan	CEMP -P	CEMP -P	CEMP -P	CEMP sub-plan	CEMP -P
Waste (and Recycling)	CEMP -P	SMP -P	SMP sub-plan	SMP sub-plan	SMP sub-plan	SMP sub-plan	SMP -P	SMP sub-plan	SMP sub-plan	SMP sub-plan	SMP
Workforce Development	WFDIP Plan	N/A	WFDIP Plan	WFDIP Plan	WFDIP Plan	WFDIP Plan	WFDIP Plan	WFDIP Plan	WFDIP Plan	WFDIP Plan	WFDIP Plan

Figure 1 - Staging Report applicability, VCISD – outlined in red is relevant to this plan

2 INTRODUCTION

2.1 Sydney Metro Description

Sydney Metro is Australia’s biggest public transport project. In 2024, Sydney will have 31 metro railway stations and a 66km standalone metro railway system – the biggest urban rail project in Australian history. The Sydney Metro Project is illustrated in the Figure below.

Services started in 2019 in the city’s north west with a train every four minutes in the peak. Sydney Metro will be extended into the CBD and beyond to Bankstown in 2024. There will be new metro railway stations underground at Crows Nest, Victoria Cross, Barangaroo, Martin Place, Pitt Street, Waterloo and new metro platforms under Central.

On 9 January 2017, the Minister for Planning approved the Sydney Metro City & Southwest - Chatswood to Sydenham project as a Critical State Significant Infrastructure project (reference SSI 15_7400) (CSSI Approval). The terms of the CSSI Approval includes all works required to construct the Sydney Metro Victoria Cross Station, including the demolition of existing buildings and structures on both sites. The CSSI Approval also includes construction of below and above ground improvements with the metro station structure for appropriate integration with the Over Station Development (OSD).

With regards to CSSI related works, any component of the detailed design that is contained within the “metro box envelope” and public domain will be pursued in satisfaction of the CSSI conditions of approval and do not form part of the scope of the State Significant Development Approval (SSDA) for the OSD, unless otherwise specified in the SSDA.

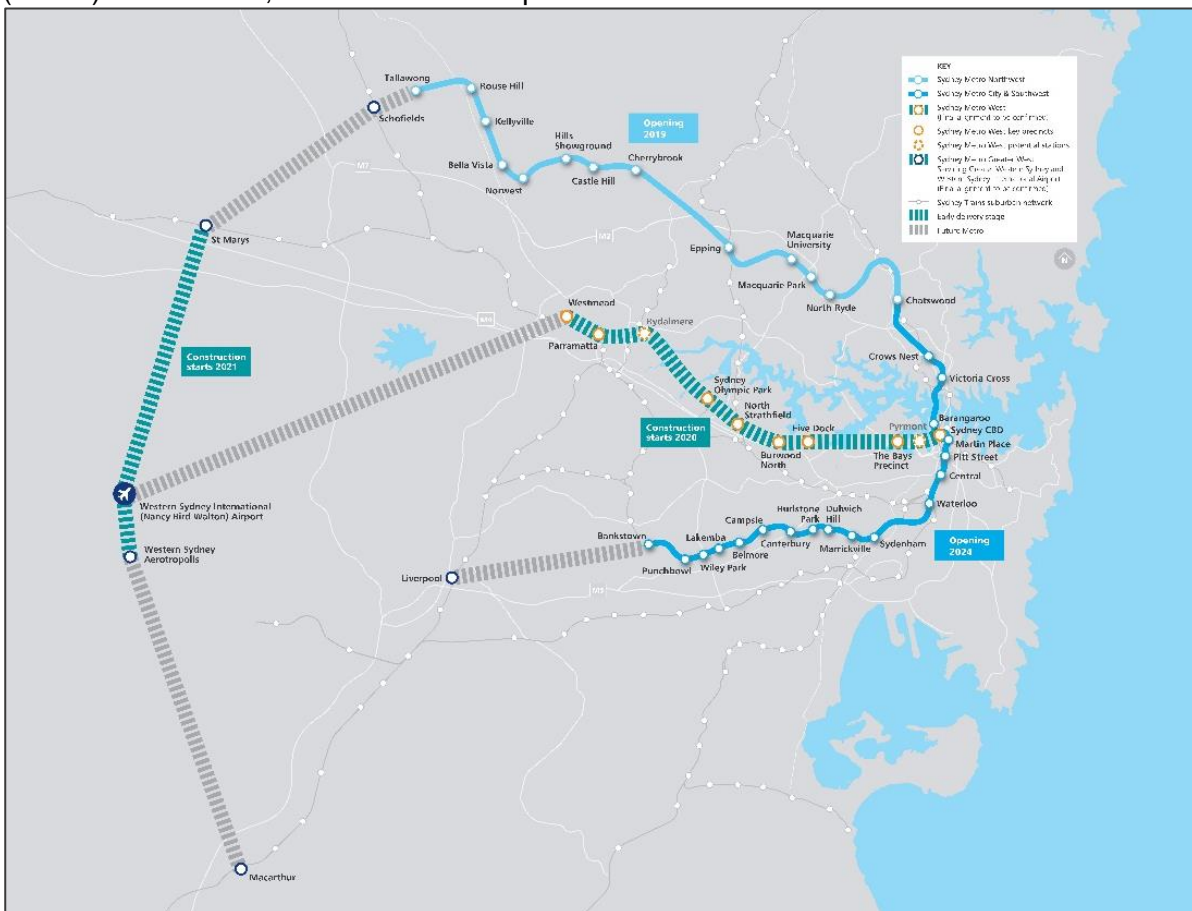


Figure 2 - Sydney Metro Alignment Map. Source: Sydney Metro

2.2 Project Background

Situated at the corner of Miller and Berry Streets, and corner of McLaren and Miller Streets North Sydney, the new Victoria Cross Integrated Station Development (VCISD) represents a unique opportunity to create a new precinct in the heart of North Sydney that has seamless access to retail, commercial offices and transport infrastructure. The new station supports the continued growth of North Sydney, adding to the vibrancy of the area through new employment and retail opportunities, improved pedestrian connections and high quality outdoor spaces.

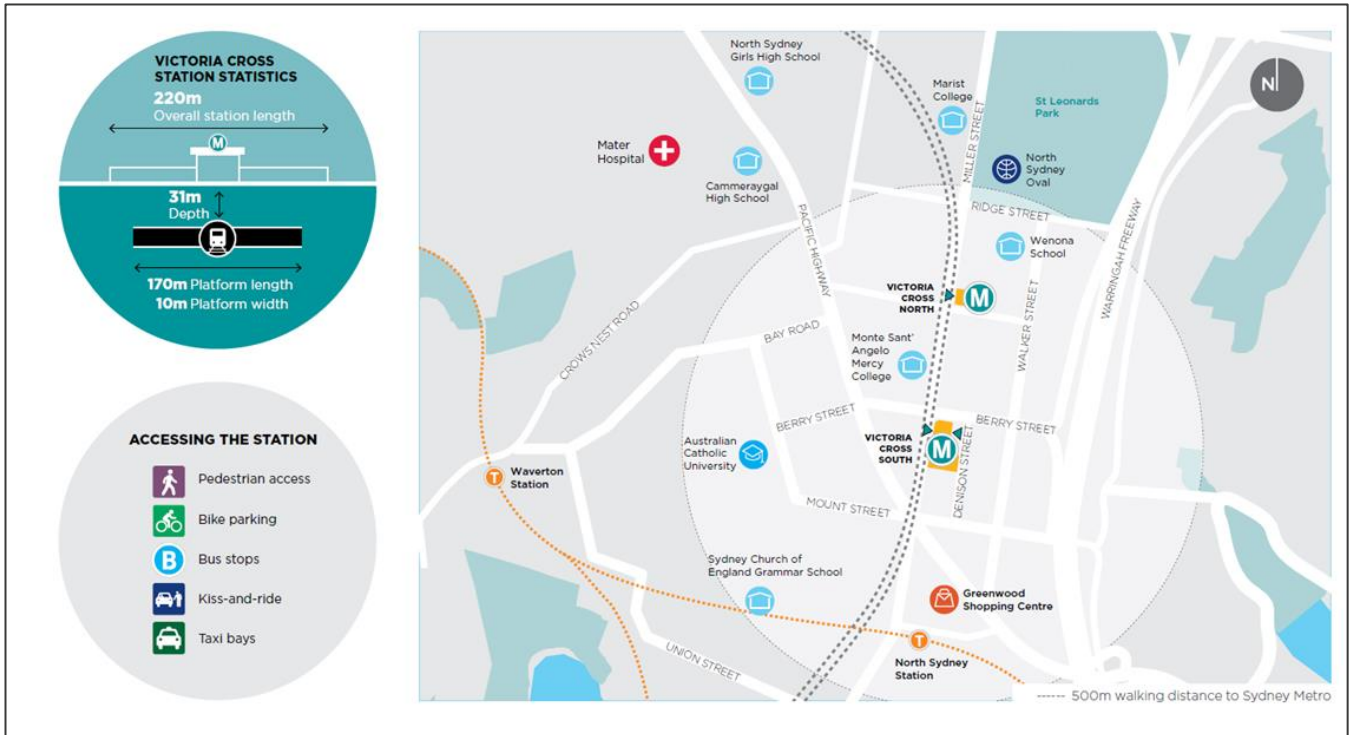


Figure 3: Victoria Cross Site Location

VCISD will integrate retail opportunities and enhance North Sydney as a thriving commercial, residential, retail and entertainment hub. The new Victoria Cross Station will be a cavern station located beneath Miller Street between Berry and McLaren Streets in North Sydney. Sydney Metro have engaged the Tunnel and Station Excavation (TSE) contractor to complete the tunnels, platform cavern, adits and station box excavation. The station will have two separate entrances (refer to Figure 4):

- the southern station entrance, bound by Miller, Berry and Denison Streets; and
- the smaller northern station entrance being located on Miller Street at the corner of McLaren Street.

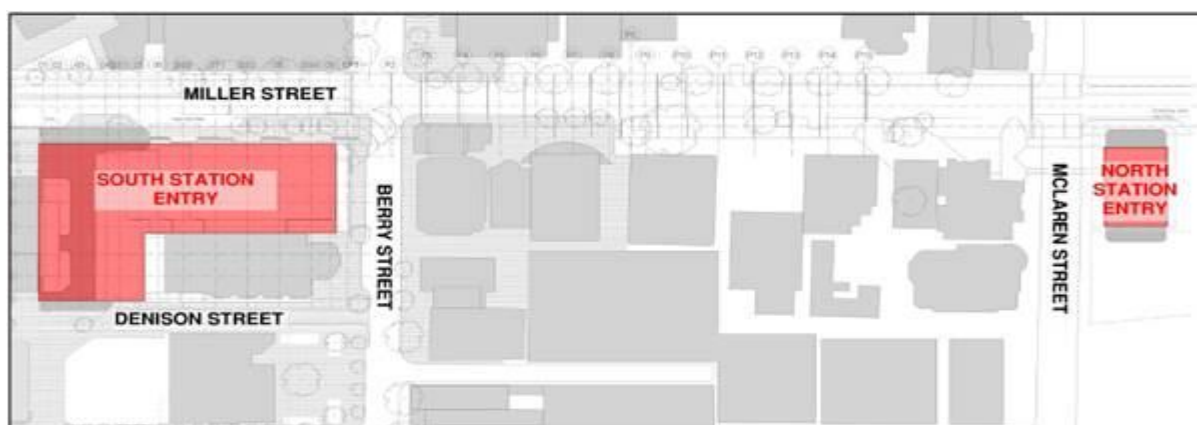


Figure 4: Location of the Victoria Cross Station entrances

2.3 The Site

The Victoria Cross station is to be located beneath Miller Street in North Sydney from McLaren Street and extending approximately 40 metres beyond Berry Street. The main cavern is 265 metres long, elliptical shaped and will house the rail tracks and platforms. The cavern permanent lining has a span of 23.8 m and a height of 15.7m and will be approximately 20 metres below ground surface. In addition, there will be a northern and southern station shaft providing access from street level to the platforms below. The surrounding vicinity of the site contains predominately medium and high-rise commercial buildings, mixed with low rise public, educational, commercial and retail buildings. Immediate neighbouring buildings have deep basements with between two and six levels below ground level. Deep basements have been identified at 50 and 65-69 Berry Street and 105-153 and 199 Miller Street.

The northern shaft will be constructed over a footprint of approximately 28 m x 35 m or 980 m². It will provide a link for commuters from the northern end of the cavern with McLaren Street via an eastern and western station adit. The southern shaft covers a much larger footprint and will provide a link for commuters from the southern end of the cavern with Berry and Denison Streets via an eastern and western station adit. The southern shaft footprint is configured in an 'L' shape extending 100 m parallel to Miller Street and also parallel to Berry Street covering an area of 5050 m². It is noted that the VCISD project does not involve the excavation of the shafts or tunnels associated with the Sydney Metro project, which will be completed by the TSE contractor. The VCISD scope is for construction of the new metro station only, not bulk excavation of the station shafts or tunnels. Supporting works such as utility and stormwater upgrades, service investigations and minor road works will be completed in the adjacent surrounding areas. This will include stormwater upgrades along Miller Street and Denison Street that are further outlined in section 6.3.3, Appendix D and Appendix E.

2.4 Key Dates and Timeframes

Table 3 summarises key dates for preparation and submission of sustainability reports and deliverables.

Activity	Dates
Design of Station	
Stage 2	Submit Nov 2019
Stage 3	Submit May 2020
Construction of Station	November 2020 to August 2023

Table 6 - Project Phases

3 PURPOSE OF CHMP

This Construction Heritage Management Sub-plan (CHMP) forms part of the Construction Environmental Management Plan (CEMP) for Sydney Metro City and Southwest Victoria Cross Integrated Station Development (VCISD - the Project). Effective cultural heritage management is vital to the overall success of the Project. This CHMP is required to ensure careful management of construction work so that the heritage aspects of the site and surrounding environment will be appropriately addressed during construction. It has been prepared to address the management and mitigation of potential impacts of the Project to manage heritage issues and minimise risk of impact during the first stage of development under the Minister's Conditions of Approval (CoA), noting that bulk excavation is to be completed prior to VCISD construction works.

It describes how Lendlease and its sub-contractors will ensure all risks associated with heritage are considered and managed effectively during the design and construction of the Project. It has been prepared to support, and should be read in conjunction with, the Sydney Metro Construction Environmental Management Framework (CEMF).

This CHMP addresses the relevant requirements of the CSSI planning approval as modified and all applicable guidelines and standards specific to heritage management during the Project. It has been developed based on the Environmental Impact Statement, which takes into consideration a comprehensive assessment and analysis of both Aboriginal and non-Aboriginal heritage risks for the Project.

3.1 Objectives and Targets

This CHMP provides the basis for the management of heritage issues and to minimise risk of impact during construction. Its key objective is to ensure that impacts to Aboriginal and non-Aboriginal heritage are minimised and within the scope permitted by the planning approval. The supporting objectives and targets of heritage management and mitigation are outlined below:

- minimise the adverse impacts of construction on the surrounding heritage buildings, elements, fabric, spaces and vistas that contribute to the overall significance of the local heritage character;
- consult with relevant stakeholders throughout the course of works about decisions that are relevant to the heritage significance of the site and its elements;
- identify, investigate, record and assess the significance of any discovered Aboriginal and non- Aboriginal archaeological resources before any further action, including harm, can take place;
- consult with all relevant stakeholders upon the discovery of unexpected Aboriginal objects or cultural features.

3.2 Avoidance of Impacts

Impacts to heritage items, significant archaeology and Aboriginal objects is not permitted unless items are identified in the documents referred to in Condition A1 (e) of the Sydney Metro City and Southwest Chatswood to Sydenham planning approval or corresponding Victoria Cross Station and Artarmon Substation Modification Report (Modification 1).

The Proponent must not destroy, modify or otherwise physically affect any Heritage item not identified in documents referred to in Condition A1 of the CSSI planning approval SSI 15-7400.

4 CONSULTATION AND STAKEHOLDER ENGAGEMENT

4.1 CHMP Consultation

Condition C3 requires that the CHMP be prepared for the Project in consultation with the relevant Council and the NSW Heritage Council (or its delegate).

The key stakeholders related to Heritage who have been consulted in preparation of this CHMP include:

- NSW Heritage Council (Heritage NSW as delegate)
- North Sydney Council

Appendix B will be updated to include evidence of relevant consultation. The CHMP would be provided to the Secretary no later than one month before the commencement of construction.

This CHMP may be submitted to the Secretary along with, or subsequent to, the submission of the CEMP (or corresponding document) but in any event, no later than one (1) month before commencement of construction. Construction must not commence until the CEMP and all CEMP sub-plans have been approved by the Secretary. The CEMP and CEMP sub-plans, as approved by the Secretary, including any minor amendments approved by the ER.

4.2 Registered Aboriginal Parties

Consultation with Registered Aboriginal Parties (RAPs) has been undertaken during concept design as part of the Sydney Metro Chatswood to Sydenham Environmental Impact Statement (EIS) and also during preparation of the Cultural Heritage Assessment Report (CHAR) in accordance with OEH's guidelines Aboriginal cultural heritage consultation requirements for proponents (2010) (AH1).

Aboriginal community consultation was guided by OEH 'Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation'¹, using the OEH 'Aboriginal cultural heritage consultation requirements for proponents'² as best practice. Consultation has been conducted for the entirety of the Sydney Metro route between Chatswood and Sydenham, encompassing the VCISD Project.

4.3 RAP Participation During Construction

RAPs would be given the opportunity to participate in any archaeological test or salvage excavations in regard to Aboriginal archaeology. Artefact Heritage would liaise with the RAPs to organise participation and scheduling of fieldwork.

RAPs would also be notified in the event of an unexpected find of an Aboriginal object in accordance with E25, or human remains that may be Aboriginal (in accordance with the Sydney Metro Project Exhumation Management Plan).

4.4 Heritage Working Group

The Sydney Metro Heritage Working Group will be kept updated on progress of the Project, as requested. The Heritage Working Group also provides a forum for ongoing consultation on detailed design with agencies and stakeholders.

4.5 NSW Heritage Council

A number of conditions of approval require consultation with NSW Heritage Council (or its delegate Heritage NSW). Heritage Council will also be informed of project progress through attendance at the Heritage Working Group.

¹ Department of Environment and Conservation 2005

² Department of Environment, Climate Change and Water 2010

4.6 Public Open Days

Where significant archaeological remains that have educational value are uncovered a public open day may be required (E21). Although it is unlikely an open day will be required for the VCISD project, its need will be confirmed by a nominated Excavation Director, Lendlease and Sydney Metro.

5 LEGAL AND APPROVAL REQUIREMENTS

5.1 Legislation and Planning Instruments

Details of legislation and planning instruments considered during development of this Plan are given below.

Legislation	Description	Relevance to this CHMP
<i>Environmental Planning and Assessment Act 1979</i>	This Act establishes a system of environmental planning and assessment of development proposals for the State.	Relevant approval conditions and obligations are incorporated into this CHMP.
<i>Environment Protection and Biodiversity Conservation Act 1999 (Cwth)</i>	<p>The main purpose of this Act is to provide for the protection of the environment especially those aspects that are of national environmental importance and to promote ecological sustainable development.</p> <p>Heritage places are listed on the National Heritage List (NHL) for their 'outstanding heritage value to the nation' and are owned by a variety of constituents, including government agencies, organisations or individuals. Only items owned or controlled by the Commonwealth that meet the threshold for national heritage listing under the <i>Environmental Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) are listed on the Commonwealth Heritage List (CHL) and/or the World Heritage List (WHL) and afforded protection under the EPBC Act.</p>	Not relevant as no NHL, CHL or WHL items present.
<i>National Parks and Wildlife Act 1974</i>	<p>The relevance of this Act is firstly in respect to the protection and preservation of aboriginal artefacts. Discovery of material on site suspected as being of aboriginal origin must be reported and protected pending assessment and direction by the Client's Representative.</p> <p>Secondly it is an offence under Part 8A of this Act to pick or harm threatened species. (Refer to the notes under the Threatened Species Conservation Act for more information)</p>	<p>No potential for impacts to Indigenous heritage items have been identified for the VCISD works.</p> <p>An Aboriginal heritage impact permit under section 90 of the <i>National Parks and Wildlife Act 1974</i> is not required for works approved under Division 5.2 of the EP&A Act.</p> <p>Management of Indigenous heritage is outlined in this plan.</p>
<i>Heritage Act 1977</i>	<p>This Act provides for the preservation and conservation of heritage items such as building, works, relic, places of historic interest, scientific, cultural, social, archaeological, architectural, natural or aesthetic significance.</p> <p>It is an offence under this Act to wilfully and knowingly damage or destroy items of heritage value.</p>	Heritage items are identified as surrounding the site. An approval under Part 4, or an excavation permit under section 139, of the <i>Heritage Act 1977</i> is not required for works approved under Division 5.2 of the EP&A Act.

	Do not demolish, damage, move or develop around any place, building, work, relic, moveable object, precinct, or land that is the subject of an interim heritage order or listing on the State Heritage Register or heritage listing in a Local Environmental Plan without an approval from the Heritage Council (NSW) or local council.	Management of non-Indigenous heritage is outlined in this plan.
<i>Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Cwth)</i>	This Act provides for the preservation and protection from injury or desecration to areas and objects of particular significance to Aboriginals. Areas and objects can be protected by Ministerial Declaration and it is then an offence to contravene such a declaration.	No areas or objects within the Project have been identified as being subject to such a declaration and this Act is of little relevance to the project.
<i>Coroners Act 2009</i>	This Act enables coroners to investigate certain kinds of deaths or suspected deaths in order to determine the identities of the deceased persons, the times and dates of their deaths and the manner and cause of their deaths.	This Act is relevant if Human Skeletal Remains are found in the project area which is not expected.

5.2 Guidelines

Additional guidelines and standards relating to the management of Aboriginal and historic cultural heritage include:

- Code of Practice for the archaeological investigation of Aboriginal objects in NSW (OEH 2010)
- Aboriginal cultural heritage consultation requirements for proponents 2010 (OEH 2010)
- Due Diligence Code of practice for protection of Aboriginal objects in NSW (OEH 2010)
- Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH 2010)
- Guide to Aboriginal Heritage Impact Permit processes and decision making
- Assessing Heritage Significance (NSW Heritage Office 2001)
- Levels of Heritage Significance (NSW Heritage Office 2008)
- Assessing Significance for Historical Archaeological Sites and Relics (NSW Heritage Branch, Department of Planning 2009)
- Investigating Heritage Significance (NSW Heritage Office 2001)
- NSW Government's Aboriginal Participation in Construction Guidelines (2007).
- How to Prepare Archival Recording of Heritage Items (Heritage Branch 1998).
- Photographic Recording of Heritage Items Using Film or Digital Capture (Heritage Branch 2006).
- Guidelines for the Management of Human Skeletal Remains under the Heritage Act 1977

The existing environment and heritage context of the Project has been assessed in the following background reports prepared to support the Environmental Impact Statement (EIS) for the Project:

- Sydney Metro City and Southwest – Chatswood to Sydenham: Aboriginal Heritage Archaeological Assessment, prepared by Artefact Heritage (2016a)
- Sydney Metro City and Southwest – Chatswood to Sydenham: Non-Aboriginal Heritage Impact Assessment, prepared by Artefact Heritage (2016b).

Additional reports, which have been prepared for the project and have been used to support this management plan also include:

- Sydney Metro City and Southwest – Chatswood to Sydenham Historical Archaeological Assessment and Research Design by Artefact Heritage (2016c)
- Sydney Metro City and Southwest – Chatswood to Sydenham: Aboriginal Cultural Heritage Assessment Report (CHAR), prepared by Artefact Heritage (2016e)

These reports have been referenced to inform this management plan in regard to existing environment, heritage significance and archaeological potential.

6 IDENTIFICATION OF HERITAGE ITEMS

6.1 Aboriginal Heritage

Artefact Heritage undertook a heritage assessment of the Sydney Metro City and Southwest – Chatswood to Sydenham Project, including the Victoria Cross Station and Artarmon substation modification report. No previously registered Aboriginal sites were located within the project area at Victoria Cross.

Assessment of Aboriginal archaeological potential at the Victoria Cross station site reports that:

Limited archaeological investigation has occurred at North Sydney in the vicinity of Victoria Cross Station. The majority of recorded Aboriginal sites in the local area are associated with the Harbour foreshore zone, approximately 600 metres to the south. The Aboriginal heritage assessment conducted for the Royal North Shore Hospital in a similar crest landform context to Victoria Cross Station identified that due to large-scale disturbance there was no assessed archaeological potential across that area.

The construction of commercial buildings, roads and underground services are likely to have impacted upon or removed archaeological deposits. The relatively shallow soils associated with Ashfield Shale and the crest context Hawkesbury Sandstone suggest that even minor surface disturbance associated with building or road construction is likely to have a significant impact or result in the removal of natural A horizon contexts.

The predictive model indicates that more frequently visited areas likely to demonstrate evidence of repeated and overlapping activities are likely to occur in close proximity to high order watercourses, raw material resources, or salient features in the landscape. Victoria Cross Station is located on a crest landform context away from major watercourses, suggesting that the overall archaeological potential of Victoria Cross Station is likely to be low.

The archaeological significance of the Victoria Cross Station site is assessed as low due to its low archaeological potential resulting from high levels of ground disturbance that would have impacted any surface or subsurface Aboriginal sites. No Aboriginal sites have been identified within the study area.

No identified Aboriginal sites would be impacted by the proposed works at Victoria Cross Station. Due to the largely modified nature of Victoria Cross Station and surrounding area there are no identified areas of archaeological potential that would be impacted by the proposed works at Victoria Cross Station. The closest recorded Aboriginal site is AHIMS site 45-6-0825, an art site recorded around 325 metres to the north-west of the northern site, and not impacted by the project.

Prior to the VCISD project commencing construction works, the Tunnel and Station Excavation (TSE) contractor will have completed bulk excavation of the station shafts, caverns and tunnels. This would significantly mitigate the VCISD project from encountering any unknown Aboriginal archaeology.

6.2 Built Heritage

There is one heritage listed item that has been demolished within the project area (Shop at 187 Miller Street, North Sydney LEP 2013 I0898) prior to VCISD works commencing. This demolition was approved and completed by others, outside of the VCISD scope.

There are a number of other listed items that were identified in the EIS assessment and Victoria Cross Station and Artarmon substation modification report in proximity to the site, however these would not be impacted by the VCISD construction works to be undertaken by Lendlease.

The following table outlines the heritage listed items within the project area as identified in Figures 5 and 6.

Heritage item / location	Register listings	Significance	Location
Monte Sant Angelo Group	North Sydney LEP 2013 I0894	Local	North-west of southern site.
MLC Building	North Sydney LEP 2013 I0893	Local	Immediately south of the southern site
Rag and Famish Hotel (199 Miller Street)	North Sydney LEP 2013 I0901	Local	Adjacent to southern site, north on Berry Street
Commercial building (201 Miller Street)	North Sydney LEP 2013 I0904	Local	North of the southern site
McLaren Street Heritage Conservation Area	North Sydney LEP 2013 CA19	Local	West of northern site
Walker and Ridge Streets Heritage Conservation Area	North Sydney LEP 2013 (CA20)	Local	North-east of northern site
North Sydney Council Chambers (including fountain in park adjacent to Council Chambers)	North Sydney LEP 2013 (I0902)	Local	West of northern site
243 Miller Street, also known as “Garston”	North Sydney LEP 2013 (I0908)	Local	Immediately adjacent (west) northern site
House (255–257 Miller Street)	North Sydney LEP 2013 (I0912)	Local	Immediately adjacent (west) northern site
Simsmetal House	North Sydney LEP 2013 (I0889)	Local	South of northern site
Previous iteration (1838-1880) of Denison Street located during service investigations underneath the existing Denison Street road reserve.	Not registered – refer Appendix D and Appendix E	Potentially Local	Immediately east of southern site

Table 7 - Heritage listed items in proximity to VCISD

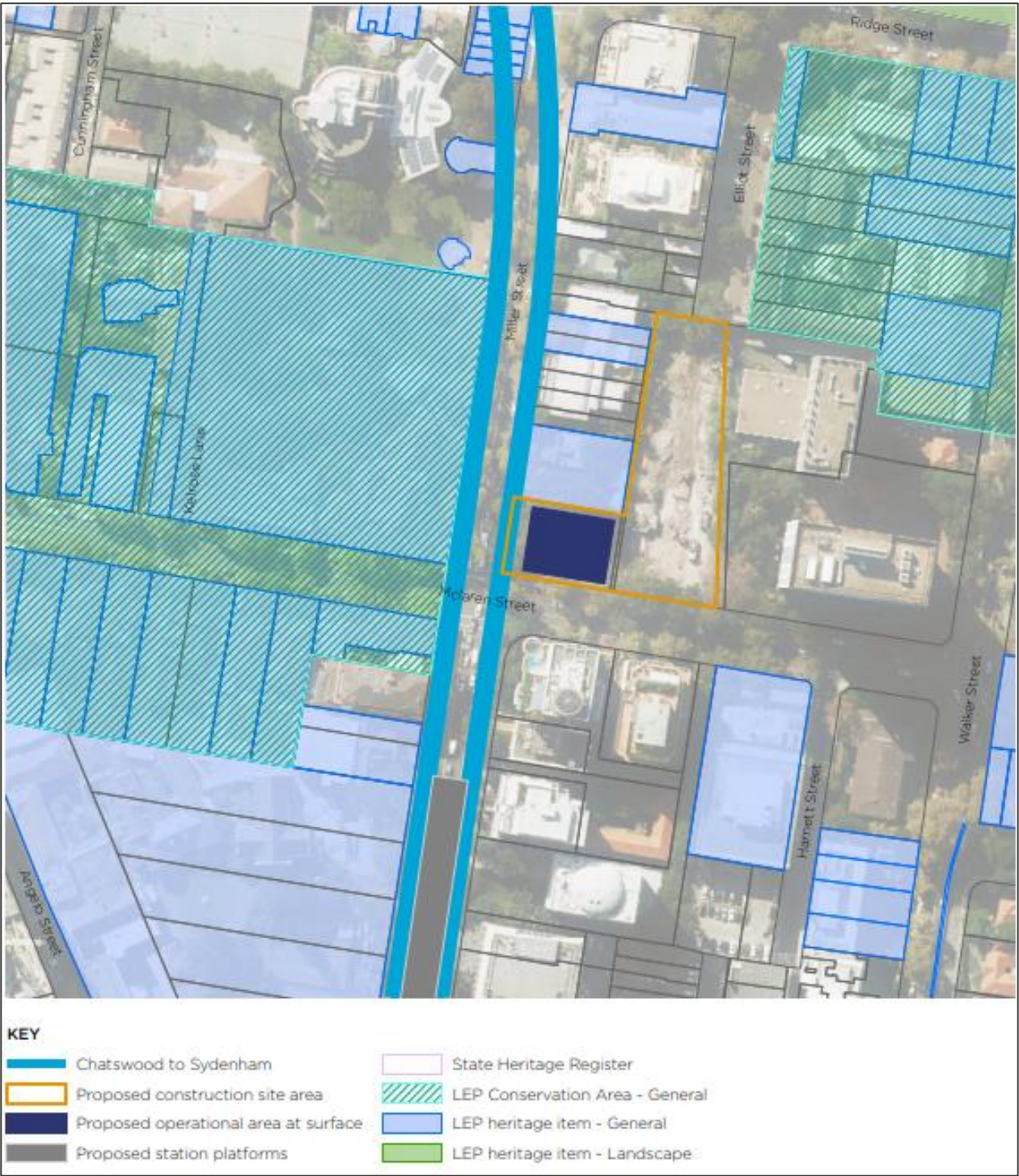


Figure 5 - Heritage item locations in proximity to the VCISD north site, taken from Victoria Cross Station and Artarmon substation modification report

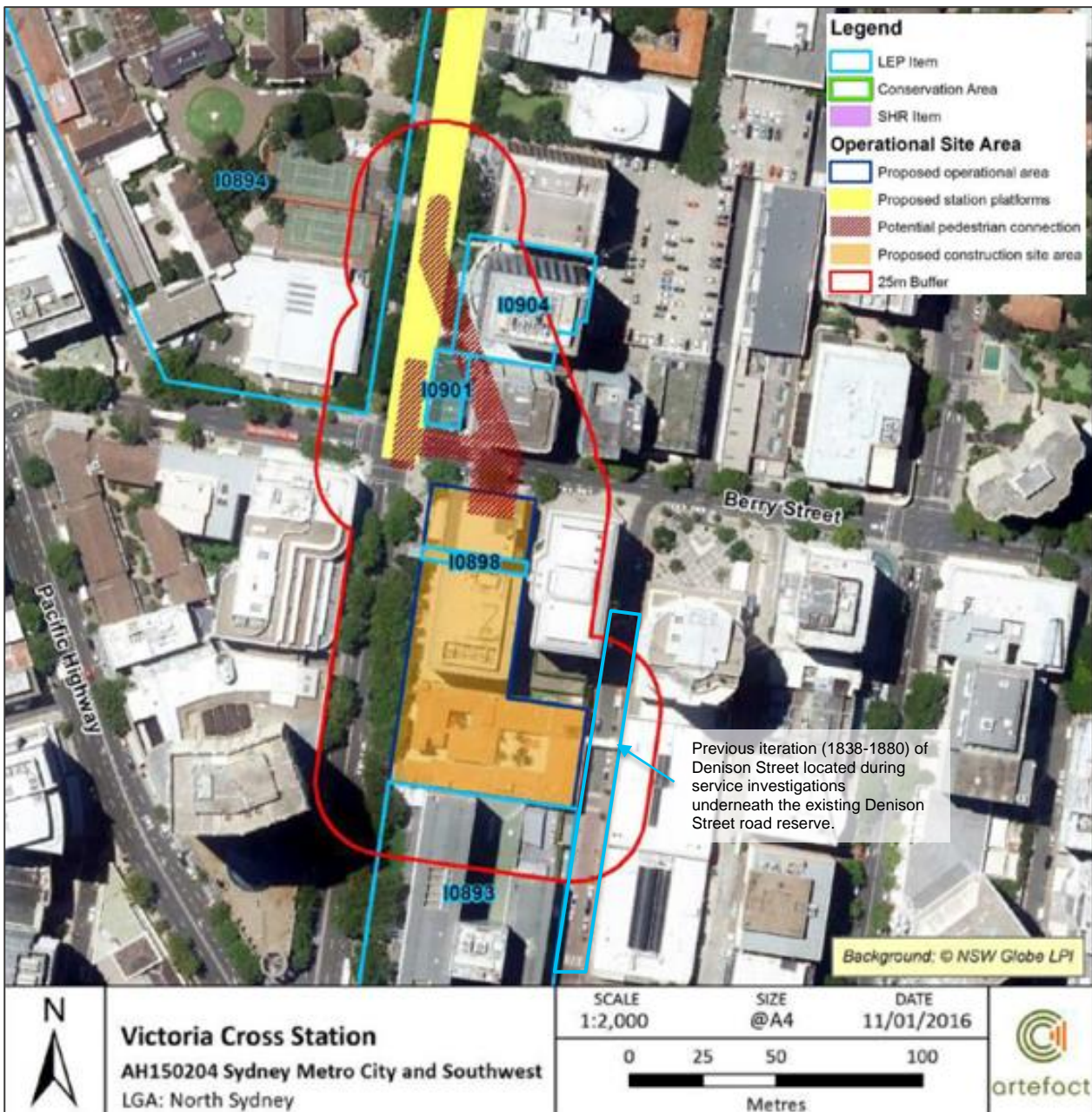


Figure 6 - Heritage item locations in proximity to the VCISD south site, taken from the Sydney Metro City and Southwest Chatswood to Sydenham Environmental Impact Statement.

6.3 Non-Aboriginal Archaeology

The VCISD south site has been heavily modified since the mid-nineteenth century, with significant development of large commercial buildings occurring from the 1950s onwards. The variable but generally high degree of subsurface disturbance from modern construction activities has reduced the likelihood of locating extensive archaeological deposits in the project area.

The northern site has low to moderate archaeological potential to contain remains associated with Mid-to-late 19th century residential development. Within the southern station site, no major developments are known to have occurred until the late 1880s or early 1890s. Prior to this, archaeological remains are likely to be associated with the minor and informal occupation and use of the land. Archaeological remains from subsequent phases would likely consist of the building footings of the early commercial buildings. Because of the later development of this site and the

early establishment of utilities, concentrated artefactual deposits from wells or cisterns are unlikely. Within the area of the underground car park at 189 Miller Street, the potential for of archaeological remains to be present is nil.

Although significant portions of the VCISD site have been heavily impacted by modern developments, there are some areas where archaeological deposits could remain below the present buildings. The significance of the archaeological remains is contingent upon their level of intactness.

It is noted that bulk earthworks is to be completed by the TSE contractor, prior to VCISD construction works commencing, hence potential of encountering any unknown archaeology is extremely low for VCISD works. However, this CHMP still includes procedures required for discovery of any unexpected finds.

6.3.2 *TSE Works*

VCISD have been informed by Sydney Metro that TSE assessed archaeological remains during demolition of the shop at 187 Miller Street on the southern site. From the AMBS Archaeological Memo dated 30 July 2018;

The shop at 187 Miller Street was the sole surviving building in a terrace row of six shops with residences built in the 1890s. The assessed little archaeological potential of the site was confirmed during monitoring when the only structure in the rear yard to be exposed was a sump or the remains of the WC. Having been built in 1891, flooring was tongue-and-groove and as such there would not be any underfloor deposits associated with the occupation of the shop, which was also confirmed during monitoring. Not only was the shop the last surviving building of the terrace row of six, but to each side was a deep basement such that the 187 property formed a 'land bridge' of the last surviving B and C Horizon natural soils and clays. However, there was no evidence of early deposits or features present or exposed during the archaeological monitoring. No artefacts associated with the shop were exposed or recovered.

From the same AMBS memo regarding archaeological monitoring on the northern site;

It had been anticipated that there may be unmapped physical remains of structures associated with the 1869 villa, Kedron. Although it was known that the northern site had been developed during the 1970s for the Georgian House Retirement Village, the extent of disturbance to potential archaeological relics or features was unknown. It was not until construction work and archaeological monitoring began on site that it became clear that the site had been extensively disturbed prior to selection of the McLaren Street site for the Sydney Metro project. This was also confirmed by analysis of time lapse images showing that following demolition of the retirement village, the property was substantially cut back and truncated such that no archaeological structures, deposits, features or relics associated with early structures could have survived. In addition, no artefacts associated with the period of occupation by the 1860s Kedron were exposed or recovered.

Sydney Metro have confirmed that as of the development of this plan, no unexpected finds have been encountered at the Victoria Cross site during bulk earthworks or tunnelling works completed by the TSE contractor. No remaining archaeological issues have been identified by TSE.

6.3.3 *Local VCISD Stormwater Works and VCISD Historical Archaeological Assessment and Archaeological Method Statement*

Stormwater upgrade works associated with VCISD are required to be completed on Denison and Miller Streets. The scope includes excavation and replacement of existing stormwater infrastructure to support the VCISD works. The work method involves progressive excavation and installation of a new 1500-1650mm pipe and associated pits, backfilling progressively and providing connections as required. The stormwater line positioning is shown below.

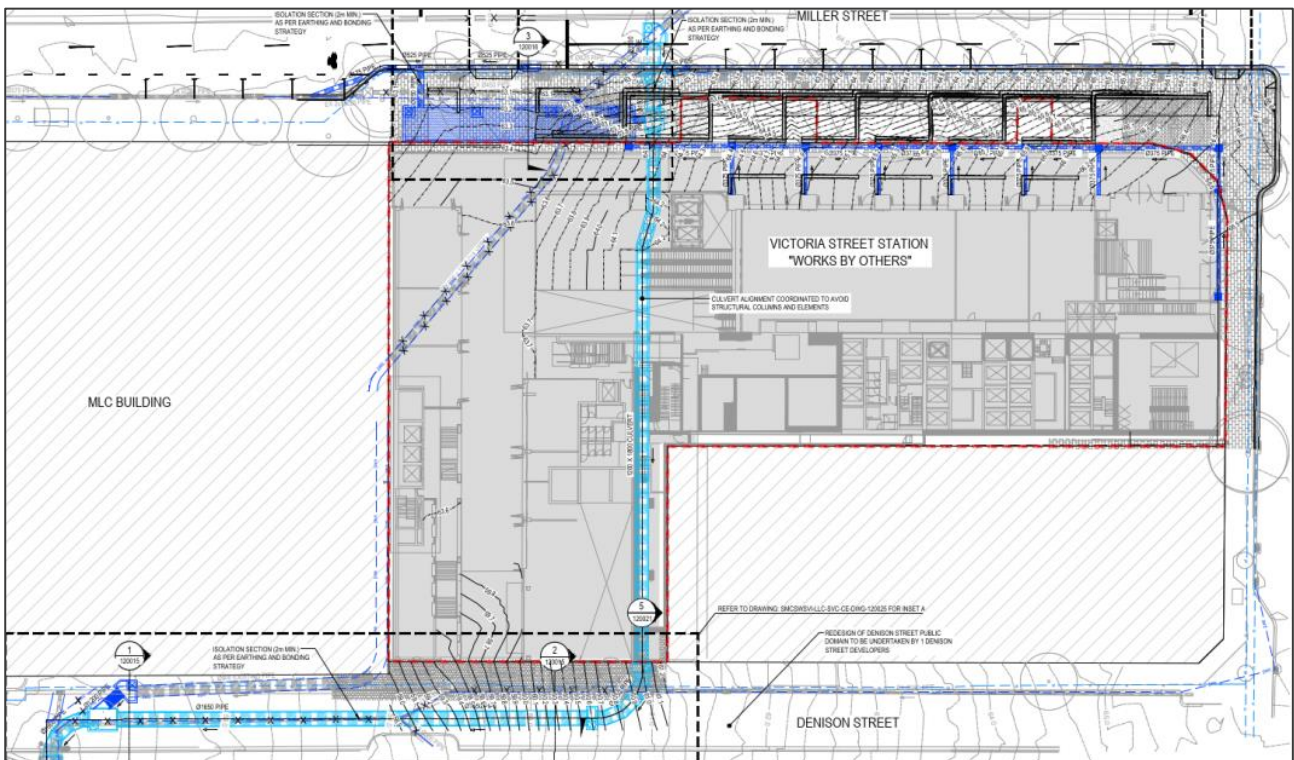


Figure 7 - VCISD stormwater work location

During planning for these stormwater works, and in consultation with Artefact Heritage, the works on Denison Street were assessed as having low to moderate potential to contain archaeological remains of local significance relating to the mid-late nineteenth century establishment of Denison Street and early utilities (c.1838 - 1880). The corresponding Historical Archaeological Assessment (HAA) is included in Appendix D. Although not required under the project EIS or SPIR, an Archaeological Method Statement (AMS) was completed by VCISD for investigative works associated with the stormwater upgrade works (Appendix E). The AMS concluded that the Denison Street work area had low-moderate potential to contain archaeological remains relating to the nineteenth century establishment of Denison Street and early utilities. Intact remains may reach the local significance threshold. It was concluded that such remains would be considered to be 'works,' not relics, under the NSW Heritage Act.

The stormwater investigative works were determined as low impact works by DPIE, in consultation with Heritage DPC to allow service locating works for the project to be undertaken during February 2020, with a secondary aim of locating any archaeological items present in the work area. Works were monitored by the project archaeologist team (Artefact Heritage). During these works a sandstone road surface was located and has been interpreted as the first alignment of Denison Street and as being evidence of the Phase 2 (1838-1880) formation of Denison Street. The remains of the former road are considered to be a 'work' of local significance. Sample excavation and archaeological recording of the former sandstone road surface identified will be undertaken during further stormwater works along Denison Street as recommended in the corresponding archaeological monitoring results memo included in Appendix E. This archaeological monitoring will be completed in consultation with North Sydney Council. It is noted that no potential heritage items were anticipated or located on Miller Street. VCISD Denison Street archaeological monitoring results and records obtained by Lendlease will be issued to Sydney Metro for incorporation into any required overarching Sydney Metro City Southwest Heritage Archival Recording Report, as required.

7 MANAGEMENT MEASURES

This Section describes the overall approach and principles associated with managing and mitigating Aboriginal and non-Aboriginal cultural heritage risks of the Project. The management measures are based on the mitigation measures compiled from the relevant requirements of the Project Approval as modified, Revised Environmental Mitigation Measures (REMMs), relevant elements of Sydney Metro's Construction Environmental Management Framework (CEMF) and the requirements and standards of Lendlease. As bulk excavation will be completed by others prior to VCISD construction works commencing, it is unlikely that unexpected heritage finds will be encountered.

7.1 Aboriginal Archaeological Management

7.1.2 *Cultural Heritage Assessment Report*

A Cultural Heritage Assessment Report (CHAR) was prepared by Artefact Heritage (2016e) as part of the Preferred Infrastructure Report (PIR) which forms part of the Approved Project as modified. Comprehensive Aboriginal consultation was undertaken as part of the preparation of the CHAR, including an Aboriginal Focus Group (AFG) meeting. All RAPs who responded through consultation were in support of the proposed archaeological management methodology included in the CHAR.

The CHAR outlined an archaeological management and response methodology for test and salvage excavation, triggers for staged investigation, approach to methodology and reporting. The CHAR also addressed the relationship between Aboriginal archaeological and non-Aboriginal archaeological management. The CHAR would be implemented in accordance with REMM AH2. There are no archaeological excavations anticipated to be completed as part of the VCISD works, as bulk earthworks will be completed by the TSE contractor prior to VCISD construction works commencing.

7.1.3 *Human Remains*

Should suspected human remains be uncovered, works will immediately cease. If suspected human remains are identified, the Sydney Metro Exhumation Management Plan would be implemented in accordance with E26 and E27. Note that the approval does not allow human remains to be harmed, modified or impacted unless in accordance with the Sydney Metro Exhumation Management Plan.

The Sydney Metro Exhumation Management Plan has been prepared in consultation with Heritage NSW and the NSW Health Department in accordance with NAH3. The plan is in accordance with the Guidelines for Management of Human Skeletal Remains (NSW Heritage Office, 1998b) and NSW Health Policy Directive – Exhumation of human remains (December 2013). The Exhumation Management Plan will be provided to the Secretary for information before the commencement of excavation works (E27).

Works will immediately cease in that area. The discoverer will immediately notify machinery operators so that no further disturbance of the remains will occur, as well as notify the foreman/site supervisor, principal contractor, project archaeologist and Sydney Metro Environmental Representative. The Sydney Metro Exhumation Management Plan will be enacted. Preliminary notification to the NSW Police will be undertaken by the contractor.

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

No works to recommence until clearance is provided by OEH and/or the NSW Police as Sydney Metro Exhumation Management Plan

7.1.4 *Unexpected Finds*

Following the discovery of new finds of Aboriginal objects – works will cease in the immediate area and the area secured. A suitably qualified and experienced Aboriginal heritage expert must be contacted to provide specialist heritage advice, before works recommence. In accordance with E23 avoidance would be considered.

Assessment of the site/object and subsequent management of the site will be carried out in accordance with the Sydney Metro Unexpected Heritage Finds Procedure. The use of the Sydney Metro Unexpected Heritage Finds Procedure would satisfy the requirement in E25 to include measures to manage an unexpected find in the CHMP.

All new sites will be recorded on standard AHIMS site cards and lodged with OEH in accordance with E25.

7.1.5 *Clearance*

A written clearance confirmation would be provided by the nominated Excavation Director to Lend Lease once Aboriginal archaeological management has been completed in an area. Construction would continue under the Sydney Metro Unexpected Finds Procedure (Appendix A).

7.1.6 *Reporting*

Upon completion of any unexpected finds reporting and required mitigation measures, post excavation reporting in accordance with the OEH Aboriginal reporting requirements will be undertaken within two years of the completion of the project. The post-excavation report to be prepared by the Aboriginal archaeologist in consultation with the RAPs. RAPs would review the draft report prior to finalisation.

7.2 *Built Heritage Management*

7.2.2 *General*

The need for built heritage management in relation to this CHMP is limited as demolition of structures and bulk excavation works will be completed prior to VCISD works commencing. A number of tasks which meet the conditions of approval have already been completed by the TSE contractor or Sydney Metro, including salvage of interior, exterior and setting of the shop at 187 Miller Street. Some general conditions apply, for example in relation to design and appointment of heritage specialists.

7.2.3 *Design Requirements*

Design requirements are outside the scope of this CHMP but should follow conditions E10 and E23 for avoidance of impacts, E21 for heritage interpretation and E100 and E101 in regard to public domain works and review by the Design Review Panel (DRP).

REMM NAH16 refers to investigation of opportunities for the salvage and reuse of bus shelters temporarily removed at Victoria Cross. These bus shelters are no longer required to be removed. OCP Architects, as nominated heritage specialists, will work with the design team where required.

7.2.4 *Heritage Interpretation*

A Heritage Interpretation Strategy has been prepared for Sydney Metro City & Southwest by Sydney Metro (February 2018). The Heritage Interpretation Strategy provides an overarching framework for preparation of a site specific Heritage Interpretation Plan (HIP) for Victoria Cross Station in accordance with E21 which would include measures for consulting with the design team and reviewing appropriate Aboriginal and historical interpretive themes. As per the Staging Report, a site specific HIP is required to be prepared prior to the commencement of construction of

permanent above-ground works and submitted to the Secretary for information. The HIP is outside the scope of this CHMP and will be produced separately to this document for the VCISD works.

The HIP will include consideration of re-use of materials salvaged from demolition of buildings that were present on the Victoria Cross station site. The HIP will consider Aboriginal heritage values and the results of any Aboriginal archaeological investigation in accordance with REMM AH4. The HIP will consider any finds of significant non-Aboriginal archaeological remains in accordance with NAH2. The previous iteration (1838-1880) of Denison Street located during service investigations underneath the existing Denison Street road reserve, outlined in Section 6.3.3, will be considered in the HIP. The HIP will be prepared in consultation with the Heritage Council of NSW (or its delegate, Heritage NSW), Relevant Councils and Registered Aboriginal Parties.

7.2.5 *Vibration Monitoring*

Vibration monitoring will be undertaken in accordance with the VCISD Construction Noise and Vibration Management Plan. A combination of attended and unattended vibration monitoring is proposed to be undertaken at surrounding receivers to verify that vibration levels remain in compliance with the relevant screening criterion. If monitoring identifies that vibration is likely to be above the relevant screening criterion, a different construction method with lower source vibration levels will be considered. Where there is potential for exceedances of the criteria, further vibration site investigations will be undertaken to determine the site-specific safe working distances for that vibration generating activity. VCISD will seek advice of a heritage specialist on methods and locations for installing equipment used for vibration, movement and noise monitoring of heritage-listed structures.

The project general vibration screening criterion are detailed in the VCISD Construction Noise and Vibration Management Plan, and summarised below, with a conservative vibration damage screening level per receiver type is given below:

- Reinforced or framed structures: 25.0 mm/s
- Unreinforced or light framed structures: 7.5 mm/s

At locations where the predicted and/or measured vibration levels are greater than shown above (peak component particle velocity), a more detailed analysis of the building structure, vibration source, dominant frequencies and dynamic characteristics of the structure would be required to determine the applicable safe vibration level. Heritage buildings and structures would be assessed as per the screening criteria as they should not be assumed to be more sensitive to vibration unless they are found to be structurally unsound. If a heritage building or structure is found to be structurally unsound (following inspection) a more conservative cosmetic damage criteria of 2.5 mm/s peak component particle velocity (from DIN 4150) would be considered. The following table outlines the heritage listed items within the vicinity of the project, none of which have been assessed as being structurally unsound.

The VCISD Construction Noise and Vibration Management Plan includes predicted vibration levels at surrounding receivers and heritage items. All predicted vibration from VCISD works are below the above screening criterion, with no encroachment or exceedance of any vibration screening criteria predicted for any heritage items or structures. Where an exceedance of the vibration screening criterion is identified, the responsible works will cease and the corresponding methodology will be reviewed and reassessed before recommencing works, with the aim of ensuring no further exceedances of the screening criterion.

Where monitoring equipment is required to be installed for monitoring of heritage-listed structures, advice of a heritage specialist will be sought on methods and locations for installing equipment.

7.2.6 *MLC Building*

The MLC Building is listed as having local heritage significance under the North Sydney LEP. The VCISD south site works will be completed immediately adjacent the northern wall of this building. Mitigation and management that will be employed to protect this building from impacts will include;

- All scaffolds constructed in the vicinity of the building will be fully encapsulated with chain mesh and shade-cloth with the bottom deck level secured with plywood, to prevent loose items from contacting the building.
- The adjacent jumpform form work system will be a fully encapsulated structure with no gaps to prevent any loose items or construction material from impacting the building.
- Where the VCISD deck levels come into close contact with the MLC building, the tiles will be covered and protected using a light weight form of protection such as coreflute or similar.

MLC Building protection may be refined as construction methodologies are further developed and the site is taken over by VCISD.

7.2.7 *Denison Street Stormwater Works*

A sample excavation and recording of the former sandstone road surface identified on Denison Street will be undertaken during stormwater trenching along Denison Street, in accordance with the advice from Artefact Heritage included in Appendix E. During these works the following methodology will be adopted:

- A portion of the sandstone surface would be exposed using machine and hand excavation (as appropriate) to allow the archaeologists to prepare a detailed record of a sample of the former road surface.
- The portion to be recorded would be determined by the archaeologists on site but should, at a minimum, cover an area measuring approximately 2m² (if the feature survives to this extent).
- The portion of the sandstone feature would be subject to detailed photography using an appropriate scale, recorded and planned.
- Sandstone blocks within the area subject to sample recording should then be lifted (by machine if required) allowing the underlying stratigraphy to be recorded by the archaeologist.
- Assuming nothing unexpected is identified, the remainder of the stormwater works can continue without archaeological supervision under the Sydney Metro Unexpected Finds Procedure.
- The full extent of the feature is to be surveyed, where located as part of the works, and the results included in the final report.
- A final monitoring results report would then be produced.
- VCISD Denison Street archaeological monitoring results and records obtained by Lendlease will be issued to Sydney Metro for incorporation into any required overarching Sydney Metro City Southwest Heritage Archival Recording Report, as required. This CHMP will be reviewed and updated as required by findings from the Denison Street archaeological monitoring.

7.3 *Non-Aboriginal Archaeological Management*

7.3.2 *Archaeological Management*

The Sydney Metro Archaeological Assessment and Research Design (AARD) divided the project into archaeological management zones based on archaeological potential and construction

impacts. These management zones are the high level framework on which site specific archaeological management documents are based.

Section 4.5 of the AARD states that archaeological impact mitigation is required for the Victoria Cross Station site, consisting of AMS development and test/salvage excavation to be undertaken prior to bulk excavation and that an unexpected finds procedure would apply elsewhere. As the archaeological management zones relate to excavation works, and as the bulk excavation of the VCISD site is to be completed by the TSE contractor prior to VCISD construction works commencing, the archaeological management zones will not be applied to the VCISD works. No archaeological method statements are required for the VCISD project.

The Sydney Metro Chatswood to Sydenham Victoria Cross Station and Artarmon Substation Modification Report states that the relevant project-specific mitigation measures identified for the approved project would also continue to apply to the project as proposed to be modified (north site location). The heritage assessment did not identify any new mitigation measures required in relation to the Victoria Cross Station component of the proposed modification.

As bulk excavation is to be completed by others prior to VCISD commencing, VCISD will proceed under the Sydney Metro Unexpected finds procedure. Should heritage/archaeological items of significance be encountered, further management will be implemented as outlined below and in Section 8.

Sample excavation and archaeological recording of the former sandstone road surface identified in Section 6.3.2 will be undertaken during further stormwater works along Denison Street.

7.3.3 *Unexpected Finds*

As per the Sydney Metro Unexpected Heritage Finds Procedure, an ‘unexpected heritage find’ can be defined as any unanticipated archaeological discovery that has not been identified during a previous assessment or is not covered by an existing permit under the Heritage Act. The find may have potential cultural heritage value, which may require some type of statutory cultural heritage permit or notification if any interference of the heritage item is proposed or anticipated. Unexpected non-Aboriginal archaeological finds would be managed under the Sydney Metro Unexpected Heritage Finds Procedure. VCISD works will comply with the Sydney Metro Unexpected Heritage Finds Procedure and any future updates. An archaeological find would be unexpected if it was not identified in the AARD as a class or type of possible remain.

The Sydney Metro Unexpected Heritage Finds Procedure complies with Section 146 of the Heritage Act 1977, Notification of discovery of relic:

A person who is aware or believes that he or she has discovered or located a relic (in any circumstances, and whether or not the person has been issued with a permit) must: (a) within a reasonable time after he or she first becomes aware or believes that he or she has discovered or located that relic, notify the Heritage Council of the location of the relic, unless he or she believes on reasonable grounds that the Heritage Council is aware of the location of the relic, and (b) within the period required by the Heritage Council, furnish the Heritage Council with such information concerning the relic as the Heritage Council may reasonably require.

In the event of an unexpected find of a potential relic, the nominated Excavation Director must attend site in accordance with E20 to assess the nature and significance of the find, to ascertain whether an Archaeological Relics Management Plan is required and if notification under s146 of the NSW Heritage Act is necessary.

Notification under s146 would only be required if the relic was unexpected and would apply to relics of local and State significance.

An Archaeological Relics Management Plan would only be required if the unexpected relics were assessed to be of State significance, detailed further below.

The Secretary must be notified at the same time as the Heritage Council of NSW (or its delegate) of any relic of State Significance found.

7.3.4 *Archaeological Relics Management Plan*

An Archaeological Relics Management Plan (ARMP) would be prepared if unexpected State significant archaeological remains were located in accordance with E20. The ARMP would provide detail on proposed management of the find and outline measures to be implemented to avoid and/or minimise harm to and/or salvage the relic of State significance. The NSW Heritage Council (with Heritage NSW as delegate) would be consulted on the ARMP before the find was impacted. The ARMP may consider in situ conservation depending on the intactness and significance of the find.

Construction in the vicinity of the discovery must not recommence until the requirements of the ARMP have been implemented, in consultation with the nominated Excavation Director. The Proponent must notify the Secretary in writing of the outcome of consultation on the ARMP with the Heritage Council of NSW.

7.3.5 *Clearance*

A written clearance confirmation would be provided by the nominated Excavation Director to Lendlease once archaeological management has been completed in an area. Construction would continue under the Sydney Metro Unexpected Finds Procedure.

7.3.6 *Human Remains*

If suspected human remains are identified, the [Sydney Metro Exhumation Management Plan](#) would be implemented in accordance with E26 and E27.

The Sydney Metro Exhumation Management Plan has been prepared in consultation with Heritage NSW and the NSW Health Department in accordance with NAH3. The plan is in accordance with the Guidelines for Management of Human Skeletal Remains (NSW Heritage Office, 1998b) and NSW Health Policy Directive – Exhumation of human remains (December 2013). The Exhumation Management Plan will be provided to the Secretary for information before the commencement of excavation works (E27).

Works will immediately cease in that area. The discoverer will immediately notify machinery operators so that no further disturbance of the remains will occur, as well as notify the foreman/site supervisor, principal contractor, project archaeologist and Sydney Metro Environmental Representative. The Sydney Metro Exhumation Management Plan will be enacted. Preliminary notification to the NSW Police will be undertaken by the contractor.

If confirmation is received from the technical specialist that the remains are of human origin, there are three possible statutory pathways to follow based on the assessment. Refer to the Sydney Metro Exhumation Management Plan.

No works to recommence until clearance is provided by OEH and/or the NSW Police as per the Sydney Metro Exhumation Management Plan.

7.3.7 *Storage of Archaeological Remains*

Should archaeological items be encountered, artefact cleaning and preliminary cataloguing would primarily occur on site. Otherwise artefacts would be catalogued and stored at an off site storage facility. Details on proposed sampling, a sampling strategy and analysis would be provided in an AMS document in accordance with the AARD.

7.3.8 *Analysis and Reporting*

A preliminary results report will be prepared within two months of completion of any archaeological work required by the project Archaeological Assessment Research Design Report (AARD). This would be prepared under the direction of the nominated Excavation Director. A corresponding excavation report will be prepared within two years of completion of archaeological excavations in accordance with condition E18.

8 HERITAGE ASPECTS, ACTIONS AND TIMING

8.1 General Heritage and Archaeological Management

Action	Trigger/Timing	Responsibility	Description of Action
Monitoring			
The Environment Manager, or delegate, will undertake regular inspections and monitoring of construction activities to ensure compliance with the requirements of the CSSI planning approval and this CHMP.	Ongoing during construction	Environmental Manager	<ul style="list-style-type: none"> Undertake regular inspections and monitoring of construction activities to ensure compliance with the requirements of the CSSI planning approval and this plan.
Regular inspections of site controls will be undertaken by Supervisors during works.	Ongoing during construction	Site Supervisors	<ul style="list-style-type: none"> Complete regular inspections of site controls during works
Heritage inductions	Ongoing during construction	Environmental Manager	<ul style="list-style-type: none"> Contractors will be given awareness training on Aboriginal and non-Aboriginal historic heritage prior to commencement of their work on site. All site personnel shall undergo site specific induction training, which will include environmental awareness training. Toolbox meetings will also be undertaken as and when required; covering specific environmental issues and heritage controls.
Management			
Sydney Metro review of draft heritage documentation required by the CSSI	Development of heritage documentation heritage documentation required by the	Environmental Manager Sydney Metro	<ul style="list-style-type: none"> Sydney Metro to review draft heritage documentation required by the CSSI planning conditions and VCISD contract or as otherwise agreed.

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planning conditions and VCISD contract.	CSSI planning conditions and VCISD contract.		
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8.2 Aboriginal Heritage

Action	Trigger/Timing	Responsibility	Description of Action
Management			
All relevant personnel and contractors involved in the design and construction of the Project must be advised of the relevant heritage considerations, requirements and commitments.	Pre-construction / Construction	Environmental Manager	<ul style="list-style-type: none"> Ensure all personnel involved in detailed excavation or any type of disturbance works are appropriately trained/inducted and made aware of the cultural significance of the area, including site identification and materials likely to be uncovered. Personnel will be instructed to notify the Environmental Manager, or delegate, in the event they identify any object which they believe to be of archaeological or cultural origin.
Aboriginal stakeholder identification (RAP) and contact details in case of unexpected finds.	Unexpected finds / prior to test or salvage excavation.	Environmental Manager	<ul style="list-style-type: none"> Contact RAPs in accordance with the Unexpected Finds Protocol in the case of unexpected finds of an Aboriginal object or potential Aboriginal human skeletal remains and/or Aboriginal burials. RAPs should be consulted prior to test or salvage excavation commencing in accordance with the project CHAR and should be given the opportunity to participate in any excavation works in accordance with E24.
Incident Response			
Unexpected finds procedures for Aboriginal objects.	Identification of potential Aboriginal heritage artefacts or other sensitive cultural values.	Environmental Manager Excavation Director	<ul style="list-style-type: none"> Following the discovery of new finds of Aboriginal objects – works will cease in the immediate area and the area secured in accordance with the Unexpected finds Procedure which would satisfy E24. The ER would be notified. Assessment of the site/object and subsequent management of the site will be carried out in accordance with the Sydney Metro Unexpected Finds Protocol. Works would not recommence until authorised by the nominated Excavation Director. The site will be recorded on standard AHIMS site cards and lodged with OEH.

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			<ul style="list-style-type: none"> Upon completion of any unexpected finds reporting and required mitigation measures, post excavation reporting in accordance with the OEH Aboriginal requirements will be undertaken within 12 months of the completion of the Project. Post-excavation report to be prepared by the Aboriginal archaeologist in consultation with the RAPs.
Unexpected finds procedures for human skeletal remains.	Identification of a potential burial or discovery of skeletal remains.	Environmental Manager	<ul style="list-style-type: none"> Works will immediately cease in that area. The discoverer will immediately notify machinery operators so that no further disturbance of the remains will occur, as well as notify the foreman/site supervisor, principal contractor, project archaeologist and Sydney Metro Environmental Representative (E26). The Sydney Metro Exhumation Management Plan (E27) will be enacted. Preliminary notification to the NSW Police will be undertaken. Once confirmation is received from the technical specialist that the remains are of human origin, there are three possible statutory pathways to follow based on the assessment. Refer to the Sydney Metro Exhumation Management Plan. Relevant works not to recommence until clearance is provided by OEH and/or the NSW Police as per the protocol outlined in this CHMP and the Sydney Metro Exhumation Management Plan.
Where impacts are identified outside the project area	New impact areas not previously surveyed	Environmental Manager Environmental Representative	<ul style="list-style-type: none"> Non-conformance procedures outlined in the CEMP Where practicable avoid additional impacts or confirm appropriate mitigation measures (E26). Ensure that consistency assessments are undertaken for any new impact areas, reviewed by the ER and approval sought from Sydney Metro. Further consultation with RAPs would be required where a consistency assessment identifies additional impacts to Aboriginal heritage. The consistency assessment would outline appropriate mitigation measures.

Table 8 - Aboriginal heritage

8.3 Built Heritage

Action	Trigger/Timing	Responsibility	Description of Action
Monitoring			

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Vibration monitoring	Construction	Environmental Manager Acoustic Advisor	<ul style="list-style-type: none"> • Vibration monitoring will be undertaken in accordance with the VCISD Construction Noise and Vibration Management Plan. • A combination of attended and unattended vibration monitoring is proposed to be undertaken at surrounding receivers to verify that vibration levels remain in compliance with the relevant screening criterion stated in section 7.2.5. • If monitoring identifies vibration to be above the relevant screening criterion, responsible works will cease, corresponding methodologies to be reviewed with a different construction method with lower source vibration levels to be considered. • Where there is potential for exceedances of the criteria, further vibration site investigations will be undertaken to determine the site-specific safe working distances for that vibration generating activity. • Seek advice of a heritage specialist on methods and locations for installing equipment used for vibration, movement and noise monitoring of heritage-listed structures
Denison Street archaeological monitoring	Denison Street Stormwater Works	Environmental Manager Site Manager	<ul style="list-style-type: none"> • A sample excavation and recording of the former sandstone road surface identified on Denison Street will be undertaken during stormwater trenching along Denison Street, in accordance with the advice from Artefact Heritage included in Appendix E. During these works the following methodology will be adopted: • A portion of the sandstone surface would be exposed using machine and hand excavation (as appropriate) to allow the archaeologists to prepare a detailed record of a sample of the former road surface. • The portion to be recorded would be determined by the archaeologists on site but should, at a minimum, cover an area measuring approximately 2m² (if the feature survives to this extent). • The portion of the sandstone feature would be subject to detailed photography using an appropriate scale, recorded and planned. • Sandstone blocks within the area subject to sample recording should then be lifted (by machine if required) allowing the underlying stratigraphy to be recorded by the archaeologist. • Assuming nothing unexpected is identified, the remainder of the stormwater works can continue without archaeological supervision under the Sydney Metro Unexpected Finds Procedure. • The full extent of the feature is to be surveyed, where located as part of the works, and the results included in the final report.

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			<ul style="list-style-type: none"> A final monitoring results report would then be produced.
Management			
General	Pre-construction and construction	Coordinated by Sydney Metro and Lendlease	<ul style="list-style-type: none"> Heritage issues arising during design development and throughout the construction period will be raised with relevant stakeholders, including the Sydney Metro Heritage Working Group meetings attended by relevant authorities and stakeholders as required.
Design requirements	Pre-construction and construction	Design Manager Design Review Panel Environmental Manager	<ul style="list-style-type: none"> The project design would be sympathetic to heritage items and, where reasonable and feasible, minimise impacts to the setting of heritage items in accordance with REMM NAH6. All relevant Project designs will be reviewed by the Sydney Metro Design Review Panel (DRP) in accordance with REMM NAH7, which is obligated to include a representative from the NSW Heritage Council.
Heritage Interpretation	Prior to permanent aboveground works	Environmental Manager Heritage Architect	<ul style="list-style-type: none"> A Heritage Interpretation Strategy has been prepared for Sydney Metro City & Southwest by Sydney Metro (February 2018). A site specific Heritage Interpretation Strategy/Plan will be prepared under E21 and REMM NAH8, with the overarching document providing a framework for its development. Aboriginal themes would be included in the interpretation in consultation with the RAPs and in accordance with REMM AH4. Consultation with Sydney Metro, NSW Heritage Council, North Sydney Council and RAPs would be undertaken during developing of the Heritage Interpretation Strategy/Plan in accordance with condition E21 and REMM AH4. The VCISD Heritage Interpretation Plan is required prior to commencement of construction of permanent aboveground works. Information from archaeological monitoring on Denison Street as per Section 6.3.3 of this CHMP will be considered.
MLC Building protection	Construction in vicinity of, or potential to impact, the MLC Building	Site Manager Environment Manager	<ul style="list-style-type: none"> All scaffolds constructed in the vicinity of the building will be fully encapsulated with chain mesh and shade-cloth with the bottom deck level secured with plywood, to prevent loose items from contacting the building. The adjacent jumpform form work system will be a fully encapsulated structure with no gaps to prevent any loose items or construction material from impacting the building. Where the VCISD deck levels come into close contact with the MLC building, the tiles will be covered and protected using a light weight form of protection such as coreflute or similar.

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			<ul style="list-style-type: none"> MLC Building protection may be refined as construction methodologies are further developed and the site is taken over by VCISD
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Table 9 - Construction, Management Action and Responsibilities, Built Heritage

8.4 Archaeology

Action	Trigger/Timing	Responsibility	Description of Action
Monitoring			
Denison Street archaeological monitoring	Denison Street Stormwater Works	Environmental Manager Site Manager	<p>A sample excavation and recording of the former sandstone road surface identified on Denison Street will be undertaken during stormwater trenching along Denison Street, in accordance with the advice from Artefact Heritage included in Appendix E. During these works the following methodology will be adopted:</p> <ul style="list-style-type: none"> A portion of the sandstone surface would be exposed using machine and hand excavation (as appropriate) to allow the archaeologists to prepare a detailed record of a sample of the former road surface. The portion to be recorded would be determined by the archaeologists on site but should, at a minimum, cover an area measuring approximately 2m² (if the feature survives to this extent). The portion of the sandstone feature would be subject to detailed photography using an appropriate scale, recorded and planned. Sandstone blocks within the area subject to sample recording should then be lifted (by machine if required) allowing the underlying stratigraphy to be recorded by the archaeologist. Assuming nothing unexpected is identified, the remainder of the stormwater works can continue without archaeological supervision under the Sydney Metro Unexpected Finds Procedure. The full extent of the feature is to be surveyed, where located as part of the works, and the results included in the final report. A final monitoring results report would then be produced. VCISD Denison Street archaeological monitoring results and records obtained by Lendlease will be issued to Sydney Metro for incorporation into any required overarching Sydney Metro City Southwest Heritage Archival Recording Report, as required. This CHMP will be reviewed and updated as required by findings from the Denison Street archaeological monitoring.

SYDNEY METRO VICTORIA CROSS STATION – INTEGRATED STATION DEVELOPMENT
CONSTRUCTION HERITAGE MANAGEMENT PLAN

Management			
Nomination of an Excavation Director	Where significant archaeology is encountered	Environmental Manager	<ul style="list-style-type: none"> No excavation of known archaeological management sites will be undertaken. Where sites or items of archaeological significance are encountered a qualified Excavation Director (ED) who complies with the Heritage Council of NSW's Criteria for Assessment of Excavation Directors (July 2011) would be required. In accordance with E18 and E20. DPE and OEH shall be advised of the nominated ED. The nominated ED for the VCISD project is Jenny Winnett of Artefact Heritage, further details provided in Appendix C.
Preparation of AMS	Where significant archaeology is encountered	Environmental Manager Archaeologist Excavation Director	<ul style="list-style-type: none"> Prepare a works specific AMS in accordance with the excavation methodology outlined in the AARD and E17, if items of archaeological significance are encountered. This would be signed off by the nominated Excavation Director and would be prepared in consultation with NSW Heritage Council (or its delegate). No archaeological management sites have been identified for the VCISD works.
Archaeological management	Where significant archaeology is encountered	Environmental Manager Archaeologist	<ul style="list-style-type: none"> Any required archaeological management of significant archaeology is to be undertaken in accordance with a corresponding AMS (E17). An ED who fulfils the criteria for excavations of State significant archaeology would be nominated for these works (E18). Depending on impacts, archaeological monitoring or archaeological excavation would be required for the section of the Project that has been identified as having potential for archaeological remains. In areas being managed under the unexpected finds procedure, no archaeological management is required unless unexpected finds are identified during construction or an AMS recommends further work.
Notification and management of relics	Where significant archaeology is encountered	Sydney Metro Archaeologist	<ul style="list-style-type: none"> If any potential relics are located, the nominated ED would assess significance of the find and provide advice (E18 and E19). If relics are of State significance and are not identified in the AARD or AMS an Archaeological Relic Management Plan (ARMP) would be prepared and provided to Heritage NSW (E20). Construction in the location of the relics cannot commence until the recommendations of the ARMP have been implemented (E20). The Secretary and Heritage Council would be notified if relics of State significance are found.

SYDNEY METRO VICTORIA CROSS STATION – INTEGRATED STATION DEVELOPMENT
CONSTRUCTION HERITAGE MANAGEMENT PLAN

Site clearance after archaeological management completed	Where significant archaeology has been encountered	Environmental Manager Excavation Director	<ul style="list-style-type: none"> Site clearance would be required from the nominated ED prior to construction commencing in accordance with E18. This clearance would be in the form of a memo or email and would apply to a work specific area or the project sites as a whole, depending on stage of works.
Archaeological reporting	Where significant archaeology has been encountered	Environmental Manager Archaeologist	<ul style="list-style-type: none"> Archaeological reporting and find management would be undertaken in accordance with the AARD and AMS. A final excavation report must be submitted to the Heritage Council within two years of the completion of excavation (E18). The Excavation Director would oversee preparation of the report.
Inclusion of significant archaeology in heritage interpretation	Where significant archaeology has been encountered	Environmental Manager Heritage Architect	<ul style="list-style-type: none"> Significant archaeological remains would be considered for inclusion in heritage interpretation (E21) for the project and be developed in consultation with the relevant local council. The VCISD Heritage Interpretation Plan is required prior to commencement of construction of permanent aboveground works.
Incident Response			
Unexpected finds procedure for artefacts and relics.	During construction	Environmental Manager Construction Manager	<ul style="list-style-type: none"> If unexpected finds are located during works the Unexpected Finds Procedure would be followed in accordance with the Sydney Metro Unexpected Finds Procedure and E19.
Unexpected finds procedures for human skeletal remains.	Identification of a potential burial or discovery of skeletal remains.	Environmental Manager Construction Manager	<ul style="list-style-type: none"> Works will immediately cease in that area. The discoverer will immediately notify machinery operators so that no further disturbance of the remains will occur, as well as notify the foreman/site manager, project archaeologist and Sydney Metro Environmental Representative (E26). The Sydney Metro Exhumation Management Plan (E27) will be enacted. Preliminary notification to the NSW Police will be undertaken by the Environmental Representative. Once confirmation is received from the technical specialist that the remains are of human origin, there are three possible statutory pathways to follow based on the assessment. Refer to the Sydney Metro Exhumation Management Plan. No works to recommence until clearance is provided by OEH and/or the NSW Police as per the protocol outlined in Section 7.3.6 of this CHMP and the Sydney Metro Exhumation Management Plan.

Table 10 - Construction, Management Action and Responsibilities, Non-Aboriginal archaeology

9 ROLES AND RESPONSIBILITIES

Relevant roles and responsibilities associated with this CHMP are presented in the table below. All personnel are responsible for ensuring that heritage items are protected. It is important to note that failure to report a discovery and those responsible for the damage or destruction occasioned by unauthorised removal or alteration to a site or to archaeological material may be prosecuted under the NP&W Act (as amended).

Roles	Heritage Specific Responsibilities
Acoustic Advisor	The independent Acoustic Advisor is engaged by Sydney Metro and approved by DPE. The primary role of the AA is to independently oversee construction noise and vibration planning, management and mitigation in accordance with the MCoA. The AA may be consulted on vibration causing works in proximity to heritage structures.
Environmental Representative	<p>Receive and respond to communications from the Secretary in relation to the environmental performance of the Project.</p> <p>Consider and inform the Secretary on matters specified in the terms of the planning approval.</p> <p>Consider and recommend any improvements that may be made to work practices to avoid or minimise adverse impact to the environment and to the community.</p> <p>Review all documents required to be prepared under the terms of the planning approval, ensure they address any requirements in or under the planning approval and if so, endorse them before submission to the Secretary (if required to be submitted to the Secretary) or before implementation (if not required to be submitted to the Secretary). For documents requiring specialist review and/or endorsement the ER is not required to endorse the specialist content.</p> <p>Regularly monitor the implementation of all documents required by the terms of the planning approval for implementation in accordance with what is stated in the document and the terms of the planning approval.</p> <p>Review the Proponent's notification of incidents in accordance with Condition A41 of the planning approval.</p> <p>As may be requested by the Secretary, help plan, attend or undertake Department audits of the Project, briefings, and site visits.</p> <p>Consider any minor amendments to be made to the CHMP that comprise updating or are of an administrative or minor nature and are consistent with the terms of the planning approval and the CHMP approved by the Secretary and, if satisfied such amendment is necessary, approve the amendment. This does not include any modifications to the terms of the planning approval</p>
Department of Planning, Industry and Environment	<p>Approval of the CHMP.</p> <p>Monitor Lendlease for compliance with the CHMP.</p>
Project Director	<p>Ensure that sufficient resources are allocated for the implementation of this CHMP.</p> <p>Ensure that the outcomes of the compliance construction monitoring/ incident reporting are systematically evaluated as part of ongoing management of construction activities.</p>
Environment Manager	<p>Oversee the overall implementation of this CHMP.</p> <p>Ensure all relevant personnel have access to and understand the most up-to-date copy of this CHMP.</p>

	<p>Ensure that any required actions arising from the detection of unexpected heritage items or if works are required outside of the approved development footprint are reported to the relevant personnel for further action and ensure that the actions are effectively implemented.</p> <p>Ensure all monitoring reporting requirements are met and maintained on site.</p> <p>Ensure audits of construction site records/ monitoring records/ incident reports are undertaken and findings are shared with relevant site personnel and corrective actions are implemented.</p> <p>Authorise any revisions to this CHMP.</p>
Construction Managers Subcontractors	<p>Understand and implement mitigation protocols as required in the CHMP and any other required measures during construction.</p> <p>Responsible for managing site controls of heritage items.</p> <p>Informing the Environmental Manager of any heritage issues as they arise.</p>
Design Review Panel	<p>The objectives of the Design Review Panel (DRP) are to:</p> <ul style="list-style-type: none"> • Provide independent, high level design review of the Sydney Metro Program. • Support the achievement of the Sydney Metro program objectives. • Ensure quality design outcomes. <p>The NSW Government Architect representative is the Chair of the DRP.</p> <p>The Membership of the DRP is to be approved by the Program Director Sydney Metro. Experts in specialist fields such as sustainability, customer experience and transport integration may be invited to review proposals and provide advice to the DRP as required.</p>
Sydney Metro	<p>Review draft heritage documentation required by the CSSI planning conditions and VCISD contract or as otherwise agreed.</p> <p>Oversee implementation of the Sydney Metro Unexpected Heritage Finds Procedure.</p> <p>Monitor compliance with the CSSI conditions.</p>
Excavation Director	<p>The Excavation Director must be suitably qualified and be someone who complies with the Heritage Council of NSW's Criteria for Assessment of Excavation Directors (July 2011) to oversee and advise on matters associated with historic archaeology.</p> <p>The Excavation Director is to oversee archaeological issues. The Excavation Director has the authority to advise on the duration and extent of oversight required as informed by the provisions of the approved AARD.</p> <p>The Excavation Director will review any archaeological monitoring report produced as part of the VCISD project.</p>

Table 11 - Roles and Responsibilities

10 TRAINING, AWARENESS AND COMPETENCE

10.1 Heritage Awareness Training (Induction)

All employees will receive suitable environmental induction to ensure that they are aware of their responsibilities and are competent to carry out the work. Records of induction and training will be kept on a database including the topic of the training carried out, dates, names. All relevant personnel and contractors involved in the Project will be advised of the relevant heritage considerations and legislative requirements.

10.2 Unexpected Finds Procedure

If any potential significant archaeological remains or Aboriginal heritage objects, as protected under NSW legislation, are uncovered during the works, then the Sydney Metro Unexpected Finds procedure would be followed in accordance with condition E19.

10.3 Ongoing Notifications – Unexpected Finds

The following protocol will be followed with respect to ongoing notifications.

- For all unexpected heritage finds the project Environmental Manager shall notify the Sydney Metro Environmental Manager and Sydney Metro Heritage Program Manager in accordance with the Sydney Metro Unexpected Finds Procedure.
- For all unexpected heritage finds the project Environmental Manager shall notify the Environmental Representative as soon as practicable.
- The Secretary and Heritage Council (or Heritage NSW as delegate) would be notified if relics of State significance are found.
- In accordance with E20 in the event that a Relic is discovered, relevant construction must cease in the affected area and the Excavation Director must be notified and assess the finds, identify their significance level and provide mitigation advice according to the significance level and the impact proposed. Depending on the significance of the find, the Excavation Director must attend the site. The Secretary must be notified at the same time as the Heritage Council of NSW (or its delegate) of any Relic found.
- For unexpected Aboriginal archaeological finds, RAPs and Sydney Metro will be notified immediately.
- Notification to the RAPs will occur within 1 week where changes to the Project are identified that may have implications for Aboriginal heritage management (such as changes in design).
- Feedback requested from the RAPs should be received within two weeks and no later than four weeks from the date correspondence is issued.
- The appropriate address and format for responses shall be provided as part of the request. Where no response is issued within this timeframe, a follow-up phone call will be made by the Environmental Manager (or delegate) to close out the outstanding request.

All notification and consultation records will be kept by Lendlease and its subcontractors.

11 INSPECTION, MONITORING, AUDITING AND REPORTING

In accordance with MCoA A28, A29 and A30, a compliance tracking program must be developed and implemented during construction works in order to monitor compliance with the terms of the project approval. Compliance tracking will be undertaken in accordance with the Sydney Metro Compliance Tracking Program (CTP) prepared by Sydney Metro to meet MCoA A28.

A compliance matrix has been established for the works incorporating MCoA, licence conditions, permits and other approvals relevant to the works to track issues and ensure compliance issues are addressed and closed out.

In addition to reporting required under the Sydney Metro CTP, the Lendlease Environmental Manager will also prepare a summary report or supply relevant documentation on environmental matters to Sydney Metro on a monthly basis, with a detailed report on environmental compliance submitted to Sydney Metro quarterly.

Site specific heritage/archaeological inspection and monitoring will be completed as per any Archaeological Method Statements required for the VCISD works.

Regarding vibration screening criteria outlined in MCoA E28 and E30, Section 7.2.5 of this CHMP and the VCISD Construction Noise and Vibration Management Plan (CNVMP) discusses potential vibration impacts to surrounding buildings and receivers and corresponding management measures. From the VCISD CNVMP and associated vibration assessment, no encroachment or exceedance of any vibration screening criteria have been predicted for any heritage items or structures.

Internal environmental compliance audits will be conducted by the Environmental Manager (or delegate). Elements to be audited include:

- Compliance with the CSSI planning approval conditions;
- Compliance with the EIS, PIR and CEMF;
- Compliance with the CEMP;
- Compliance with approval, permit and licence obligations.

External audits may be conducted by Sydney Metro and Independent Environmental Auditor. The ER will audit if requested by DPIE. The outcomes of any audit, if reported to Lendlease, will be documented. Corrective actions and observations will be addressed through the same mechanisms as non-conformances. Resolution of these will be documented and filed with the corresponding audit report.

To ensure VCISD heritage risks, impacts and hazards are identified and monitored throughout the VCISD project, VCISD heritage impacts and hazards are recorded in the Project Impacts & Hazards Risk Assessment (IHRA), as per the project EHS Management Plan. The IHRA is continually updated as the project progresses to ensure potential impacts and risks are captured for all project stages and the various works packages that will be in place across the project. The IHRA will be reviewed at maximum six-week intervals. IHRA reviews will be championed by the Construction Manager, or nominated representative, with input from the Environment Manager, or nominated delegate, to ensure currency and accuracy of heritage aspects.

Where high risk impacts or hazards present an imminent or immediate risk to a heritage item, the work task shall be stopped, consultation must then be undertaken with key stakeholders and a suitable alternate method or approach developed. Construction heritage monitoring and management of VCISD will be as per sections 7, 8, 10 and 11 of this CHMP.

12 RECORDS

The Environmental Manager will maintain the following records, as required by the VCISD works:

- The CEMP and CHMP
- Archaeological Research Design and any required Archaeological Method Statement
- Archaeological Clearance documents
- Records of Excavation Director advice
- S146 notification under the NSW Heritage Act where relevant
- Regulatory licences and permits
- Regulatory authority inspection reports
- Correspondence with regulatory authorities
- Monitoring results
- Environmental monitoring and inspection records
- Environmental accidents/incidents/emergency reports
- Non-conformance reports
- Compliance reports
- Audit reports
- Any relevant reports submitted to the regulatory authorities or Government agencies

13 REVIEW AND IMPROVEMENT OF THE CHMP

13.1 Endorsement and Approval of the CHMP

The CHMP would be developed in consultation with Sydney Metro, Heritage NSW as a delegate of the NSW Heritage Council, and North Sydney Council. The CHMP would be endorsed by the ER and then submitted to the Secretary for approval no later than one month before the commencement of construction or within another timeframe agreed with the Secretary. The CHMP would be implemented for the duration of construction of the project.

13.2 Continual Improvement

Continual improvement of the CEMP and sub plans will be achieved by the continual evaluation of environmental management performance against environmental policies, objectives and targets for the purpose of identifying opportunities for improvement. The continual improvement process will be designed to:

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

APPENDIX A - SYDNEY METRO UNEXPECTED FINDS PROCEDURE



Sydney Metro Unexpected Heritage Finds Procedure

[SM-18-00105232]

Sydney Metro Integrated Management System (IMS)

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

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

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

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

In NSW, there are strict laws to protect and manage heritage objects and relics. As a result, appropriate heritage management measures need to be implemented to minimise impacts on heritage values; ensure compliance with relevant heritage notification and other obligations; and to minimise the risk of penalties to individuals, Sydney Metro and its contractors. This procedure includes Sydney Metro’s heritage notification obligations under the Heritage Act, NPW Act and the Coroner’s Act 2009 and the requirements of the conditions of approval (CoA) issued by NSW Department of Planning and Environment.

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

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

1.1. Legislation that does not apply

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

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

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

2. Scope

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

This procedure **applies to**:

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

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

This procedure **does not apply** to:

- The discovery and disturbance of heritage items as a result of investigations being undertaken in accordance with the Office of Environment and Heritage's (OEH) *Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW 2010*¹; an Aboriginal Heritage Impact Permit (AHIP) issued under the NPW Act; or a permit approval issued under the Heritage Act.
- the discovery and disturbance of heritage items as a result of construction related activities, where the disturbance is permissible in accordance with an AHIP; or an approval issued under the Heritage Act or CSSI /CSSD planning approval;

3. Definitions

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

	Definitions
AHIP	Aboriginal Heritage Impact Permit
Aboriginal object	An Aboriginal object is any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains. An Aboriginal object may include a shell midden, stone tools, bones, rock art, Aboriginal-built fences and stockyards, scarred trees and the remains of fringe camps.
CEMP	Construction Environmental Management Plan
CoA	Conditions of Approval
CSSD	Critical State Significant Development
CSSI	Critical State Significant Infrastructure
EP&A Act	NSW Environmental Planning and Assessment Act 1979
Excavation	A person that complies with the Heritage Council of NSW's Criteria for Assessment of

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

Director	Excavation Directors (July 2011) to oversee and advise on matters associated with historic archaeology. Note this applies to a specific project/program and requires consultation and/or approval by OEH.
Heritage Act	NSW <i>Heritage Act 1977</i>
NPW Act	NSW <i>National Parks and Wildlife Act 1974</i>
OEH	Office of Environment and Heritage
SM	Sydney Metro
Relic (non-Aboriginal heritage)	<p>A relic means any deposit, artefact, object or material evidence that:</p> <ul style="list-style-type: none"> a) relates to the settlement of the area that comprises NSW, not being Aboriginal settlement, and b) is of State or local significance. <p>A relic may include items such as bottles, utensils, remnants of clothing, crockery, personal effects, tools, machinery and domestic or industrial refuse.</p>
TfNSW	Transport for New South Wales
Work (non-Aboriginal heritage)	Archaeological features such as historic utilities or buried infrastructure that provide evidence of prior occupations such as former rail or tram tracks, timber sleepers, kerbing, historic road pavement, fences, culverts, historic pavement, buried retaining walls, cisterns, conduits, sheds or building foundations, but are also subject to assessment by the Excavation Director to determine its classification

4. Types of unexpected heritage items and corresponding statutory protections

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

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

These discoveries are categorised as either:

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

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

4.1. Aboriginal objects

The NPW Act protects Aboriginal objects which are defined as:

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

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

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

IMPORTANT!

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

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

4.2. Historic heritage items

Historic (non-Aboriginal) heritage items may include:

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

4.2.1. Archaeological relics

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

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

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

IMPORTANT!

All relics are subject to statutory controls and protections.

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

4.2.2. Other historic items

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

³ Section 5(1) NPW Act.

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

⁵ Section 4(1) Heritage Act.

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

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

4.3. Human skeletal remains

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

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

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

IMPORTANT!

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

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

However, where it is suspected that less than 100 years has elapsed since death, the human skeletal remains come under the jurisdiction of the State Coroner and the Coroners Act 2009 (NSW). Such a case would be considered a 'reportable death' and under legal notification obligations set out in section 35(2); a person must report the death to a police officer, a coroner or an assistant coroner as soon as possible. This applies to all human remains less than 100 years old⁸ regardless of ancestry (i.e. both Aboriginal and non-Aboriginal remains). Public health controls may also apply.

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

5. Legislative Requirements

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

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

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

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

Table 1 Legislation and guidelines for management of unexpected heritage finds

Relevant Requirement	Objectives and offences
<i>Environmental Planning and Assessment Act 1979 (EP&A Act)</i>	Section 115ZB Giving of approval by Minister to carry out a project.
<i>Environmental Planning and Assessment Act 1979 (EP&A Act)</i>	Requires heritage to be considered within the environmental impact assessment of projects. This guideline is based on the premise that an appropriate level of Aboriginal and non-Aboriginal cultural heritage assessment and investigations and mitigation have already been undertaken under the relevant legislation, including the EP&A Act, during the assessment and determination process. It also assumes that appropriate mitigation measures have been included in the conditions of any approval.
<i>Heritage Act 1977 (Heritage Act)</i>	The Heritage Act provides for the care, protection and management of heritage items in NSW. Under section 139, it is an offence to disturb or excavate any land knowing or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed, unless the disturbance or excavation is carried out in accordance with an excavation permit issued by the Heritage Division of the OEH. Under the Act, a relic is defined as: <i>‘any deposit, artefact, object or material evidence that: (a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and (b) is of State or local heritage significance.’</i> A person must notify the Heritage Division of OEH, if a person is aware or believes that they have discovered or located a relic (section 146). Penalties for offences under the Heritage Act can include six months imprisonment and/or a fine of up to \$1.1million.

Relevant Requirement	Objectives and offences
National Parks and Wildlife Act 1974 (NPW Act)	<p>The NPW Act provides the basis for the care, protection and management of Aboriginal objects and places in NSW.</p> <p>An Aboriginal object is defined as: <i>‘any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains’.</i></p> <p>An ‘Aboriginal place’ is an area declared by the Minister administering the Act to be of special significance with respect to Aboriginal culture. An Aboriginal place does not have to contain physical evidence of occupation (such as Aboriginal objects).</p> <p>Under section 87 of the Act, it is an offence to harm or desecrate an Aboriginal object or place. There are strict liability offences. An offence cannot be upheld where the harm or desecration was authorised by an AHIP and the permit’s conditions were not contravened. Defences and exemptions to the offence of harming an Aboriginal object or Aboriginal place are provided in section 87, 87A and 87B of the Act.</p> <p>A person must notify OEHL if a person is aware of the location of an Aboriginal object.</p> <p>Penalties for some of the offences can include two years imprisonment and/or up to \$550,000 (for individuals), and a maximum penalty of \$1.1 million (for corporations).</p>

6. Unexpected heritage finds protocol

6.1. What is an unexpected heritage find?

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

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

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

6.2. Managing unexpected heritage finds

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

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

IMPORTANT!

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

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

Step	Task	Responsibility	Guidance and tools
1	Stop work, protect item and inform the Excavation Director		
1.1	Stop all work in the immediate area of the item and notify the Project Manager	Contractor/ Supervisor	Appendix 1 (Identifying Unexpected Heritage items)
1.2	Establish a 'no-go zone' around the item. Use high visibility fencing, where practical. No work is to be undertaken within this zone until further investigations are completed and, if required, appropriate approvals are obtained. Inform all site personnel about the no-go zone.	Project Manager/ Contractor/ Supervisor	
1.3	Inspect, document and photograph the item.	Archaeologist and or Excavation Director	Appendix 2 (Unexpected Heritage Item Recording Form) Appendix 3 (Photographing Unexpected Heritage items)
1.4	Is the item likely to be bone? If yes , follow the steps in Appendix 4 – 'Uncovering bones'. Where it is obvious that the bones are human remains, you must notify the local police by telephone immediately. They may take command of all or part of the site. Also refer to the Sydney Metro Exhumation Management Plan If no , proceed to next step.	Excavation Director	Appendix 4 (Uncovering Bones)

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

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

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

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

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

7. Responsibilities

Table 3 Roles and Responsibilities

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

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

8. Seeking Advice

Advice on this procedure should be sought from the Sydney Metro Environment a Manager in the first instance. Contractors and alliance partners should ensure their own project environment managers are aware of and understand this procedure. Technical archaeological or heritage advice regarding an unexpected heritage item should be sought from a suitably qualified and experienced archaeologist/Aboriginal heritage consultant.

9. Related documents and references

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

10. List of appendices

The following appendices are included to support this procedure:

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

11. Document history

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

Appendix 1: Examples of finds encountered during construction works



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



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



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



Photo 4 Sandstone pavers uncovered at Balmain East, 2016



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

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



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



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



Photo 9 - Pottery made by convict potter Thomas Ball during the early settlement - Wynyard Walk project, 2014

The following images, obtained from the Roads and Maritime Services' *Standard Management Procedure for Unexpected Heritage items 2015*, can be used to assist in the preliminary identification of potential unexpected items during construction and maintenance works.



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



Photo 11 - Top left hand picture continuing clockwise: Stock camp remnants (Hume Highway Bypass at Tarcutta); Linear archaeological feature with post holes (Hume Highway Duplication), Animal bones (Hume Highway Bypass at Woomargama); Cut wooden stake; Glass jars, bottles, spoon and fork recovered from refuse pit associated with a Newcastle Hotel (Pacific Highway, Adamstown Heights, Newcastle area) (RMS, 2015).

Appendix 2 - Unexpected heritage item recording form

Example of unexpected heritage item recording form:

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

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

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

Important

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

Approvals may also be required to impact on certain works.

Appendix 3 - Photographing unexpected heritage items

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

Context and detailed photographs

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

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

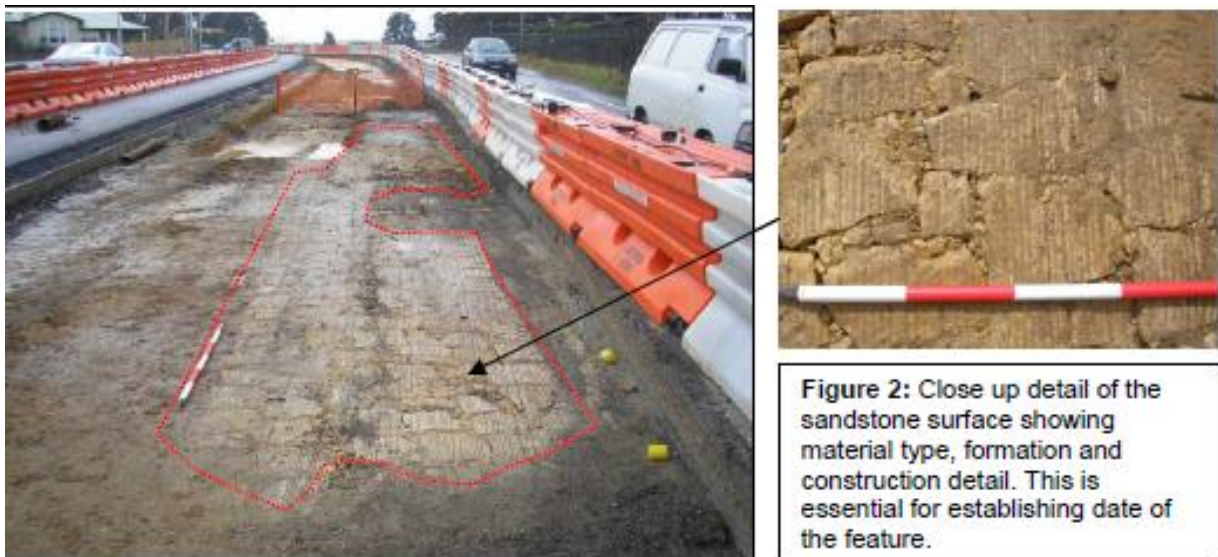


Figure 1: Telford road uncovered on the Great Western Highway (Leura) in 2008 (RMS, 2015).

Photographing distinguishing features

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



Figure 3: Ceramic bottle artefact with stamp.



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

Photographing bones

The majority of bones found on site will those of be recently deceased animal bones often requiring no further assessment (unless they are in archaeological context). However, if bones are human, the police must be contacted immediately (see Appendix 6 for detailed guidance). Taking quality photographs of the bones can often resolve this issue quickly. The project archaeologist can confirm if bones are human or non-human if provided with appropriate photographs.

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

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



Figure 5: Bone concealed by foliage.



Figure 6: Bone covered in sediment

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

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



Figure 7: Photograph showing complete bone.



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

Appendix 4 - Uncovering bones

This appendix provides advice regarding:

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

1. First uncovering bones

Refer to the Sydney Metro Exhumation Management Plan

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

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

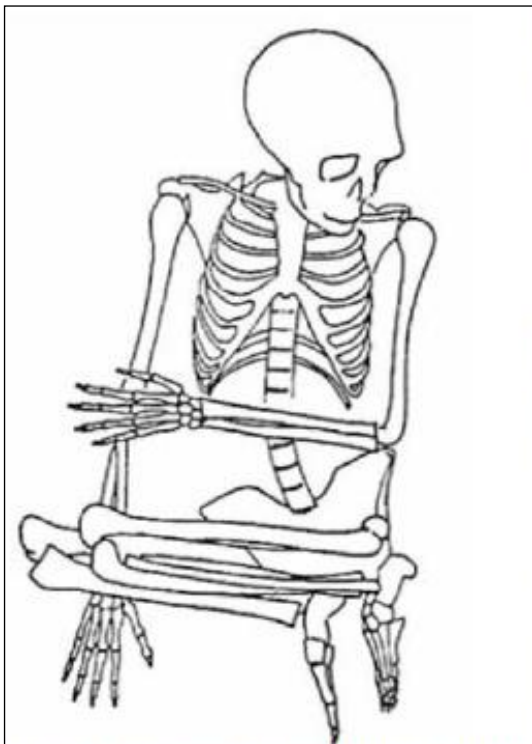


Figure 1: Schematic of a complete skeleton that is 'obviously' human¹².



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

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

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

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

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

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

2. Range of human skeletal notification pathways

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

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

Action

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

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

Action

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

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

Action

The OEH (Heritage Division) must be notified immediately

Figure 3 summarises the notification pathways on finding bones.

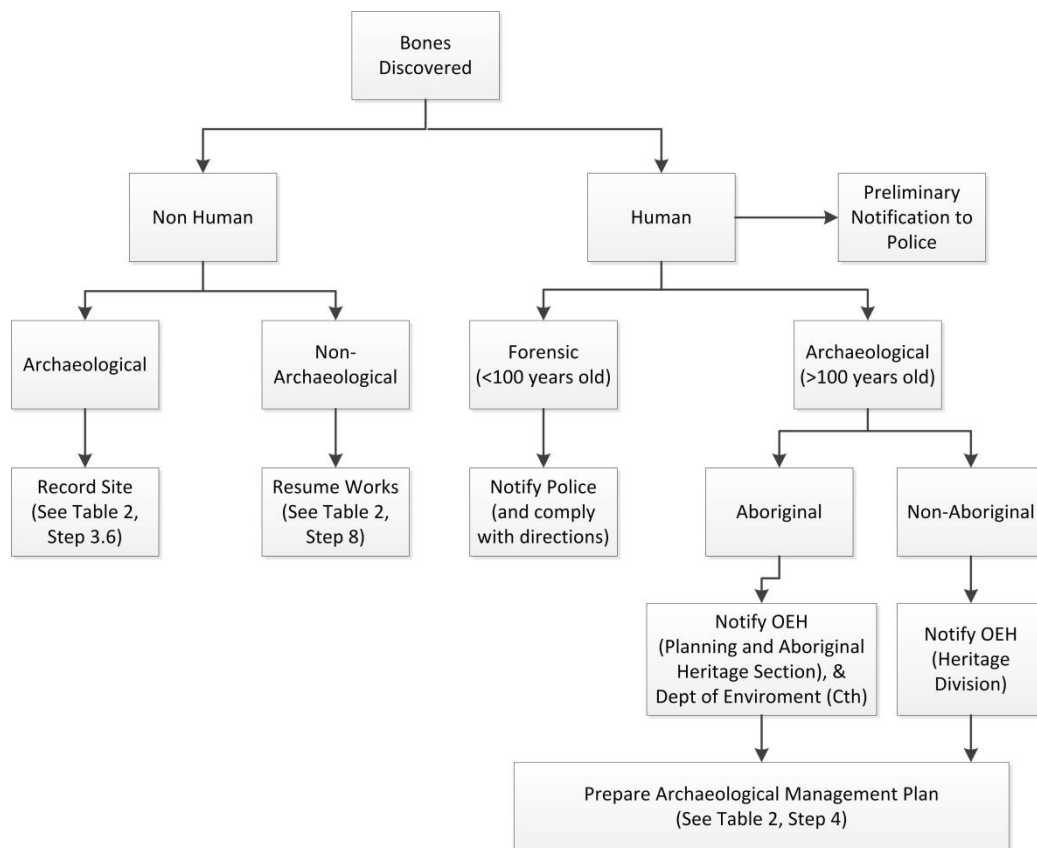


Figure 3 Overview of steps to be undertaken on the discovery of bones

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

3. Additional considerations and requirements

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

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

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

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

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

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

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

Appendix 5 - Archaeological/heritage advice checklist

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

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

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

Appendix 6 - Template notification letter

Insert on TfNSW letterhead

Select and type date]

[Select and type reference number]

XXX

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

[Select and type salutation and name],

Re: Unexpected heritage item discovered during Sydney Metro activities.

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

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

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

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

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

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

Should you have any feedback on the proposed approach, or if you require any further information, please do not hesitate to contact [Environment and Planning Project Manager] on (02) XXXX XXXX.

Yours sincerely

[Sender name]

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

APPENDIX B – STAKEHOLDER CONSULTATION

This CHMP was distributed to the required stakeholders for comment as per CSSI condition C3(g), summary details provided below.

Stakeholder	CHMP revision and issue date	Comments received
North Sydney Council	Rev A, 27/03/20	08/04/20, Noted Council stated that they are satisfied with the measures proposed in the Construction Heritage Management Plan for Victoria Cross. No changes suggested or requested.
	Rev D, 21/05/20	No further comments or requests received from Council regarding Rev D updates and inclusions.
Heritage NSW (as delegate of Heritage Council)	Rev A, 27/03/20	24/04/20, Noted that Heritage NSW considered the CHMP satisfactory to guide the works required. However, please update the CHMP (where relevant) to reflect the recent Machinery of Government Changes: Heritage Division OEH is now Heritage NSW at DPC.
	Rev D, 25/05/20	No further comments or requests received from Heritage NSW regarding Rev D updates and inclusions.
Greater Sydney Planning Team in Environment, Energy and Science	Rev A, 10/04/20	16/04/20, Noted that the Greater Sydney Planning Team in Environment, Energy and Science will not be providing comments in regard to Aboriginal cultural heritage matters.

APPENDIX C – NOMINATED EXCAVATION DIRECTOR DETAILS

27 April 2020

Jason Ambler
Environment & Planning Manager, Building
Level 14, Tower Three, International Towers Sydney
Exchange Place, 300 Barangaroo Avenue
Barangaroo NSW 2000

Re: Archaeological Excavation Director CV- Jenny Winnett, Artefact Heritage.

The following has been produced to provide Lendlease with an overview of my archaeological experience in support of my nomination as Excavation Director for management of archaeological remains identified during Denison Street stormwater relocation works associated with the construction of Victoria Cross Station, as part of the Sydney Metro City & Southwest Chatswood to Sydenham project.

I have over 13 years' experience in archaeological and cultural heritage management in Australia and the UK. I have managed numerous projects that have required the production of archaeological assessment and investigations and I am experienced in providing archaeological management advice to developers and clients. My current role requires a comprehensive understanding of heritage management and regulation in NSW, and knowledge of how archaeological sites are assessed and excavated in accordance with best practice guidelines. I am experienced in the application of the NSW Heritage Legislation to assess the significance of potential archaeological remains as part of numerous significance assessments. These assessments have drawn on relevant publications such as *Assessing Significance for Historical Archaeological Sites and 'Relics'* (Heritage Branch, Department of Planning, 2009), the Burra Charter (ICOMOS 1999) and the *Historical Archaeology Code of Practice* (Heritage Council of New South Wales 2006).

I have obtained numerous permits issued by Heritage NSW, Department of Premier and Cabinet (Heritage NSW, DPC) allowing me to act as Excavation Director on archaeological sites of a scale and significance commensurate with that identified at Denison Street.

Please find attached a CV outlining my experience and examples of recent work.

I hope this information is all you require. Please do not hesitate to contact me if you have any questions.

Kind Regards,



Jenny Winnett
Principal
Artefact Heritage



artefact

JENNY WINNETT

PRINCIPAL, ARTEFACT HERITAGE

Years of experience

13 years' professional experience in the management of historic heritage and archaeology in Australia and the UK.

Qualifications

- BA Hons (Archaeology) (First Class) University of Sydney/University of Glasgow
- Rail Industry Worker (RIS) – Australian Railway Association
- OH&S White Card

Professional affiliations

- Australian Archaeological Association
- Australian Society for Historical Archaeology

Key skills and experience

Jenny specialises in historic (non-Indigenous) heritage and has experience undertaking an array of archaeological work including site assessments and Statements of Heritage Impact, excavation supervision and the authoring of excavation reports, artefact analysis, cataloguing and database management, project management and client advice. Jenny has over 13 years' experience in the heritage sector undertaking a range of projects for public and private sector clients including large scale residential subdivisions, targeted urban developments and major infrastructure projects.

Jenny brings a commitment to ethical archaeological practice, with a focus on positive heritage outcomes, while maintaining strong client relationships and constructive outcomes for clients and government agencies. Jenny is eligible to be nominated as an Excavation Director on permits from the Heritage NSW, Department of Premier and Cabinet.

Selected recent projects

- Parramatta Light Rail Enabling Works (DWJV 2019) – Ongoing archaeological advice and work method statements
- Waverley Bowling Club (Hamptons Property Services 2019) – provision of historical archaeological assessment for bowling club redevelopment
- Small Parks Project (GroupGSA Pty Ltd 2019/2020) – provision of heritage impact assessments, archaeological assessment, and specific elements conservation plans for three parks
- Parramatta Light Rail EIS (Jacobs for TfNSW 2017) – Production of archaeological technical Paper
- Parramatta Light Rail Geotechnical Investigations (Coffey for TfNSW 2017) – Excavation Director
- Moorebank Precinct East (2014-2016)- archaeological management for EIS
- Robin Thomas Reserve Masterplan (TfNSW 2018) – Archaeological assessment and methodology
- Sydney Metro - Central Walk (Jacobs/Arcadis/RPS 2016) - Heritage assessment, excavation and ongoing archaeological and heritage advice

- Sydney Metro – Central Station Main Works (Laing O’Rourke) – archaeological management of the project in accordance with the CSSI conditions of approval
- Sydney Metro City & Southwest (Jacobs/Arcadis/RMS for TfNSW 2017). Heritage impact assessment, heritage advice
- 168-188 Day Street, Sydney (Loftex)—heritage impact statement, heritage interpretation plan, Aboriginal and historical archaeological assessments, AHIP and Section 140 permit reporting and applications, archaeological excavations during construction
- 65 Sussex Street, Sydney (Alfasi)—heritage impact statement and archaeological assessments
- Sydney Opera House (client: SOH)—heritage impact statements for special and summer events.

Professional history

- 2013-present - Artefact Heritage – Principal
- 2008-2013 - Casey & Lowe Archaeology & Heritage – Senior Archaeologist
- 2009-2010 - John Moore Heritage Services – Archaeological Project Supervisor
- 2008 - University of Sydney – Historical Archaeology Tutor
- 2008 - Urban Analysts – Cataloguer/lab technician
- 2007-2008 - Banksia Heritage + Archaeology – Archaeologist

APPENDIX D - VICTORIA CROSS STATION, DENISON STREET STORMWATER WORKS HISTORICAL ARCHAEOLOGICAL ASSESSMENT

Victoria Cross Station – Denison Street Stormwater Works

Historical Archaeological Assessment

Report to Lendlease

September 2019



Artefact Heritage
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EXECUTIVE SUMMARY

Artefact Heritage has been engaged by Lendlease to prepare a Historical Archaeological Assessment (AA) for a section of Denison Street, North Sydney (the study area). The proposed work will involve a staged excavation of the study area to relocate the existing stormwater infrastructure to the east. The proposed works are part of the Sydney Metro City & Southwest Chatswood to Sydenham project which involves the construction of a new metro rail line between Chatswood and Sydenham. The project is associated with the works that have commenced at Victoria Cross Station, located immediately northwest of the study area that was the subject of an Archaeological Method Statement (AMS) completed by AMBS¹.

The Sydney Metro City & Southwest Chatswood to Sydenham project was approved by the Minister for Planning on 9 January 2017 subject to a number of Conditions set out in Critical State Significant Infrastructure (CSSI) approval (CSSI 15_7400) and Modification 3 (CSSI 7400 MOD 3). An Archaeological Assessment and Research Design (AARD) was prepared by Artefact Heritage in consultation with the Heritage Division of the Office of Environment and Heritage (OEH) as a delegate of the NSW Heritage Council in August 2016.

The aim of this AA is to assess the potential for proposed works to impact historical archaeological resources within the study area. This report also includes an assessment of historical archaeological potential and historical archaeological significance.

Overview of findings

- The study area has nil potential to contain archaeological remains dating to the first phase of European occupation of the site (1788 – c.1838)
- The study area has been assessed as having low – moderate potential to contain archaeological remains of local significance relating to the mid-late nineteenth century establishment of Denison Street and early utilities (Phase 2, c.1838 - 1880)
- Although it is likely that remains from Phase 3 (1880 – 1932) and Phase 4 (1932 – present) are located within the study area they would not reach the threshold of local significance.

Recommendations

- Simple archaeological testing should be undertaken in the form of 2-3 test trenches excavated by machine in the southern section of the study area assessed as having archaeological potential. This would enable identification of the former road surface and utilities if it is present. If machine excavation cannot be undertaken due to density of services, NDD may be undertaken to investigate whether the former road surface is present. As artefacts in association with the remains are unlikely NDD would be appropriate if trenching is not possible.
- A brief Archaeological Method Statement (AMS) should be developed for the proposed works which would outline the methodology for archaeological testing and next steps if remains were

¹ AMBS Ecology and Heritage, 2017. *Sydney Metro, City & Southwest Archaeological Method Statement for Victoria Cross Station*. Prepared November 2017

located, or if the area was found to be disturbed and no further archaeological management was required.

- In the northern section of the study area assessed as not having archaeological potential the Sydney Metro Unexpected Heritage Finds Procedure 2019 should be enacted during works.

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1.0 INTRODUCTION

1.1 Background

The Sydney Metro network consists of Sydney Metro Northwest (previously known as the North West Rail Link), Sydney Metro City & Southwest and Sydney Metro West. The Sydney Metro City & Southwest Chatswood to Sydenham project (Figure 1.1) involves the construction of a new metro rail line between Chatswood and Sydenham. New metro stations will be provided along the line.

The Sydney Metro City & Southwest Chatswood to Sydenham project was approved by the Minister for Planning on 9 January 2017 subject to a number of Conditions set out in Critical State Significant Infrastructure (CSSI) approval (CSSI 15_7400) and Modification 3 (CSSI 7400 MOD 3). An Archaeological Assessment and Research Design (AARD) was prepared by Artefact Heritage in consultation with the Heritage Division of the Office of Environment and Heritage (OEH) as a delegate of the NSW Heritage Council in August 2016.²

The AARD included an assessment of Victoria Cross Station (Figure 1.2) and recommended an Archaeological Method Statement (AMS) be completed for the site. Subsequently, AMBS completed an AMS for Victoria Cross Station as part of Sydney Metro City & Southwest portion of the project.

Works have commenced at Victoria Cross Station, and Lendlease require an associated stormwater relocation works in Denison Street, North Sydney (the study area). As this location was not assessed in the AARD or the AMS, Lendlease have engaged Artefact Heritage to complete this Historical Archaeological Assessment (AA) for the study area to indicate if the proposed works will affect “*areas of known or expected archaeological potential*”, under the definition of ‘construction’ in the Sydney Metro City & Southwest planning approval.

1.2 Study area

The study area is identified as a section of Denison Street, North Sydney, located between Mount Street (in the south) and Berry Street (in the north). The study area is within the historic Parish of Willoughby, County of Cumberland, and the North Sydney LGA (Figure 1.3).

1.3 Limitations

Historical research in this report is drawn largely from the *Sydney Metro, City & Southwest Archaeological Method Statement* for Victoria Cross Station prepared by AMBS Ecology and Heritage for an adjoining study area in November 2017.³ The following report presents the historical research undertaken for this document in relation to potential archaeological remains. Additional research of the site using cartographic materials and heritage studies in the vicinity of the site has been undertaken.

No physical archaeological investigation was undertaken during the preparation of this report.

Aboriginal cultural heritage assessment is beyond the scope of this report. However, an Aboriginal Cultural Heritage Assessment Report (ACHAR) was prepared by Artefact Heritage⁴ which covers the current study area. The ACHAR states that any Aboriginal objects that might be located within the

² Artefact Heritage 2016a. Sydney Metro City & Southwest Chatswood to Sydenham - Historical Archaeological Assessment & Research Design. Report to Jacobs / Arcadis / RPS April 2016

³ AMBS Ecology and Heritage, 2017. *Sydney Metro, City & Southwest Archaeological Method Statement for Victoria Cross Station*. Prepared November 2017

⁴ Artefact Heritage 2016b. Sydney Metro City & Southwest Chatswood to Sydenham – Aboriginal Cultural Heritage Assessment Report. Prepared for Jacobs / Arcadis / RPS October 2016

impact area are likely to be within a disturbed context and would therefore be considered to be of low archaeological significance. As per the ACHAR, the works would proceed under an unexpected finds procedure. It is not expected that Aboriginal objects will be affected by the works.

1.4 Authorship

This report was written by Ryan Taddeucci (Senior Heritage Consultant) and Jessica Horton (Heritage Consultant), with review by Sandra Wallace (Managing Director).

Figure 1.1: Project overview and station locations



Figure 1.2: Victoria Cross Station site south showing existing modern development and site codes

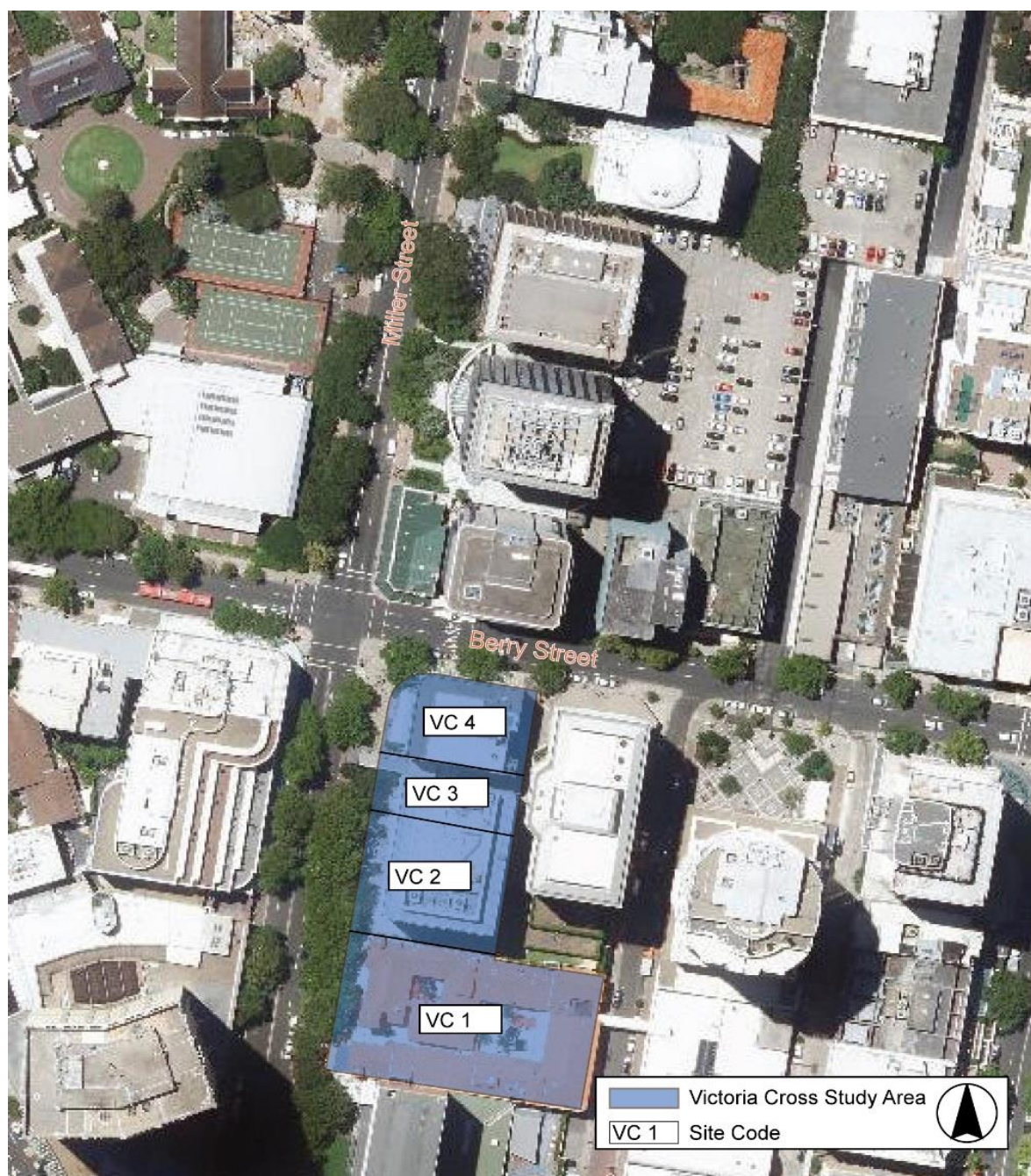
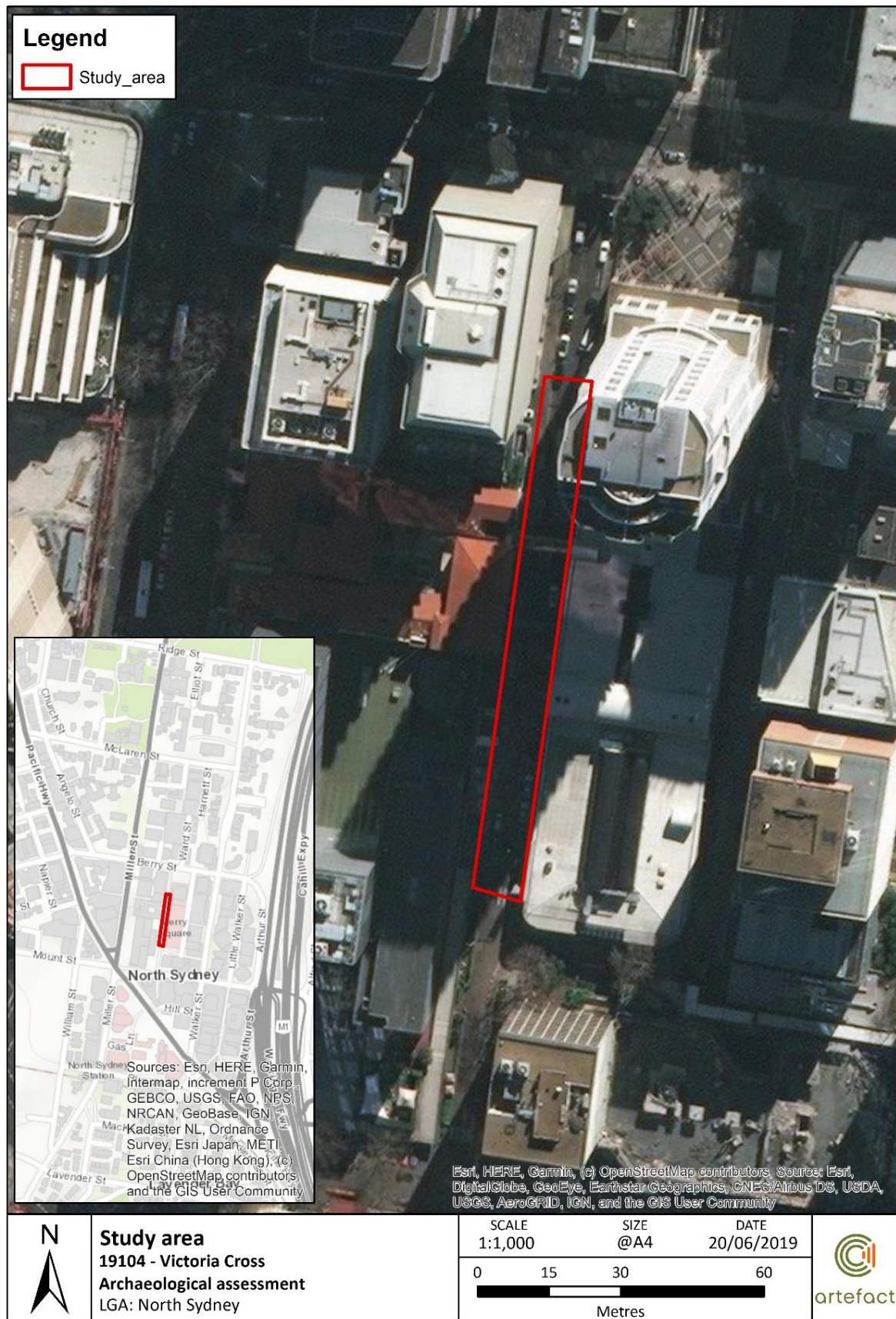


Figure 1.3: Location of the study area



2.0 LEGISLATIVE CONTEXT

2.1 Introduction

There are several items of legislation, heritage registers and heritage management guidelines that are relevant to the project. A summary of these Acts and the potential legislative implications for the project follow.

2.2 The World Heritage Convention

The *Convention Concerning the Protection of World Cultural and National Heritage* (the World Heritage Convention) was adopted by the General Conference of the United Nations Educational, Scientific and Cultural Organisation (UNESCO) on 16 November 1972, and came into force on 17 December 1975. The World Heritage Convention aims to promote international cooperation to protect heritage that is of such outstanding universal value that its conservation is important for current and future generations. It sets out the criteria that a site must meet to be inscribed on the World Heritage List (WHL) and the role of State Parties in the protection and preservation of world and their own national heritage.

2.2.1 World Heritage List

The World Heritage List contains sites that have been listed by UNESCO as being of special cultural or physical significance.

There are no items listed on the World Heritage List located within the study area.

2.3 Environmental Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides a legislative framework for the protection and management of matters of national environmental significance, that is, flora, fauna, ecological communities and heritage places of national and international importance.

2.3.1 Commonwealth Heritage List

The Commonwealth Heritage List has been established to list heritage places that are either entirely within a Commonwealth area, or outside the Australian jurisdiction and owned or leased by the Commonwealth or a Commonwealth Authority. The Commonwealth Heritage List includes natural, Indigenous and historic heritage places which the Minister is satisfied have one or more Commonwealth Heritage values.

There are no items listed on the Commonwealth Heritage List located within the study area.

2.3.2 National Heritage List

The National Heritage List has been established to list places of outstanding heritage significance to Australia. It includes natural, historic and Indigenous places that are of outstanding national heritage value to the Australian nation.

There are no items listed on the National Heritage List located within the study area.

2.4 New South Wales Heritage Act 1977

The NSW *Heritage Act 1977* (Heritage Act) provides protection for items of ‘environmental heritage’ in NSW. ‘Environmental heritage’ includes places, buildings, works, relics, movable objects or precincts considered significant based on historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic values.

Although the requirements for impact permits under the Heritage Act are not relevant for an approved SSI project, the Heritage Act overall is relevant to assessment and ongoing works. The Heritage Act guides assessment, defines statutory listed items, the Secretary’s Environmental Assessment Requirements include reference to related regulations, and certain sections of the Heritage Act are potentially relevant to the project, such as Section 146 (notification of discovery of relic) which is not ‘switched off’ by the SSI approval.

2.4.1 State Heritage Register

The State Heritage Register (SHR) was established under Section 22 of the Heritage Act and is a list of places and objects of particular importance to the people of NSW, including archaeological sites. The State Heritage Register is administered by the Heritage Division of the Department of Planning, Infrastructure and Environment and includes a diverse range of over 1500 items, in both private and public ownership. To be listed, an item must be deemed to be of heritage significance for the whole of NSW.

A search of the SHR was undertaken in relation to the study area. There are no SHR items within the study area.

2.4.2 Section 170 registers

Under the Heritage Act all government agencies are required to identify, conserve and manage heritage items in their ownership or control. Section 170 of the Heritage Act requires all government agencies to maintain a Heritage and Conservation Register that lists all heritage assets and an assessment of the significance of each asset.

A search of the Section 170 register was undertaken in relation to the study area. There are no Section 170 register items within the study area.

2.4.3 Archaeological relics and works

The Heritage Act also provides protection for ‘relics’, which includes archaeological material or deposits. Section 4 (1) of the Heritage Act (as amended in 2009) defines a relic as:

“...any deposit, artefact, object or material evidence that:

- (a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and*
- (b) is of State or local heritage significance”*

Sections 139 to 145 of the Heritage Act prevent the excavation or disturbance of land known or likely to contain relics, unless under an excavation permit. Excavation permits are issued by the Heritage Council of NSW, or its Delegate, under Section 140 of the Heritage Act for relics not listed on the SHR or under Section 60 for relics listed on the SHR. However, the project is subject to Part 5.2 (SSI) provisions of the EP&A Act, and therefore excavation permits or exceptions would not be required.

In the context of the Heritage Act ‘works’ are a separate category to archaeological ‘relics’. ‘Works’ refer to past evidence of infrastructure. ‘Works’ may be buried, and therefore archaeological in nature, however, exposure of a ‘work’ does not trigger reporting obligations under the Act. The following examples are commonly considered to be ‘works’: Former road surfaces or pavement, kerbing, evidence of former infrastructure (such as drains or drainage pits where there are no relics in association), tram and train tracks and ballast and evidence of former rail platforms and bridges.

2.5 Environmental Planning and Assessment Act 1979

The EP&A Act establishes the framework for cultural heritage values to be formally assessed in the land use planning, development consent and environmental impact assessment processes. The EP&A Act requires that environmental impacts are considered prior to land development; this includes impacts on cultural heritage items and places as well as archaeological sites and deposits. The EP&A Act also requires that local governments prepare planning instruments (such as Local Environmental Plans [LEPs]) in accordance with the EP&A Act to provide guidance on the level of environmental assessment required.

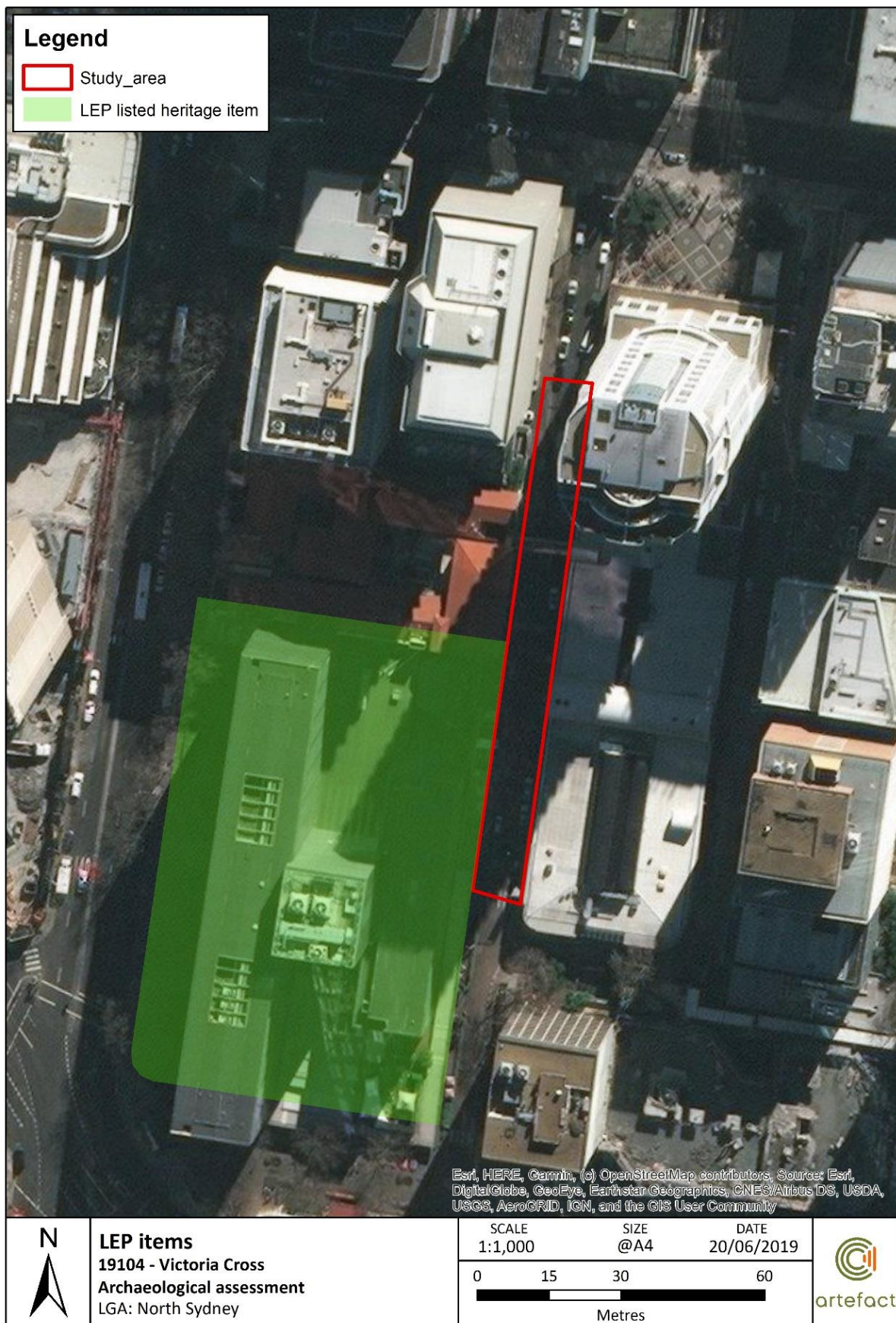
The study area falls within the boundaries of the North Sydney Local Government Areas (LGA). The study area is therefore subject to the North Sydney LEP 2013.

The aim of the LEPs in relation to heritage is to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings, views and archaeological sites. The LEP’s list items of heritage significance within the LGA.

One LEP listed item, the MLC Building (Item No. I0893), is located along the western boarder of the study area (Figure 2.1: Location of LEP listed heritage item).

The project is approved as SSI under Part 5, Section 5.2 of the EP&A Act.

Figure 2.1: Location of LEP listed heritage item



3.0 HISTORICAL BACKGROUND

3.1 Introduction

For a detailed history of North Sydney and the study area, see the *Sydney Metro, City & Southwest Archaeological Method Statement for Victoria Cross Station*, prepared by AMBS Ecology & Heritage for the study area in November 2017.⁵ This section has been drawn largely from the report by AMBS Ecology & Heritage, but targeted for the consideration of potential historic archaeology within the study area. Additional research of the site using cartographic materials and heritage studies in the vicinity of the site has been undertaken.

3.2 European exploration and early land grants (1788 - c1838)

The first land grant along the North Shore went to time-expired convict, Samuel Lightfoot in 1794.⁶ Lightfoot's grant was illegally transferred to Scottish political exile Thomas Muir who named the grant 'Hunters Hill'.⁷ As such, the land reverted to government ownership, eventually being absorbed into 120-acres granted to Robert Ryan, a member of the New South Wales Corps.⁸

In 1806, Ryan's land was sold to merchant Robert Campbell who leased the land to James Milson in 1822; this area would become known as Milsons Point. Milson is known to have constructed a slab house on the property, however this was destroyed in 1826 during a bush fire.⁹ Both Campbell and Milson lost their respective copies of the promissory grant, resulting in dispute. Government Surveyor Sir Thomas Mitchell was therefore asked to visit the property in 1828 to provide a report to resolve the dispute. In doing so, Mitchell identified land suitable for a township slightly north of Milsons Point, incorporating the study area. From this, Mitchell produced a plan of the potential township which included suggested subdivisions, streets, a reserve and a road towards the north of the colony and Broken Bay.¹⁰

The land was resurveyed in 1836, with the township of St Leonards (later North Sydney) being accepted in 1838. At this time, Berry and Miller Streets, adjacent to the study area were laid out.

⁵ AMBS Ecology & Heritage, 2017. *Sydney Metro, City & Southwest Archaeological Method Statement for Victoria Cross Station*. Prepared for John Holland CPB Ghella Joint Venture, May 2019.

⁶ North Shore Historical Society, 1994. *Kirribilli from Milsons Point Railway Station*. North Shore Historical Society: North Sydney.

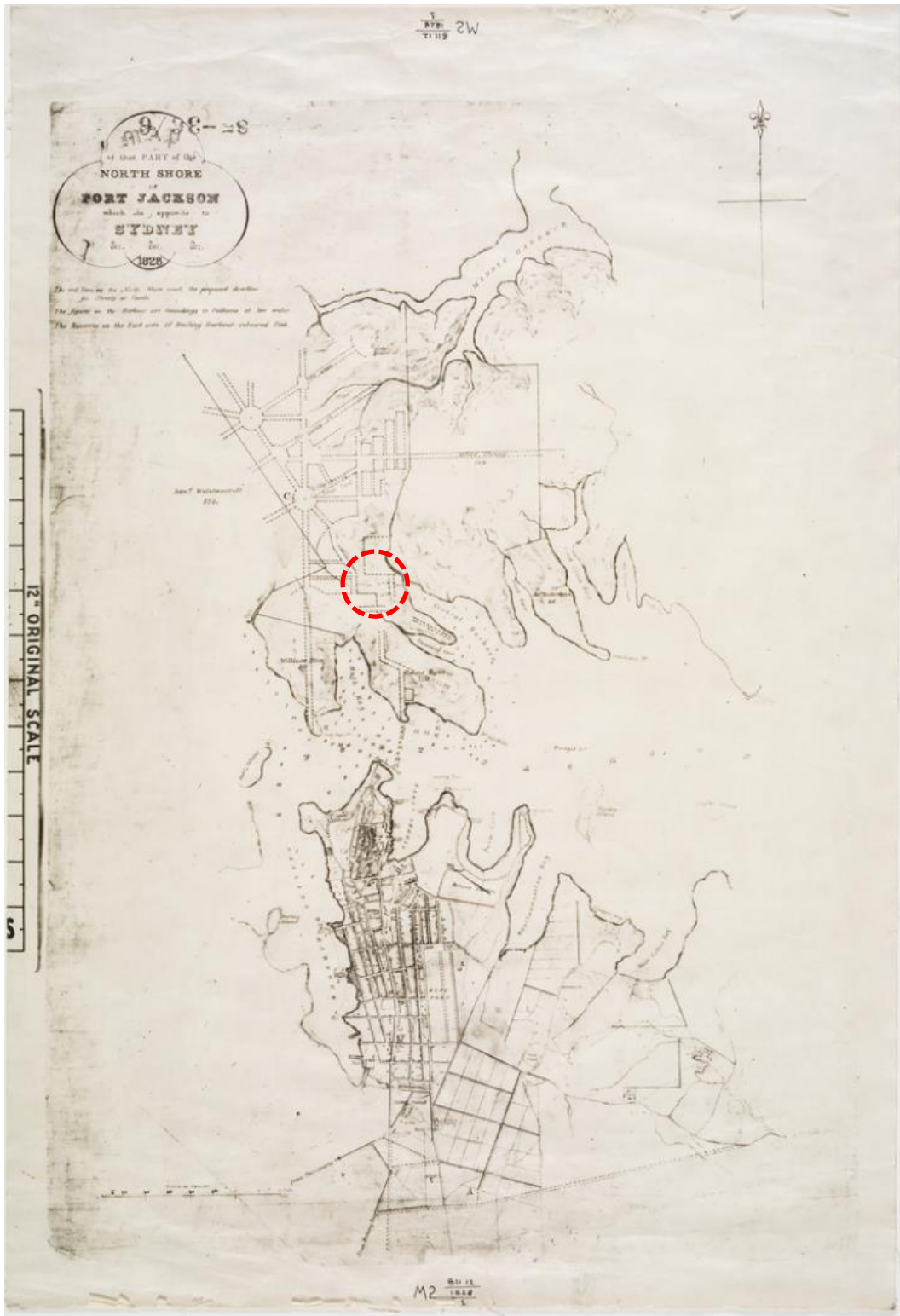
⁷ Ian Hoskins, 2008. 'Kirribilli'. Accessed online 20 June 2019, <https://dictionaryofsydney.org/entry/kirribilli>

⁸ AMBS Ecology & Heritage, 2017. *Archaeological Method Statement for Victoria Cross Station*: 7.

⁹ AMBS Ecology & Heritage, 2017. *Archaeological Method Statement for Victoria Cross Station*: 7.

¹⁰ AMBS Ecology & Heritage, 2017. *Archaeological Method Statement for Victoria Cross Station*: 7.

Figure 3.1: Plan of the North Shore of Port Jackson, 1828 (study area outlined in red). The North Shore section of the survey was drawn by Thomas Mitchell for his 'report accompanying a plan of part of North Shore, Sydney' included within his 'progress in roads and public works'.¹¹



¹¹ John Thompson and Thomas Mitchell, 1828. 'Map of that part of the North Shore of Port Jackson which is opposite to Sydney'. Sydney: Surveyor General's Department. Accessed online 20 June 2019, http://digital.sl.nsw.gov.au/delivery/DeliveryManagerServlet?embedded=true&toolbar=false&dps_pid=IE3543312

3.3 Subdivision and development (1838 – c1880s)

The township was gazetted and divided into 48 half-acre allotments, separated into three sections and offered for sale. Land sales were slow, with sales mainly focused to the north and north-east of the St Leonards Reserve. A c1840s plan indicates that the land within the study area was purchased from the Crown by Hastings Elwin Esquire at this time (Figure 3.2). Elwin was a free settler who sailed for Australia from England in 1841, aged 64. The reason for this migration remains unknown, however it is clear that Elwin resided at the St Leonards property, establishing a house there. This is evidenced in a letter addressed from Elwin's neighbour, Reverend William Branwhite Clark, at the 'parsonage', in March 1851 who writes: 'a continual beating of a drum upon your premises...a perpetual disturbance at all hours of the day and night, and on Sunday mornings!'¹² Elwin's address is not recorded within the letter, however the c1840s plan does not indicate structures within the study area at this time (Figure 3.2).

Thirty-five sections were sold during the c1850s which boosted the expansion of St Leonards and subdivisions during the late 1850s and 1860s encouraged the construction of cottages, terraces, villas and mansions.¹³ A comparison between Figure 3.2 and a c1857 plan of allotments within St Leonards shows that Denison Street had been partially laid out during the c1850s, with the northern end of the study area falling within the curtilage of property owing to 'Deins' (Figure 3.3). Information concerning this landowner has not been obtained, however this plan does not indicate that any structures were built within the study area at this time.

The Borough of St Leonards was gazetted in 1869, from which point, services and utilities were installed. Over the next few decades, St Leonards expanded, becoming a hub for professionals and labourers. Mansions were constructed within the hills and surrounding the St Leonards Reserve, the North Sydney medical fraternity was established between Miller and Berry Streets and a number of churches and educational institutions were developed.¹⁴

Alderman Clark proposed St Leonards be renamed North Sydney, arguing that the new name would bring prestige to the township; bringing more finances into the area.¹⁵

¹² Reverend William Branwhite Clark cited in H. S Torrens, December 2005. 'The life and times of Hastings Elwin or Elwyn (1777-1752) and his critical role in founding the Bath Literary and Scientific Institution in 1823'. *The Geological Curator*. Vol 8 No. 4: 141-168.

¹³ Leonie Masson, 2010. 'North Sydney'. Accessed 20 June 2019, https://dictionaryofsydney.org/entry/north_sydney

¹⁴ AMBS Ecology & Heritage, 2017. Archaeological Method Statement for Victoria Cross Station: 7.

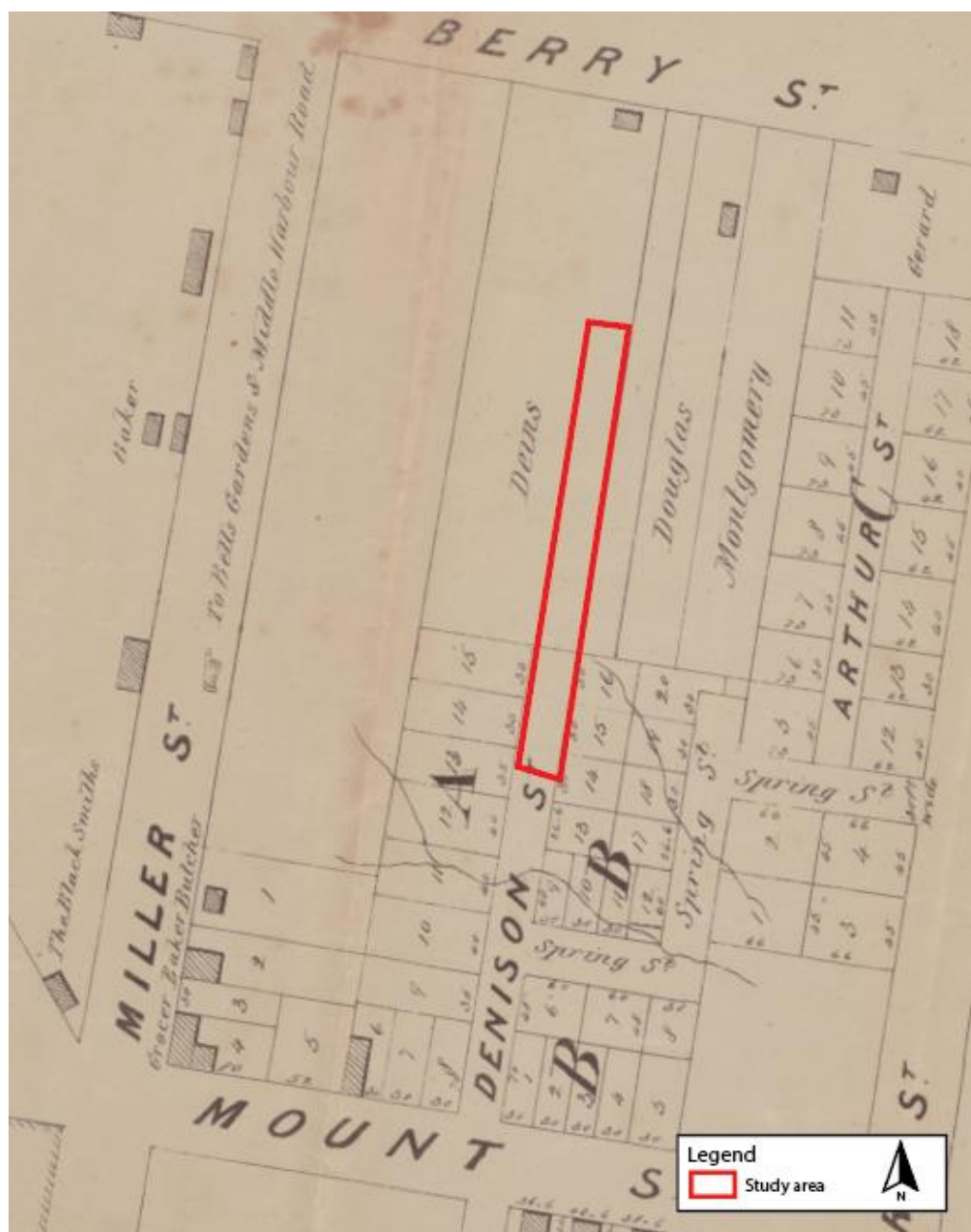
¹⁵ Leonie Masson, 2010. 'North Sydney'.

Figure 3.2: Detail of plan of the property of Hastings Elwin Esqr., c1840-1849.¹⁶



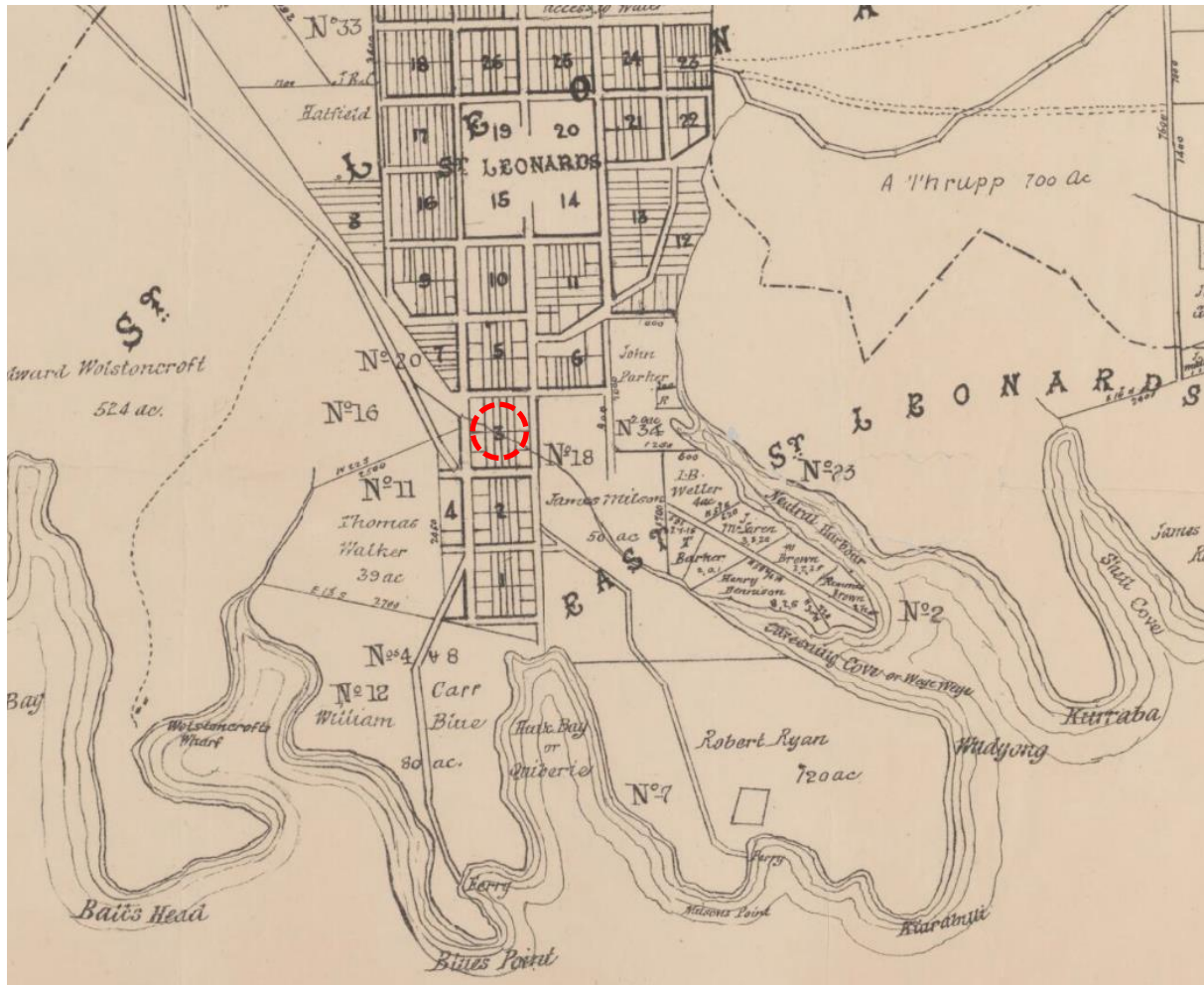
¹⁶ Author unknown, c1840-1849. 'Plan of the property of the late Hastings Elwin Esquire situate in the Town of St Leonards North Shore'. Accessed 20 June 2019, <https://nla.gov.au/nla.obj-229988154/view>

Figure 3.3: Detail of plan of allotments of St Leonards, c1857.¹⁷



¹⁷ Allan & Wigley, c1857. 'Plan of allotments, St Leonards, North Shore'. Accessed 20 June 2019, <http://nla.gov.au/nla.obj-229987895/view>

Figure 3.4: Detail of Parish of Willoughby plan, c1960; showing the St Leonards subdivisions, Robert Ryan's 120-acre land grant and various road layouts (study area outlined in red).¹⁸



3.4 Continued development (1880s – 1932)

By the c1880s, a commercial and civic centre had been established within St Leonards. A cable tram ran from Ridge Street to the ferry wharf at Milsons Point and settlement dramatically increased; enhanced by the development of a number of public buildings.¹⁹

An 1887 parish map of Willoughby indicates that Denison Street had still not been extended through to Berry Street by this time, with the northern portion of the study area falling within the curtilage of a land parcel owing to H. W. Parker (Lot 12) (Figure 3.5). Information regarding Parker has not been obtained; however, the map does not indicate that any structures had been constructed within this portion of the study area. Despite written records evidencing substantial development within the wider area from the c1890s; an 1892 Water Block Plan indicates that not only had Denison Street not been extended by this time, but structures had also not been constructed within the northern portion of the study area (Figure 3.6). In addition, an undated subdivision plan (possibly c1890s) confirms that Denison Street had yet to be extended, and no structures had been constructed within the northern portion of the study area, which is referred to as 'Duns Garden'. Information concerning Duns Garden has not been obtained.

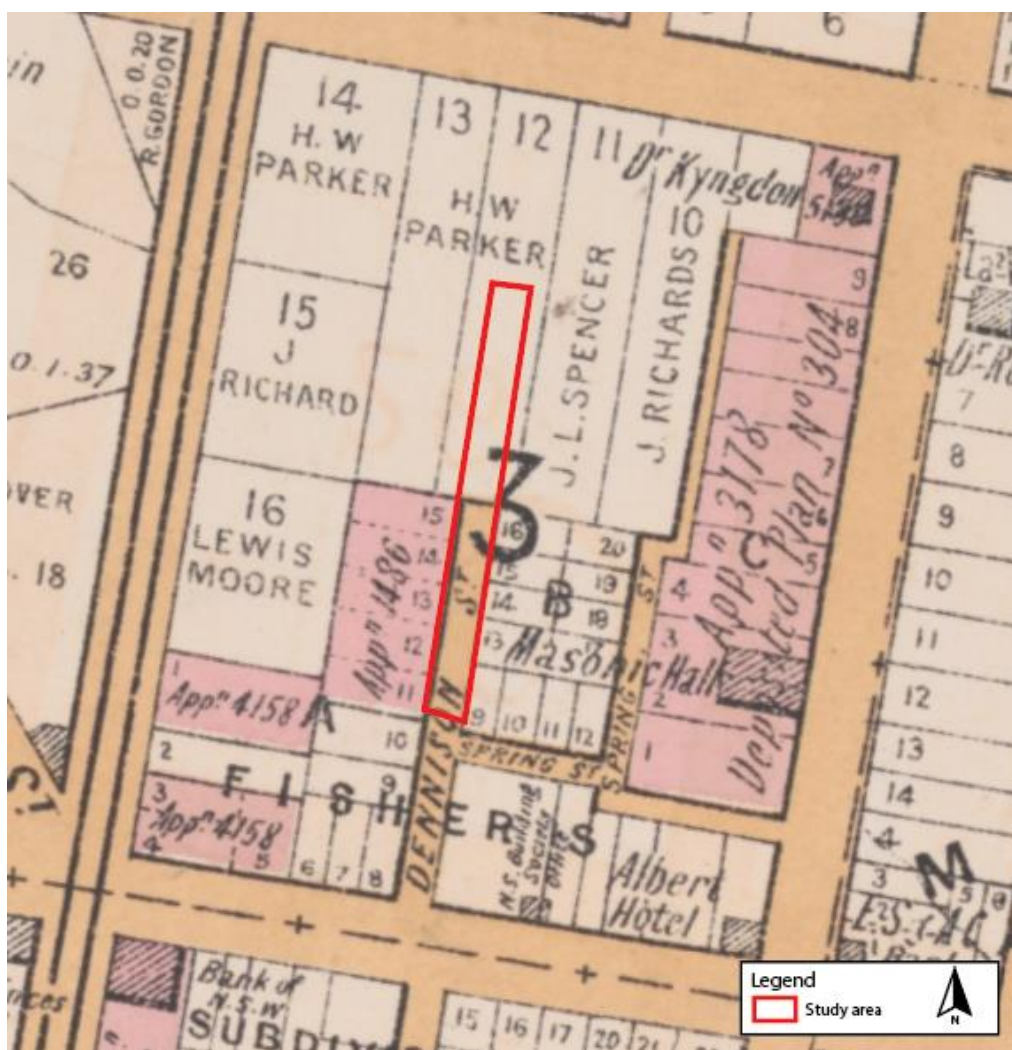
¹⁸ Gibbs, Shallard & Co., c1860. 'Willoughby'. Accessed online 20 June 2019, <http://nla.gov.au/nla.obj-229997080/view>

¹⁹ AMBS Ecology & Heritage, 2017. Archaeological Method Statement for Victoria Cross Station.

By the close of the nineteenth century, St Leonards had been renamed 'North Sydney' and the area had continued to develop, with a mix of upper, middle and lower income residents living and working within the northern suburb.²⁰

The Upper Nepean Scheme was completed in 1888, and a temporary pumping station was established at Junction Street, supplying water to North Sydney. By 1895 a trunk main connected Potts Hill with a balance reservoir near Ryde Railway Station and on to the water tanks to Mowbray Road at Chatswood, to supply Willoughby, North Sydney and Mosman, and the temporary pumping station was abandoned. The North Sydney sewerage system was completed in 1898, connecting to the North Sydney Suburbs Ocean Outfall Sewer. Figure 3.6 shows that a number of structures within proximity to the study area were sewered, potentially with reticulated water. In addition, there are a number of wells, cisterns or outbuildings included within the plan. The plan also indicates that by 1930, plans for the Denison Street to Berry Street were underway.

Figure 3.5: Detail of Parish of Willoughby map, 1887; showing Denison Road and H.W. Parker's property within the study area.²¹



²⁰ AMBS Ecology & Heritage, 2017. Archaeological Method Statement for Victoria Cross Station.

²¹ Higinbotham and Robinson, 1887. 'Parish of Willoughby'. Accessed 20 June 2019, <http://nla.gov.au/nla.obj-232482086/view>

Figure 3.6: Detail of North Sydney Block Plan, 1892; showing Denison Road.²²



²² Sydney Water Board, 1892. 'Water Board Block Plan; North Sydney Sheet No. 29'. Stanton Library call No. LH REF MH 299/29. Accessed 20 June 2019, <https://www.aurorashore.com.au/montage/stanton/Maps.aspx?keyword=north+sydney&method=0&sort=1003&refinements=&showall=true#prettyPhoto>

Figure 3.7: Detail of subdivision lot plan, undated (possibly c1890s); showing Denison Street partially lain out and 'Duns Garden' within the study area.²³



3.5 Sydney Harbour Bridge and further development (1932 – present)

The Sydney Harbour Bridge had begun construction in 1923 and was completed ten years later, officially opening on 19 March 1932. Despite the opening up of North Sydney with improved access, the 1930s marked a period of reduced economic and population growth within the suburb. The impact of the Great Depression and the opening of the bridge had caused land prices to drop; and the suburb layout had been significantly altered with Lane Cove Road (Pacific Highway) extended and widened; Junction Street removed and the development of the present Victoria Cross intersection. The name 'Victoria Cross' was introduced in 1939, following a competition held by the North Sydney Council (Figure 3.9).²⁴

²³ Author unknown, n.d. 'Subdivision: 9 Lots'. Stanton Library call No. LH REF SP /402. Accessed 20 June 2019, <https://www.aurorashore.com.au/montage/stanton/Maps.aspx?keyword=Denison&method=0&sort=1003&refinem ents=&showall=true#prettyPhoto>

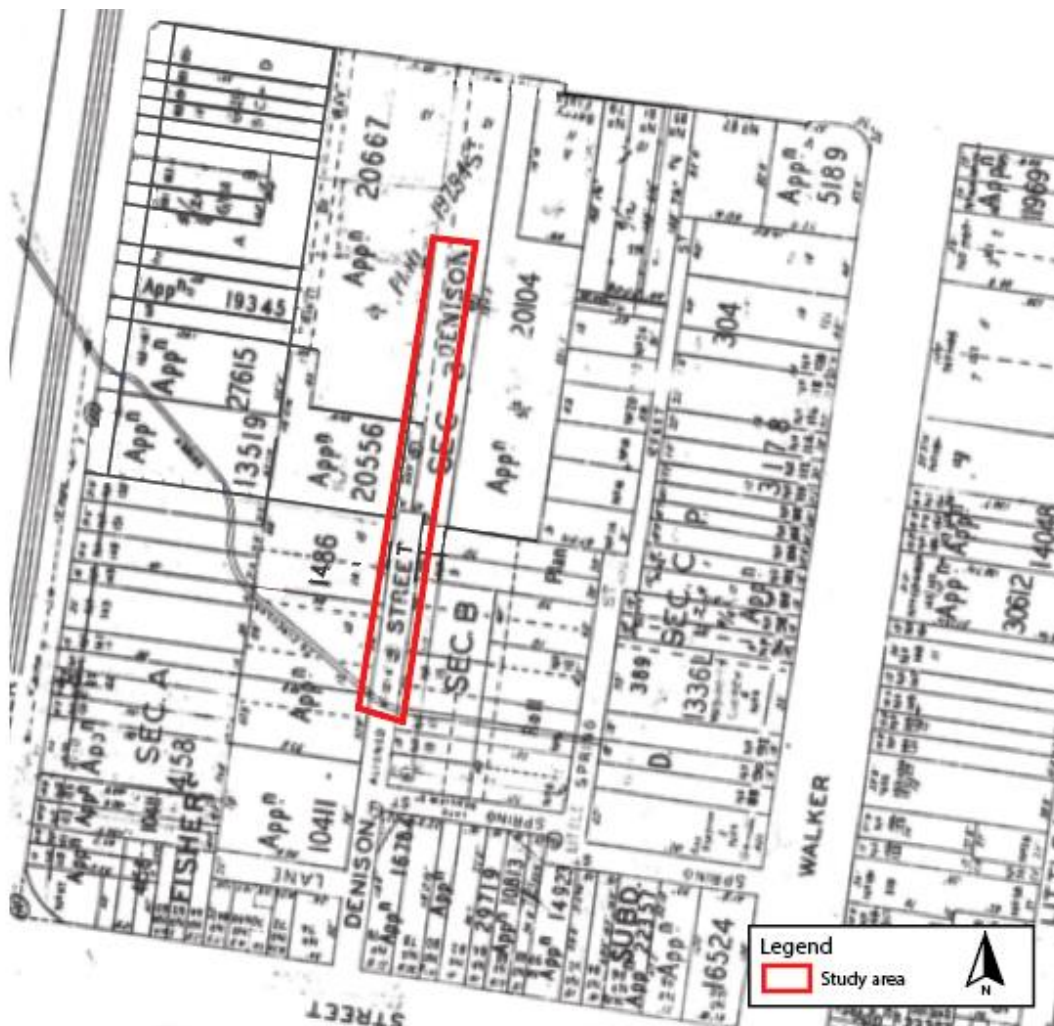
²⁴ VICTORIA CROSS, NORTH SYDNEY. (1939, November 23). *The Sydney Morning Herald* (NSW: 1842 - 1954), p. 10. Retrieved June 21, 2019, from <http://nla.gov.au/nla.news-article17617921>

A c1930s block plan of the study area indicates that Denison Street was undergoing extension to Berry Street during this time (Figure 3.8). In addition, 1943 aerial imagery indicates that Denison Street was extended to Berry Street by this point (Figure 3.10).

The wider North Sydney area underwent redevelopment during the 1940s, primarily focusing on replacing earlier structures with Art Deco hotels, garages and public buildings. In addition, Federation and Victorian mansions were repurposed into boarding houses.²⁵ The 1950s to the 1980s saw significant change within Victoria Cross; large corporations had established themselves within the area due to reduced land prices resulting in the construction of substantial office blocks (Figure 3.11 - Figure 3.12). As such, further demolitions of earlier structures continued.²⁶

Today, the study area is defined by high-density corporate structures which flank either side of Denison Street.

Figure 3.8: Detail of c1930s block plan, showing Denison Street.²⁷



²⁵ Leonie Masson, 2010. 'North Sydney'.

²⁶ AMBS Ecology & Heritage, 2017. Archaeological Method Statement for Victoria Cross Station.

²⁷ North Sydney Council Stanton Library, c1930 cited in AMBS Ecology & Heritage, 2017. Archaeological Method Statement for Victoria Cross Station: 18.

Figure 3.9: *Sydney Morning Herald* article, 1939.²⁸



Figure 3.10: 1943 aerial imagery of the study area, showing Denison Road.²⁹



²⁸ VICTORIA CROSS, NORTH SYDNEY. (1939, November 23). *The Sydney Morning Herald*.

²⁹ Sixmaps, 1943. '1943 Aerial Imagery'. Accessed online 20 June 2019, <https://maps.six.nsw.gov.au/>

Figure 3.11: Southern view along Denison Street from Berry Street showing rear elevation of the MLC offices, 1957.³⁰



³⁰ Author unknown, 1957. 'View south along Denison Street from Berry Street showing rear elevation of the MLC offices, North Sydney'. Stanton Library call no. LF REF PF2707. Accessed online 20 June 2019, <https://www.aurorashore.com.au/montage/stanton/Gallery.aspx?keyword=denison&method=0&sort=1003&refinements=&showall=true#prettyPhoto>

Figure 3.12: Aerial view of North Sydney CBD and the Warringah Expressway, 1977 (arrow indicating Denison Street).³¹



³¹ Author unknown, December 1977. 'Aerial view of North Sydney CBD and Warringah Expressway'. Stanton Library call no. LH REF CPF39/1. Accessed online 20 June 2019, <https://www.aurorashore.com.au/montage/stanton/Gallery.aspx?keyword=aerial&method=0&sort=1003&refinements=&showall=true#prettyPhoto>

4.0 ARCHAEOLOGICAL ASSESSMENT

4.1 Methodology

4.1.1 Archaeological Potential and Significance

Historical archaeological potential is defined as the potential of a site to contain significant archaeological remains, including works or relics as identified in the Heritage Act. The assessment of historical archaeological potential is based on the identification of former land uses and evaluating whether subsequent actions (either natural or human) may have impacted on archaeological evidence for these former land uses. Knowledge of previous archaeological investigations, understanding of the types of archaeological remains likely to be associated with various land uses, and the results of site inspection are also taken into consideration when evaluating the potential of an area to contain archaeological remains.

The assessment of archaeological potential contained in this heritage impact assessment is based on analysis of historical plans and readily available secondary sources, such as archaeological zoning plans and archaeological investigations undertaken in the vicinity of the study area.

Assessments of significance are preliminary in nature and where possible significance has been assessed against the NSW Heritage Assessment Criteria. The assessment is informed by the NSW Heritage Division's *Assessing Significance for Historical Archaeological Sites and Relics* (NSW Heritage Division 2009).

An archaeological test excavation was not undertaken as part of this assessment.

4.1.2 Research potential and archaeological significance

In 1984, Bickford and Sullivan examined the concept and assessment of archaeological research potential; that is, the extent to which archaeological resources can address research questions. They developed three questions which can be used to assess the research potential of an archaeological site:

- Can the site contribute knowledge that no other resource can?
- Can the site contribute knowledge that no other site can?
- Is this knowledge relevant to:
 - General questions about human history?
 - Other substantive questions relating to Australian history?
 - Other major research questions?

In the 2009 guidelines *Assessing Significance for Historical Archaeological Sites and 'Relics'*, the NSW Heritage Division has since provided a broader approach to assessing the archaeological significance of sites, which includes consideration of a site's intactness, rarity, representativeness, and whether many similar sites have already been recorded, as well as other factors. This document acknowledges the difficulty of assessing the significance of potential subsurface remains, because the assessment must rely on predicted rather than known attributes.³²

³² NSW Heritage Branch 2009

A site can have high potential for archaeological remains, and yet still be of low research potential if those remains are unlikely to provide significant or useful information.

4.2 Archaeological potential

4.2.1 History of land use and disturbance

Phasing

The historical development of study area and surrounds can be divided into the following phases of activity:

- Phase 1 (1788 - c1838) European exploration and early land grants: early land use associated with timber getting, vegetation clearance and road building.
- Phase 2 (1838 – c1880s) subdivision and development: establishment of the southern portion of Denison Street.
- Phase 3 (1980s - 1932) continued development: installation of utility services within the southern half of the study area.
- Phase 4 (1932 – present) Sydney Harbour Bridge and further development: Extension of Denison Street to Berry Street and further installation of utility services in the northern portion of the study area. Any archaeological remains within the study area would relate to the extant road and its construction along with modern utilities.

Land Disturbance

A Dial Before You Dig (DBYD) search was completed on 19 June 2019 to identify any existing utility services which may have disturbed archaeological remains within the study area. It was found that sewage and stormwater drainage and electrical cables had been installed within the study area (Figure 4.1).

The 1943 aerial (Figure 3.10) indicates that by the early 20th century the study area had been covered by a bitumen road. The establishment of the bitumen road is likely to have commenced towards the end of Phase 3. Archaeological excavations within the wider region have identified that the former sandstone roads have been covered over by the current bitumen roads, leaving the former, sandstone roads intact.

Figure 4.1: Overlay of identified utilities within the study area



4.2.2 Assessment of potential

This section discusses the archaeological potential of the study area.

Phase 1 (1788 - c1838)

There are no records of any significant development taking place within the study area during this period. The period was characterised by early land grants, land sales, with potential for some grazing activity and land clearance. Therefore, archaeological remains from Phase 1 would likely be limited to evidence of land clearance, property boundaries, ephemeral tracks or early road surfaces, informal drainage, and isolated artefact scatters.

Archaeological remains from this phase are likely to be ephemeral in nature and have likely been impacted by subsequent building developments, modification of the road corridors and the installation of services.

Overall, the potential for legible archaeological remains from this phase is nil.

Phase 2 (1838 – 1880)

Historical plans indicate that the southern portion of Denison Street was established during this period. This period is characterised by the subdivision of land, the installation of early utility services and construction of the southern portion of Denison Street. No formal structures are known to have been present within the study area at this time.

Overall, the potential for archaeological remains from this period is low – moderate.

Phase 3 (1880 – 1932)

Historical overlays (Figure 3.5 and Figure 3.6) illustrate that no structures had been established within the study area during this period. The 1930s block plan (Figure 3.8) indicates that the Circular Sewer is likely to be present within the southern portion of the study area and that Denison Street have been extended to Berry Street during this phase.

Overall, the potential for archaeological remains from this period is high.

Phase 4 (1932 – present)

The 1943 aerial indicated that by the beginning of this phase the current alignment was Denison Street was established. Therefore, as there has been no development within the study area during this phase there is nil potential for archaeological remains.

4.3 Archaeological significance

This section discusses the archaeological significance of the study area.

4.3.1 Archaeological research potential (current NSW Heritage Criterion E)

Phase 1 (1788 - 1838)

It is highly unlikely that archaeological remains associated with Phase 1 would be present within the site. Any remains would be ephemeral, truncated and would have little research potential. Overall, the research potential for archaeological remains from this phase is nil.

Phase 2 (1838 - 1880)

The potential archaeological resources dating to Phase 2 would be limited to the original alignment of Denison Street and early utilities. Potential archaeological remains associated with the establishment of the first alignment of Denison Street and early utilities may provide information on early development of the northern side of the harbour and an opportunity for comparative analysis with early infrastructure remains located in the Sydney CBD. Any intact archaeological remains may reach the threshold for local significance in terms of research potential.

Phase 3 (1880 - 1932)

The potential archaeological resources dating to Phase 3 would be limited to the establishment of the Circular Sewer in the southern half of the study area. Historical overlays indicate that the only other development within the study area during this phase is the establishment of the current alignment of Denison Street. As this development of infrastructure is later than Phase 2 and not associated with first development it is not likely to have research potential. Therefore, remains associated with this phase are unlikely to reach the threshold for local significance in terms of research potential.

Phase 4 (1932 - present)

Documentary records and aerial imagery indicate that the current alignment of Denison Street was established prior to Phase 4. It is possible that utilities would have been installed during this phase. However, as they would have been installed within living memory, they would be of no research potential.

4.3.2 Associations with individuals, events or groups of historical importance (NSW Heritage Criteria A, B & D)

Phase 1 (1788 - 1838)

The study area during Phase 1 was a part of land grants and estates owned by particular individuals of historical importance in the local area, such as Samuel Lightfoot, Thomas Muir, Robert Ryan, and Robert Campbell. It is unlikely that archaeological remains would show any connection to these individuals. In addition, the lack of potential for remains dating to this period indicates that Phase 1 would not meet the threshold for local significance under this criterion.

Phase 2 (1838 - 1880)

Any archaeological remains from Phase 2 would be associated with the early subdivision and development of Sydney in the mid nineteenth century, a historically important event within the local area. The study area is linked to Hastings Elwin who purchased the land encompassing the study area during Phase 2. However, there is no record of any activities or developments associated with Hastings Elwin within the study area. Subsequently, the property was subdivided and a number of buildings constructed. However, the records indicate that the only developments that occurred within the study area during Phase 2 were limited to the establishment of the southern portion of Denison Street and utilities. No major historical events, groups or individuals are known to be associated with these activities.

Therefore, the potential remains from Phase 2 may meet the level of local significance for their association with the early development of North Sydney and general occupation, rather than a specific connection to an individual.

Phase 3 (1880 - 1932)

The archaeological remains of the study area in Phase 3 would be associated with the establishment of the Circular Sewer and the current alignment of Denison Street. Neither of these are known to be associated with any significant historical figure, groups or events. Archaeological remains associated

with this phase would provide an insight into the function of the buildings and further information relating to the daily lives of the individuals who utilised the structures. Intact archaeological remains from Phase 3 are unlikely to reach the threshold of local significance under this criterion.

Phase 4 (1932 - present)

No development within the study area is documented to have occurred during Phase 4. Therefore, Phase 4 is of no significance does not reach the threshold of local significance under this criterion.

4.3.3 Aesthetic or technical significance (NSW Heritage Criterion C)

Phase 1 (1788 - 1838)

The study area during Phase 1 was a part of land grants and estates and was subjected to land clearing and subdivision. Any remains from this phase are likely to be ephemeral in nature and have likely been impacted and truncated by subsequent building developments, and the installation of services. Therefore, remains from Phase 1 are unlikely to meet the threshold for local aesthetic or technical significance.

Phase 2 (1788 - 1838)

No development dating to Phase 2 have been identified with the northern half of the study area. It is likely that only the original alinement of Denison Street and early utilities will be present within the southern portion of the study area. These features have been well documented within the regional context and are unlikely to reach the threshold for local aesthetic and technical significance.

Phase 3 (1880 - 1932)

Potential archaeological features relating to the post 1890s drains may be present within the study area. These features can contribute to our understanding of specific construction methods and materials but are unlikely to be particularly representative or unique.

Therefore, potential archaeological remains associated with this phase are unlikely to reach the threshold for local aesthetic and technical significance.

Phase 4 (1932 - present)

The only likely developments to have occurred within the study area during Phase 4 are the installation of utilities. These developments would have occurred within living memory and examples of these works would be ubiquitous across the Sydney area. Therefore, any utilities established during this phase is unlikely to demonstrate aesthetic significance at the local level.

4.3.4 Ability to demonstrate the past through archaeological remains (NSW Heritage Criteria A, C, F & G)

Phase 1 (1788 - 1838)

Remains from Phase 1 have little potential to illustrate the early development of the area, including land grants, estates and land sales, due to the likely ephemeral and truncated nature of the remains due to later development of the site. The remains are unlikely to meet the threshold for local significance.

Phase 2 (1788 - 1838)

Remains from Phase 2 have the potential to illustrate the early development of North Sydney roads and infrastructure. Any intact archaeological remains may meet the threshold of local significance under this criterion.

Phase 3 (1880 - 1932)

Remains from Phase 3 have the potential to illustrate the development and use of the wider area. There is moderate potential for the site to contain intact archaeological features including documented and undocumented utilities. These remains have limited potential to provide evidence of the daily life and activities of the previous occupants of the area. Therefore, any intact archaeological remains are unlikely to meet the threshold of local significance under this criterion.

Phase 4 (1932 - present)

As remains are associated with construction of the extant road and associated utilities they are unlikely to reach the threshold of local significance under this criterion.

4.4 Statement of archaeological significance

It is highly unlikely that archaeological remains associated with Phase 1 (1788 - 1838) would be present within the study area due to the ephemeral nature of the remains and the likelihood of subsequent phases resulting in the destruction of remains from this phase. There is nil potential for archaeological remains associated with early land grants and land sales of the study area and therefore, the threshold for local significance would not be met for research potential, associative value, aesthetic or technical significance, or the ability to demonstrate the past.

There is generally low-moderate potential for archaeological remains associated with the original alignment of Denison Street and early utilities within the study area during Phase 2 (1788 - 1838). The remains of the road and utilities are likely to reach local significance threshold under the criterion of research potential, associative value and the ability to demonstrate the past and such remains would be considered 'works' not 'relics' under the Heritage Act. There is some potential for archaeological deposits and artefact assemblages associated with drains and other utilities to be present. It is unlikely that any artefact deposit would have research potential as it would be a secondary context and wouldn't provide information not available in the documentary record regarding the date of construction of utilities or occupation of the surrounding area.

There is high potential for archaeological remains associated with this Phase 3 (1880 - 1932), as it is likely that the current alignment of Denison Street was established towards the end of this phase. As the roads and utilities established during this phase are ubiquitous across the Sydney area the threshold for local significance would not be met for research potential, associative value, aesthetic or technical significance, or the ability to demonstrate the past.

Archaeological evidence from Phase 4 (1932 – present) would be limited to the establishment of recent utilities. As such, the threshold for local significance would not be met for research potential, associative value, aesthetic or technical significance, or the ability to demonstrate the past.

4.5 Summary of archaeological potential and significance

The following table provides a summary of the archaeological potential and significance of the study area.

Table 4.1: Summary of archaeological potential and significance for the study area.

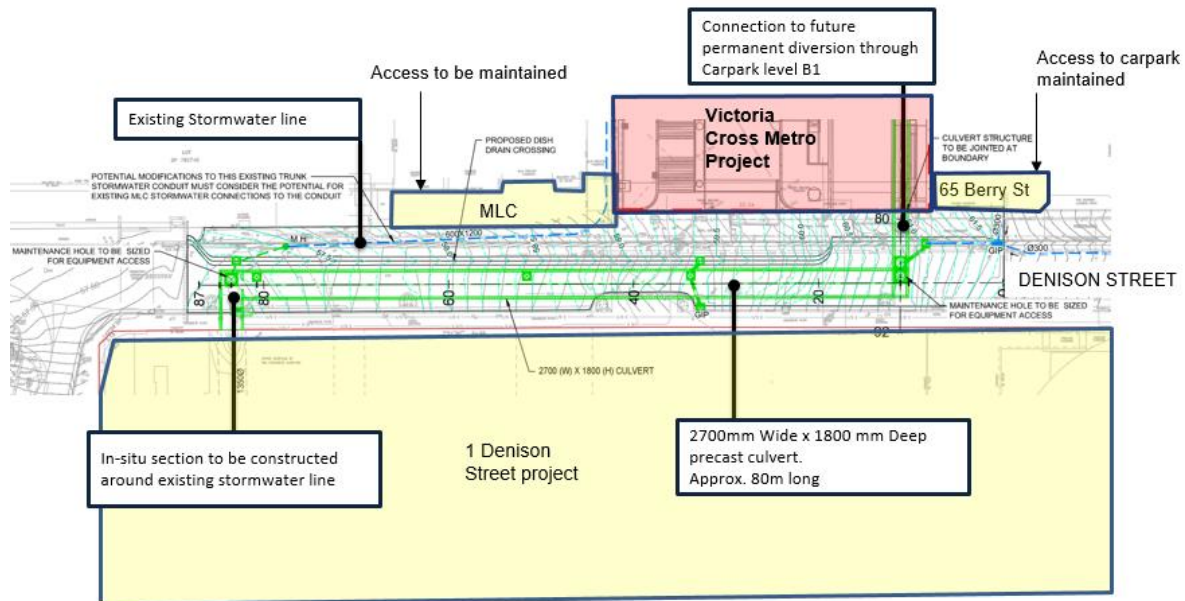
Phase	Potential	Significance
1 (1788 – 1838)	Nil	N/A
2 (c1838 – 1880)	Low – Moderate	Local
3 (1880 – 1932)	High	Nil
4 (1932 – present)	Nil	Nil

5.0 ARCHAEOLOGICAL IMPACT ASSESSMENT

5.1 Proposed works

The proposed works will involve the relocation of the current stormwater infrastructure along Denison Street. A staged approach has been planned to minimise the impact to traffic along Denison Street, this in involve four stages of excavation beginning in the south of the study area.

Figure 5.1: Design plans for the completed stormwater infrastructure (supplied by Lendlease 2019)



5.2 Statement of heritage impact

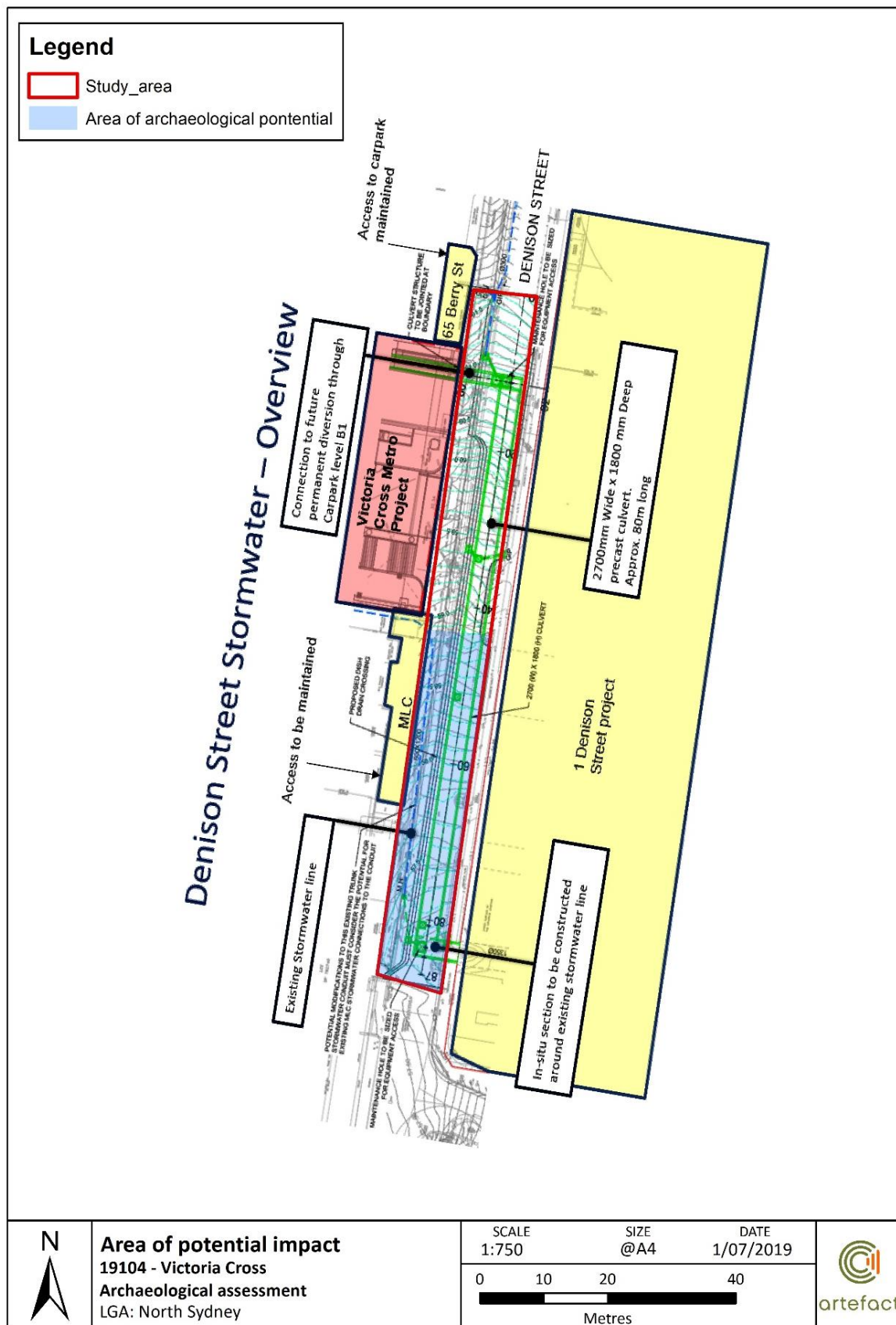
Overall, the study area has been assessed as having a low-moderate potential for archaeological remains of local significance relating to the nineteenth century establishment of Denison Street and early utilities (Phase 2). The study area has some limited potential to contain an intact artefactual resource associated with this phase of use with the ability to provide insight into the life-ways of the former inhabitants of the site. Remains of the early alignment of Denison Street and the early utilities would be considered to be 'works' not relics under the Heritage Act.

The proposed works in the southern half of the study area may have an overall minor -moderate impact to potential archaeological remains of the nineteenth century roads and utilities (Figure 5.2). The proposal has the potential to impact on archaeological 'works' of local significance. Relics as defined under the Heritage Act are unlikely to be impacted. Table 5.1 below provides a summary of the archaeological potential and significance of the site and the resultant impact from the proposed works.

Table 5.1: Summary of archaeological potential, significance and heritage impact for the study area.

Phase	Potential	Significance	Impact to significant archaeology
1 (1788 – 1838)	Nil	N/A	None
2 (c1838 – 1880)	Low – Moderate	Local (works)	Minor - moderate
3 (1880 – 1932)	High	Nil	None
4 (1932 – present)	High	Nil	None

Figure 5.2: Area of potential for locally significant remains to be impacted by the proposed works



6.0 CONCLUSIONS & RECOMMENDATIONS

6.1 Conclusions

- The study area has nil potential to contain archaeological remains dating to the first phase of European occupation of the site (1788 – c.1838)
- The study area has been assessed as having low – moderate potential to contain archaeological remains of local significance relating to the mid-late nineteenth century establishment of Denison Street and early utilities (Phase 2, c.1838 - 1880)
- Although it is likely that remains from Phase 3 (1880 – 1932) and Phase 4 (1932 – present) are located within the study area they would not reach the threshold of local significance
- An ACHAR has been completed for the study area with found that no registered Aboriginal sites are located within the study area and that it is unlikely that intact deposits will be present which bear Aboriginal artefacts. It is unlikely that Aboriginal objects will be impacted by the works.

Recommendations

- Simple archaeological testing should be undertaken in the form of 2-3 test trenches excavated by machine in the southern section of the study area assessed as having archaeological potential. This would enable identification of the former road surface and utilities if it is present. If machine excavation cannot be undertaken due to density of services, NDD may be undertaken to investigate whether the former road surface is present. As artefacts in association with the remains are unlikely NDD would be appropriate if trenching is not possible.
- A brief Archaeological Method Statement (AMS) should be developed for the proposed works which would outline the methodology for archaeological testing and next steps if remains were located, or if the area was found to be disturbed and no further archaeological management was required.
- In the northern section of the study area assessed as not having archaeological potential the Sydney Metro Unexpected Heritage Finds Procedure 2019 should be enacted during works.

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APPENDIX E - VICTORIA CROSS STATION, DENISON STREET STORMWATER WORKS ARCHAEOLOGICAL METHOD STATEMENT AND ARCHAEOLOGICAL MONITORING RESULTS


Victoria Cross Station – Denison Street Stormwater Works

Archaeological Method Statement

Report to Lendlease

December 2019



 artefact

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Document history and status

Revision	Date issued	Reviewed by	Approved by	Date approved	Revision type
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1.0 INTRODUCTION

1.1 Background

The Sydney Metro City & Southwest Chatswood to Sydenham project was approved by the Minister for Planning on 9 January 2017 subject to a number of Conditions set out in Critical State Significant Infrastructure (CSSI) approval (CSSI 15_7400) and Modification 3 (CSSI 7400 MOD 3). An Archaeological Assessment and Research Design (AARD) was prepared by Artefact Heritage in consultation with Heritage NSW, Department of Premier and Cabinet (formerly the NSW Heritage Division, Office of Environment and Heritage) as a delegate of the NSW Heritage Council in August 2016.¹ The AARD included an assessment of Victoria Cross Station and recommended a brief Archaeological Method Statement (AMS) be completed for the site. Subsequently, AMBS completed an AMS for Victoria Cross Station.²

In September 2019 Artefact Heritage were engaged by Lendlease to prepare a Historical Archaeological Assessment (HAA) for stormwater relocation works associated with the construction of Victoria Cross Station.

The HAA identified that a portion of Denison Street, North Sydney (the study area) has the potential to contain significant archaeological resources. The HAA recommended that an Archaeological Method Statement (AMS) be prepared to guide excavation works for the project.

Artefact Heritage has subsequently been engaged by Lendlease to prepare this AMS for the proposed Denison Street works.

1.2 The study area

The study area is identified as a section of Denison Street, North Sydney, located between Mount Street (in the south) and Berry Street (in the north) (see Figure 1). The study area is within the historic Parish of Willoughby, County of Cumberland, and the North Sydney LGA.

1.3 Authorship

This report has been prepared by Jenny Winnett (Principal, Artefact Heritage), utilising background information included in the HAA³ and research undertaken for the AMBS Ecology and Heritage AMS for Victoria Cross Station.⁴

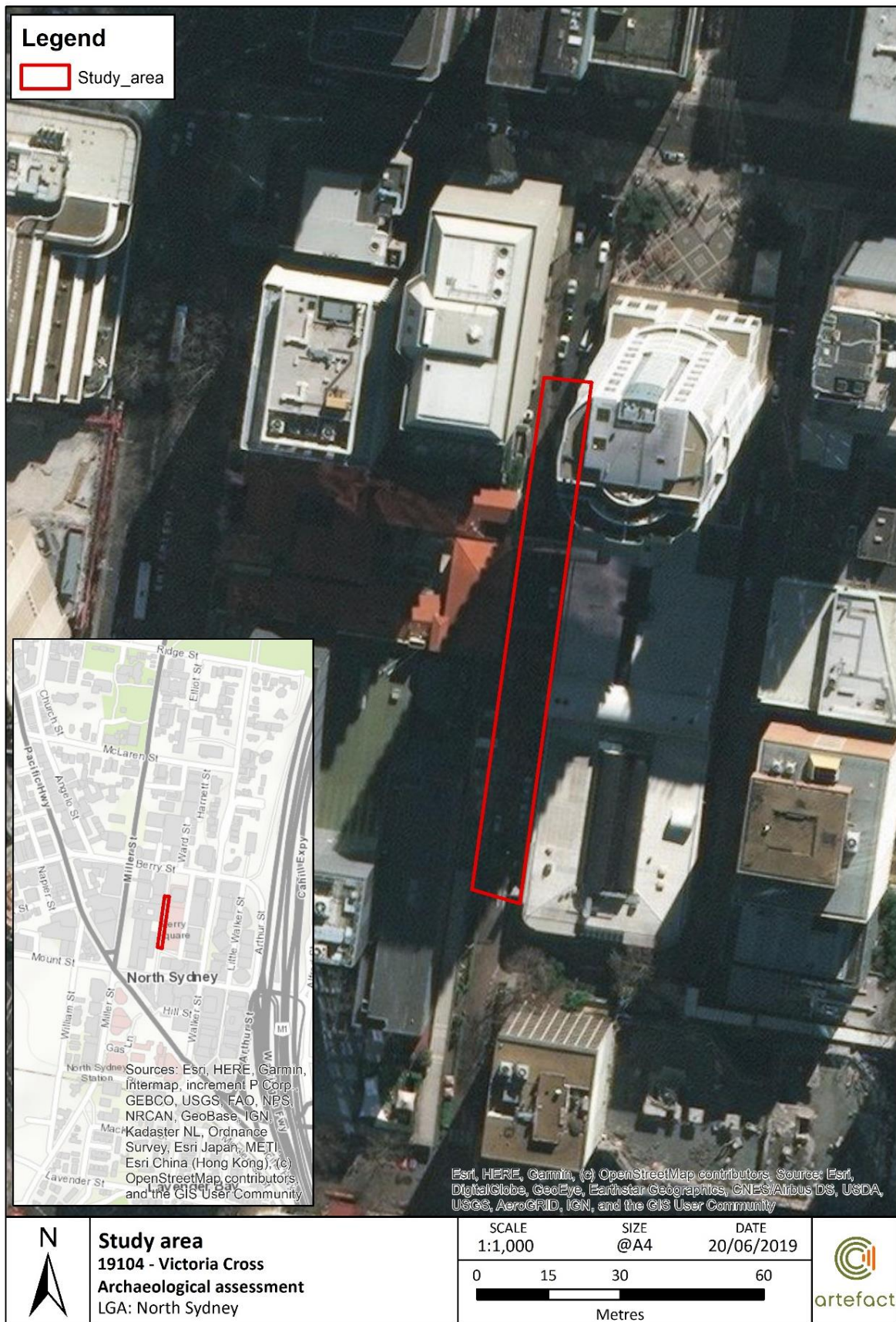
¹ Artefact Heritage *Sydney Metro City & Southwest Chatswood to Sydenham - Historical Archaeological Assessment & Research Design* Report to Jacobs / Arcadis / RPS, April 2016

² AMBS Ecology and Heritage, Sydney Metro, City & Southwest Archaeological Method Statement for Victoria Cross Station, prepared November 2017

³ Artefact Heritage *Victoria Cross Station – Denison Street Stormwater Works – Historical Archaeological Assessment* report to Lendlease, September 2019

⁴ AMBS Ecology and Heritage, Sydney Metro, City & Southwest Archaeological Method Statement for Victoria Cross Station, prepared November 2017

Figure 1: The study area



2.0 ARCHAEOLOGICAL CONTEXT

2.1 Archaeological potential

2.1.1 Land use history

The historical development of study area and surrounds can be divided into the following phases of activity:

- Phase 1 (1788 - c1838) European exploration and early land grants: early land use associated with timber getting, vegetation clearance and road building
- Phase 2 (1838 – c1880s) subdivision and development: establishment of the southern portion of Denison Street
- Phase 3 (1880s - 1932) continued development: installation of utility services within the southern half of the study area
- Phase 4 (1932 – present) Sydney Harbour Bridge and further development: Extension of Denison Street to Berry Street and further installation of utility services in the northern portion of the study area. Any archaeological remains within the study area would relate to the extant road and its construction along with modern utilities.

2.1.2 Overview of archaeological potential

The archaeological potential of the study area has been summarised in Table 1:

Table 1: Summary archaeological potential

Phase	Land use	Potential archaeological remains	Potential
Phase 1 (1788 - c1838)	Early land grants, land sales, with potential for some grazing activity and land clearance	Evidence of land clearance, property boundaries, ephemeral tracks or early road surfaces, informal drainage, and isolated artefact scatters	nil
Phase 2 (1838 – 1880)	Establishment of Denison Street, subdivision and early utility construction.	Former road surfacing and infrastructure, former service lines	Low-moderate
Phase 3 (1880 – 1932)	Construction of the Circular Sewer	Former road surfacing and infrastructure, the circular sewer	High
Phase 4 (1932 – present)	Current alignment of Denison Street	nil	nil

2.2 Archaeological significance

The significance of the potential archaeological resource has been summarised in Table 2, and a summary statement of archaeological significance included in Section 3.3.1.

Table 2: Summary archaeological significance

NSW Heritage Council Criterion	Phase	Discussion	Significance
Criterion E – Archaeological research potential	Phase 1	No remains expected to be present	nil
	Phase 2	Archaeological remains associated with the establishment of the first alignment of Denison Street and early utilities may provide information on development of the northern side of the harbour, with the opportunity for comparative analysis.	Local
	Phase 3	Remains not anticipated to have research potential	nil
	Phase 4	Remains not anticipated to have research potential	nil
Criteria A, B & D – Association with individuals, events or groups of historical importance	Phase 1	No remains expected to be present.	nil
	Phase 2	The study area is linked to Hastings Elwin who purchased the land encompassing the study area during this phase. However, there is no record of any activities or developments associated with Hasting Elwin within the study area at this time.	nil
	Phase 3	Remains not anticipated to have associative significance	nil
	Phase 4	Remains not anticipated to have associative significance	nil
Criterion C – Aesthetic or technical significance	Phase 1	No remains expected to be present	nil
	Phase 2	Remains not anticipated to have aesthetic or technical significance	nil
	Phase 3	Remains not anticipated to have aesthetic or technical significance	nil
	Phase 4	Remains not anticipated to have aesthetic or technical significance	nil
Criteria A, C F & G – Ability to demonstrate the past through archaeological remains	Phase 1	No remains expected to be present	nil
	Phase 2	Remains from Phase 2 have the potential to illustrate the early development of North Sydney roads and infrastructure.	Local
	Phase 3	Remains not anticipated to have the ability to demonstrate the past through archaeological remains.	nil
	Phase 4	Remains not anticipated to have the ability to demonstrate the past through archaeological remains.	nil

2.2.1 Statement of archaeological significance

It is highly unlikely that archaeological remains associated with Phase 1 (1788 - 1838) would be present within the study area due to the ephemeral nature of the remains and the likelihood of subsequent phases resulting in the destruction of remains from this phase. There is nil potential for archaeological remains associated with early land grants and land sales of the study area and

therefore, the threshold for local significance would not be met for research potential, associative value, aesthetic or technical significance, or the ability to demonstrate the past.

There is generally low-moderate potential for archaeological remains associated with the original alignment of Denison Street and early utilities within the study area during Phase 2 (1838-1880). The remains of the road and utilities are likely to reach local significance threshold under the criterion of research potential, associative value and the ability to demonstrate the past and such remains would be considered 'works' not 'relics' under the Heritage Act. There is some potential for archaeological deposits and artefact assemblages associated with drains and other utilities to be present. It is unlikely that any artefact deposit would have research potential as it would be a secondary context and wouldn't provide information not available in the documentary record regarding the date of construction of utilities or occupation of the surrounding area.

There is high potential for archaeological remains associated with this Phase 3 (1880 - 1932), as it is likely that the current alignment of Denison Street was established towards the end of this phase. As the roads and utilities established during this phase are ubiquitous across the Sydney area the threshold for local significance would not be met for research potential, associative value, aesthetic or technical significance, or the ability to demonstrate the past.

Archaeological evidence from Phase 4 (1932 – present) would be limited to the establishment of recent utilities. As such, the threshold for local significance would not be met for research potential, associative value, aesthetic or technical significance, or the ability to demonstrate the past.

2.3 Summary of archaeological potential and significance

A summary of archaeological potential and significance has been included in Table 3.

Table 3: Summary of archaeological potential and significance for the study area

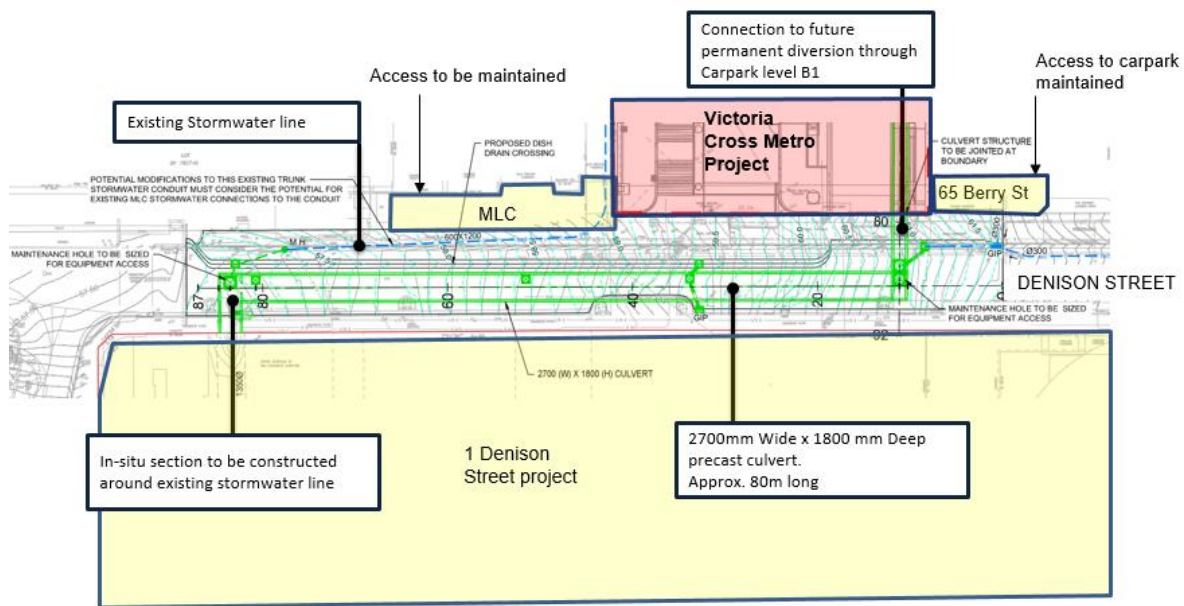
Phase	Potential	Significance
1 (1788 – 1838)	Nil	Nil
2 (c1838 – 1880)	Low – Moderate	Local
3 (1880 – 1932)	High	Nil
4 (1932 – present)	Nil	Nil

3.0 WORK STAGE SPECIFIC ARCHAEOLOGICAL METHODOLOGY

3.1 Proposed works

The proposed works will involve the relocation of the current stormwater infrastructure along Denison Street. A staged approach has been planned to minimise the impact to traffic along Denison Street, this would involve four stages of excavation beginning in the south of the study area.

Figure 2: Design plans for the completed stormwater infrastructure (supplied by Lendlease 2019)

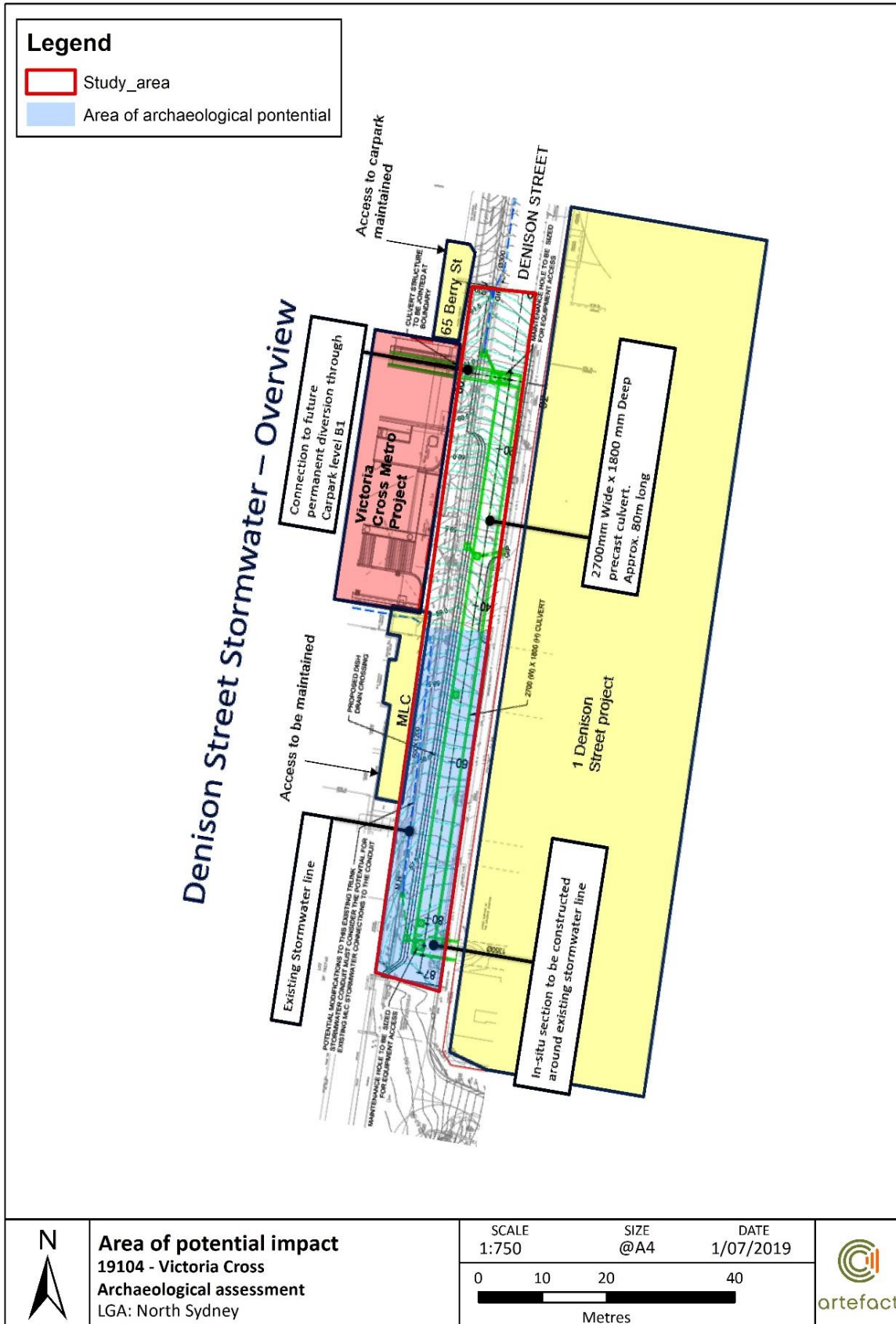


3.2 Assessment of potential archaeological impact

Overall, the study area has been assessed as having a low-moderate potential for archaeological remains of local significance relating to the nineteenth century establishment of Denison Street and early utilities (Phase 2). The study area has some limited potential to contain an intact artefactual resource associated with this phase of use with the ability to provide insight into the life-ways of the former inhabitants of the site. Remains of the early alignment of Denison Street and the early utilities would be considered to be 'works' not relics under the Heritage Act.

The proposed works in the southern half of the study area may have an overall minor -moderate impact to potential archaeological remains of the nineteenth century roads and utilities (Figure 3). The proposal has the potential to impact on archaeological 'works' of local significance. Relics as defined by the Heritage Act are unlikely to be impacted.

Figure 3: Area of potential for locally significant remains to be impacted by the proposed works



3.3 Archaeological methodology

Due to the density of services in the area identified as having minor -moderate potential to impact archaeological remains (illustrated on Figure 3), and the robust nature of the anticipated archaeological resource, archaeological testing using non-destructive digging (NDD) will be undertaken in several locations within the study area.

3.3.1 Archaeological testing methodology

It is recommended that three NDD test trenches be excavated in the southern section of the study area assessed as having archaeological potential. This would determine whether any archaeological remains are located within the study area. Each trench should extend to a length and width of 750mm to allow for clear inspection of the underlying stratigraphy.

In order to verify the location of existing utilities, several investigative trenches will be excavated within Denison Street. Trenches A, B and D (see Appendix A) would be excavated under supervision of the archaeologists, unless otherwise agreed.

The final location of these test trenches would be surveyed on completion of the testing program.

Should archaeological remains associated with former road infrastructure be identified, these would be recorded by the archaeologist/archaeological team on site. Trenches would then be backfilled with a suitable substrate and bitumen reinstated (this would be the responsibility of Lendlease).

In the unlikely event that considerably intact or significant remains are unexpectedly encountered during the testing program it is possible alternative archaeological methodologies would need to be implemented (horizontal salvage or in situ conservation may be required). This would be discussed with Lendlease in the first instance.

3.3.2 Archaeological research design

The study area has limited potential to contain an archaeological resource with the potential to contribute significantly to our understanding of the history of the local area. The following brief research questions have been provided to guide the testing program:

- Are archaeological remains relating to earlier phases of the construction and use of Denison Street present?
- What is the nature and extent of these surviving archaeological remains?
- What historical information do these remains provide?
- What is the significance of these remains?

3.3.3 Heritage induction

Archaeological heritage will be included in the general project induction for all personnel. At a minimum, this would include an overview of the project and employee obligations, archaeological management and the role of the archaeological team. Toolbox meetings will also be undertaken as and when required; covering specific environmental issues and heritage control measures

3.3.4 Contractor responsibilities

The contractor would set up site and then operate under the direction of the archaeologists during archaeological testing. This would include but not be limited to:

- Set out and secure the work area for the construction and archaeological team
- Provide shoring, if required
- Provide all equipment necessary to safely undertake NDD excavation
- Provide traffic control and implement any other safety measures required.

The contractor would be responsible for the backfilling of all test trenches with a suitable substrate, and reinstate bitumen/surfaces, as required.

3.3.5 Excavation recording methodology

The recording would be undertaken in accordance with the guidelines issued by the Heritage Council of NSW. The recording methodology includes the following:

- A site datum would be established
- Survey and scaled plans of the area, trench locations and any significant archaeological features uncovered. The plans would include elevations recorded with a dumpy level.
- Scaled section drawings where appropriate
- Photogrammetry where appropriate
- Digital photography, in RAW format, using photographic scales and photo boards where appropriate. A photographic record of all phases of the work on site would be undertaken
- A standard context recording system will be employed: The locations, dimensions and characteristics of all archaeological features and deposits will be recorded on a sequentially numbered context register. This documentation will be supplemented by preparation of a Harris matrix showing the stratigraphic relationships between features and deposits
- Artefact collection by context (if applicable). Large or redundant artefactual materials from individual contexts would be sample collected. Hazardous material would not be collected.
- Registers of contexts, photos, samples and drawings would be kept.

3.3.6 Reporting

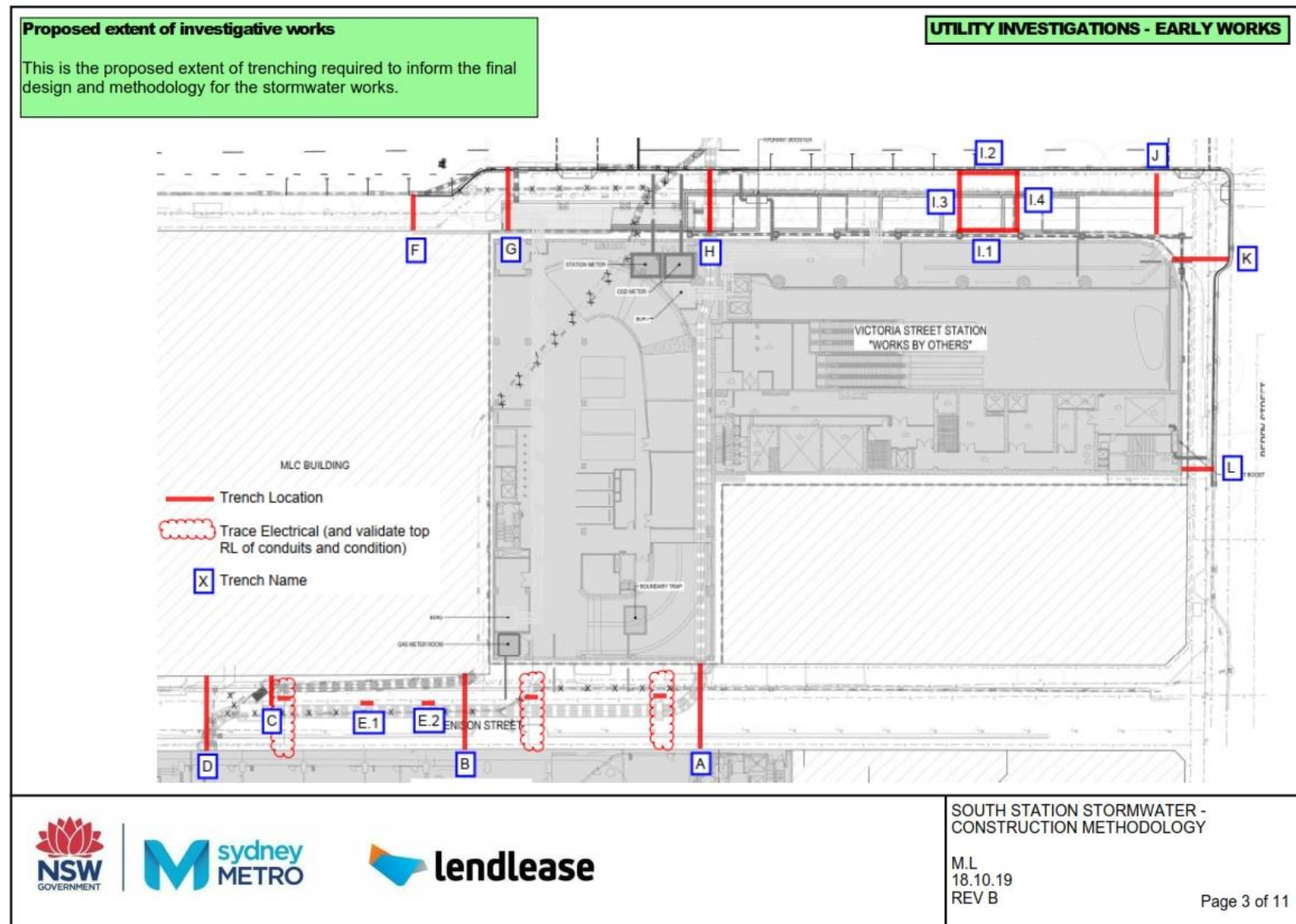
A test excavation results report would be prepared following completion of the works outlined in this AMS. This report would outline the main archaeological findings, post-excavation and analysis requirements, and identify if further archaeological work would be required, or if results would be appropriate for public interpretation. This report is likely to be brief unless substantial remains are encountered.

The report would be prepared in accordance with the standard conditions of archaeological permits issued under the Heritage Act:

- a. An executive summary of the archaeological programme;
- b. Due credit to the client paying for the excavation, on the title page;

- c. An accurate site location and site plan (with scale and north arrow);
- d. Historical research, references and bibliography;
- e. Detailed information on the excavation, including the aim, the context for the excavation, procedures, treatment of artefacts if applicable (cleaning, conserving, sorting, cataloguing, labelling, scale photographs and/or drawings, location of repository) and analysis of the information retrieved;
- f. Nominated repository for the items (if applicable);
- g. Detailed response to research questions (at minimum those stated in this document);
- h. Conclusions from the archaeological programme. The information must include a reassessment of the site's heritage significance, statement(s) on how archaeological investigations at this site have contributed to the community's understanding of the site and other comparable archaeological sites in the local area and any relevant recommendations for the future management of the site information and artefacts;

APPENDIX A –TRENCH LOCATIONS





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Memo—Archaeological Monitoring Results

Project: Victoria Cross Station – Denison Street	Date: 8 April 2020
Worksite Location: Denison Street, North Sydney, NSW 2060	Author: HollyMae Steane Price (Heritage Consultant)
	Client: Lendlease

Project background

The Sydney Metro City & Southwest Chatswood to Sydenham project was approved by the Minister for Planning on 9 January 2017 subject to a number of Conditions set out in a Critical State Significant Infrastructure (CSSI) approval (CSSI 15_7400) and Modification 3 (CSSI 7400 MOD 3). An Archaeological Assessment and Research Design (AARD) was prepared by Artefact Heritage in consultation with Heritage NSW, Department of Premier and Cabinet (formerly the NSW Heritage Division, Office of Environment and Heritage) as a delegate of the NSW Heritage Council in August 2016.¹

The AARD included an assessment of Victoria Cross Station and recommended a brief Archaeological Method Statement (AMS) be completed for the site. Subsequently, AMBS completed an AMS for Victoria Cross Station.² In September 2019 Artefact Heritage were engaged by Lendlease to prepare a Historical Archaeological Assessment (HAA) for stormwater relocation works associated with the construction of Victoria Cross Station. The HAA identified that a portion of Denison Street, North Sydney (the study area) has the potential to contain significant archaeological resources. The HAA recommended that an Archaeological Method Statement (AMS) be prepared to guide excavation works for the project.

Artefact Heritage was engaged by Lendlease to prepare the AMS for the proposed Denison Street works. The AMS concluded that the study area had low-moderate potential to contain archaeological remains relating to the nineteenth century establishment of Denison Street and early utilities. Intact remains may reach the local significance threshold. It was concluded that remains of this would be considered to be 'works,' not relics, under the NSW Heritage Act.

Service locating works for the project were undertaken on 11, 12 and 14 February with five, one and three trenches excavated on each night respectively. The works were monitored by HollyMae Steane Price, archaeologist, Artefact Heritage. The results of the archaeological monitoring are outlined in this memo.

This memo has been prepared by HollyMae Steane Price and reviewed by Jenny Winnett, Principal, Artefact Heritage.

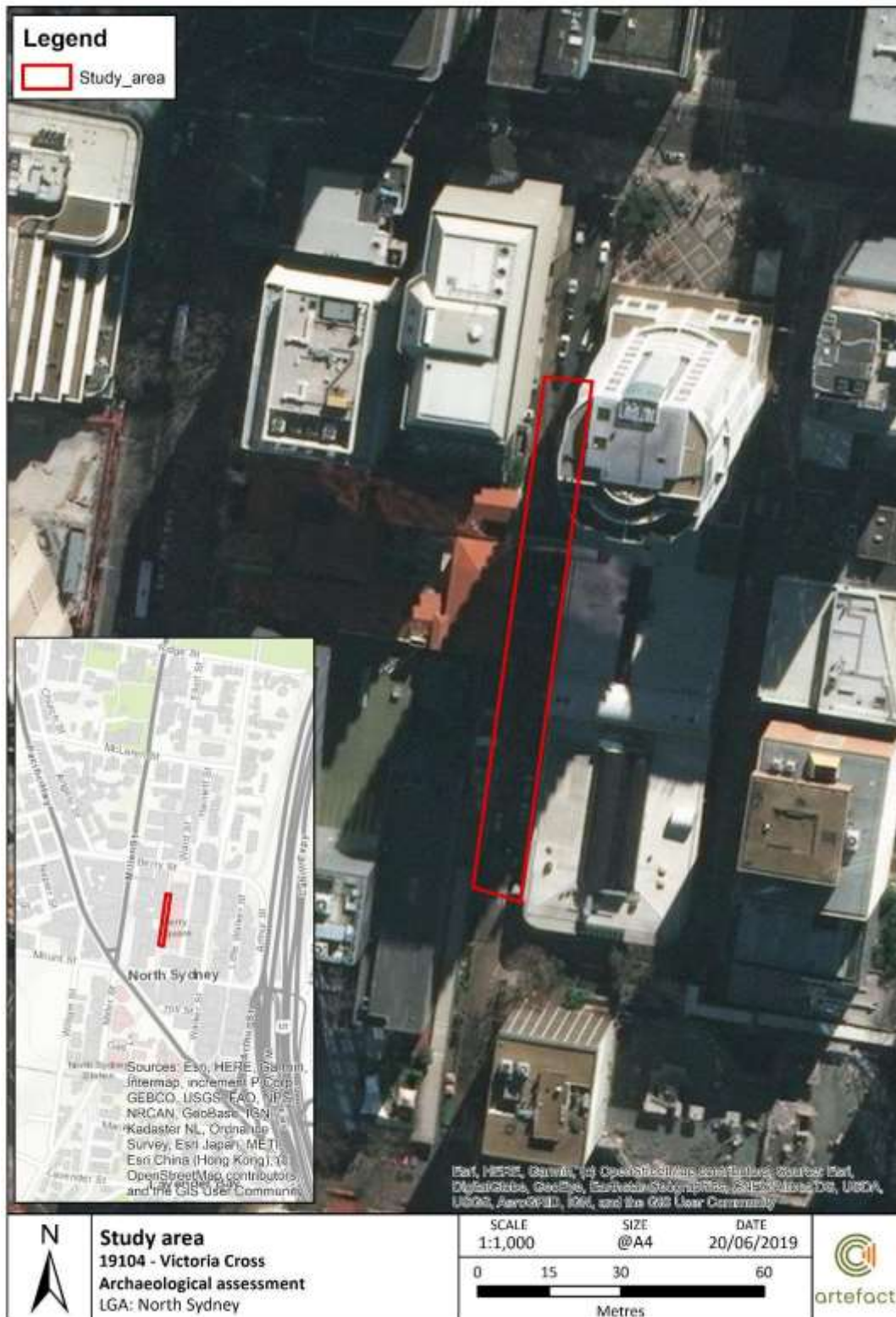
¹ Artefact Heritage *Sydney Metro City & Southwest Chatswood to Sydenham - Historical Archaeological Assessment & Research Design* Report to Jacobs / Arcadis / RPS, April 2016

² AMBS *Ecology and Heritage, Sydney Metro, City & Southwest Archaeological Method Statement for Victoria Cross Station* November 2017

The Study Area

The study area is a section of Denison Street, North Sydney, located between Mount Street (in the south) and Berry Street (in the north) (see Figure 1). The study area is within the historic Parish of Willoughby, County of Cumberland, and the North Sydney LGA.

Figure 1: The study area



Historical context

The historical development of study area and surrounds can be divided into the following phases of activity:

- Phase 1 (1788 - c1838) European exploration and early land grants: early land use associated with timber getting, vegetation clearance and road building
- Phase 2 (1838 – c1880s) subdivision and development: establishment of the southern portion of Denison Street
- Phase 3 (1980s - 1932) continued development: installation of utility services within the southern half of the study area
- Phase 4 (1932 – present) Sydney Harbour Bridge and further development: Extension of Denison Street to Berry Street and further installation of utility services in the northern portion of the study area. Any archaeological remains within the study area would relate to the extant road and its construction along with modern utilities.

Monitoring results

The monitored utility investigation works consisted of the excavation of nine slit trenches in areas identified as having the potential to contain live services. The overlying road surface was cut by road saw and the underlying fill removed using non-destructive digging via hydro excavation and vacuum truck.

Trench 1 (C. 1)

Excavated on 11 February, Trench 1 was excavated to a length of 1.2 m and width of 150 mm. The modern brick road surface was 100 mm thick and consisted of asymmetrical machine pressed bricks 240 mm x 120 mm x 100 mm in size. The bricks were a dark brown-red colour and were present across the southern half of Denison Street extending to the traffic control ramp at 27 Denison Street. The northern half of Denison Street has a consistent dark black grey asphalt surface.

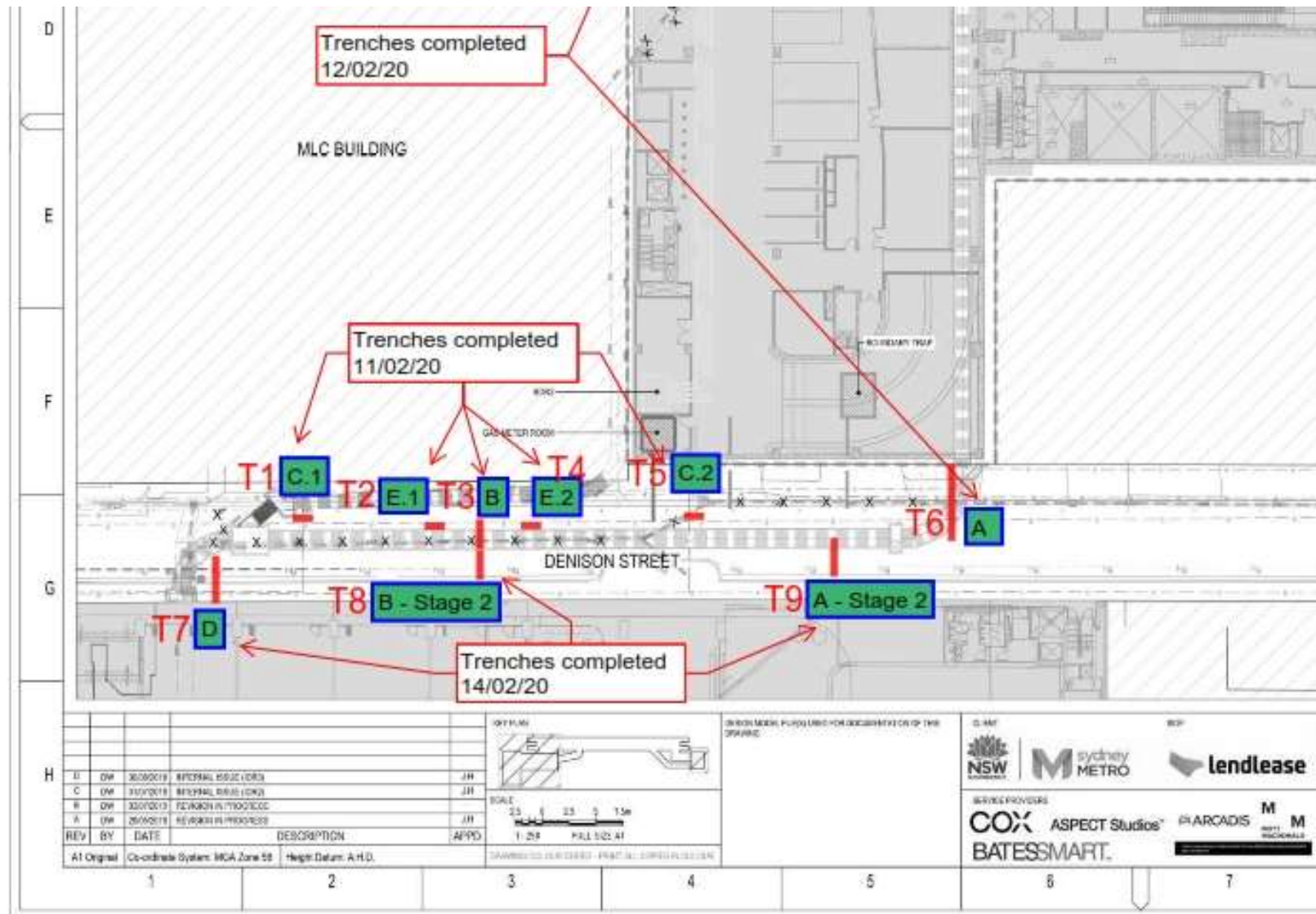
The modern brick surface overlay a former asphalt road surface which was 100 mm thick. The compacted asphalt layer contained a high percentage of aggregate. Below the asphalt, the trench contained mixed gravelly backfill with sandstone rubble inclusions down to a service which was identified at a depth of 600 mm. The service was protected by modern bricks which overlay it.

No significant archaeological remains were identified within this trench.

Figure 2: Section showing stratigraphy of Slit Trench 1. Western aspect



Figure 3: Trench location map. Source: Lendlease, annotated in red by Artefact



Trench 2 (E. 1)

Trench 2, to the north of Trench 1 and excavated on 11 February, was 1.2 m long by 150 mm wide. The same brick road surface identified in Trench 1 was 100 mm thick, and overlay a previous compacted aggregate rich asphalt road surface which was 80 mm thick. Below the asphalt was a layer of sandstone blocks forming a level surface which was 200 mm thick. Below the sandstone block surface was a dense gravelly fill which continued for 600 mm to the top of a metal pipe.

The sandstone block surface is likely to be a previous iteration of Denison Street.

Figure 4: Section showing stratigraphy of Slit Trench 2. Western aspect



Trench 3 (B)

Trench 3, an east to west aligned trench to the north of Trench 2 and excavated on 11 February, was 1.7 m long and 150 mm wide. The asymmetrical brown-red brick road surface was 100 mm thick and overlay a previous compacted and aggregate rich asphalt road surface which was 100 mm thick. Below the asphalt was a layer of sandstone blocks forming a surface. A rusted small-bore pipe ran north to south across the trench and was at 600 mm depth from surface. At 600 mm depth were two narrow bore iron pipes.

Figure 6: Slit Trench 3. Eastern aspect



Figure 7: Section showing stratigraphy of Slit Trench 3. Northern aspect



Trench 4 (E. 2)

Trench 4, a north to south aligned trench to the north of Trench 3 which was excavated on 11 February, was 1.5 m long and 150 mm wide. The asymmetrical brown-red brick road surface was 100 mm thick and below that was a compacted aggregate rich asphalt layer 100 mm deep. The asphalt was directly above a sandstone block layer which was approximately 200 mm deep and lay above a sandy gravel levelling material.

Figure 5: Section showing stratigraphy of Slit Trench 4. Eastern aspect



Trench 5 (C. 2)

Trench 5 was aligned north to south, and excavated on 11 February. The trench was north of Trench 4, extending to a length of 1.4 m and width of 150 mm. The upper road layer consisted of modern concrete which corresponded with the northern ramp of a traffic calming construction. The concrete was approximately 200 mm deep and lay directly above backfill material above the two services below.

Figure 6: Section showing stratigraphy of Slit Trench 5. Eastern aspect



Trench 6 (A)

Trench 6, an east to west aligned trench excavated on 12 February, was in two parts, one being 2.5 m long and within the road corridor (east) and the other being 600 mm within the footpath (west). The trench was 150 mm wide. Within the road corridor the current road surface asphalt was 200 mm thick and overlay a dense light grey-cream coloured sandy concrete with angular basalt chip inclusions approximately 40 mm in size. This trench was not excavated to a further depth.

The excavation within the footpath revealed a 200 mm thick concrete pavement poured directly onto a 50 mm thick polystyrene layer over highly disturbed and mixed backfill approximately 100 mm thick. The backfill came down onto bricks which covered live services which lay at 450 mm depth below surface.

Figure 7: Section showing stratigraphy of Slit Trench 6 east. Northern aspect



Figure 8: Section showing stratigraphy of Slit Trench 6 west. Northern aspect



Figure 9: Slit Trench 6 west. Eastern aspect



Trench 7 (D)

Excavated on February 14, east to west aligned Trench 7 was the southernmost trench excavated as part of these works. The trench was 3.4 m in length and 150 mm wide. Within the trench was evidence of the former sandstone alignment of Denison Street which was 300 mm below the current asymmetrical brown-red brick road surface level. A hole was excavated through the sandstone level to a depth of 700 mm through a sandy gravelly levelling deposit. The sandstone surface layer was 200 mm thick.

Figure 10: Slit Trench 7. Western aspect



Figure 11: Section showing stratigraphy of Slit Trench 7 and depth of sandstone. Northern aspect



Trench 8 (B – Stage 2)

Trench 8 was an eastern continuation of Trench 3 and was excavated on 14 February. The trench was 2.2 m long and 150 mm wide. The brick road surface was 100 mm deep and lay above a remnant asphalt road surface which was also 100 mm thick and was directly above a sandstone surface. Partial excavation through the sandstone surface into the underlying material revealed a sandy gravelly deposit which continued to 650 mm.

Figure 12: Section showing stratigraphy of Slit Trench 8 mid. Northern aspect



Trench 9 (A – Stage 2)

Trench 9 was excavated on 14 February and was 3.5 m long by 150 mm wide. The asphalt layer at the top of the trench was 200 mm thick and was above a mixed backfill deposit associated with the installation of services. At the east end of the trench there was a builder's sand backfill deposit over a high-pressure gas service. The trench reached 900 mm at its deepest and 'no heritage was encountered.

Figure 13: Slit Trench 9. Western aspect



Figure 14: Section showing stratigraphy of Slit Trench 9. Northern aspect



Interpretation

The sandstone blocks within Trench 2, Trench 4, Trench 7 and Trench 8 were interpreted as being remnant road surface associated with the first alignment of Denison Street and part of Phase 2 of the development of the area between 1838 and 1880.

The conglomerate material encountered in Trench 6 (east) is a previous alignment of Denison Street associated with the extension of Denison Street to Berry Street (1932 onwards) and likely extends within the road corridor from 27 Denison Street to the pedestrian crossing to the north at the junction with Berry Street.

Significance

The sandstone road surface has been interpreted as the first alignment of Denison Street. This would have Local Significance under Criterion E:

Archaeological remains associated with the establishment of the first alignment of Denison Street and early utilities may provide information on development of the northern side of the harbour, with the opportunity for comparative analysis.³

³ Artefact Heritage Victoria Cross Station – Denison Street Stormwater Works Archaeological Method Statement December 2019

And criteria A, C, F and G:

Remains from Phase 2 have the potential to illustrate the early development of North Sydney roads and infrastructure.

The sandstone surface has been interpreted as being evidence of the Phase 2 (1838-1880) formation of Denison Street. The remains of the former road are considered to be a 'work' of local significance.

Further actions required

It is recommended that sample excavation and recording of the former sandstone road surface identified within Trenches 7 and 8 is undertaken during stormwater trenching along Denison Street. During these works the following methodology should be adopted:

- Detailed sample excavation and recording:
 - A portion of the sandstone surface would be exposed using machine and hand excavation (as appropriate) to allow the archaeologists to prepare a detailed record of a sample of the former road surface
 - The portion to be recorded would be determined by the archaeologists on site but should, at a minimum, cover an area measuring approximately 2m² (if the feature survives to this extent)
 - The portion of the sandstone feature would be subject to detailed photography using an appropriate scale, recorded and planned
 - Sandstone blocks within the area subject to sample recording should then be lifted (by machine if required) allowing the underlying stratigraphy to be recorded by the archaeologist
 - Assuming nothing unexpected is identified, the remainder of the stormwater works can continue without archaeological supervision under the project Unexpected Finds Procedure.
- Survey
 - The full extent of the feature should be surveyed, and the results included in the final report.
- Final report
 - A final monitoring results report would then be produced, including digitised detail plans and site survey.