

# CONSTRUCTION HERITAGE MANAGEMENT PLAN

## Moorebank Precinct East Stage 2

30 OCTOBER 2020

## SYDNEY INTERMODAL TERMINAL ALLIANCE

## Moorebank Precinct East Stage 2

Author

[REDACTED]

[REDACTED]

Checker

[REDACTED]

[REDACTED]

Approver

[REDACTED]

[REDACTED]

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## Original Author Details

Author Details	Qualifications and Experience
Dr. Sandra Wallace Artefact Heritage 4/35 Saunders St, Pyrmont NSW 2009	BA (hons), PhD (Historical and Prehistoric archaeology)  15 years' experience in heritage consultancy specialising in Aboriginal and non-Aboriginal archaeology and built heritage assessment.

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		<ul style="list-style-type: none"> <li>RfMA 014 – Suitable spoil importation</li> </ul>		
		<ul style="list-style-type: none"> <li>RfMA 015 – Moorebank Precinct EPL</li> </ul>		
		<ul style="list-style-type: none"> <li>RfMA 019 – Clarification of definitions for Early Works and Construction Phase A activities</li> </ul>		
012	21/11/2019	<ul style="list-style-type: none"> <li>RfMA 024 – MPW EPBC (2011/6086) and MPE EPBC (2011/9229) approval requirements for DotEE review and approval</li> </ul>		
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013	20/12/2019	Minor update to address ER comments associated with RfMA 019 – Clarifications of definitions for Early Works and Construction Phase A activities		
014	30/10/2020	Updates associated with:		
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		<ul style="list-style-type: none"> <li>RfMA-028 – MAUW/MADR stockpile areas</li> </ul>		
		<ul style="list-style-type: none"> <li>SSD 7628-Mod 2 approval</li> </ul>		
		<ul style="list-style-type: none"> <li>Periodic review of management plans – Unexpected Finds Protocol (Non-Aboriginal heritage)</li> </ul>		

## KEY TERMS AND ACRONYMS

Term	Meaning
AHD	Australian Heritage Database
AHIP	Aboriginal Heritage Impact Permit
AHMS	Archaeological Heritage Management Service
Archaeological Potential	Potential of a site to contain archaeological remains. This potential is assessed by identifying former land uses and associated features through historical research, and evaluating whether subsequent actions (either natural or human) may have impacted on evidence for these former land uses.
CBD	Central Business District
CCCS	Construction Community Communication Strategy
CCOS	Council of City of Sydney
Contractor's CM	Contractor's Construction Manager
Contractor's EM	Contractor's Environment Manager
CEMP	Construction Environmental Management Plan
CHL	Commonwealth Heritage List
CHMP	Construction Heritage Management Plan
CoCs	Conditions of Consent
Construction area / Construction footprint	Extent of construction works, namely areas to be disturbed during the construction of the Project, as identified in the MPE S2 RtS.
Contractor	Principal Contractor
DNSDC	Defence National Storage and Distribution Centre
DoEE	Commonwealth Department of the Environment and Energy
DP&E	Department of Planning and Environment
DPI	NSW Department of Primary Industries
EEC	Endangered Ecological Community
EIS	Environmental Impact Statement
EPA	NSW Environment Protection Authority
EPBC Act	Commonwealth Environment Protection and Biodiversity Conservation Act 1999
MPE EPBC Approval	Approval (No. 2011/6229) granted under the EPBC Act on March 2014 by the Commonwealth Department of Environment for the development of the SIMTA Moorebank Intermodal Terminal Facility at Moorebank.
MPW EPBC Approval	Approval (No. 2011/6086) granted under the EPBC Act on September 2016 by the Commonwealth Department of Environment and Energy for the development of the SIMTA Moorebank Intermodal Terminal Facility at Moorebank.
EPL	Environment Protection Licence
ER	Environmental Representative
ha	hectare



Term	Meaning
HIA	Heritage Impact Assessment
HIP	Heritage Interpretation Plan
HIS	Heritage Interpretation Strategy
IMEX	Import Export Terminal. Includes the following key components: Truck processing, holding and loading areas - entrance and exit from Moorebank Avenue Rail loading and container storage areas – installation of four rail sidings with adjacent container storage area serviced by manual handling equipment initially and overhead gantry cranes progressively Administration facility and associated car parking- light vehicle access from Moorebank Avenue.
ISCA	Infrastructure Sustainability Council of Australia
km	kilometres
LEP	Local Environment Plan
LGA	Local Government Area
Local significance	An item is important in the course or pattern of the local area's cultural or natural history.
MHG	Moorebank Heritage Group
Minister, the	NSW Minister for Planning
MPE	Moorebank Precinct East
MPE Stage 1 Project	MPE Stage 1 Project (SSD 14-6766) for the development of the Intermodal terminal facility at Moorebank. This reference also includes associated conditions of consent and environmental management measures which form part of the documentation for the approval.
MPE Stage 2 EIS	Moorebank Precinct East Stage 2 Proposal – Environmental Impact Statement publicly exhibited between 13 December 2016 and 24 February 2017.
MPE Stage 2 RtS	Moorebank Precinct East Stage 2 Proposal – Response to Submissions Report (July 2017), prepared in response to the submissions received regarding the MPE Stage 2 Proposal.
MPW	Moorebank Precinct West
NHL	National Heritage List
Non-compliance	An occurrence, set of circumstances, or development that results in a non-compliance or is non-compliant with Development Consent SSD 7628 Conditions of Consent or EPBC Act Approval (EPBC 2011/6229) Conditions of Approval but is not an incident
Non-conformance	Observations or actions that are not in strict accordance with the CEMP and the aspect specific sub-plan
NVIA	Noise and Vibration Impact Assessment
Operational area / Operational footprint	Extent of operational activities for the operation of the Project.
OEH	Office of Environment and Heritage
OEMP	Operational Environmental Management Plan
PAC	Planning Assessment Commission

Term	Meaning
Package 1	The Rail Link (not included within this CHMP) includes a connection to the IMEX, and traverses across Moorebank Avenue, Anzac Creek and Georges River prior to connecting to the Southern Sydney Freight Line.
PAD	Potential Archaeological Deposit
Project site / Project footprint	The subject of the MPE Stage 2 EIS, the part of the MPE site which includes all areas to be disturbed by the Project (including the operational area and construction area).
Rail link	Part of the MPE Stage 1 Proposal (14-6766), connecting the MPE site to the SSFL. The Rail link (as discussed above) is to be utilised for the operation of the Proposal.
RAP	Registered Aboriginal Parties
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.
RtS	Response to Submissions
SIMTA	Sydney Intermodal Terminal Alliance
SME	School of Military Engineering
SSD	State Significant Development
SSFL	Southern Sydney Freight Line
The Burra Charter	The Australia ICOMOS Charter for Places of Cultural Significance (Adopted 31 October 2013)
Project, the	The MPE Stage 2 Project, namely Stage 2 of the MPE Concept Approval (MP 10_0193) and the Modification 2 Approval under SSD 7628. It involves the construction and operation of warehousing and distribution facilities on the MPE site within the Moorebank Precinct as approved under SSD 16-7628. It upgrades to approximately 2.1 kilometres of Moorebank Avenue.
Project site / Project footprint	The subject of the MPE Stage 2 EIS, the part of the MPE site which includes all areas to be disturbed by the Project (including the operational area and construction area).
UFP	Unexpected Finds Protocol

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# 1 BACKGROUND

The Sydney Intermodal Terminal Alliance (SIMTA) received development consent for the construction and operation of Stage 2 of the Moorebank Precinct East (MPE) Project (SSD 7628), which comprises the second stage of development under the MPE Concept Approval (MP10\_0193) and approved under Development Approval SSD 7628. This was subsequently modified and approved under SSD 7628 Modification 2 (SSD 7628-Mod 2). This Construction Heritage Management Plan (CHMP) has been developed to manage impacts to heritage items and values during the construction of Stage 2 of the Moorebank Precinct East (MPE) Project (hereafter, 'the Project').

Within this plan, a strategy has been established to demonstrate the contractor's approach to the management of heritage items and values. This CHMP addresses the relevant requirements of the Development Consent, including the Environmental Impact Statement (EIS), Response to Submissions Report (RtS) and Minister's Conditions of Consent (CoCs), and all applicable guidelines and standards specific to the management of heritage during construction of the Project.

## 1.1 Introduction

The MPE site, including the Project site, is located approximately 27 kilometres (km) south-west of the Sydney Central Business District (CBD) and approximately 26 km west of Port Botany and includes the former Defence National Storage and Distribution Centre (DNSDC) site. The MPE site is situated within the Liverpool Local Government Area (LGA), in Sydney's South West subregion, approximately 2.5 km from the Liverpool City Centre.

The Project involves the development of an intermodal facility including warehouse and distribution facilities, freight village (ancillary site and operational services), stormwater, landscaping, servicing and associated works on the eastern side of Moorebank Avenue, Moorebank.

Stage 2 of the Project involves the construction and operation of warehousing and distribution facilities on the MPE site and upgrades to approximately 2.1 km of Moorebank Avenue.

Key components of the Project include:

- Earthworks including the importation of 600,000m<sup>3</sup> of fill and vegetation clearing
- Importation, stockpiling and placement of up to 250,000 m<sup>3</sup> of suitable spoil (separate to the 600,000 m<sup>3</sup> of imported clean general fill permitted for bulk earthworks)
- Approximately 300,000m<sup>2</sup> gross floor area (GFA) of warehousing and ancillary offices
- Warehouse fit-out
- Freight village, 8000m<sup>2</sup> GFA of ancillary retail, commercial and light industrial land uses
- Internal road network and hardstand across the site
- Ancillary supporting infrastructure within the site, including:
  - Stormwater, drainage and flooding infrastructure
  - Utilities relocation/installation
  - Fencing, signage, lighting, remediation and landscaping.
- Moorebank Avenue upgrade including:
  - Raising by about two metres and some widening
  - Embankments and tie-ins to existing Moorebank Avenue road levels
  - Signalling and intersection works
- Intersection upgrades along Moorebank Avenue including:
  - Moorebank Avenue/MPE Stage 2 access
  - Moorebank Avenue/MPE Stage 1 northern access

- Moorebank Avenue/MPE Stage 2 central access
- Moorebank Precinct West Southern Access/MPE Stage 2 southern emergency access.

The Site location is provided in Figure 1-1.



## Construction Heritage Management Plan

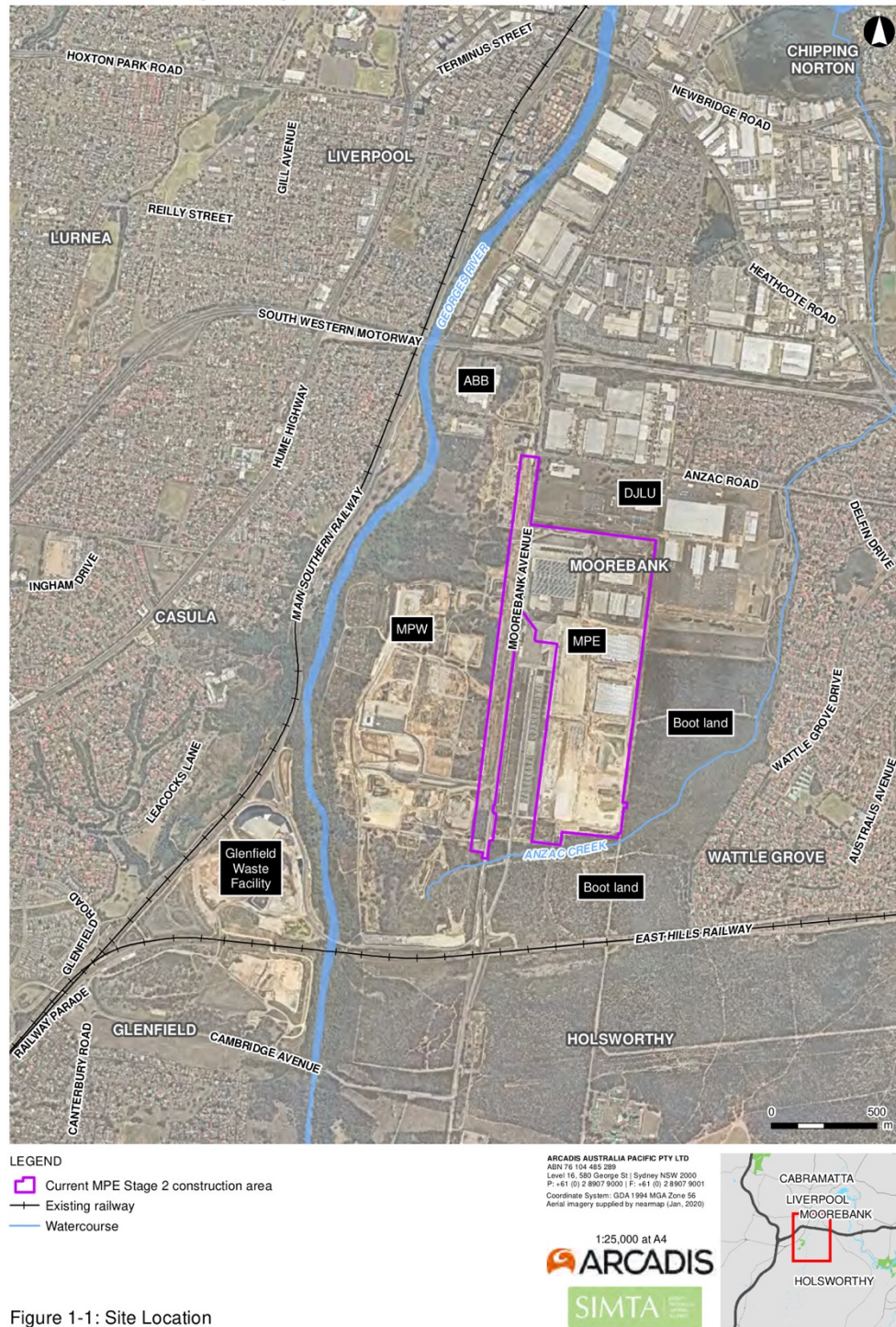


Figure 1-1 Site Location



## 1.2 Development Consent

The MPE Stage 2 Project has been assessed by the Department of Planning and Environment (DP&E) under Part 4, Division 4.1 (now Division 4.7 as of 1 March 2018) of the *Environmental Planning and Assessment Act 1979* (EP&A Act) as State significant development (SSD). The Planning Assessment Commission (PAC) granted development consent for the MPE Stage 2 Project on 31 January 2018 and is subject to the Minister's CoCs (ref SSD 7628). The Project has been subsequently modified and approved under SSD 7628-Mod 2 on 31 January 2020. The Project, including its potential impacts, consultation and proposed mitigation and management, is documented or referenced in the following suite of documents:

- State Significant Development (SSD) Consent SSD 7628 and Modification 2 SSD 7628-Mod 2
- Moorebank Precinct East – Stage 2 – Environmental Impact Statement (Arcadis Australia Pacific Pty Limited, December 2016)
- Moorebank Precinct East – Stage 2 (Modification 2) – Environmental Impact Statement (Aspect Environmental Pty Limited, July 2019)
- Moorebank Precinct East – Stage 2 – Response to Submissions (Arcadis Australia Pacific Pty Limited, July 2017)
- Moorebank Precinct East – Stage 2 (Modification 2) – Response to Submissions (Aspect Environmental Pty Limited, September 2019)
- MPE *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) Approval (No. 2011/6229) granted on March 2014
- MPW *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) Approval (No. 2011/6086) granted on September 2016 (for Moorebank Avenue Upgrade Works only)
- Consolidated assessment clarification responses issued on 10 November 2017.

## 1.3 Project Delivery Phases

The Project construction period is anticipated to be approximately 24 to 36 months, which will be generally divided into three works phases, as detailed in the following sections.

The terminology for the project phases or periods has developed from the preparation of the EIS and RtS documentation in response to the language of the CoCs and the need to stage the delivery of the environmental management documentation required by the CoCs. Current terminology, and the equivalent terminology from the CoC and RtS are included in Table 1.

Table 1 Project Delivery Phase Terminology

Project Delivery Phase	CoC A18 Phase Equivalent	MPE Stage 2 RtS Works Period Equivalent
Early Works	Early works Fill importation (to 60,000m <sup>3</sup> )	Works Period A: Pre-construction Works Period B: Site preparation
Construction Phase A	Fill importation Construction	Works Period B: Site preparation Works Period E: Bulk earthworks Works Period F: Construction and internal fit out of warehousing Works Period G: Miscellaneous construction works

Project Delivery Phase	CoC A18 Phase Equivalent	MPE Stage 2 RtS Works Period Equivalent
Construction Phase B	Fill importation Construction	<p>Works Period C: Construction of Moorebank Avenue Diversion Road</p> <p>Works Period D: Pavement and intersection works along Moorebank Avenue</p>

### 1.3.1 Early Works

Early Works is generally described as site preparatory works including utilities adjustments and relocations, clearing and stripping of topsoil (top 100mm of topsoil), heritage salvage and fill importation (including virgin excavated natural material [VENM] and excavated natural material [ENM], up to 60,000 m<sup>3</sup>), establishment of site access, temporary fencing and compound establishment, asbestos and hazardous material removal and the preparation of demolition of buildings.

The Early Works includes but is not limited to:

- Geotechnical and utilities investigation works including potholing to confirm the location of existing services, disconnection of non-critical services (with retention in place), grout filling of disconnected draining lines, and adjustment and relocation where applicable
- Clearing of non-native vegetation, stripping of topsoil and stockpiling of topsoil on site for later re-use within site landscaping
- Stabilisation of areas where topsoil has been stripped with imported clean hard fill or by other methods determined by the Environmental Representative (ER) to have minimal environmental impact
- Removal of asbestos from heating equipment and fire resistant building elements (e.g. fire doors) by a licenced asbestos removalist followed by clearance by a certified occupational hygienist
- Hazardous material cleaning and decontamination in Buildings 67, 69, 81 and 83
- Heritage salvage works in Buildings 37, 75 and 80 on the Project site to recover architectural elements for adaptive re-use
- Importation, stockpiling and placement of up to 60,000 m<sup>3</sup> (not exceeding a total of 22,000 m<sup>3</sup> of material per day) of imported clean general fill material by truck-and-dog and / or semi-trailer
- Establishment of a site access point at the existing MPE site northern access and construction of associated access road, utilising existing paved areas with minor pavement extension as required, to provide for access and manoeuvrability of vehicles into and through the site in accordance with CoC B10
- Establishment of temporary site fencing, a site compound(s) and temporary car parking areas to support Early Works and construction of the Project in accordance with CoC B10, B11 and B12
- Other activities determined by the ER to have minimal environmental impact.

Any of the activities defined in SSD Consent 7628 as 'Early Works' may be undertaken during the Early Works. All works during Early Works will be undertaken in accordance with the Early Works Management Plan (EWEMP) and required sub-plans.

Upon the commencement of construction, the Project's CEMP will supersede the EWEMP.

### 1.3.2 Construction Works Phase A (Excluding Moorebank Avenue Upgrade Works)

Construction Works Phase A will include all works described in Early Works in addition to bulk earthworks, drainage and utilities, construction and internal fit-out of warehousing and finishing works.

Construction Works Phase A excludes Moorebank Avenue works described in Section 0.

Construction Works Phase A includes, but is not limited to:

#### Completion of Site Preparation Activities

- Demolition of existing structures
- Clearing of remaining vegetation
- Adjusting the building formation of the site (to final operational levels) within which the Warehousing Compound will be located
- Establishment of temporary batch plant and materials crushing plant

#### Bulk Earthworks, Drainage and Utilities

- Importation, stockpiling and placement of up to 600,000 m<sup>3</sup> of imported clean general fill for bulk earthworks
- Importation, stockpiling and placement of up to 250,000 m<sup>3</sup> of suitable spoil (separate to the 600,000 m<sup>3</sup> of imported clean general fill permitted for bulk earthworks)
- Installation of on-site detention (OSD) and drainage infrastructure within the MPE Stage 2 site
- Construction of retaining walls
- Creation of internal road formation by general earthworks (by constructing fill embankments)
- Bulk earthworks and adjusting the building formation of the Project site to final level, including the terminal hardstand
- Utilities relocation and installation
- Establishment of hardstand areas.

#### Construction and Internal Fit-out of Warehousing

- Foundation and floor slab installation
- Erection of framework and structural walls
- Installation of roof
- Internal fit-out of warehouses (racking and associated services).

#### Miscellaneous construction and finishing works

- Pavement construction (internal transfer roads and perimeter road), including forming of new kerbs, gutters, medians (where required) and other structures
- Line marking, lighting and sign posting
- Installation of road furniture, including traffic signs and pavement markers
- Miscellaneous structural construction
- Finishing works, including landscaping and general site rehabilitation, where required
- Commissioning of the Project
- Decommissioning/demobilisation of the Project site, including removal of construction compound(s) and temporary construction environmental controls.

### 1.3.3 Construction Works Phase B (All Construction Activities)

Construction Works Phase B will include all works described in Early Works and Construction Works Phase A, in addition to the Moorebank Avenue upgrade works. Generally, the Moorebank Avenue upgrade works are described as construction of the Moorebank Avenue Diversion Road, bulk earthworks, drainage and utilities, and pavement works.

Construction Works Phase B includes, but is not limited to:

#### **Construction of the Moorebank Avenue Diversion Road**

- Stripping of topsoil within footprint of temporary diversion road
- Installation of temporary drainage
- Placement of fill and temporary road pavement (e.g. gravel)
- Construction of interface between temporary diversion road and existing Moorebank Avenue
- Installation of temporary road signage, street lighting and signalling
- Transfer of traffic onto temporary diversion road from Moorebank Avenue.

#### **Bulk Earthworks, Drainage and Utilities**

- Removal of existing pavement and stripping of topsoil within Moorebank Avenue
- Importation, stockpiling and placement of approximately 600,000 m<sup>3</sup> of imported clean general fill for bulk earthworks
- Importation, stockpiling and placement of up to 250,000 m<sup>3</sup> of suitable spoil (separate to the 600,000 m<sup>3</sup> of imported clean general fill permitted for bulk earthworks)
- Creation of a road formation by general earthworks (by constructing fill embankments)
- Utilities relocation and installation

#### **Pavement works along Moorebank Avenue**

- Placement of select layer of earthworks material on top of the road formation
- Placing and compacting the pavement later (concrete, or concrete and asphalt) over the select layer (consisting of a sub-base and base) and potential sealing with bitumen
- Traffic switching from diversion road onto final, upgraded Moorebank Avenue
- Removal of construction traffic management and progressive opening of the internal road and warehouse access roads to traffic
- Removal of road surface, road signage, street lighting and signalling from temporary diversion road
- Commissioning of Moorebank Avenue.

## 1.4 Purpose and Application

This CHMP has been developed to address the Minister's CoCs (A1, B90, B91, B92, B93, B94, B95, B96, B97, B98, B99, and C7), the final compilation of mitigation measures (FCMMs), and is based on the Archaeological Heritage Management Service (AHMS) Aboriginal Heritage Impact Assessment (AHMS, 2012 and 2015), Artefact Aboriginal Heritage Impact Assessment for Stage 2 (Artefact 2016a) and Artefact Non-Indigenous Heritage Impact Assessment (Artefact 2012 and 2016b). This plan aims to demonstrate how Aboriginal and non-Aboriginal heritage values will be managed during construction.

This plan provides methods to measure and reduce the impact to Aboriginal and non-Aboriginal heritage by the contractor during the construction phase of the Project, including all contractor and consultant partners.

## 1.5 Staged Submission of this Plan

Subject to the consent of the Secretary (CoC A14), the Project has elected to stage the submission of a number of strategies, plans and programs that are required by the CoCs based on the Delivery Works Phases identified in Table 2.

In accordance with CoC A15, Table 2 identifies the stage of the development to which this document applies, and the relationship between any future stage. The trigger for updating the document is also identified in Table 2. When a document is updated, the most recent version of the document will supersede the previous version(s).

*Table 2 Staged Documentation and Triggers to Satisfy CoC A15*

Delivery Works Phases	General Description of Works	Current Document	Trigger to Update Document
<b>Early Works</b>			
Early Works	Utilities adjustments and relocations, clearing and stripping of topsoil, heritage salvage, fill importation, establishment of site access, temporary fencing and compound establishment, and other activities determined by the ER to have minimal environmental impact	<input type="checkbox"/> Document prepared to address Early Works only	Prior to the commencement of construction works (update to either Phase A-specific or Phase B document)
<b>Construction</b>			
Construction Phase A	Early Works activities, bulk earth works, drainage and utilities, construction and internal fit-out of warehousing and finishing works	<input type="checkbox"/> Document prepared to address Construction Works Phase A only (does not address Moorebank Avenue upgrade works)	Prior to the commencement of Moorebank Avenue upgrade works
Construction Phase B	Construction Phase A activities, construction of the Moorebank Avenue Diversion Road, bulk earthworks, drainage and utilities and pavement works	<input checked="" type="checkbox"/> Document prepared to address all construction works (Phase A + Phase B)	

## 1.6 Objectives and Targets

The following high level objectives and targets are set for the Project for the management of Aboriginal and non-Aboriginal heritage (Table 3).

Table 3 Objectives and Targets

Objective	Target	Timeframe	Accountability
To implement heritage management controls as outlined within this CHMP to minimise impacts during construction and to comply with contractual and legislative requirements	No known heritage sites or items disturbed or damaged	Duration of Construction	Contractor's CM
To implement the unexpected finds protocol to minimise impacts on unknown heritage items	STOP works in 100% cases where potential heritage is identified in accordance with the unexpected finds protocol	Duration of Construction	Contractor's CM
Maintain the Project personnel's awareness of aboriginal and non-aboriginal heritage	100% of employees to attend environmental site induction	Duration of Construction	Contractor's EM

## 1.7 Consultation

This CHMP has been prepared in consultation with the NSW Heritage Division, Liverpool City Council, relevant landowners and stakeholders including the Moorebank Heritage Group (MHG) and Department of Defence as outlined below (Table 4). Registered Aboriginal Parties (RAPs) were not consulted in the preparation of this plan as this is not a requirement of CoC B92. However, CoC B97 requires consultation with RAPs be undertaken during the preparation of the Unexpected Finds Protocol (UFP) which is outlined below (Table 5). Supplementary information to support the consultation undertaken is included in Appendix A.

Table 4 Consultation Summary HMP

Agency	Date	Person Contacted	Comment	Status
Department of Defence	02/03/18	Department of Defence representative	This plan emailed for review and comment. Noted that this plan had been prepared per the EWHMP. Confirmation of approach to consultation requested.	Open
	06/03/18	SIMTA	Email received from Department of Defence representative noting that they had no comments on the plan.	Closed
Moorebank Heritage Group	02/03/18	Moorebank Heritage Group representative	This plan emailed for review and comment. Noted that this plan had been prepared per the EWHMP. Confirmation of approach to consultation requested.	Open
	12/03/18	SIMTA	Email received from Moorebank Heritage Group representative noting that select review comments on the EWHMP applied to the CHMP.	Closed

Agency	Date	Person Contacted	Comment	Status
Liverpool City Council	02/03/18	Liverpool City Council representative	This plan emailed for review and comment. Noted that this plan had been prepared per the EWHMP. Confirmation of approach to consultation requested.	Open
	08/03/18	SIMTA	Email from Liverpool City Council representative acknowledging that the CHMP had been prepared in accordance with LCC's comments on the EWHMP. One other comment was raised.	Closed
NSW Heritage Division	02/03/18	Heritage Division representative	This plan emailed for review and comment. Noted that this plan had been prepared per the EWHMP. Confirmation of approach to consultation requested.	Open
	22/03/18	Heritage Division representative	Phone conversation; SIMTA requested an update on the status of review comments. NSW Heritage Division representative noted that the review was underway and comments would be provided early week of 26/3/18, pending sign off by the delegate.	Open
	03/04/18	SIMTA	Email from NSW Heritage Division representative providing comments on this plan. Consultation considered closed based on the appropriate addressing of NSW Heritage comments.	Closed

Table 5 Consultation Summary: UFP

RAP	Date	Person contacted	Comment	Status
Tharawal Local Aboriginal Land Council	24/04/18	Tharawal LALC representative	The Unexpected Finds Protocol emailed for review and comment.	Open
	16/05/18	Tharawal LALC representative	Phone conversation and email sent asking when comments would be provided to SIMTA	Open
	23/05/18	Tharawal LALC representative	Phone conversation and email sent asking when comments would be provided to SIMTA	Open
	23/05/18	SIMTA	Email sent acknowledging receipt of Unexpected Finds Protocol and Tharawal LALC representative noted that review was underway.	Open
	30/05/18	Tharawal LALC representative	Phone conversation and email follow up, requesting update on completion of review.	Open
	05/06/18	Tharawal LALC representative	Phone conversation and email follow up, requesting update on completion of review.	Open
	06/06/18	Tharawal LALC representative	Phone conversation and email follow up, requesting update on completion of review.	Open
	07/06/18	SIMTA	Email from Tharawal LALC representative providing comments on the Unexpected Finds Protocol.	Open
	12/06/18	Tharawal LALC representative	Email sent to Tharawal LALC representative responding to their comments on the Unexpected Finds Protocol.	Closed.



## 2 ENVIRONMENTAL MANAGEMENT

### 2.1 Environmental Obligations

Table 6 below details the legislation, planning instruments and guidelines considered during development of this sub-plan.

Table 6 Legislation, Planning Instruments and Guidelines

Legislation and Guidelines	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.	The DA 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 have been meet the threshold for national heritage listing under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) are listed on the Commonwealth Heritage List (CHL) and afforded protection under the EPBC Act.</p>	<p>The MPE projects as a whole are a controlled action under the EPBC Act with controlling provisions related mainly to the Rail connection.</p> <p>The Defence National Storage and Distribution Centre (DNSDC), which includes the Moorebank Intermodal Terminal Development site was previously included on the Commonwealth Heritage List (CHL) as a Listed Place for its historic heritage values. As the Department of Defence lease has now expired and the site is no longer controlled by the Commonwealth it is no longer included on the CHL. It is listed as a Heritage item on Liverpool Local Environment Plan (LEP) which provides protection under the provisions of the EP&amp;A Act 1979.</p>
<i>National Parks and Wildlife Act 1974</i>	The relevance of this Act is 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.	Aboriginal Heritage Items have been identified within the construction area but will not be impacted. 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 Part 4.1 of the EP&A Act.

Legislation and Guidelines	Description	Relevance to this CHMP
<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> <p>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.</p>	Heritage Items are identified on the site and addressed as part of the CoCs. 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 Part 4.1 of the EP&A Act.
<i>Australian Heritage Council (Consequential &amp; Transitional Provisions) Act 2003</i>  <i>Australian Heritage Council Act 2003 (Cwth)</i>	<p><i>The Australian Heritage Council (Consequential and Transitional Provisions) Act 2003</i> repealed the <i>Australian Heritage Commission Act 1975</i>.</p> <p><i>The Australian Heritage Council Act 2003</i> establishes the Australian Heritage Council. The Council is required to identify places to be included in the National Estate and to maintain a Register of the National Estate of places.</p>	The site is not on Register of the National Estate of places.
<i>Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Cwth)</i>	<p>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.</p>	No areas or objects within the works site have been identified as being subject to such a declaration and this Act is of little relevance to the project.
Guideline for the Preparation of Environmental Management Plans (DIPNR, 2004)	<p>The Guideline assists government agencies, contractors and developers prepare effective environmental management plans.</p> <p>The purpose is to ensure a minimum standard and consistent approach to the preparation of environmental management plans.</p>	This plan has been structured to align with Figure 4-1 of the guideline with information relating to each of the headings and subheadings included.

Legislation and Guidelines	Description	Relevance to this CHMP
Assessing Heritage Significance (NSW Heritage Office 2001)	The guideline provides an overview of the heritage management system in NSW, heritage significance criteria and a procedure to assess the heritage significance of an area or item.	The CHMP uses information from the EIS heritage report that assessed heritage values and significance of the precinct in accordance with these guidelines.
Assessing Significance for Historical Archaeological Sites and Relics (NSW Heritage Branch, Department of Planning 2009)	The guideline provides an overview of NSW heritage criteria, levels of significance, ranking of the significance of a historical archaeological site and relic and measures to protect archaeological sites and relics.	The archaeological assessment prepared for the EIS that informs the CHMP was prepared in accordance with this guideline. The Archaeological Monitoring Strategy which is included in Appendix B outlines archaeological management in accordance with this guideline
How to prepare Archival Recording of Heritage items (Heritage Branch, 1999)	The guideline outlines how to prepare an archival record, the different types of archival records and how to store and collate archival records.	Archival recording is required under the approval (B91) and is referenced in the CHMP. Archival recording has been undertaken in accordance with this guideline
Photographic recording of heritage items using film or digital capture (Heritage Branch, 2006)	The guideline provides an overview of how to make a photographic record of sites, buildings, structures and moveable items of heritage significance	Archival recording is required under the approval (B91) and is referenced in the CHMP. Archival recording has been undertaken in accordance with this guideline
Guidelines for the Management of Human Skeletal Remains under the <i>Heritage Act 1977</i>	The guideline outlines practices to manage human skeletal remains.	The UFP included in the CHMP has been prepared in accordance with this guideline.

## 2.1.1 Compliance Matrices

### 2.1.1.1 State Approvals

The Project is being delivered under Part 4, Division 4.1 (now Division 4.7) of the EP&A Act. The CoCs include requirements to be addressed in this plan and delivered during the Project. These requirements, and how they are addressed along with division of responsibilities is provided within Table 7.

Table 7 Conditions of Consent (CoCs)

CoC	Requirement	Plan Section	How Addressed
A1	In addition to meeting the specific performance measures and criteria established under this consent all reasonable measures must be implemented to prevent, and if prevention is not reasonable, minimise, any harm to the environment that may result from the construction and operation of the development, and any rehabilitation required under this consent.	Section 3 Table 16 Section 4	Section 3, Table 15 of this CHMP identifies the management measures to be implemented to prevent and minimise environmental harm.  Section 4 sets out the process for monitoring and review of the effectiveness of these measures. Opportunities to further minimise environmental harm will be identified through the ongoing evaluation of environmental management performance and effectiveness of this plan.
A2	The development may only be carried out: (a) in compliance with the conditions of this consent; (b) in accordance with all written directions of the Secretary in relation to this consent; (c) in accordance with the EIS, Submissions Report and MPE Stage 2 (SSD-7628) – Consolidated assessment clarification responses and updated Biodiversity Assessment Report; (d) in accordance with all Modification Assessments (if any); (e) in accordance with the amended development layout to be submitted for the Secretary's approval as part of this consent; and (f) in accordance with the management and mitigation measures at APPENDIX B of this consent.	(a) Section 2.1.1, Table 6 (b) N/A (c) Section 2.1.1 and Table 7 (d) N/A (e) Section 2.1.1 and Table 7	This plan has been developed to comply with the CoCs, written directions to the Secretary, amended development layout and management and mitigation measures outlined in Appendix B of the CoCs.
A15	If submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage of the development to which the strategy, plan or program applies, the relationship of the stage to any future stages and the trigger for updating the strategy, plan or program.	Section 1.3	Section 1.3 addresses the staging of the Project. The CHMP supersedes the Early Works Heritage Management Plan (EWHMP) and is relevant to the construction phases
A19	Where conditions of this consent require a document to be prepared in consultation with an identified party, the Applicant must:  a) Consult with relevant party prior to submitting the subject document to the Secretary for approval; b) Provide evidence that at least two weeks was provided for the relevant party to comment on the document; and	Section 1.7 Appendix A	a) Section 1.7 indicates that consultation has been undertaken with NSW Heritage Division, Liverpool City Council, Moorebank Heritage Group, Department of Defence.  b) Section 1.7 indicates that at least two weeks has been given to stakeholders to provide comments on the EWHMP.

CoC	Requirement	Plan Section	How Addressed
	<p>c) Include in the document:</p> <p>i. Details of the consultation undertaken</p> <p>ii. A description of how matters raised by those consulted have been resolved to the satisfaction of both Applicant and the party consulted; and</p> <p>Details of any disagreement remaining between the party consulted and the Applicant and how the Applicant has addressed the matters not resolved.</p>		<p>(c)(i) Section 1.7 and Appendix A provides details on the consultation undertaken.</p> <p>(ii) Appendix A describes how issues raised by stakeholders have been resolved to the satisfaction of stakeholders by SIMTA.</p> <p>(iii) To date, there have been no disagreements.</p>
A20	<p>All licences, permits, approvals and consents as required by law must be obtained and maintained as required for the development. No condition of this consent removes the obligation for the Applicant to obtain, renew or comply with such licences, permits, approvals and consents.</p>	<p>CEMP - Section 2.5.2</p> <p>Section 2.1</p>	<p>All applicable licences, permits and approvals will be obtained as required.</p> <p>Approvals, permits and licences required for the Project are discussed in the CEMP in Section 2.5.2.</p> <p>An Environmental Protection Licence (EPL) (No. 21054) was issued by the EPA on 4 June 2018 (variation issued on 18 April 2019). The licence applies to the Moorebank Precinct (excluding the MPE Stage 1 Rail Access Land Package (RALP) which has a separate EPL licence (No. 20966) and authorises &gt; 100,000 – 500,000 tonnes crushing, grinding or separating processing capacity per annum and &gt; 500,000 – 2,000,000 tonnes extraction, processing or storage capacity per annum. The licence applies to all other activities carried on at the premises, including road construction, bulk earthworks 'cut and fill' and importing fill.</p>
B91	<p>Prior to Early Works and Fill Importation, archival recording of the entire former DNSDC site must be undertaken in accordance with the Non-Indigenous Heritage Assessment (artefact, 2016) by a suitably qualified and experienced person(s).</p>	<p>Table 16 (HM2)</p>	<p>Table 16 HM2 states that a Project Heritage Consultant completed archival recordings for all heritage listed structures on the site prior to the commencement of construction of MPE Stage 1 as required by CoC C13 of SSD14-6766. The archival recordings were submitted as a soft copy to DP&amp;E on 08/06/17 with hardcopies posted at the end of June and received by 05/07/17.</p>
B92	<p>Prior to commencement of Early Works and Fill Importation, the Applicant must prepare a Heritage Management Plan, to the satisfaction of the Secretary. The plan must form part of the CEMP required by C3 and must:</p>	<p>This plan (Cover Page)</p>	<p>This document was prepared by Sandra Wallace of Artefact Heritage. Details are provided on the front page.</p>

CoC	Requirement	Plan Section	How Addressed
	(a) be prepared by suitably qualified and experienced person(s);		
	(b) be prepared in consultation with NSW Heritage Division, Council, relevant landowners and stakeholders including the Moorebank Heritage Group (MHG) and Department of Defence.	Section 1.7 Table 4 Appendix A	Section 1.7 summarises consultation undertaken during preparation of the CHMP. Evidence of consultation, i.e. correspondence, is provided in Appendix A.
B93	The Heritage Management Plan must include:  (a) plans/strategies to monitor, mitigate and manage the effects of the development on identified PADs;	Table 16 Item HM8	Monitoring, mitigation and management plans/strategies for impacts on identified PADs (particularly PADs V and W) is discussed through Sections 3 and 4 of this document. Monitoring of PADs is complete. No further monitoring has been recommended for PADs V and W.
	(b) measures to ensure site workers receive suitable heritage inductions prior to carrying out any activities which may cause impacts to heritage, and that suitable records are kept of these inductions;	Section 2.3 Table 16 Item HM1	Section 2.3 and Table 16 item HM1 details suitable heritage induction measures and records of training protocol for site workers.
	(c) a program and description of the measures/procedures to be implemented for:  (i) undertaking surface surveys and archaeological investigations (where subsurface disturbance is proposed) of any items of heritage significance;	Section 3.3 Table 16 Item HM12 Appendix B - Archaeological Monitoring Strategy	Measures for the management of PADs are discussed in Table 16 and are detailed in the Archaeological Monitoring Strategy prepared for the works. Monitoring of PADs V and W is complete. No further monitoring has been recommended for PADs V and W.
	(c) a program and description of the measures/procedures to be implemented for:  (ii) protecting heritage items located outside the disturbance area from the impacts of the development;	Table 16 Item HM4, HM5, HM 10 and HM11	HM4, HM5, HM 10 and HM11 addresses the protection requirements of heritage items located outside the Project boundary.
	(c) a program and description of the measures/procedures to be implemented for:  (iii) managing any new heritage items discovered during the development; and	Table 16 Item HM13A and HM13B Section 3.4.1	New heritage items will be considered to be unexpected finds. HM13A and HM13B and Section 3.4.1 details management actions and responsibilities for unexpected finds.
	(iv) additional archaeological excavation and recording of any significant heritage deposits uncovered during demolition.	Table 16 Item HM13A and HM13B Section 4	Any heritage items uncovered during the demolition of buildings would be treated as an unexpected find and managed in accordance with HM13A and HM13B Section 3.4.1.



CoC	Requirement	Plan Section	How Addressed
B94	Prior to commencement of Early Works and Fill Importation, archaeological monitoring and recording must be undertaken at potential archaeological deposits (PADs) V and W in accordance with the Non-Indigenous Heritage Assessment (Artefact 2016) by a suitably qualified and experienced archaeologist with Excavation Director Criteria qualifications	Table 16 Item HM8 Appendix B - Archaeological Monitoring Strategy	Table 16 HM8 details action on archaeological monitoring and recording in accordance to an Archaeological Method Statement (AMS) prepared by an experienced Excavation Director. Monitoring of PADs V and W was undertaken prior to the commencement of Early Works. No further monitoring has been recommended for PADs V and W.
B95	The results must be reported to the Secretary within one month of completion of monitoring and recording at PADs V and W, along with recommendations for further monitoring at additional sites, if significant archaeological deposits are encountered.	Table 16 Item HM8	<p>A report entitled 'Summary of Excavation Results and Future Management – Moorebank Precinct East (MPE) PADs V and W' dated 16 April 2018, was submitted to the Secretary on 18 April. The submission date was within one month of completing the monitoring and recording (which was undertaken on 19-21 March 2018).</p> <p>No significant archaeological deposits were found. The report concludes there is no need for any further testing around PADs V and W and that no further monitoring is required at additional sites.</p>
B96	Fill importation must not commence within 10 metres of PADs V and W until the results of any further monitoring and recording, along with any additional Non-Indigenous Heritage management measures, are submitted to the Secretary and included in an updated Heritage Management Plan to the satisfaction of the Secretary.	Table 16 Item HM7	<p>The report 'Summary of Excavation Results and Future Management – Moorebank Precinct East (MPE) PADs V and W' dated 16 April 2018, was submitted to the Secretary on 18 April.</p> <p>The report concludes there is no need for any further testing around PADs V and W and recommends that restrictions within 10 m of PADs V and W can be removed. There are no recommendations for further monitoring at additional sites.</p> <p>This plan has been updated to reflect these recommendations.</p>
B97	Before commencement of construction, the Applicant must prepare an Unexpected Finds Protocol for the development in consultation with the Registered Aboriginal Parties, OEH and the NSW Heritage Division and must implement the Protocol in accordance with its terms.	Section 1.7 Appendix A Section 3.4.1	<p>Section 1.7 and Appendix A identifies consultation undertaken for this plan.</p> <p>The Unexpected Finds Protocol in Section 3.4.1 has been consulted upon with the Registered Aboriginal Parties separately to this plan. OEH (NSW Heritage Division) have commented on the</p>

CoC	Requirement	Plan Section	How Addressed
			Unexpected Finds Protocol through the broader review of this document. Consultation with OEH is recorded in Section 1.7 and Appendix A.
B98	If human remains are discovered on site, then all work surrounding the area must cease, and the area must be secured. The Applicant must immediately notify NSW Police and OEH, and work must not recommence in the area until authorised by NSW Police and OEH.	Table 16 Item HM14 Section 3.4.2	Table 16 HM14 and Section 3.4.2 identifies the process to be undertaken if human remains are uncovered and that works in the vicinity must cease immediately, and NSW police and OEH must be notified. Works will not recommence until authorised by OEH and NSW Police.
B99	If any Aboriginal object or Aboriginal place is identified on site, or suspected to be on site:  (b) all work in the immediate vicinity of the object or place must cease immediately;  (i) a 10m buffer area around the object or place must be cordoned off; and  (j) OEH must be contacted immediately	Table 16 Item HM13A	Details of action for any Aboriginal object or Aboriginal place encountered is described in Table 16 HM13A
B100	Work in the immediate vicinity may only recommence if:  (a) the object or place is confirmed by OEH upon consultation with the Registered Aboriginal Parties, not to be an Aboriginal object or Aboriginal Place; or  (b) an Aboriginal Cultural Heritage Management Plan is prepared in consultation with the Registered Aboriginal Parties and OEH to include the object or place and appropriate measures in respect of it, and the Plan is approved by the Secretary; or  (c) OEH is satisfied as to the measures to be implemented in respect of the object or place and makes a written direction in that regard.	Section 3.3.1.1 Table 16 Item HM13A	The condition is addressed as part of the Unexpected Finds Protocol in Section 3.3.1.1. Actions detailed in Table 16 HM13A.
B101	Prior to commencement of operation, the Applicant must prepare a <b>Heritage Interpretation Plan</b> based on the recommendations contained in the Heritage Interpretation Strategy (artefact, 2017) approved under MPE Stage 1. The plan must be prepared	Table 16 Item HM3	An HIP will be developed prior to commencement of operation



CoC	Requirement	Plan Section	How Addressed
	for the entire Moorebank Intermodal Precinct (MPE and MPW sites).		
B102	<p>The plan must form part of the OEMP required by condition C3 and must:</p> <p>(a) be prepared by a suitably qualified and experienced person(s);</p> <p>(b) be prepared in consultation with NSW Heritage Division, Council, relevant landowners and stakeholders including the Moorebank Heritage Group (MHG), Department of Defence, as well as the Relevant Aboriginal Parties (RAPs) should themes relating to Aboriginal heritage be included for interpretation; and</p> <p>(c) be approved by the Secretary prior to the commencement of operation.</p>	Table 15 item HM3	<p>The HIP will be developed during construction in line with the recommendations made in the Heritage Interpretation Strategy and submitted for approval prior to the commencement of operations. The requirements and recommendations of the HIP will be incorporated into the OEMP prior to commencement of operations</p>
C7	<p>The Applicant must ensure that the environmental management plans required under this consent are prepared in accordance with any relevant guidelines, and include:</p> <p>(a) detailed baseline data;</p>	Table 6 Section 3.1	<p>Table 6 details how this plan has been developed in accordance with DIPNR guidelines.</p> <p>Section 3.1 details relevant data related to Aboriginal and Non-Aboriginal items within and surrounding the Project site.</p>
	<p>(b) a description of:</p> <p>(i) the relevant statutory requirements (including any relevant approval, licence or lease conditions);</p> <p>(ii) any relevant limits or performance measures/criteria; and</p> <p>(iii) the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;</p>	Section 1 Section 2.1 Section 1.6 Table 3	<p>(i) Section 1 provides information on the approvals required for the Project site. Section 2.1 lists the environmental obligations for the Project site.</p> <p>(ii) Section 1.6 details the performance measures/criteria (objectives).</p> <p>(iii) Table 3 under Section 1.6 details the performance indicators (targets).</p>
	<p>(c) a description of the management measures to be implemented to comply with the relevant statutory requirements, limits or performance measures/criteria;</p>	Section 3.3 Table 16	Section 3.3 and Table 16 stipulates the management measures for construction.
	<p>(d) a program to monitor and report on the:</p> <p>(i) impacts and environmental performance of the development; and</p> <p>(ii) effectiveness of any management measures (see (c) above);</p>	Section 4.1 Section 4.3	<p>(i) Program on monitoring and reporting of impacts and environmental performance is discussed under Section 4.1.</p> <p>(ii) Section 4.3 states ongoing evaluation on performance and effectiveness will be undertaken against policies, objectives and targets.</p>

CoC	Requirement	Plan Section	How Addressed
	(e) a contingency plan to manage any unpredicted impacts and their consequences;	Table 16 Item HM15	Incidents will be notified to the environments team and works within the vicinity will stop immediately as per the Unexpected Finds Protocol.
	(f) a program to investigate and implement ways to improve the environmental performance of the development over time;	Section 4.3	Improvement measures are discussed under Section 4.3 through ongoing evaluation and effectiveness of the program.
	(g) a protocol for managing and reporting any: (i) incidents and non-compliances; (ii) complaints; (iii) non-compliances with statutory requirements; and	i) Section 4.4 ii) Section 4.6 iii) Section 4.5	(i) Section 4.4 indicates how incidents will be managed and reported. (ii) Section 4.6 indicates how complaints will be managed and reported. (iii) Section 4.5 indicates how non-compliances will be managed and reported.
	(h) a protocol for periodic review of the plan.	Table 16 Item HM17 Section 4.3	Table 16 HM17 states a summary of compliance will be provided in the Project Monthly Report. Section 4.3 states that review and improvement of the plan will be undertaken annually and intermittently in accordance with the CoCs and Section 1.2.7 of the CEMP. Further detail of the review process is provided in Section 4 of the CEMP.

The Final Compilation of Mitigation Measures (FCMMs) were prepared as part of the consolidated assessment clarification responses issued to DP&E on 10 November 2017. A list of the FCMMs as relevant to the Project and how they have been complied with in this plan are provided in Table 8.

*Table 8 Final Compilation of Mitigation Measures (FCMMs)*

FCMM	Requirement	Document Reference	How addressed
9A	An exclusion zone would be provided around previously identified MPE Isolated Artefacts 2, 3 and 4 (refer to Figure 16-2) to avoid potential disturbance of these artefacts during construction of the Amended Proposal.	Section 3.3	Section 3.3 (HM7) outlines that high visibility fencing will be installed at 10m around the Aboriginal isolated finds.

FCMM	Requirement	Document Reference	How addressed
9B	Management of Aboriginal heritage would be included in the CEMP for the Amended Proposal. Information within the CEMP would include: <ul style="list-style-type: none"> <li>A summary of the findings of the Aboriginal Heritage Impact Assessment Report (provided at Appendix S of the EIS)</li> </ul>	Section 3.1	Section 3.1 summarises the existing environment of the Project, as well as the management measures recommended in the Aboriginal Heritage Impact Assessment Report.
	<ul style="list-style-type: none"> <li>Guidance on unexpected archaeological and cultural finds (including human remains).</li> </ul>	Section 3.3	Unexpected Finds Protocols have been provided in Section 3.3.
9C	All relevant personnel and contractors involved in the design and construction of the Amended Proposal would be advised of the relevant heritage considerations, legislative requirements and recommendations in the Aboriginal Heritage Impact Assessment Report (provided at Appendix S of the EIS).	Section 2.3 Table 16 (HM1 and HM5)	Section 2.3 and Table 16 item HM1 detail induction and training requirements for Project personnel.  HM5 details Environmental control maps (ECM) that identify Aboriginal and non-Aboriginal heritage sites which will be used for site induction.
10A	<b>Non-Indigenous Heritage</b> A Heritage Management Plan in adherence to NSW Heritage Council guidelines would be prepared as part of the CEMP for the Amended Proposal.	This Plan	This plan has been prepared in accordance with the NSW Heritage Council requirements as well as the requirements of the Conditions of Consent.
10B	Archaeological monitoring and recording would be conducted at PADs V and W, which have the potential to contain archaeological remains of local significance. Monitoring and recording would be undertaken by a suitably qualified archaeologist, who would assess the likely significance of any archaeological deposits encountered, and provide advice regarding appropriate further action. If highly significant remains were identified during monitoring, it would be appropriate to conduct further monitoring for additional sites of former structures or test excavations.	Section 3.3 Table 16 (HM8)	Archaeological monitoring and recording was conducted at PADs V and W. No significant archaeological deposits were found. No further testing is required around PADs V and W and no further monitoring is required at additional sites.
10C	A Heritage Interpretation Strategy should be prepared prior to the commencement of construction, outlining appropriate interpretive measure for the Amended construction area in the context of the MPE site as a whole.	Refer to Appendix C - MPE Heritage Interpretation Strategy (Artefact 2016)	This was completed prior to the commencement of MPE Stage 1 (SSD14-6766) and has been included as Appendix C.

FCMM	Requirement	Document Reference	How addressed
10D	If unexpected finds are located during works an archaeological consultant would be engaged to assess the significance of the finds and the NSW Heritage Council notified.	Section 3.3	Unexpected Finds Protocols are included in Section 3.4.1.

### 2.1.1.2 EPBC Approvals

The EPBC Act approval for the MPE Concept was granted by the Department of the Environment in March 2014 (No. 2011/6229). This approval was provided for the impact of the MPE Project on listed threatened species and communities (Sections 18 and 18A of the EPBC Act) and Commonwealth land (Sections 26 and 27A of the EPBC Act).

The EPBC Act approval for the MPW Concept was granted by the Commonwealth Department of Environment and Energy (DotEE) in September 2016 (No. 2011/6086). This approval was provided for the impact of the MPW Project on listed threatened species and communities (Sections 18 and 18A of the EPBC Act) and Commonwealth land (Sections 26 and 27A of the EPBC Act).

The Moorebank Avenue upgrade works will be performed under the MPE Stage 2 Consent as described in Section 1.1 and 1.3 of the CEMP. Since the western side of the Moorebank Avenue upgrade works construction footprint is located in an existing area of hardstand within the MPW site, the works must comply with the MPW Commonwealth Approval.

The construction and operation of the Project has been designed to be consistent with the EPBC Act Approval conditions. EPBC Act Approval conditions applicable to this plan are identified in Table 9.

Table 9 Commonwealth Conditions of Approval

No.	Requirement	Document Reference	How Addressed
<b>MPE EPBC Approval (2011/6229)</b>			
7	For better protection of Commonwealth land, the person taking the action must engage a suitably qualified expert (s) to prepare a Construction Environment Management Plan (CEMP), for the approval of the Minister. The CEMP must include in relation to construction of the proposed facility.	CEMP and this Plan	This plan forms a sub-plan to the CEMP.
7b	Identification and quantification of all potential impacts associated with noise, vibration, air quality, traffic, light spill, hydrological changes, contamination and indigenous heritage upon Commonwealth land. Consideration must be given to people and communities at SME, DNSDC, Defence housing, and the environment more generally in neighbouring bushland area.	Refer to CEMP and Section 3.2 of this Plan	Section 3.2 details the potential impacts of construction on heritage.
7c	The results of further investigations with regard to land contamination and indigenous heritage impacts (specifically PADs two and three). If adverse impacts are identified, details on how such matters will be managed/mitigated must also be provided. Evidence of ongoing consultation with RAPs regarding further	Refer to Heritage Assessment (Artefact 2016)	This was completed prior to the commencement of MPE Stage 1 (SSD14-6766).

No.	Requirement	Document Reference	How Addressed
	investigations for indigenous heritage objects/places must be provided.		
7g	Details of a comprehensive monitoring program (including locations, frequency and duration) for: <ul style="list-style-type: none"> <li>i. validating the anticipated impacts associated with condition 7(b); and</li> <li>ii. determining the effectiveness of proposed mitigation/management measures</li> </ul>	Section 4	Section 4 details the monitoring and review processes that will be undertaken as part of this Plan.
7h	provisions to revise the approved CEMP in response to monitoring associated with condition 7(g) including, details of response contingency mechanisms to address any exceedances of the relevant trigger values;	Section 1.2.7 of the CEMP Section 4.3 of this Plan	Section 1.2.7 of the CEMP details revision procedures of construction plans  Section 4.3 details how the CHMP will be reviewed and improved.
<b>MPW EPBC Approval (2011/6086)</b>			
11	Sections of the CEMP and OEMP relating to Aboriginal heritage must be prepared by a suitably qualified expert and must: <ul style="list-style-type: none"> <li>a) be consistent with the Aboriginal Heritage Provisional Environmental Management Framework (2 July 2014), provided at Appendix 0 to the finalised EIS</li> <li>b) incorporate all measures 12A to 12G from Table 7.1 of the finalised EIS that are described as 'mandatory'</li> <li>c) explain how all measures 12A to 12G from Table 7.1 of the finalised EIS that are described as 'subject to review' have been addressed</li> <li>d) be approved by the Minister or a relevant New South Wales regulator.</li> </ul>	This Plan  Refer to Section 3.3 and 4.7 Measure 12E is not applicable to the MPE site.  Refer to Appendix C Measures 12C and 12D are not applicable to the MPE site.  This Plan	This Plan is consistent with the Aboriginal Heritage Provisional Environmental Management Framework (2 July 2014),  Section 3.3 (HM13A) details the Unexpected Finds Protocol Section 4.7 details the process of ongoing consultation with the RAPs  Appendix C details approach to conserving heritage.  This Plan was approved by DP&E on 15 June 2018.

### 2.1.1.3 Other Approvals

The Revised Statement of Commitments (RSoC) includes the most recent compilation of SIMTA commitments to mitigate the environmental impacts, monitor the environmental performance and/or achieve a positive environmentally sustainable outcome. These RSoCs (June 2017) were presented in the Moorebank Precinct East – Concept Plan Modification 2 Response to Submissions. The RSoC that are relevant to this plan are identified in Table 10.

Table 10 Revised Statement of Commitments (RSoC) – MPE Project Concept Plan

RSoC	Requirement	Document Reference	How Addressed
2.0	<b>Aboriginal Heritage</b> Consultation between SIMTA and relevant Registered Aboriginal Parties (RAPs) throughout the design and construction of the SIMTA proposal	Section 4.7	Section 4.7 details the circumstances under which the RAPs will be contacted.
	Where possible, SIMTA should aim to avoid impacting any known Aboriginal heritage objects, sites or places and places that have potential Aboriginal heritage or cultural values, throughout the life of the SIMTA proposal.	This Plan	This Plan has been developed to identify the means by which the works will avoid impacting any known Aboriginal heritage objects, sites or places and places that have potential Aboriginal heritage or cultural values.
	Where impact cannot be avoided, SIMTA should choose partial impact rather than complete impact wherever possible and ensure that appropriate measures to mitigate impacts are developed and implemented as required and as appropriate during design, construction and operation of the various stages of the SIMTA proposal.	This Plan Table 16 (HM13A)	HM13A details protection of Aboriginal isolated finds.
	If relocation of any element of the SIMTA proposal outside area assessed in this study is proposed, further assessment of the additional area(s) should be undertaken to identify and appropriately manage Aboriginal objects/sites/places that may be in this additional area(s).	Table 16 (HM10)	HM10 details that no works are to occur outside of the Project boundary.
	In the event that previously undiscovered Aboriginal objects, sites or places (or potential Aboriginal objects, sites or places) are discovered during construction, all works in the vicinity of the find should cease and SIMTA should determine the subsequent course of action in consultation with a heritage professional, relevant Registered Aboriginal Parties and/or the relevant State government agency as appropriate-	Section 3.4.1	Section 3.4.1 details the Unexpected Finds Protocol to be implemented should any potential Aboriginal objects, sites or places be identified.
	Should suspected human skeletal material be identified, all works should cease and the NSW Police and the NSW Coroner's office contacted. Should the burial prove to be archaeological of Aboriginal origin, consultation with a heritage professional, relevant RAPs and/or the relevant State government agency, should be undertaken by SIMTA.	Section 3.4.2	Section 3.4.2 details the procedure to be followed in the even human skeletal remains are uncovered.

RSoC	Requirement	Document Reference	How Addressed
	SIMTA should ensure that any reports or documents for the SIMTA proposal concerning Aboriginal heritage comply with applicable statutory requirements (those currently applicable are outlined in this report), are prepared in accordance with best practice professional standards and, where appropriate, ensure findings are provided to OEH AHIMS Registrar and the relevant RAPs.	Section 2.1	Section 2.1 details the legislative and other obligations that are to be adhered to in the development of any documentation pertaining to heritage.
	The detailed application for the first stage of works shall include test excavations in each of PADs 'I' - 3 in accordance with current archaeological practice and any relevant guidelines to determine the nature, extent and significance of any Aboriginal archaeological deposit. Such testing would be undertaken under Section 75U of the Environmental Planning and Assessment Act 1979, and be used to inform the assessment of these areas prior to lodgement of the subsequent staged application.	Refer to MPE Stage 1 CHMP. Not relevant to Stage 2.	
	<b>Non-Indigenous Heritage</b> Preparing a Statement of Heritage Impact (SoHI) for submission to the Minister for Planning and infrastructure as part of staged planning applications at State level.	Refer to Heritage Assessment (Artefact 2016b)	This was completed prior to the commencement of MPE Stage 1 (SSD14-6766).
	Commencing discussions with the appropriate heritage bodies regarding the potential listing of the DNSDC site on the National Heritage List or the State Heritage Register.	Refer to Heritage Assessment (Artefact 2016b)	This was completed prior to the commencement of MPE Stage 1 (SSD14-6766).
	Preparing a Statement of Heritage Impact for each stage, including the legal status of the site and advice on required actions depending on whether the site is listed or unlisted at the time that approval is sought.	Refer to Heritage Assessment (Artefact 2016b)	This was completed prior to the commencement of MPE Stage 1 (SSD14-6766).
	Development of an overall mitigation strategy for the DNSDC site, which may be based on Table 3 of the Non-Indigenous Heritage report.	HIS has been prepared as part of MPE Stage 1 Project. The HIP will be progressed as part of the Project	
	Undertaking further archaeological assessment and investigation or monitoring, where required in areas designated as having archaeological potential that would be impacted by the proposal. The SoHIs for each stage should address the archaeological potential within the development area for each stage	Refer to Heritage Assessment (Artefact 2016b)	This was completed prior to the commencement of MPE Stage 1 (SSD14-6766).



RSoC	Requirement	Document Reference	How Addressed
	If any archaeological deposit or item of heritage significance is located within the study area and is at risk of being impacted, the NSW Heritage Council should be notified and a heritage consultant archaeologist should be engaged to assess the item to determine its heritage significance.	Section 3.4.3	Section 3.4.3 details the procedures to be followed in the event of an unexpected find being uncovered.

Infrastructure Sustainability Council of Australia (ISCA) requirements relevant to this plan are detailed in Table 11.

*Table 11 ISCA Requirements*

Credit	Level	Requirement	Document Reference
Her-2 Monitoring of Heritage		The contractor must ensure: Monitoring of heritage is undertaken at appropriate intervals during construction	Section 4
		Monitoring and modelling demonstrates maintenance of heritage values	Section 4
		Heritage is managed and reported to meet the requirements of the CEMP	Section 4

There are no specific conditions relating to Concept Plan Conditions of consent relating to Heritage Management.



## 2.2 Roles and Responsibilities

All Project personnel are responsible for the implementation of this CHMP and have responsibility to stop works if there is potential for a safety or environmental incident to occur. These roles are indicative only and the Construction Contractor may allocate the responsibilities across these roles. The Construction contractor will provide roles and responsibilities and staff names to the Principal's Representative prior to Construction.

Key roles and responsibilities associated with this heritage management plan are presented in Table 12.

Table 12 Roles and Responsibilities

Roles	Responsibilities
<b>Principal's Representative</b>	<ul style="list-style-type: none"> <li>Review the CHMP to ensure that it meets all relevant regulatory and Project requirements</li> <li>Ensure ongoing conservation and preservation of the items of heritage to be used for interpretation purposes</li> <li>Review the Contractor's environmental monitoring reports and compliance documentation to confirm that the CHMP is being implemented</li> <li>Issue a stop work direction immediately where an unacceptable environmental impact may occur</li> <li>Liaise with relevant regulators if an incident occurs</li> <li>Ensure that independent and internal audits of the system are conducted</li> <li>Review audit outcomes and act as necessary</li> <li>Review environmental performance through the monthly reporting cycle</li> <li>To manage all aspects of the contract between SIMTA and the Construction Contractor</li> <li>Stop works if required</li> <li>Notify NSW Heritage Council of any confirmed unexpected finds.</li> </ul>
<b>Contractor's Construction Manager (Contractor's CM)</b>	<ul style="list-style-type: none"> <li>Communicating with all personnel and sub-contractors regarding compliance with the CHMP and site specific environmental issues / EWMS</li> <li>Undergo induction and training in environmental awareness as directed by management</li> <li>Identifying resources required for implementation of the CHMP</li> <li>Organise and manage site plant, labour and temporary materials</li> <li>Co-ordinating the implementation and maintenance of site environmental controls and provide support for the Contractor's EM</li> <li>Report all environmental incidents in accordance with incident reporting protocol</li> <li>Take action to resolve non-conformances and incidents</li> <li>Be contactable 24 hours a day</li> <li>Direct works to be performed in a more environmentally responsible manner that reduces impacts or stop works if there is a risk of environmental harm.</li> </ul>
<b>Contractor's Environment Manager (Contractor's EM)</b>	<ul style="list-style-type: none"> <li>Notify NSW Heritage Council of any confirmed unexpected finds</li> <li>Assist and guide the respective workers to meet their environmental responsibilities</li> <li>Check and monitor the implementation of this CHMP</li> </ul>

Roles	Responsibilities
	<ul style="list-style-type: none"> <li>• Report to the Contractor's CM on environmental issues</li> <li>• Monitor the rectification of incidents</li> <li>• Provide technical advice to personnel and management in the review of work methods</li> <li>• Oversee the conduct a site start-up meeting with the site personnel on site</li> <li>• Implement appropriate action to address any environmental incidents</li> <li>• Manage and investigate identified non-conformances to Conditions of Consent</li> <li>• Development, implementation, monitoring and updating of the CHMP</li> <li>• Ensure environmental risks of the Project are identified and appropriate mitigation measures implemented</li> <li>• Develop environmental site induction and maintain a register of attendance</li> <li>• Present and participate in toolbox meetings</li> <li>• Manage environmental document control, reporting, inductions and training</li> <li>• Oversee site monitoring, inspections and internal audits</li> <li>• Manage all sub-contractors and consultants with regards to environmental matters, including assessing their environmental capabilities and overseeing the submission of their environmental documents</li> <li>• Respond to stakeholder enquires / complaints within required timeframes</li> <li>• Undergo induction and training in environmental awareness as directed by management</li> <li>• Act as a 24-hour contact (if other staff as outlined above are not available).</li> <li>• Direct works to be performed in a more environmentally responsible manner that reduces impacts or stop works if there is a risk of environmental harm</li> <li>• Liaise with construction team as required in order to implement the ISCA requirements</li> <li>• Cooperate and participate in audits and action results of any audit findings.</li> </ul>
<b>Site Supervisors</b>	<ul style="list-style-type: none"> <li>• Implement and maintain environmental controls around confirmed, or potential, heritage items on-site and ensure that exclusion zones are maintained, or erected in the event of a potentially unexpected find</li> <li>• Present and participate in toolbox talks and meetings</li> <li>• Train staff in their obligations under the EWMS</li> <li>• Meet environmental reporting requirements of the Project</li> <li>• Undergo induction and training in environmental awareness as directed by management</li> <li>• Direct works to be performed in a more environmentally responsible manner that reduces impacts or stop works if there is a risk of environmental harm.</li> </ul>
<b>Project Heritage Consultant</b>	<ul style="list-style-type: none"> <li>• Responsible for providing advice to help minimise potential impacts to any Aboriginal or historic heritage values that may be identified during construction activities</li> <li>• Identify potential finds, and in consultation with the Contractor's EM and principal's Representative, report to the NSW Heritage Council</li> <li>• Undertake any archival recording and documentation of heritage items as required.</li> </ul>

Roles	Responsibilities
<b>All Personnel</b>	<ul style="list-style-type: none"> <li>• Minimise the potential of pollution of land, air and water</li> <li>• Preserve the natural and cultural heritage environment</li> <li>• Minimise the occurrence of offensive noise</li> <li>• Take all feasible and reasonable steps to ensure compliance with the requirements of this CHMP</li> <li>• Comply with the relevant Acts, Regulations and Standards</li> <li>• Comply with the Project policies and procedures</li> <li>• Comply with the CHMP</li> <li>• Comply with lawful management directions</li> <li>• Reporting any potential unexpected finds to the Site Supervisors and Contractor's EM</li> <li>• Promptly report to management on any non-conformances, environmental incidents and / or breaches of the system</li> <li>• Undergo induction and training in environmental awareness as directed by management</li> <li>• Report all incidents in accordance with reporting requirements outlined in this CHMP</li> <li>• Fulfil the General Environmental Obligations</li> <li>• Undertake works in a manner that will enable the Project to implement ISCA requirements.</li> </ul>

## 2.3 Training

All personnel working on the Project shall undergo general environmental awareness training in accordance with Section 2.7.1 of the CEMP. Records of Project environmental induction and other environmental training will be maintained in the Construction Contractor's site office.

All site personnel shall undergo site specific induction training. As a minimum the induction will include the following:

- Awareness of their obligations to minimise impacts to non-Aboriginal heritage under the *Heritage Act 1977*
- Outline of the location and type of archaeological sites within the Project area including instructions not to disturb these sites
- Provide clear information about statutory obligations for heritage NSW *National Parks and Wildlife Act 1974* (NPW Act). 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 NPW Act (as amended)
- Information on historic heritage sites and 'relics' and information about statutory obligations under the NSW Heritage Act 1977
- Provide training on how to identify stone artefacts and other Aboriginal heritage sites
- Stop works and reporting protocols for discovery of previously unknown heritage and archaeological items
- The training/induction package must be prepared and delivered in consultation with Aboriginal stakeholder groups
- Plans of the Project site and surrounding area that identify sites of Aboriginal and Non-Aboriginal heritage sensitivity. This will include environmental control maps (ECMs) that identify heritage sites and items on and around the Project site.
- Examples of Aboriginal and non-Aboriginal items that may be expected on the site and how to identify them

- Unexpected Finds Protocol and reporting requirements for discovery of potential and previously unknown heritage and archaeological items

Toolbox meetings will also be undertaken, as and when required.

Competency training will be provided by the Construction Contractor as required and may include a certification, vocational qualification or a competency assessment. Where possible and appropriate, training to contractors and sub-contractors will involve representatives from Gandangara and/or Tharawal Local Aboriginal Land Councils as they will be able to provide an understanding of the local significance of the area and what likely artefacts might be found.

Records of all training are to be filed in accordance with the document control system outlined in the CEMP.

## 3 IMPLEMENTATION

### 3.1 Existing Environment

The Project site was previously operating as the DNSDC; however, Defence has recently relocated this operation and vacated the site. The majority of land immediately surrounding the site is owned and operated by the Commonwealth and comprises:

- Holsworthy Military Reserve to the south of the site on the southern side of the East Hills Passenger Railway Line
- Commonwealth Residual Land, to the east between the SIMTA site and the Wattle Grove residential area
- DNSDC, to the north and north east of the SIMTA site.

The land on the western side of Moorebank Avenue is referred to as Moorebank Precinct West (MPW).

The existing environment and heritage context of MPE has been assessed in the following background reports prepared to support the EIS for the Project:

- Aboriginal Heritage Impact Assessment, prepared by AHMS in 2012 and updated in 2015
- Non-Aboriginal Heritage Impact Assessment, prepared by Artefact Heritage in 2012 and updated in 2015
- MPE Stage 2 Aboriginal heritage assessment (Artefact 2016a)
- MPE Stage 2 Non-Aboriginal heritage assessment (Artefact 2016b)

These reports have been used as the basis of this plan.

### 3.1.1 Aboriginal Heritage

No previously registered Aboriginal sites are located in the Project site (Figure 3-1). A number of studies have been completed for the Project site as summarised below.

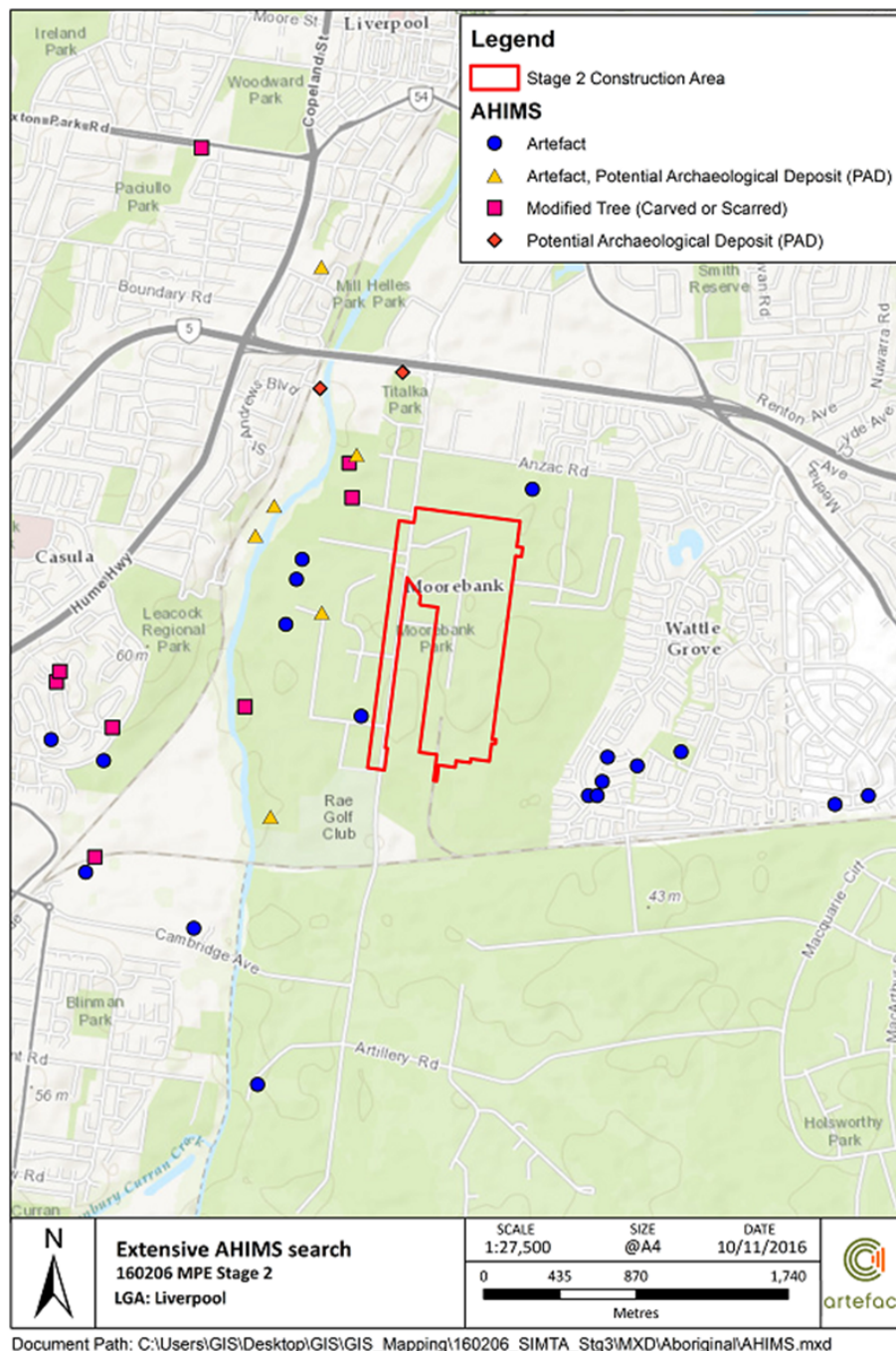


Figure 3-1 Aboriginal Heritage Information Management Service search results (Artefact 2016)

Steele and Dallas (2001) undertook a heritage assessment of the Moorebank Defence area (including the Project site), and describes the site as:

*'Whilst no evidence for Aboriginal occupation or visitation was identified through this study [Dallas, 2000 Cited in Steele & Dallas 2000], it is likely that this outcome is principally the result of the fact that the entire DNSDC [SIMTA site] has been substantially developed through a combination of cutting, levelling, landscaping and construction. Given the extent of the previous land use, the likelihood of intact archaeological deposits surviving within this*

portion of the Moorebank Defence area has been assessed to be minimal' (Steele & Dallas, 2001: 14.).

The Moorebank Defence area was mapped for its archaeological sensitivity, as shown in Figure 3-2. The Project site was assessed as having no archaeological potential.

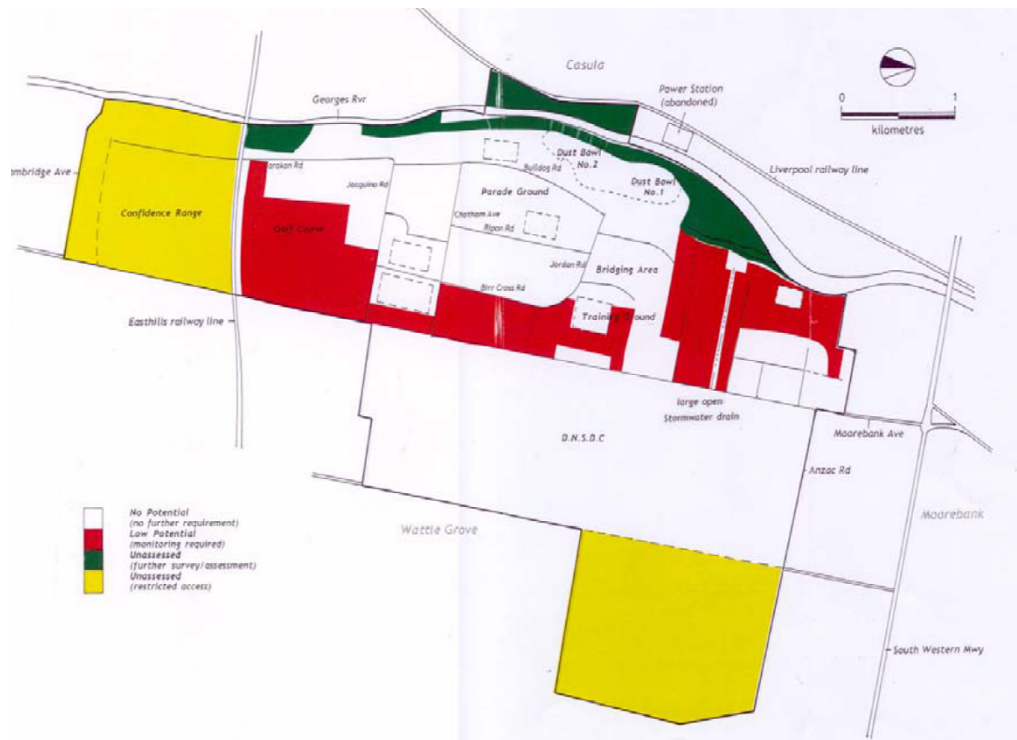


Figure 3-2 Archaeological Sensitivity of the Moorebank Defence Area (Steele & Dallas 2001).

The Project site was subject to additional survey by AHMS in 2012. This survey identified seven isolated Aboriginal objects and three areas of Potential Archaeological Deposit (PAD). Of the identified sites, four isolated objects (Isolated Find #1, 2, 3 and 4) occur within the Project site and none of the PADs are located within the Project site. Descriptions of these sites are provided in Table 13. Areas of archaeological sensitivity mapped by AHMS in their 2015 update of the 2012 survey are shown in Figure 3-3.



### Construction Heritage Management Plan



Figure 3-3 Aboriginal Sites and Area of Sensitivity as Identified by AMHS 2015.

### 3.1.1.1 MPE Stage 2 Project Site

The Project site has been assessed as highly disturbed and modified. There were no areas of PAD identified within the site and overall the site is considered to have low to nil potential to contain intact archaeological deposits.

MPE Isolated Artefact 1 was recorded by AHMS in 2012. It was assessed as having low archaeological significance. The site was not recorded on the AHMS register and no site card is available. The artefact was not located during the site visit for the MPE Stage 2 assessment (Artefact 2016). The search was informed by information presented in the AHMS assessment report. As the artefact, could not be relocated and the site has not been registered, it is recommended that no additional assessment or management of the site is required.

MPE Isolated Artefacts 2, 3 and 4 identified by AHMS in 2012 are located south of the DNSDC site in the southern portion of the Project site. **An exclusion zone would be provided around these artefacts so no impact would result from the construction of the Project.**

The Project will not impact Aboriginal heritage values or any registered Aboriginal objects. As there will be no impacts to known Aboriginal objects, or to areas of Aboriginal archaeological potential, no specific archaeological management is required. Any finds will be treated as unexpected as per the Unexpected Finds Protocol.

Table 13 Previously Recorded Indigenous Heritage Sites within (or close to) the Project Site

Site Name	Location	Description
PAD 3 <i>no longer recognised as a PAD</i>	South of the Project site	<p>Wooded area bounded by SIMTA site to north, disused rail line to east and Moorebank Ave to south.</p> <p>One of the RAPs indicated that several very old paperbarks (<i>Melaleuca</i> sp.) in PAD 3 were culturally significant. Although they did not appear to be culturally modified, mature examples of this species are now rare in the area. They were used traditionally by Aboriginal people for food. The bark was also used for wrapping babies and starting fires.</p> <p>Another RAP identified a feature in PAD 3 that he believed to be culturally significant. He indicated that it was potentially a ground oven that may even contain a burial underneath.</p> <p>Additional survey and archaeological test pitting was undertaken by AHMS in 2015. The area was found to be heavily disturbed in places showing signs of material movement from bulldozing and dumping of waste material including building rubble (AHMS 2015). It is therefore determined that there is a low potential for archaeological deposits to be located in this area and the location is not identified to be a PAD.</p>
Isolated Find #1 <i>No longer a site</i>	Within project impact area	No site card submitted and could not be relocated during MPE Stage 2 survey.
Isolated Find #2	Within project impact area, exclusion zone to be provided	Mudstone possible flake core; found near vehicle track in mud.
Isolated Find #3	Within project impact area, exclusion zone to be provided	Red/black silcrete possible core with one negative flake scar; found near vehicle track in mud.

Site Name	Location	Description
Isolated Find #4	Within project impact area, exclusion zone to be provided	Chert core with 8 negative flake scars; found near vehicle track in mud.

### 3.1.2 Non-Aboriginal Heritage

#### 3.1.2.1 Listed items

Figure 3-4 shows the listed heritage items within the vicinity of the Project.



## Construction Heritage Management Plan

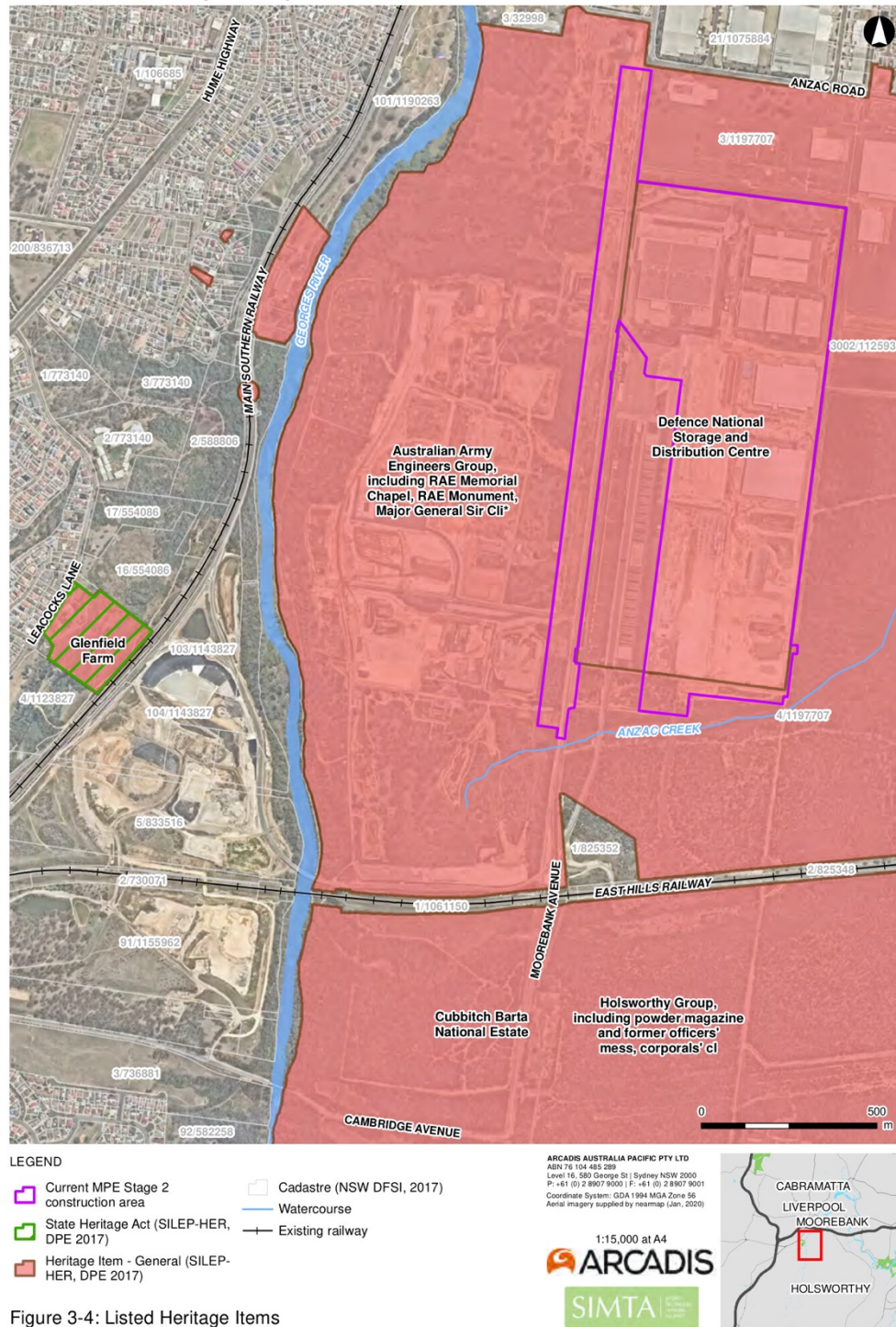


Figure 3-4: Listed Heritage Items

Figure 3-4 Listed heritage items.

The Defence National Storage and Distribution Centre (DNSDC), which incorporated the majority of the Project site was previously included on the Commonwealth Heritage List (CHL) as a Listed Place for its historic heritage values (CHL Place ID # 105641). As the Department of Defence lease has now expired and the site is no longer controlled by the Commonwealth it is no longer included on the CHL, however, it is listed as a heritage item on Schedule 5 of the Liverpool Local Environment Plan (LEP). The values of the site predominantly relate to its continuous use as a military storage facility since WWI, and several rare and representative buildings including the WWII post and beam warehouses.

### 3.1.2.2 Historic Context

As described by Artefact (2012), the first land parcels in the Liverpool area were granted in 1798 to Thomas Moore. The road connecting Liverpool and Sydney was established in 1813 and settlement in the region grew rapidly. Parish maps indicate that the Moorebank Intermodal Terminal Development site formed part of the 'PE Barker' Orchard and Vineyard in 1888 (shown in Figure 3-5) (Artefact 2012).

Military activities occurred within the local region from the early 1900s, and the area north of the Project site was utilised for training camps during this time. By 1907 a military camp was established on the eastern side of the Georges River, which included the Project site. Following a recommendation that a large central training ground should be established in each state, large plots of land were acquired within Liverpool by the Government for use as permanent military camps (Artefact 2012).

By 1913, the Liverpool camp accommodated 2000 troops in tents and became the main training centre in New South Wales. Plans dating to this period show Liverpool camp located between the Georges River and Moorebank Avenue. To the east of the camp was an area marked 'stores' which included the northern portion of the MPE. To the east of the site was a rifle range. The camp was further developed in the lead up to WWI including the development of huts, kitchens mess buildings etc. (Artefact 2012).





Figure 3-5 Site Layout (Artefact Heritage 2015).

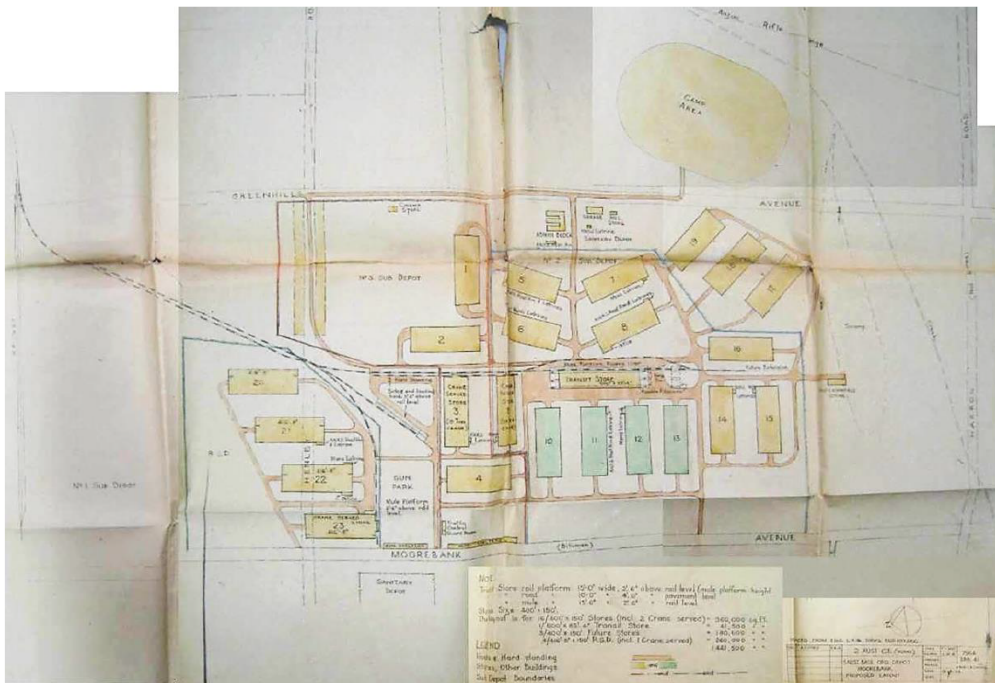


Figure 3-6 Plan of Proposed Layout of Moorebank Ordnance Depot 25/4/44 (NAA SP459/1, 420/7/1153) (Artefact 2012).

Further development of military sites occurred during the beginning of WWII. The School of Military Engineering (SME) was established to the east of the Georges River and west of the Project site. In September 1943, it was proposed that Ordnance Stores be established at Moorebank and a plan was developed by December that year. Approval was subsequently granted in February 1944 which formed the first construction phase of the DNSDC site (which incorporated the Project site) (Artefact 2012). A plan from April 1944 (Figure 3-6) shows the proposed layout which included:

- 17 stores (400' x 150' in size).
- Two crane served stores (400' x 150').
- 19 offices attached to each store (40' x 20').
- One transit store (500' x 83'4").
- Office acc. inside transit store.
- One cinematograph store (60' x 40').
- Two inflammables stores (100' x 50'). 20, 000 square feet of equipment shelters.
- One traffic control building (18' x 17'8").
- One strong room (50' x 50').
- One Depot Administration building in three blocks (135'4" x 111' combined size).
- One combined garage, service station, fire station, P.O.L store, Tpt office (97' x 25').
- One SW guard house (60' x 20').
- One case making building (3,750 square feet).
- Seven men's latrines.
- Three AWAS latrines.
- Three AWAS latrines and rest rooms (NAA: SP459/1, 420/7/1153) (Artefact 2012).





*Figure 3-7 Aerial Photograph Showing the Ordnance Depot/DNSDC in 1951 (Brookes & Associates 2002:9).*

Aerial photographs indicate that little changed at the site between the late 1940s and early 1990s (Figure 3-7). In the early 1990s the site became the DNSDC as part of a reorganisation of defence supply services and warehousing arrangements. During the refurbishment of the DNSDC five of the original 20 store buildings (five of which occur within the Project site) were demolished and replaced with larger modern buildings. The remaining WWII store buildings were reclad at this time. Modern steel sheeting replaced the original asbestos walls and new concrete floors were laid. Various WWII structures in the study area were also demolished during this time. Modern ancillary buildings including administrative buildings, workshops and amenities were constructed throughout the complex, twenty of which occur within the Project site (Artefact 2012).

### 3.1.2.3 Existing Non-Aboriginal Heritage Values

#### Defence National Storage and Distribution Centre

As described by Artefact (2012) the MPE site is significant as a largely intact network of WWII era buildings, roads, drains and rail sidings. It embodies important heritage values and was assessed as being of State and Commonwealth heritage significance.

The DNSDC, which includes the Project site was previously included on the CHL as a Listed Place for its historic heritage values. Specifically, it was included for its Processes (a), Rarity (b), Characteristic (d) and social (g) values. The Statement of Significance provided in the site's CHL listing is provided below.

*The Defence National Storage and Distribution Centre (DNSDC) is historically highly significant. As a military storage site it dates from 1915, and the Centre is important for its associations with the development of Australia's military forces prior to and during the First World War and particularly for its direct association with the military build up in the early years of the Second World War. The DNSDC has continued to play an important role in Australia's military infrastructure, right up to the present time. The place also has an association with early nineteenth century settlement in the Liverpool area. (Criterion A.4) (Themes: 7.7 Defending Australia, 7.7.1 Providing for the common defence, 7.7.3 Going to war)*

*The DNSDC contains twenty Second World War post and beam warehouses, many of which, despite being re-clad, are good examples of their type. Particularly important are the fifteen timber post and beam military warehouses of the nine-bay type which played such an important role during the war and which were the widest post and beam military warehouses. Also important are the three composite steel and timber type warehouses. Post and beam military warehouses are small in number today, giving those at this site substantial rarity value. Additional interest is inherent in the fact that the buildings are understood to have been prefabricated in the United States and shipped to Australia in the early 1940s. Further, the alignment of part of the former military railway system is evidenced by the alignment and siting of some of the buildings and roads at the site. (Criteria D.2 and B.2)*

*The Centre is of social value for Defence personnel, for the Liverpool community and for the broader Sydney community on account of the long-term Defence associations with the site. (Criterion G.1)*

The key heritage values of the site are:

- Its continuous use as a military storage site since 1915
- Its importance for associations with the development of Australia's military forces during WWI
- For the WWII post and beam warehouses present at the site which are good and rare examples of this type.

Within the Project site, impacts to state listed heritage will include the removal of five of the twenty WWII structures, the original road and open drain alignments, possible impacts to potential archaeological material associated with former structures, impacts to underground water mains and sewerage lines dating to the 1940s, and significant impacts to the setting and context of remaining WWII-era buildings.

The Project will result in permanent direct impacts to all remaining structures within the former DNSDC site and would remove all heritage values. The item will no longer retain its State heritage significance and would be likely delisted from the Liverpool LEP 2008.

The heritage buildings to be impacted are identified in Figure 3-8.



### Construction Heritage Management Plan

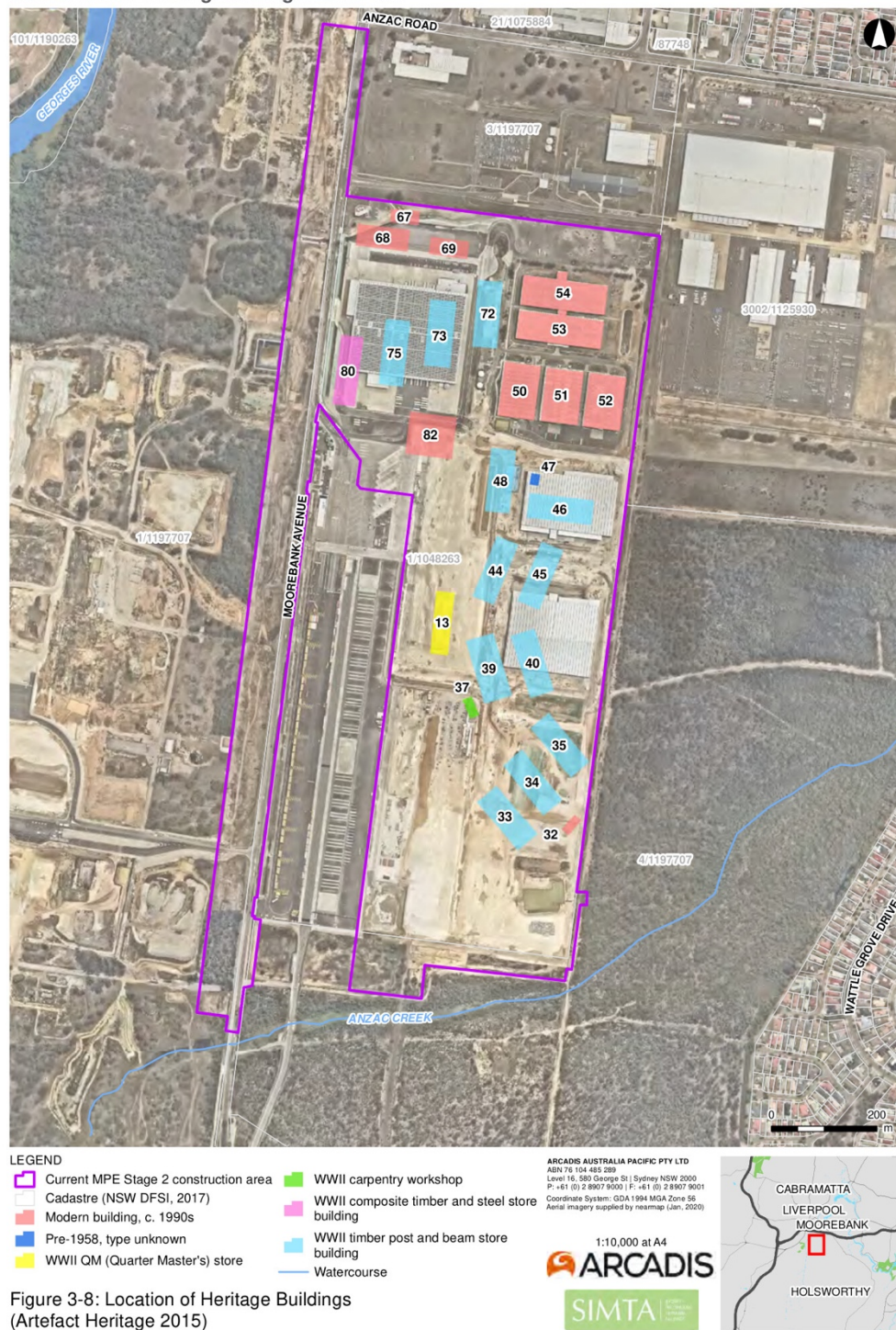


Figure 3-8 Location of Heritage Buildings (Artefact Heritage 2015)

### School of Military Engineering

The SME is listed on the Liverpool LEP (2008) under its alternate name, the Australian Army Engineers Group (Item 57). This listing notes that the site includes the Royal Australian Engineers (RAE) Memorial Chapel, RAE Monument, Major General Sir Clive Steele Memorial Gates, and The Cust Hut. According to the Liverpool LEP Heritage map, the SME also encompasses most of the land surrounding the former DNSDC site, between the East Hills railway line and Anzac Road, as well as a building on the north side of Anzac Road.

The following statement of significance for the SME is taken from the State Heritage Inventory listing for the site:

*“The School of Military Engineering demonstrates the military history, particularly the engineering military history of the area. The site encompasses a complex of heritage items that are associated with the Royal Australian Engineers. It traces the evolution of the technologies used by the RAE. Much of the war memorabilia on display is now rare. The site is representative of the RAE's pride in their military past and present. There is the potential to gain more information on the site from further architectural, archaeological and documentary research.”*

The Project will result in minor impacts to the SME curtilage. These impacts will not result in loss of heritage values as the heritage values of the place will be impacted by the MPW Project, which are already assessed under separate applications and approvals.

#### 3.1.2.4 Areas of Archaeological Potential

Artefact Heritage (2016) also identified several areas of historic heritage archaeological potential, as shown in Figure 3-9 and described in Section 3.1.2.

There is low potential for unexpected archaeological deposits dating to the pre-WWI, WWI and Interwar periods to be uncovered and if these remains existed they are likely to have been impacted by WWII development of the site.

The research potential of these deposits would not be high, and the majority of Potential Archaeological Deposits (PADs) have been assessed as unlikely to meet the threshold for local significance. This is due to a number of factors including:

- Ground disturbance levels that may have impacts on any archaeology,
- Ample documentary information for some of the former buildings (such as photos and plans) so any archaeological evidence is limited in its research potential,
- The use of the site was for storage and was not residential so the archaeological record is expected to be limited
- Any remains would be minor or insubstantial, as would be the case for mains attached latrines or very small structures.

Within the Project site only PAD W and V have the potential to contain archaeological remains of local significance. Monitoring and recording of PADs V and W was undertaken from 19 to 21 March 2018. No significant archaeological deposits were found, and no further testing around PADs V and W was recommended in the report ‘Summary of Excavation Results and Future Management - Moorebank Precinct East (MPE) PADs V and W’ dated 16 April 2018.

The remaining PADs (E to U) represent areas where there remains a low probability of unexpected finds to be uncovered during construction. All PADs are identified in Table 10 below.

Table 11: Archaeological potential

Potential Archaeological Deposit (PAD)	Description	Potential Nature of Archaeological Remains	Disturbance	Archaeological Potential
E	The large former structure at PAD E is identified as Building 12 on the 1944 and 1966 plans of the DNSDC site. This former structure was a WWII timber post and beam store building (Brooks and Associates 2002; 14). It was demolished c.1990 and replaced by modern Building 16.	Footings, wood or steel structural remains and evidence of cut and fill	High	Low
I	This PAD is identified on the 1944 DNSDC plan as an “Inflammable Store”. It is also identified on the 1958 DNSDC plan as Building 26. A photograph of this former building, dated 30/01/1946, contained the caption “inflammable wares such as paints, acids and oils are stored in this shed”	Footings, wood or steel structural remains and evidence of cut and fill.	Low	Moderate
J	PAD J is identified on the WWII DNSDC 1958 plan as Building 25. A photograph of this building, dated 05/08/1945, demonstrates that this structure was a warehouse of similar dimension and construction to that at PAD I	Footings, wood or steel structural remains and evidence of cut and fill.	Low	Moderate
K	This PAD is identified as Building 63 on the WWII 1958 DNSDC plan. The function of the structure has not been identified through documentary research. Its small footprint suggests that it is an ancillary or administrative structure.	Footings, wood or steel structural remains and evidence of cut and fill.	Low	Moderate
L	This PAD is identified as Building 62 on the WWII 1958 DNSDC plan. The function of the structure has not been identified through documentary research. Its small footprint suggests at an ancillary or administrative structure.	Footings, wood or steel structural remains and evidence of cut and fill.	Moderate	Low
O	The large former structure at PAD O is identified as Building 12 on the 1944 and 1966 plans of the DNSDC site. This former structure was a WWII timber post and beam store building. The location is currently hardstand which may be a remnant of the original structure.	Footings, wood or steel structural remains and evidence of cut and fill	Low	Moderate
P	PAD P comprises a collection of small structures associated with the WWII warehouses. The structures abutting the warehouses where latrines or stores and are marked on the 1944 plan. The nature of the four structures which were not directly attached to the warehouses is not known and could not be identified by	Footings, wood or steel structural remains and evidence of cut and fill. Accidentally deposited	Moderate	Moderate

Potential Archaeological Deposit (PAD)	Description	Potential Nature of Archaeological Remains	Disturbance	Archaeological Potential
	documentary research. It is assumed they were ancillary or administrative structures.	artefacts or rubbish if drop toilets were installed.		
Q	PAD Q comprises a collection of small structures associated with the WWII warehouses. The structures abutting the warehouses where latrines, offices or stores and are marked on the 1944 plan. The nature of the larger structure to the north of the PAD is not known. There is a smaller structure marked on the 1944 plan as a store. The store may have been extended up to 1966.	Footings, wood or steel structural remains and evidence of cut and fill. Accidentally deposited artefacts or rubbish if drop toilets were installed.	Moderate	Moderate
R	The former structure at PAD R was likely to be a store or smaller warehouse. The nature of the structure has not been identified through documentary research.	Footings, wood or steel structural remains and evidence of cut and fill	Moderate	Low
S	The four small structures at PAD S are likely to be latrines, offices and stores. Two of the structures are shown on the 1944 plan as latrines.	Footings, wood or steel structural remains and evidence of cut and fill. Accidentally deposited artefacts or rubbish if drop toilets were installed	Moderate	Moderate
T	A number of structures are located between the two WWII warehouses in PAD T. The structures are not shown on the 1944 plan and their nature cannot be identified through documentary research. It is noted that a road is located where the structures were in the 1944 plan and 1951 aerial.	Footings, wood or steel structural remains and evidence of cut and fill	Moderate	Low
U	The three structures at PAD U are not on the 1944 plan but are shown on the 1951 aerial. It is likely that they are stores of some kind and it is noted that access ways are visible into the structures on the 1951 aerial. It is likely that these items had slab floors which would limit the potential for archaeological remains to be present. A modern warehouse has been constructed at the location of the northernmost structure built over by.	Footings, wood or steel structural remains and evidence of cut and fill	Moderate	Low
V	The small cluster of structures in PAD V are visible on the 1951 aerial. The nature of the structures is not known, although it is likely they are administration facilities.	Footings, wood or steel structural remains and	Low	Moderate-high*

Potential Archaeological Deposit (PAD)	Description	Potential Nature of Archaeological Remains	Disturbance	Archaeological Potential
		evidence of cut and fill. Potential for evidence for use of structures.		
W	The small cluster of structures in PAD W are visible on the 1951 aerial. The nature of the structures is not known, although it is likely they are administration facilities.	Footings, wood or steel structural remains and evidence of cut and fill. Potential for evidence for use of structures.	Low	Moderate-high*

\* Testing and monitoring of PADs V and W was undertaken from 19 to 21 March 2018. No significant archaeological deposits were found. A report entitled 'Summary of Excavation Results and Future Management – Moorebank Precinct East (MPE) PADs V and W' dated 16 April 2018, concluded that no further testing around PADs V and W is required.



### Construction Heritage Management Plan

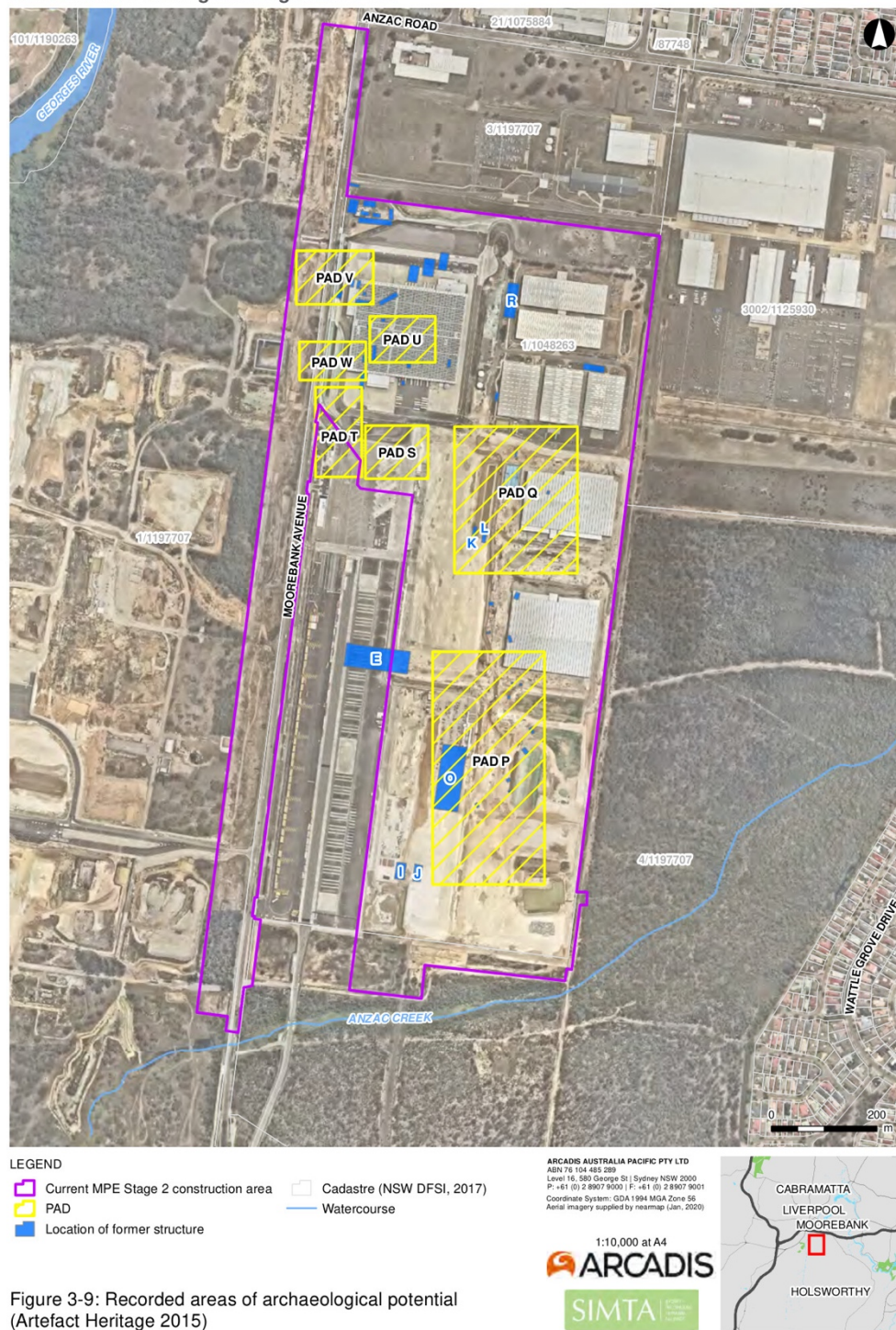


Figure 3-9 Recorded Areas of Archaeological Potential (Artefact Heritage 2015).

## 3.2 Aspects Impacts and Risks

### 3.2.1 EIS Identified Impacts

The MPE Stage 2 EIS identified the following Non-Aboriginal impacts related to the Project:

- The removal of all heritage values from the former DNSDC site and the loss of its heritage significance
- More specifically, direct impacts to 15 WWII era store buildings, comprising one composite timber and steel store (Building 80), 13 timber post and beam stores including the Quarter Master's store (Buildings 33-35, 39-40, 44-46, 48, 72-73, 75 & 13) and the carpentry workshop (Building 37)
- The removal of original roads and open drain alignments running through the Proposal site
- Impacts to potential archaeological material associated within former structures located within the Proposal site
- Impacts to underground water mains and sewerage lines within the Proposal site, as visible on a 1958 plan of the site, which probably date to the 1940s
- Impacts to the curtilage of the SME site to the west as a result of Moorebank Avenue upgrade.

No impacts are expected to Aboriginal heritage values as a result of the MPE Stage 2 project.

### 3.2.2 Construction Impacts

Further to Section 3.2.1, construction impacts directly related to Aboriginal and non-Aboriginal heritage are described in Table 14, Table 15 and the aspects and impacts register in the CEMP. Management measures to address these identified risks are included in Section 3.3.

*Table 14 Potential Construction Impacts to Aboriginal Heritage*

Activity	Aspect/s	Impacts
Bulk earthworks	Excavation, vibration, cutting and filling,	Finding/disturbance to and/or destruction of unexpected burials, human remains or other Aboriginal objects.
Construction of warehousing	Excavation, vibration, cutting and filling, construction of buildings	Finding/disturbance to and/or destruction of unexpected burials, human remains or other Aboriginal objects.
Installation of signals, signs and lights and various finishing works	Excavation, vibration and soil compaction due to use of heavy machinery, cutting and filling.	Finding/disturbance to and/or destruction of unexpected burials, human remains or other Aboriginal objects.
Removal of vegetation from the construction area.	Excavation, vibration and soil compaction due to use of heavy machinery, cutting and filling.	Finding/disturbance to and/or destruction of unexpected burials, human remains or other Aboriginal objects.
Installation of drainage lines and extension of utilities services	Excavation, vibration and soil compaction due to the use of heavy machinery, cutting and filling, installation of fencing	Finding/disturbance to and/or destruction of unexpected burials, human remains or other Aboriginal objects.

Table 15 Potential Construction Impacts to Non-Aboriginal Heritage

Activity	Aspect/s	Impact/s
Bulk earthworks	Excavation, vibration, cutting and filling, construction of buildings	Disturbance to and/or destruction of non-Aboriginal archaeological deposits.
Demolition of buildings	Removal of structures, vibration	Demolition of buildings of heritage significance
Construction of warehousing	Excavation, vibration, cutting and filling, construction of buildings	Finding/disturbance to and/or destruction of unexpected non-Aboriginal heritage items.
Construction of Freight Village	Excavation, vibration, cutting and filling, construction of buildings	Finding/disturbance to and/or destruction of unexpected non-Aboriginal heritage items.
Construction of upgrades to Moorebank Avenue, including diversion road	Excavation, vibration, cutting and filling	Finding/disturbance to and/or destruction of unexpected non-Aboriginal heritage items.
Installation of signals, signs and lights and general finishing works	Excavation, vibration and soil compaction due to use of heavy machinery, cutting and filling.	Finding/disturbance to and/or destruction of unexpected non-Aboriginal heritage items.
Removal of vegetation from the Construction area.	Excavation, vibration and soil compaction due to use of heavy machinery, cutting and filling.	Finding/disturbance to and/or destruction of unexpected non-Aboriginal heritage items.
Landscaping of the Project site	Excavation, vibration and soil compaction due to the use of heavy machinery, cutting and filling, installation of fencing	Finding/disturbance to and/or destruction of unexpected non-Aboriginal heritage items.
Installation of drainage lines and extension of utilities services	Excavation, vibration and soil compaction due to the use of heavy machinery, cutting and filling, installation of fencing	Finding/disturbance to and/or destruction of unexpected non-Aboriginal heritage items.

### 3.3 Cumulative Impacts

Assessment of potential cumulative Aboriginal heritage and non-Aboriginal heritage was undertaken as part of the preparation of the MPE Concept Plan EIS and included in Section 19 of the MPE Stage 2 EIS.

#### 3.3.1 Aboriginal Heritage

The previous and existing activities undertaken on the MPE site by the Department of Defence have resulted in a high level of disturbance to the site. It is likely this is the case for the MPW site. Excavation of the MPE site and introduction of fill to the MPE site has caused significant detrimental impact to any existing land surface and/or soil profile (and any associated Aboriginal objects) that may have been present within the MPE and MPW sites.

Overall, it is concluded that the cumulative impacts on Aboriginal heritage of the MPE and MPW Projects will be negligible with the implementation of appropriate mitigation measures outlined in Section 3.4.

### 3.3.2 Non-Aboriginal Heritage

Construction of the MPE and MPW Projects would result in a loss of heritage structures and subsequent loss of heritage context in place on both sites. The MPE Concept Plan committed to consultation with Department of Defence during the approvals process to align both the MPE and MPW Projects in the management of non-Aboriginal heritage items as far as practicable.

Works on the MPE site would be aligned to any divestment strategy of the Department of Defence during their relocation from the MPE site, taking into consideration all heritage items with the MPE site and the vicinity of the MPE site and maintaining the heritage significance through the implementation of mitigation measures outlined in Section 3.4.

## 3.4 Management Measures

This section describes the overall approach to managing and mitigating Aboriginal and non-Aboriginal heritage risks during construction of the Project. The management measures in Table 16 are based on the FCMM, provided as part of the consolidated assessment clarification responses issued on 10 December 2017, and the Minister's CoCs, as well as the requirements and standards of SIMTA, the Contractor and best practice.

Table 16 Management Measures

ID	Management Measure	Timing	Responsibility	Reference
<b>Staff Awareness</b>				
HM1	<p>All site staff, including subcontractors must attend an induction which details locations and types of heritage sites, legislation and other project requirements. Heritage sites will be further communicated in toolbox talks, prestart briefings and prior to works in or adjacent to heritage areas.</p> <p>Content of the induction will include site identification, materials likely to be uncovered, and requirement to notify the Contractor's Environmental Manager in the event that any potential object of archaeological or cultural origin is uncovered.</p> <p>Personnel directly involved in implementing heritage control measures on site will be given specific training in the various measures to be implemented.</p> <p>Records of all training are to be filed in accordance with the project filing system.</p>	Pre-construction	All personnel	FCMM 9C CoC 93 (b)
<b>Site Planning</b>				
HM2	Archival recordings shall be completed for all heritage listed structures on the site prior to the commencement of construction.	Completed	Contractor's EM and Project Heritage Consultant	CoC B91
HM3	<p>The Heritage Interpretation Plan (HIP) will be developed during construction in consultation with NSW Heritage Division, Liverpool City Council, relevant landowners and stakeholders including Moorebank Heritage Group, Department of Defence, and RAPs, in accordance with the Heritage Interpretation Strategy (HIS). It will be submitted for approval prior to the commencement of operation, and will outline appropriate interpretive measures to be implemented.</p> <p><i>Note that this is a separate document to this CHMP.</i></p>	During construction	Principal's Representative	FCMM10C CoC B101 and B102 MPW C'th CoA 11 (b)



ID	Management Measure	Timing	Responsibility	Reference
HM4	<p>Plan construction activities to ensure that they remain within the construction boundary as identified in Figure 1-1.</p> <p>Where activities may need to extend beyond the site boundary, additional heritage investigations will be undertaken to identify and manage any additional heritage items that may occur in these areas and to ensure that these items are not harmed, modified or damaged in any way. Additional investigations will include the relevant stakeholders such as the Gandangara and/or Tharawal Local Aboriginal Land Councils as well as Liverpool City Council.</p>	Prior to construction	<p>Site Supervisor</p> <p>Contractor's CM</p> <p>Contractor's EM</p>	<p>CoC B93 (c)(i)(ii)</p> <p>CoC B93(c)(iv)</p> <p>FCMM 9C</p>
HM5	Environmental control maps (ECMs) will be developed clearly identifying Aboriginal and non-Aboriginal heritage sites on and in close proximity to the Project.	Prior to construction	Contractor's EM	<p>CoC B93 (c)(i)(ii)</p> <p>FCMM 9C</p>
HM6	A Significant Element Salvage Strategy will be prepared by the heritage specialist, in consultation with appropriate experts where necessary, including materials engineers, conservators and structural engineers, to identify appropriate elements for salvage, storage, and potential reuse at the site, and provide a methodology for safely undertaking the salvage prior to the commencement of the demolition works. A final schedule of salvaged elements will be prepared following the completion of demolition. The salvaged elements will be incorporated into the detailed design for the site's interpretation.	Completed	Principal Representative	NSW Heritage Council Request
<b>Exclusion Zones and Monitoring</b>				
HM7	<p>A 10m exclusion zone (e.g. high visibility fencing, signage) will be maintained around isolated find 2, 3, and 4 and any unexpected archaeological (historic and Aboriginal) sites that are identified requiring management under the SSD.</p> <p>Signage and restricted access to heritage structures within the Construction footprint will be erected.</p>	Prior to construction	<p>Site Supervisor</p> <p>Project Heritage Consultant</p> <p>Contractor's EM</p>	<p>CoC B96</p> <p>FCMM 9A</p>
HM8	Archaeological monitoring will be undertaken for a representative sample of the sites (PADs V and W) of former structures which have been assessed as having the potential to have local heritage	Complete	<p>Contractor's EM</p> <p>Project Heritage Consultant</p>	<p>FCMM 10B</p> <p>CoC B93 (a)</p>

ID	Management Measure	Timing	Responsibility	Reference
	<p>significance. This is anticipated to have been completed prior to construction.</p> <p>An archaeological monitoring plan (AMP) will be developed prior to the commencement of the construction works. The AMP will be developed in accordance with this Plan and submitted to the Department of the Environment and Energy for information prior to commencement of construction. Monitoring of these sites will be directed by an Excavation Director experienced in investigations of locally significant archaeology. Suitable experience and qualifications are outlined by the Heritage Councils <i>Criteria for the assessment of Excavation Directors</i>.</p> <p>The archaeologist would assess the likely significance of any archaeological deposits encountered, and provide advice regarding appropriate further action. An archaeological report will be submitted to the Secretary within one month of the completion of the monitoring.</p>			<p>CoC B94</p> <p>CoC B95</p>
HM9	No access through fenced heritage sites. These are considered exclusion zones.	All times	All personnel	Best Practice
HM10	No works to occur outside the Project construction boundary.	All times	All personnel	RSoC 2.0 (Heritage)
HM11	Contractor's EM to undertake weekly inspections and monitoring of construction activities to ensure compliance with the requirements of CoCs and this plan. Site supervisor to undertake daily inspections and undertake maintenance of fencing where required. Records of inspections will be maintained.	Daily/Weekly	Contractor's EM Site Supervisor	CoC B93 (a)
HM12	Archaeological surveys directed by a qualified archaeologist will be undertaken for any construction area not included within the Project. Additional management measures will be prepared in consultation with stakeholders if required. If historical archaeological resources and relics are identified in areas outside of the project site, additional approvals under the Heritage Act 1977 may be required.	During construction	Contractor's EM	CoC B93 (c) (i)



ID	Management Measure	Timing	Responsibility	Reference
<b>Procedures for Unexpected Finds</b>				
HM13A	<p>If an item (or suspected item) of Aboriginal heritage significance is discovered, the <i>Unexpected Heritage Finds Protocol</i> will be implemented (Section 3.4.1). All work in the area of the find will cease immediately and the Site Supervisor, Contractor's EM and Contractor's CM will be notified immediately. A 10m exclusion zone around the item must be erected. Any sand/soils removed will be identified and set aside for assessment. The Principal's Representative and the Project Heritage Consultant will be notified immediately. The Principal's Representative will contact OEH immediately. The Project Heritage Consultant is to assess the area to determine whether an Aboriginal site is present. If the item is confirmed to be of Aboriginal heritage significance, the Project Heritage Consultant, in consultation with the RAPs and OEH, must record the location and attributes of the site, determine the significance of the find, and determine appropriate mitigation measures and register the site on AHIMS.</p> <p>Works can only recommence if directed by the Principal's Representative when the following have been satisfied:</p> <ul style="list-style-type: none"> <li>– The object or place is confirmed by OEH upon consultation with the Registered Aboriginal Parties, not to be an Aboriginal object or Aboriginal Place; or</li> <li>– An Aboriginal Cultural Heritage Management Plan is prepared in consultation with the Registered Aboriginal Parties and OEH and the plan is approved by the Secretary</li> <li>– OEH is satisfied with the measures implemented.</li> </ul> <p>An assessment of consistency will also be undertaken by the Principal's Representative and the Project Heritage Consultant if the item is confirmed to be of Aboriginal heritage significance.</p>	Ongoing during construction	All personnel	<p>CoC B93(c) iii</p> <p>CoC B93(c) iv</p> <p>CoC B97</p> <p>CoC B99</p> <p>CoC 100</p> <p>MPW C'th CoA 11 (b)</p>
HM13B	<p>If an item (or suspected item) of Non-Aboriginal heritage (including any archaeological 'relic' such as artefact bearing deposits directly linked to early occupation of the site) is discovered, the Unexpected Heritage Finds Procedure will be implemented (Section 3.4.1). All work in the area of the find will cease</p>	Ongoing during construction	All personnel	CoC B97

ID	Management Measure	Timing	Responsibility	Reference
	<p>immediately. The Site Supervisor, Contractor's EM and Contractor's CM will be notified immediately, and a 10m exclusion zone around the item must be erected. Any sand/soils removed will be identified and set aside for assessment.</p> <p>The Project Heritage Consultant must be notified to record the location and attributes of the site, determine the significance of the find, assess any impacts or potential impacts against the already approved project impacts and determine appropriate management measures.</p> <p>Where unexpected finds are assessed by the Project Heritage Consultant and determined not to constitute a previously unknown heritage item or evidence of heritage value and/or be of local or state heritage significance, then works shall recommence in accordance with the CEMP (including this CHMP).</p> <p>For any newly discovered historical archaeological sites and relics that are assessed by the heritage professional to be of local or state significance, the OEH Heritage Division ((02) 9873 8500), NSW Heritage Council and the Secretary shall be notified under Section 146 of the <i>Heritage Act, 1977</i>.</p> <p>Works can only recommence once approval has been provided by DPE.</p> <p>An assessment of consistency will be undertaken by the Principal's Representative and the Project Heritage Consultant if the item is confirmed to be Non-Aboriginal heritage.</p>			
HM14	If human remains are encountered works in the vicinity must cease immediately and the area will be secured. The Secretary, NSW Police, OEH and Aboriginal Stakeholders must be notified. Works will not recommence until authorised by OEH and NSW Police.	Ongoing during construction	All personnel	CoC B98
<b>Incident Management</b>				
HM15	Incidents include breach of an exclusion zone, damage to artefact, or unexpected find. All incidents must be notified to the	Ongoing during construction	All personnel	CoC C7 (e) Best Practice

ID	Management Measure	Timing	Responsibility	Reference
	environment teams immediately. Works in the vicinity of the incident will be stopped as per the unexpected finds procedure.			
<b>Reports and Records</b>				
HM16	Meeting minutes will be kept for meetings with regulatory bodies such as the ER, EPA and OEH.	Ongoing during construction	Contractor's EM	Best Practice
HM17	A summary of compliance with this procedure will be provided in the Project Monthly Report	Ongoing during construction	Contractor's EM	CoC C7 (h) Best Practice
<b>Post-Construction Works</b>				
HM18	Undertake a reassessment of the heritage value of the site upon completion of the works in consultation with Liverpool City Council and the Heritage Council of NSW.	Post-construction	Principal Representative	Heritage Council of NSW request

## 3.4.1 Unexpected Finds Protocol

### 3.4.1.1 Aboriginal Heritage

Given the extensive historical disturbance within the Project, it is considered that the likelihood of the presence of intact or significant Aboriginal objects and/or sites is low and no further archaeological investigations are warranted in these remaining areas. However, if any Aboriginal heritage objects, as protected under NSW legislation, are uncovered during the works, then steps identified in Figure 3-10 should be followed. In particular, works can only recommence if:

1. The object or place is confirmed by OEH upon consultation with the Registered Aboriginal Parties, not to be an Aboriginal object or Aboriginal Place; or
2. An Aboriginal Cultural Heritage Management Plan is prepared in consultation with the Registered Aboriginal Parties and OEH to include the object or place and appropriate measures in respect of it, and the Plan is approved by the Secretary; or
3. OEH is satisfied as to the measures to be implemented in respect of the object or place and makes a written direction in that regard.

Reporting of newly discovered sites must be prepared in accordance with statutory requirements and best practice professional standards.

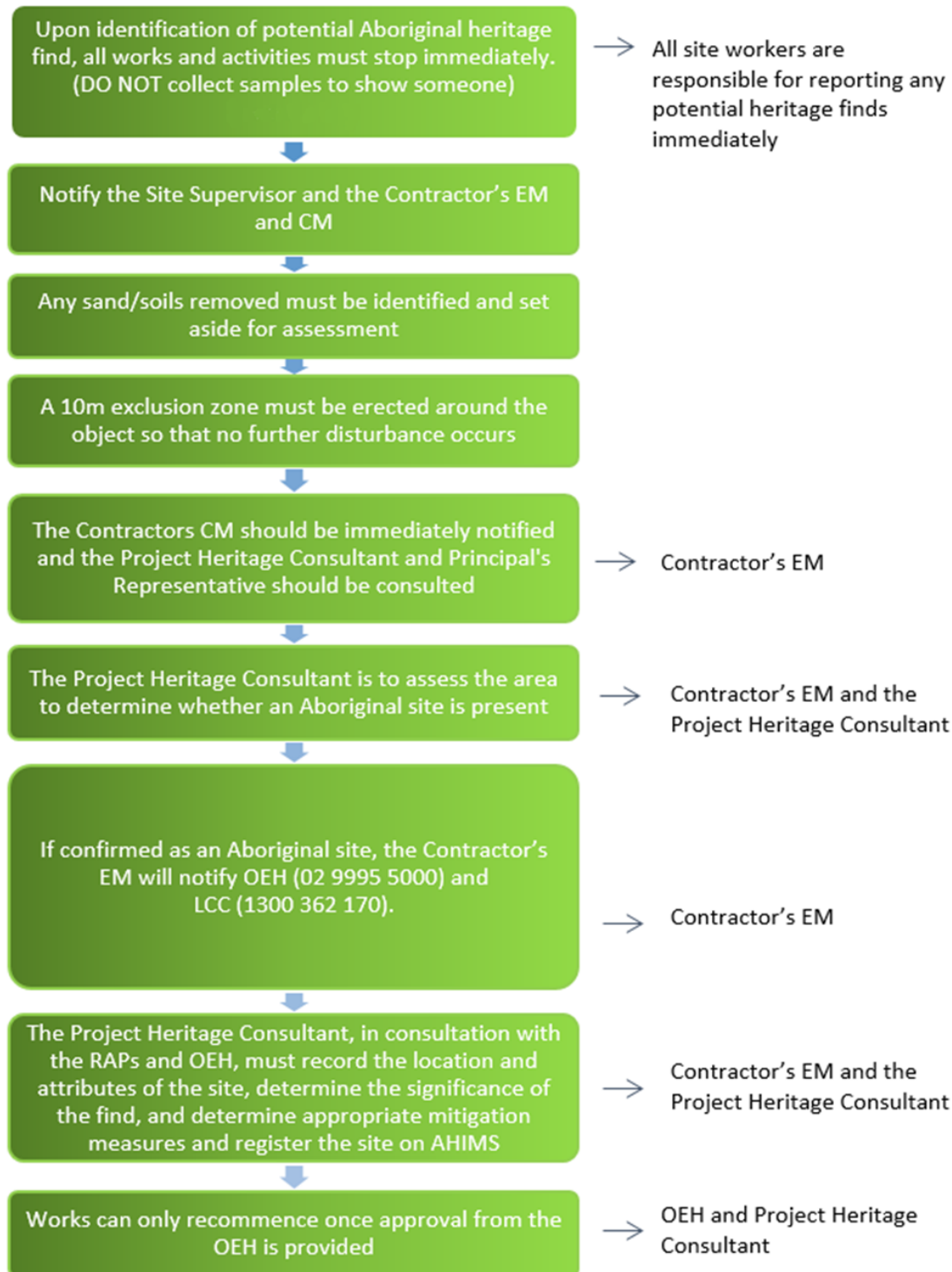


Figure 3-10 Unexpected Finds Procedure (Aboriginal Heritage)

### 3.4.1.2 Examples of Potential Unexpected Aboriginal Finds

It is highly unlikely that any Aboriginal artefacts will be identified on the site due to the historical disturbance of the area. However, the most likely finds are isolated finds such as flaked stone tools.

Typical characteristics of flaked stone tools include:

- Sharp edges.
  - Retouch along one or more edges.

- Stone rich in silica.
- Stone type often different to the natural rock in the area.
- Flakes
  - Usually less than 50 mm long.
  - A ‘striking platform’ visible.
  - Impact point often present on the striking platform.
  - A ‘bulb of percussion’ often present below the striking platform.
  - May have been shaped into a recognisable tool form, such as a point or scraper.
- Cores
- May be fist-sized or smaller.
- May have one or more scars where flakes have been removed.

It is noted that not all features can be seen on each stone tool and some require an experienced eye to identify them. Breakage can remove key features.

### 3.4.2 Skeletal Remains

In the event of the discovery of human skeletal material (or suspected human skeletal material) during Project activities the steps shown in Figure 3-11 must be followed.

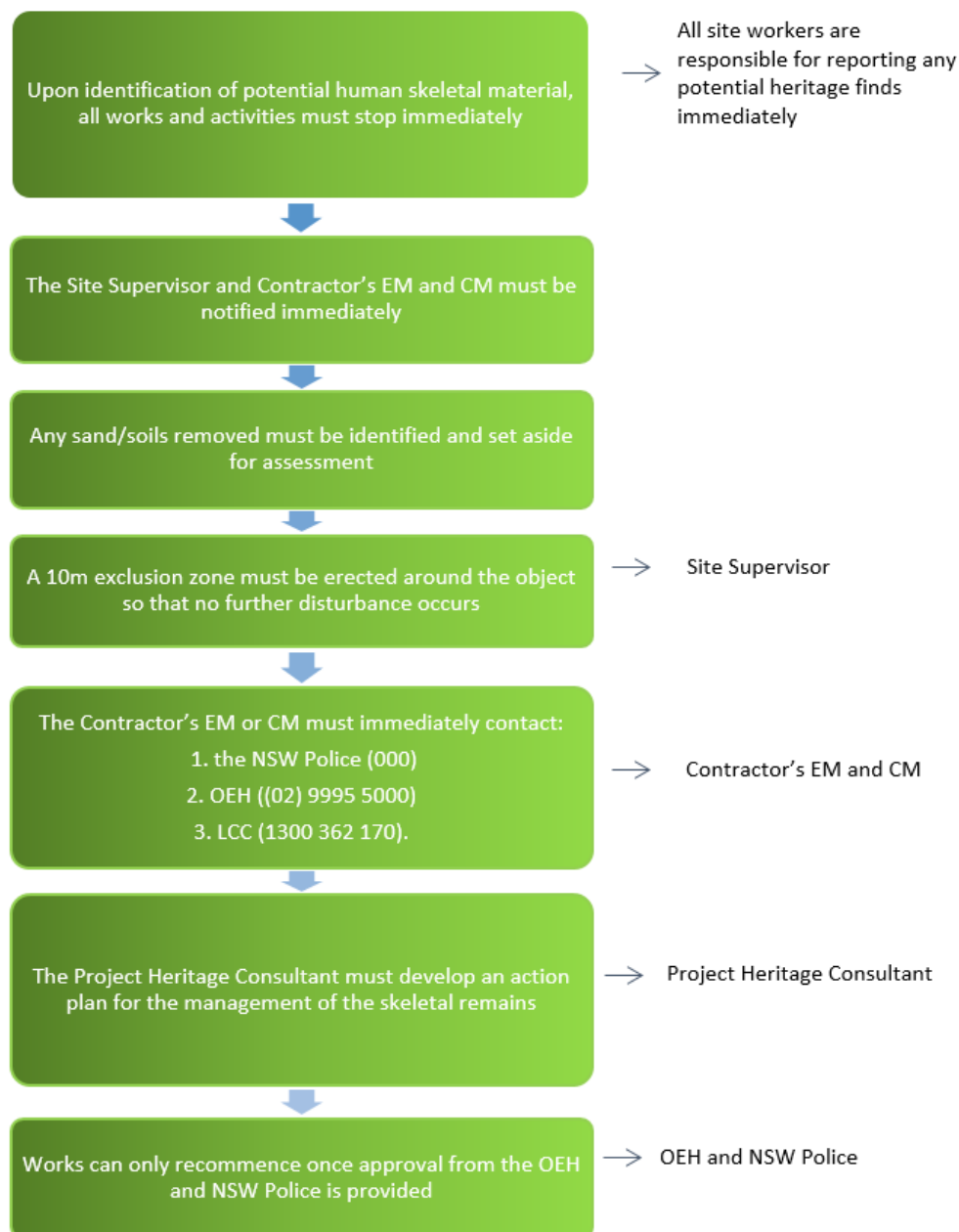


Figure 3-11 Unexpected Finds Procedure (skeletal material)

### 3.4.3 Non-Aboriginal Heritage

If unexpected finds are located during works the non-Aboriginal Unexpected Finds Procedure, shown in Figure 3-12, will be implemented.



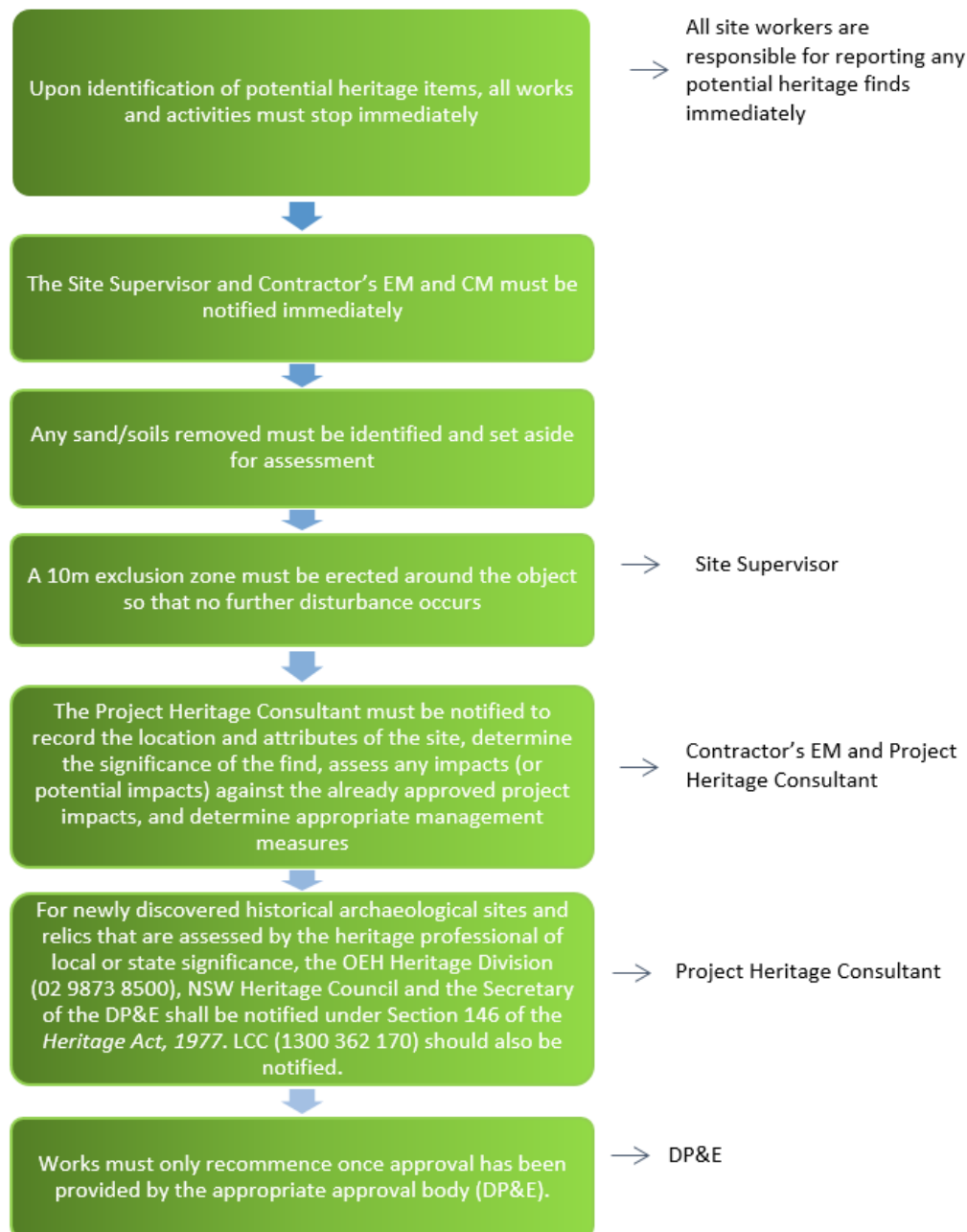


Figure 3-12 Unexpected Finds Procedure (Non-Aboriginal Heritage)

***Note:** In the context of this CHMP, an unexpected find is defined as a previously unknown heritage item or evidence of heritage value. It does not include uncovering footings within PADs identified in Table 14 as having low research potential as these have already been captured within the development consent process and no further assessment of these items is required as they are unlikely to meet the threshold for local significance. Any footings that are uncovered outside of the PADs will need to be assessed as described above.*

*Where unexpected finds are assessed by the Project Heritage Consultant and determined not to constitute a previously unknown heritage item or evidence of heritage value and/or be of local or state heritage significance, then works shall recommence in accordance with the CEMP (including this CHMP).*

### 3.4.4 Examples of Potential Unexpected Non-Aboriginal Finds

Due to previous disturbance of the site, it is highly unlikely that any non-Aboriginal artefacts will be identified during the works. However, isolated finds may be uncovered and may include:

- Discarded personal items
- Footings of unrecorded structures
- Concrete slabs
- Relics linked to early occupation of the site.

The below provides examples of what has been found to date during heritage salvage excavations on Moorebank Precinct West.

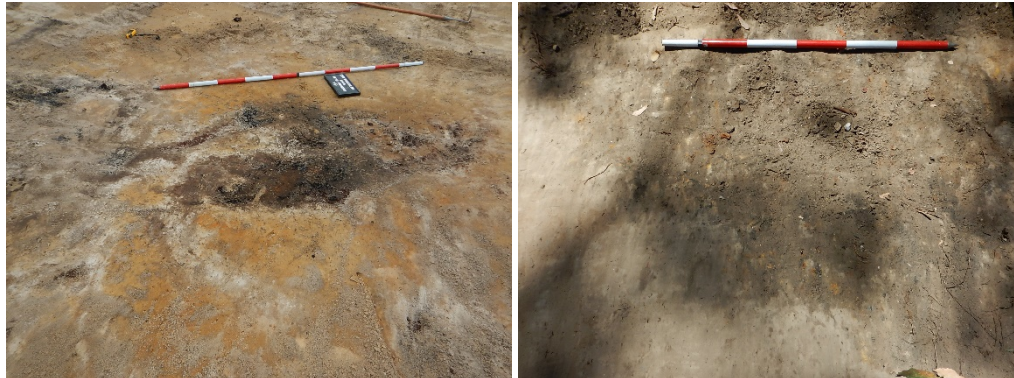


Figure 3-13 Rubbish pit



Figure 3-14 Brick pit



Figure 3-15 Post hole



*Figure 3-16 Foundation*

## 4 MONITORING AND REVIEW

### 4.1 Environmental Monitoring

Monitoring under this plan will be undertaken by the Contractor's EM during weekly inspections of construction activities to monitor compliance with the requirements of the CoCs and this CHMP.

Weekly inspections will focus on the following key issues:

- Maintenance of exclusion zones around identified Aboriginal sites
- Adherence to the approved Project boundary in regard to heritage.

Weekly inspections will be undertaken throughout construction.

An Environmental Inspection Checklist will be used to maintain compliance and effectiveness of controls and to record the effectiveness of those controls to manage impacts. Items that require action will be documented during environmental inspection and notified to the site supervisor, and if compliance is not maintained through existing controls supplementary controls will be implemented. The Contractor's PM will be responsible for providing appropriate resources in terms of labour, plant and equipment to enable the items to be rectified in the nominated timeframes.

Daily inspections and maintenance of controls will be made by the Site Supervisors and maintenance will be recorded in site diaries during active site works.

### 4.2 Environmental Auditing and Reporting

Auditing and reporting of the Project will be undertaken in accordance with the CEMP.

The Contractor's EM will undertake weekly inspections and monitoring of construction activities to ensure effectiveness of controls, compliance with the requirements of the CoCs and this plan.

Items that require action will be documented on the site environmental inspection. The Contractor's CM will be responsible for providing appropriate resources in terms of labour, plant and equipment to enable the items to be rectified in the nominated timeframes.

Daily inspections of controls will be made by the Site Supervisor and maintenance will be recorded in site diaries during active site works.

### 4.3 Review and Improvement

Review (both annually and intermittently) and improvement of this plan will be undertaken in accordance with the CoCs and Section 1.2.7 of the CEMP. Continuous improvement will be achieved by the ongoing evaluation of environmental management performance and effectiveness of this plan against environmental policies, and the objectives and targets identified in Section 1.6.

Revision of this plan will be undertaken in accordance with Section 1.2.7 of the CEMP. Any revisions to the CHMP may result from:

- CHMP and/or CEMP review
- Audits (either internal or external parties)
- Changes to the environmental management system
- Changes to procedures, scope of works and/or systems after an incident or potential incident
- Design changes
- Construction activity changes
- Changes in the CoCs
- Identification of opportunities for improvement of deficiencies in the project system (e.g. through the course of site inspections)



- Following complaints.

A copy of the updated plan and changes will be distributed to all relevant stakeholders in accordance with the approved document control procedure.

## 4.4 Incidents

An environmental incident is an incident or set of circumstances resulting in harm, or potential harm, to the environment. Environmental incidents may include disturbance or damage to a known heritage item or place. All environmental incidents will be managed and reported in accordance with Section 2.8 of the CEMP. Section 2.8 of the CEMP includes an environmental incident response flowchart, that demonstrates how incidents will be responded to and managed.

## 4.5 Non-compliances, Non-conformances and Actions

It is the responsibility of all personnel to report non-compliances and non-conformances to their Site Supervisor and/or the Contractor's EM.

Non-compliances, non-conformances and corrective and preventative actions will be conducted in accordance with Section 4.4 of the CEMP.

## 4.6 Complaints

Complaints may be received directly from stakeholders to members of the Project team, or indirectly via the 24-hour Project information line, email address or postal address. Complaints will be managed in accordance with Section 2.6.3 of the CEMP and Section 3.3.6 of the Construction Community Communication Strategy (CCCS). Section 3.3.6 of the CCCS indicates who the 24 hour contact of the Project is, provides details on the complaints register and how disputes will be resolved.

## 4.7 Ongoing Consultation

Ongoing consultation will be undertaken with Registered Aboriginal Parties (RAPs), in particular Tharawal Local Aboriginal Land Council, throughout construction as follows:

- Where changes to the Project may have implications for Aboriginal heritage management;
- Methodologies for any future investigations;
- Where there is a significant discovery in the course of site preparation or construction e.g. Aboriginal ancestral remains or archaeological features.

Urgent issues requiring the attention of RAPs will be communicated no later than one week of the issue arising.

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 Principal's Representative to close out the outstanding request.

The effectiveness and value of the consultation process will be periodically reviewed internally based on past consultation and feedback from the RAPs.

## 5 REFERENCES

- AHMS (2012a) **Aboriginal Cultural Heritage Assessment: SIMTA Moorebank Intermodal Terminal Facility**. Unpublished Report for Hyder Consulting Pty Ltd.
- AHMS (2015) **SIMTA Intermodal Terminal Facility – Stage 1 - Aboriginal Heritage Impact Assessment**. Report to Hyder Consulting Pty Ltd.
- AHMS (2012b) **Indigenous Biodiversity Values Assessment: Sydney Intermodal Terminal, Moorebank, NSW**. Unpublished Report for Hyder Consulting Pty Ltd.
- Artefact Heritage (2012) **Non-Indigenous Heritage Assessment: SIMTA Part 3A Concept Plan Application**
- Artefact Heritage (2015) **SIMTA Intermodal Terminal Facility – Stage 1 – Non-Indigenous Heritage Assessment**. Report to Hyder Consulting Pty Ltd.
- Artefact Heritage (2016a) **MPE Stage 2 Aboriginal Heritage Assessment**. Report to Arcadis
- Artefact Heritage (2016b) **MPE Stage 2 Non-Aboriginal Heritage Assessment**. Report to Arcadis
- Artefact Heritage (2017) **Moorebank Precinct East: Heritage Interpretation Strategy** Report to Arcadis
- Australian Heritage Database (<http://www.environment.gov.au/cgi-bin/ahdb/search.pl>) entry: “Defence National Storage and Distribution Centre”
- Brooks and Associates (2002) **Heritage Assessment: Defence National Storage Distribution Centre (DNSDC) Moorebank Defence Site, Moorebank**



## APPENDIX A

### Evidence of Consultation

## Addressing comments from NSW Heritage Division, received 03 April 2018

Section of Comment	Comment	SIMTA Response	Section Amended
Training (Section 2.3) p24	It would also be appropriate to include in the training any plans of the site which show identified areas of heritage sensitivity both in the project site and outside it in the induction to ensure avoidance of known sites is undertaken. This should include Non-Aboriginal or Aboriginal sites that may require continuing management, if any during this phase of works.	Addressed. A new dot point has been added to Section 2.3 – Training that reads:  <i>“Plans of the Project site and surrounding area that identify sites of Aboriginal and Non-Aboriginal heritage sensitivity”</i>	Section 2.3 – Training
Table 16 Management Measures (p50-51)	Exclusion Zones and Monitoring:  Only one area is identified as having a 10m exclusion zone (HM7). There is discussion of exclusion maps (MH9) but it isn't clear that all relevant heritage sites (Aboriginal and Non-Aboriginal) will be subject to clear fenced exclusion zones in the field. It would be appropriate to consider physical identification in the field of all exclusion zones around heritage sites for salvage and archaeological (historic and Aboriginal) sites requiring management under the SSD. This would ensure the sites are clearly identified for exclusion until the required archaeological or salvage programs are completed.	HM7 has been amended to read:  <i>“A 10 m exclusion zone (e.g. high visibility fencing, signage) will be maintained around isolated find 2,3 and 4 and any archaeological (historic and Aboriginal) sites requiring management under the SSD.</i>  <i>Signage and restricted access to heritage structures within the Construction footprint will be erected.</i>	Section 3.3 – Management Measures
Table 16 Management Measures (p51-52)	Procedures for unexpected finds  The procedure should explain under HM13 that s.146 of the Heritage Act 1977 continues to apply and notification to the Heritage Council of NSW of unexpected finds, once confirmed to be a relic, remains a requirement for the SIMTA project even with SSD approval. There is a form for notification and this advice is likely to address several of the questions raised through the notification process if adequately filled out.	HM13 has been clarified by separating HM13 into two separate management measures to adequately explain the unexpected finds protocol of Aboriginal and Non-Aboriginal heritage and to align with the EWHMP. HM13B has been updated to include the paragraph:  <i>“For any newly discovered historical archaeological sites and relics that are assessed by the heritage professional to be of local or state significance, the OEH Heritage Division ((02) 9873 8500), NSW Heritage Council and the Secretary shall be notified under Section 146 of the Heritage Act, 1977.”</i>	Section 3.3 – Management Measures

Section of Comment	Comment	SIMTA Response	Section Amended
Unexpected Finds Protocol (Section 3.3.1) (p54-57)	Figure 3-10 and Figure 3-11 indicates the OEH contact for notification is Miranda Firman. It is advisable that this table is updated as Ms Firman is longer working in the role of Aboriginal Heritage Planning Officer for OEH. It is recommended that a generic OEH phone number should be adopted rather than an an identified individual officer.	Noted. Figures 3-10 and 3-11 have been updated to remove Ms Firman as the OEH contact and the generic OEH phone number has been provided.	Section 3.3.1 – Unexpected Finds Protocol  Section 3.3.2 – Skeletal Remains

Addressing comments from Moorebank Heritage Group received on 15 February and 12 March 2018 on the Early Works Heritage Management Plan. MHG indicated via email on 12 March 2018 that their comments for the EWHMP were reiterated for CHMP.

Section of Comment	Comment	SIMTA Response	Section Amended
Comments dated 15 February 2018			
Table 1 - Compliance Matrices (Page xi)	This CoC has not been adhered to as no consultation with MHG was not undertaken during the preparation of the Heritage Management Plan. A copy of the HMP was provided to MHG for the purpose of reviewing the already completed document with the action appearing to have been an after thought. The Group regards this as being tokenistic consultation, i.e. it has no meaningful or genuine intent.	The preparation of this plan is still ongoing. Any comments / edits brought forward from the relevant stakeholders will be reviewed and incorporated into the plan (if appropriate).	N/A
Additional comments dated 12/03/18			
General	The consultation process was insufficient, disingenuous and meaningless. We wish this comment to be added to the EWHMP.	Noted and included within Appendix A of the CHMP.  We value the input provide by MHG as evidenced through consultation with yourselves on MPW Early Works including a site visit and offer of items deemed of importance to MHG, as well as consultation undertaken on both MPE and MPW Heritage Interpretation Strategies where your inputs were integrated into the strategies.	Appendix A

Section of Comment	Comment	SIMTA Response	Section Amended
		Please note the consultation process for the Heritage Interpretation Plan is currently being established and we will notify MHG of the consultation process once finished. We would welcome your input into this documentation.	
	We thank you for your offer for a 'hook up with our specialists' but must decline as this offer comes too late to be considered as genuine consultation and after most of the potential significant elements have been either demolished and or removed from the site. We wish this comment to be added to the EWHMP.	Noted. However, please be advised that there is still an opportunity to speak with our specialists to discuss your concerns. All of the buildings on the MPE Stage 2 site, barring building 80, are still present and have not been demolished.	N/A
Appendix B	The Significant Element Salvage Strategy was incomplete, vague and not inclusive ... seemingly based on a number of under researched Non-Aboriginal Heritage Assessments and a distinct lack of local knowledge. The low number of significant elements identified for salvage is most alarming. We wish this comment to be added to the EWHMP.	<p>Noted and included within Appendix A.</p> <p>The SESS was developed as a result of the archival recording undertaken for the MPE Site as part of MPE Stage 1 (SSD14-6766) by heritage specialists, Artefact; MHG were provided a copy of the archival recording in June 2017.</p> <p>The significant elements identified was based on extensive inspection of each of the warehouses. Had additional significant elements been identified, these would have been noted by the heritage consultant.</p>	N/A

#### Addressing comments from Liverpool City Council dated 8 March 2018.

Section of Comment	Comment	SIMTA Response	Section Amended
Section 3.3.1.1, 3.3.2 and 3.3.3	I would request that as a part of the Unexpected Finds Protocol that a simple notification to Council is undertaken. This would just assist us in responding to any enquiries we might receive from the general community.	Addressed. The Unexpected Finds Protocols in Sections 3.3.1.1, 3.3.2 and 3.3.3 have been updated to notify LCC when any unexpected items of heritage significance or skeletal remains are found.	Section 3.3.1.1 – Aboriginal Heritage Section 3.3.2 – Skeletal Remains Section 3.3.3 – Non-Aboriginal Heritage

#### Addressing comments from Tharawal Local Aboriginal Land Council on the Unexpected Finds Protocol dated 7 June 2018

Section of comment	Comment	SIMTA Response	Section Amended
Section 3.3.1, 3.3.2 and 3.3.3	Request that whilst work is being undertaken that a qualified Archaeologist is made available to ensure compliance under Section 86 of the <i>National Parks and Wildlife Act 1974</i>	<p>Noted. Within the Construction Heritage Management Plan, we have committed to ensuring that the Project Heritage Consultant is made available during the course of the works via phone and email, and will be able to attend site if necessary. The Construction Contractor will be responsible for ensuring that the appointed Heritage Consultant is suitably qualified. The Unexpected Finds Protocol will be enacted should any potential Aboriginal artefacts be identified. Furthermore, to aid in the identification of artefacts, the CHMP details that all personnel working on the Project will undergo environmental awareness training and site specific induction training. This training will be prepared in consultation with Aboriginal stakeholder groups and will include:</p> <ul style="list-style-type: none"> <li>• Training on how to identify stone artefacts and other Aboriginal heritage sites</li> <li>• Stop works and reporting protocols for discovery of previously unknown heritage and archaeological items</li> <li>• Plans of the Project site and surrounding area that identify sites of Aboriginal and non-Aboriginal heritage sensitivity</li> </ul>	N/A

Section of comment	Comment	SIMTA Response	Section Amended
		<ul style="list-style-type: none"> <li>• Examples of Aboriginal and non-Aboriginal items that may be expected on the site and how to identify them</li> <li>• Unexpected Finds Protocol and reporting requirements for discovery of potential and previously unknown heritage and archaeological items.</li> </ul> <p>Mitigation measures have also been developed to reduce the impact that the Project will have on items of potential Aboriginal and non-Aboriginal items. Mitigation measure HM13A indicates that if an item or suspected item of Aboriginal heritage significance is discovered, then the Project Heritage Consultant will be notified immediately.</p>	



## APPENDIX B

### Archaeological Monitoring Strategy

## Moorebank Precinct East, Stage 2: Archaeological Method Statement for PAD V and W

<b>Project:</b> Moorebank Precinct East: Stage 2	<b>Date:</b> 23 February 2018
<b>Project site:</b> Moorebank Precinct East: PAD V and W	<b>Author:</b> Adele Zubrzycka (Senior Heritage Consultant) Sandra Wallace (Director)
<b>Contractor:</b> Arcadis	<b>Document No.</b> 2

### Background

This Archaeological Method Statement (AMS) outlines the archaeological approach and methodology for test excavations and archaeological monitoring within previously identified Potential Archaeological Deposits (PAD) V and W at the Moorebank Precinct East (MPE) Stage 2 site, Moorebank. Testing and archaeological monitoring are required to mitigate impacts associated with the project.

Condition B93 and B94 of the Minister's Conditions of Consent (CoC) for MPE Stage 2 state:

*B93- Prior to commencement of Early Works and Fill Importation, archaeological monitoring and recording must be undertaken at potential archaeological deposits (PADs) V and W in accordance with the Non-Indigenous Heritage Assessment (Artefact 2016) by a suitably qualified and experienced archaeologist with Excavation Director Criteria qualifications*

*B94- The results must be reported to the Secretary within one month of completion of monitoring and recording at PADs V and W, along with recommendations for further monitoring at additional sites, if significant archaeological deposits are encountered.*

Where required this AMS should be updated to account for revised impacts, or in response to unexpected finds. This AMS does not include management for other PADs within the project site which would be managed under the project's unexpected finds procedure in accordance with the recommendations of the heritage assessment (Artefact 2016). The methodology has been informed by, and is in accordance with, the following documents:

- State significant development (SSD) Consent SSD 16-7628
- Moorebank Precinct East – Stage 2 – Environmental Impact Statement (Arcadis Australia Pacific Pty Limited, December 2016)
- Moorebank Precinct East – Stage 2 – Response to Submissions (Arcadis Australia Pacific Pty Limited, July 2017)

- Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act) Approval (No. 2011/6229) granted on March 2014.
- MPE Stage 2 Non-Aboriginal Heritage Assessment. Report to Arcadis (Artefact Heritage 2016)
- Non-Indigenous Heritage Assessment: SIMTA Part 3A Concept Plan Application (Artefact Heritage 2012)

In their Statement of Heritage Impacts, Artefact (2012 and 2016) identified two PADs (V and W) as containing a small cluster of structures shown in an early aerial photograph and plans of the site (shown in Figure 3). The structures were part of the Defence National Storage and Distribution Centre (DNSDC) and were extant prior to 1951.

The structures have since been demolished and the nature of their use is not known; however, it is likely they were administration facilities. The potential remains were assessed as having local significance, primarily related to their research potential as the function of the structures could not be confirmed by documentary records.

No significant disturbance activities are considered to have occurred in the area and the potential for locally significant archaeological remains to survive is moderate to high. PAD W is currently located below an extant warehouse (Warehouse 80) and access road to its east (also shown in Figure 3).

It is noted that consultation on this AMS is not required.

### Site Inspection

An inspection of the MPE site (specifically PADs V and W) was carried out on 21 February 2018 by Senior Heritage Consultant, Adele Zubrzycka (Artefact Heritage) and Project Manager, Anthony Milanich (Liberty Industrial). The aim of the inspection was to confirm accessibility to Pads V and W for the proposed archaeological testing and monitoring requirements.

It was concluded that archaeological testing within PAD V could be carried out without the demolition of existing structures or removal of established trees. However, the likelihood that unknown services exist within proposed test trench locations could not be confirmed.

In regard to PAD W, the site inspection concluded that the proposed location for archaeological monitoring and testing is presently confined to areas below a concrete slab (associated with Warehouse 80) and road surface. Therefore, archaeological works within the PAD cannot commence until Warehouse 80 has been demolished. DP&E provided approval to demolish building 80 on 22 February 2018. Proposed Construction Activities Which May Impact PAD V and W

### Building Demolition, Slab and Road Surface Removal

PAD W is currently occupied by an existing warehouse (Warehouse 80) and roadway. As there is potential for archaeological remains to survive below these items, archaeological monitoring may be required during the removal of the warehouse's concrete slab, existing road surface and any subsequent subsurface (location shown in Figure 4). Monitoring activities would occur after the existing warehouse has been demolished and area cleared of building materials. Archaeological monitoring is not required while the warehouse structure is being demolished.

In order to adequately carry out archaeological monitoring within PAD W, contractors will remove the existing concrete slab and road base using hydraulic hammers and a machine excavator. A machine excavator will then remove soils in 100mm spits to a depth of impact and/or natural sterile soils under the direction of an archaeologist. If archaeological remains are identified during these works, archaeological testing and/or recording may be required.

### Utility services excavation

Stormwater drainage services would be installed across the site. These stormwater services, involving drainage lines and drainage tanks, would be excavated in trenches and pits from between 2 and 3.5 metres in depth.

### Road pavement

An internal road network and connection of the MPE site to the surrounding public road network will be incorporated across the site. Ground disturbing works would likely involve subsurface excavations between 200 millimetres and 1,000 millimetres in depth.

### Levelling

The proposed works will involve bulk excavations and grading works across the site to an approximate depth of 100-1000mm. This will be carried out to accommodate new structures across the facility.

### Building Construction

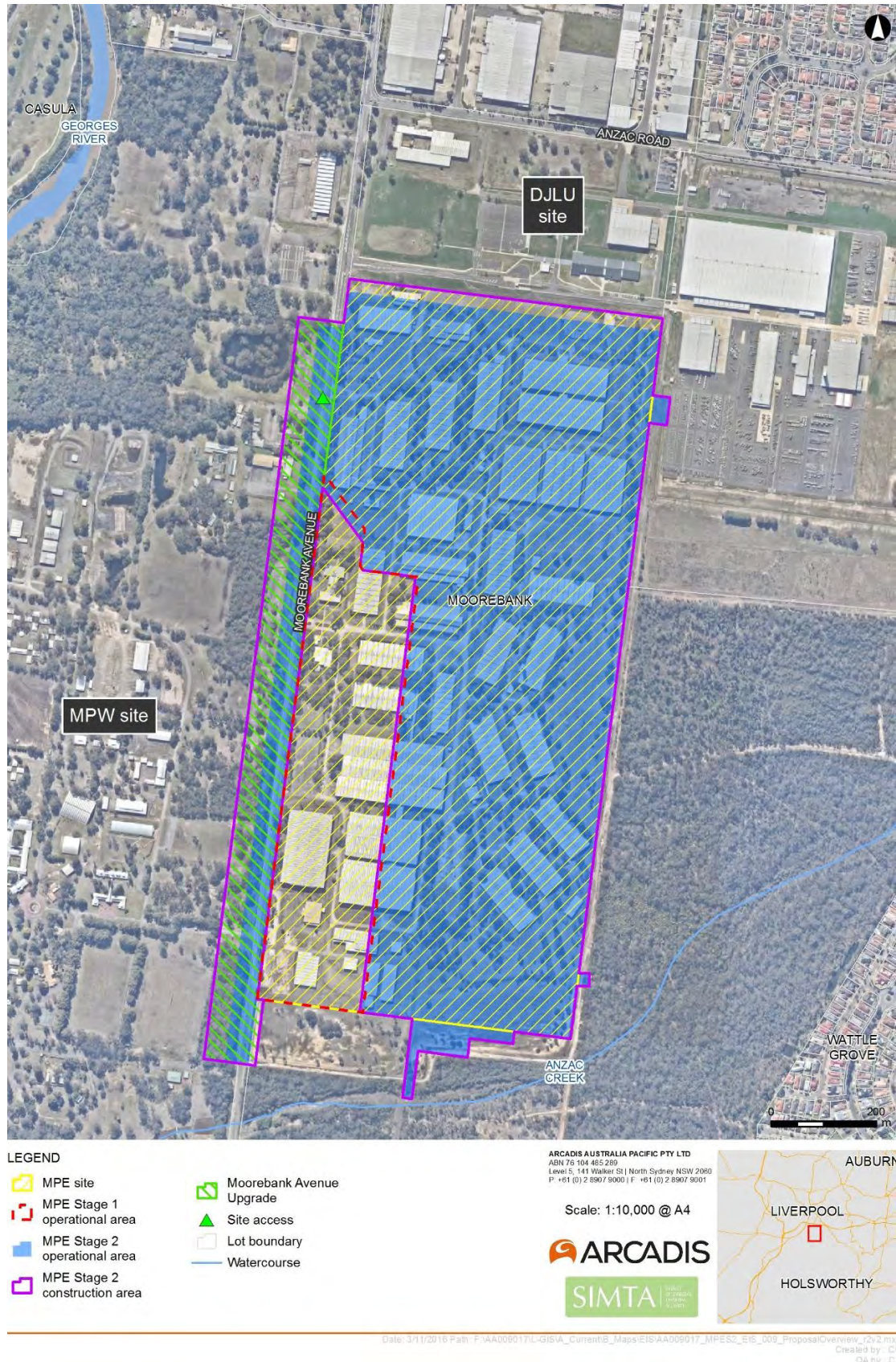
The construction of warehouses and associated structures will involve subsurface excavations to a depth of 600 mm for footing and services. These works will be carried out by machine excavators.

The location of proposed works is shown in Figure 1.

Both PADs V and W would be directly impacted by the proposed works.



**Figure 1: Overview of the MPE Stage 2 Construction and Operational Boundary. Source. Arcadis**



## Non-Aboriginal Archaeological Resources

Land within the study area was used for military activities from the early 1900s, and land near PAD V and W was utilised for training camps in 1907. By 1913, the Liverpool camp accommodated 2000 troops in tents and became the main training centre in New South Wales. Plans dating to this period show Liverpool camp located between the Georges River and Moorebank Avenue. To the east of the camp was an area marked 'stores' that included the northern portion of the MPE site. The camp was further developed in the lead up to WWI, including the development of huts, kitchens, and mess buildings (Artefact 2012).

In September 1943, it was proposed that Ordnance Stores be established at Moorebank and a plan was developed by December that year. Approval was subsequently granted in February 1944 that formed the first construction phase of the DNSDC site. Structures built in the area during this period are shown in Figure 2 and included the following:

- 17 stores (400' x 150' in size).
- Two crane served stores (400' x 150').
- 19 offices attached to each store (40' x 20').
- One transit store (500' x 83'4").
- Office acc. inside transit store.
- One cinematograph store (60' x 40').
- Two inflammables stores (100' x 50'). 20, 000 square feet of equipment shelters.
- One traffic control building (18' x 17'8").
- One strong room (50' x 50').
- One Depot Administration building in three blocks (135'4" x 111' combined size).
- One combined garage, service station, fire station, P.O.L store, Tpt office (97' x 25').
- One SW guard house (60' x 20').
- One case making building (3,750 square feet).
- Seven men's latrines.
- Three AWAS latrines.
- Three AWAS latrines and rest rooms (NAA: SP459/1, 420/7/1153) (Artefact 2012)

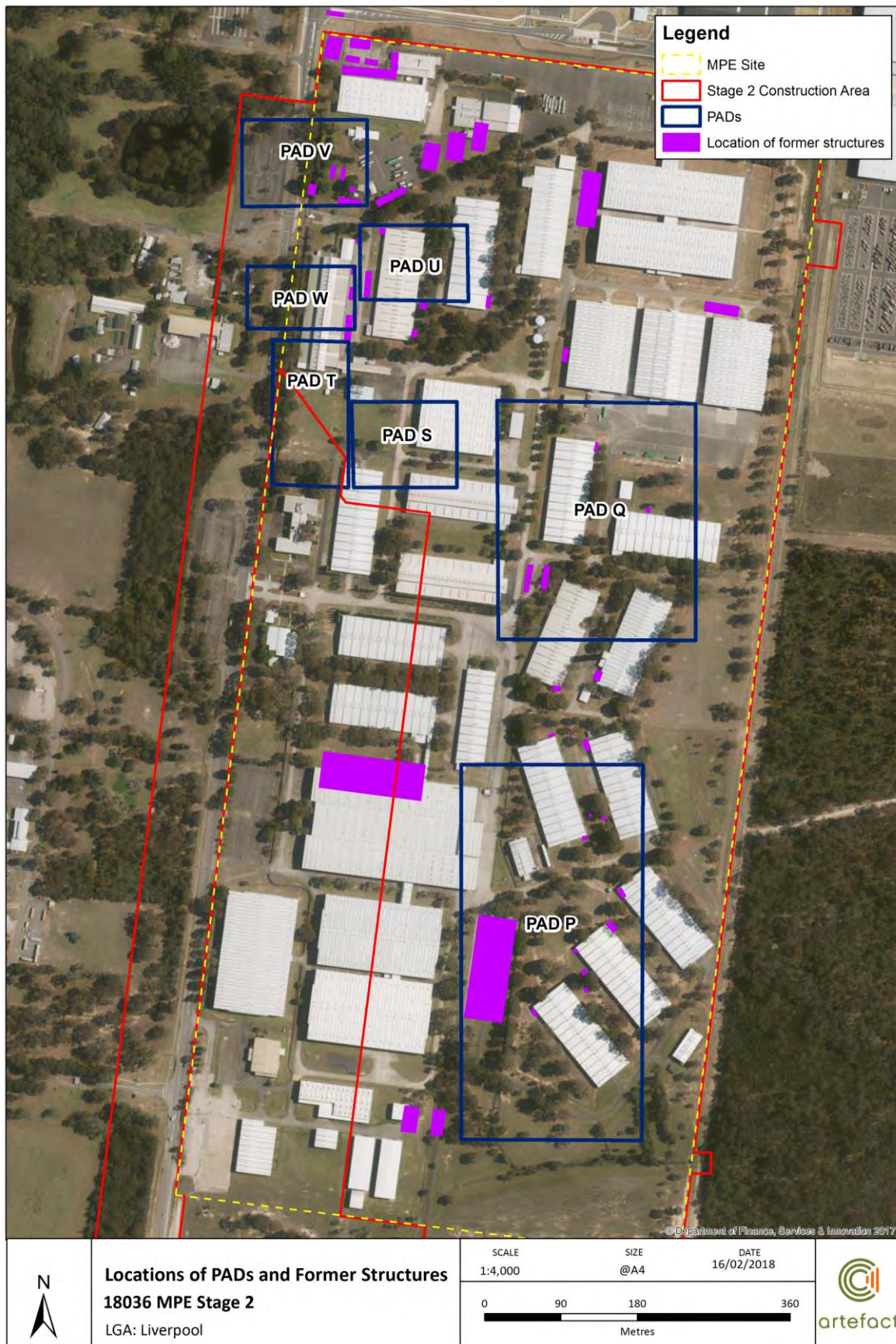


Figure 2: 1951 aerial photograph. MPE site outlined in red.





Figure 3: MPE site showing location of PADs and former structures.



## Work Stage Specific Archaeological Methodology

This AMS has been prepared to meet the Historical Archaeology Code of Practice (OEH 2009). Monitoring and testing of PADs V and W will be directed by an Excavation Director, Jenny Winnett, experienced in investigations of locally significant archaeology.

### Contractor

The contractor would operate under the direction of this AMS and archaeologists prior to and during archaeological investigations. This would involve:

- The demolition of Warehouse 80 (archaeological monitoring not required);
- Removal of existing concrete slab below Warehouse 80 and road base to east of warehouse, within PAD W;
- Set out and secure the work area for the construction and archaeological team;
- Provide machine plant to assist the removal of fill where required under the supervision of the archaeological team;
- Provision of erosion and sediment controls in accordance with an erosion and sediment control plan; and
- Provide a site induction to contractors in consultation with the Excavation Director or supervising archaeologist.

### Historical archaeological monitoring and testing of concrete slab/road base removal and subsurface excavations (PAD W)

#### Demolition of Warehouse 80

It is understood that the existing structure within PAD W (Warehouse 80) will be demolished and demolition materials removed prior to the commencement of archaeological monitoring/testing.

#### Concrete slab and road base

The removal of an existing concrete slab and roadway within PAD W will involve the use of a hydraulic hammer and machine excavator. Although significant subsurface impacts associated with these works are unlikely, archaeological monitoring may be required and would occur in consultation with the nominated Excavation Director. In order to prevent inadvertent impacts to potential archaeological remains below the slab, the removal of concrete should be limited to the existing slab level only. Removing excess soil profiles below the slab would be avoided where possible.

#### Subsurface excavations

Archaeological monitoring of subsurface excavations within a portion of PAD W are required to prevent inadvertent impacts to intact archaeological remains. In order to mitigate these impacts, machine excavations in the PAD would be monitored by a qualified archaeologist to depth of impact or once sterile natural soils are encountered.

Areas within PAD W requiring archaeological monitoring are primarily focusing on the predicted location of the former structures. This area is shown in Figure 4. Works outside of the monitoring area would proceed under the Unexpected Finds Procedure as determined by the Excavation Director, or supervising archaeologist during or after monitoring/testing works have commenced.

This would be dependent on presence or significance of archaeological remains within the monitoring area.

The machine operator would remove soils in 100mm spits under the direction of an archaeologist. If intact archaeological remains are uncovered during the monitoring program, works would cease to allow the archaeologist to fully record and salvage the remains. If significant archaeological remains are identified within the PAD, a program or archaeological test excavations may be required (discussed below).

Should hazardous materials or contaminants be identified during archaeological monitoring, ground excavation would cease until appropriate controls or remediation is conducted by Contamination / Remediation specialists contracted by Liberty Industrial.

### **Archaeological testing**

If significant archaeological remains are identified during monitoring works associated with the concrete slab, road base removal and/or underlying soil removal, a program of archaeological test excavations may commence. This will be determined by the Excavation Director, or supervising archaeologist. The methodology for archaeological test excavations is outlined in the 'Historical archaeological test excavations (PAD V)' section below.

### **Historical archaeological test excavations (PAD V)**

It is proposed that four test trenches be excavated in areas identified as having moderate or high potential to contain archaeological remains within PAD V (see overview plan, Figure 4). Test trenches would measure approximately 1.5 metres in width and 15 metres in length, dependant on the location and ground conditions. If archaeological remains requiring further investigation are identified, trenches may be widened or extended, and additional trenches may be excavated.

Archaeological test excavation would involve the use of a machine excavator (5 to 7 tonne) with a 1.2 to 1.6 metre flat bucket to remove fills or overburden within proposed test trench locations. Trenches would be excavated to the depth of impact or sterile soil horizons in 100mm spits under the direction of an archaeologist. Should archaeological remains be encountered, manual excavation would be conducted with hand tools and archaeological remains recorded.

Should the location of any test trench be found to be unsuitable due to the presence of unexpected underground services, hazardous contaminants, tree roots or other practical reasons, trenches may be moved to a more appropriate location.

Trenches would be backfilled upon completion of the test excavation program.

## **Archaeological Research Questions**

### **General – Descriptive Questions**

- What physical evidence of former activities and structures within PAD V and W associated with the army camp and DNSDC survives on the site? What is the extent of these features?
- What contexts, phases, and activity areas are evident, within the constraints of the test excavation, and how are these demonstrated by the various excavation units (trench/square/context/feature)?
- What is the nature and extent of the archaeological fabric of the site? Can structural remains yield information about materials used to construct former buildings and/or construction methodologies?

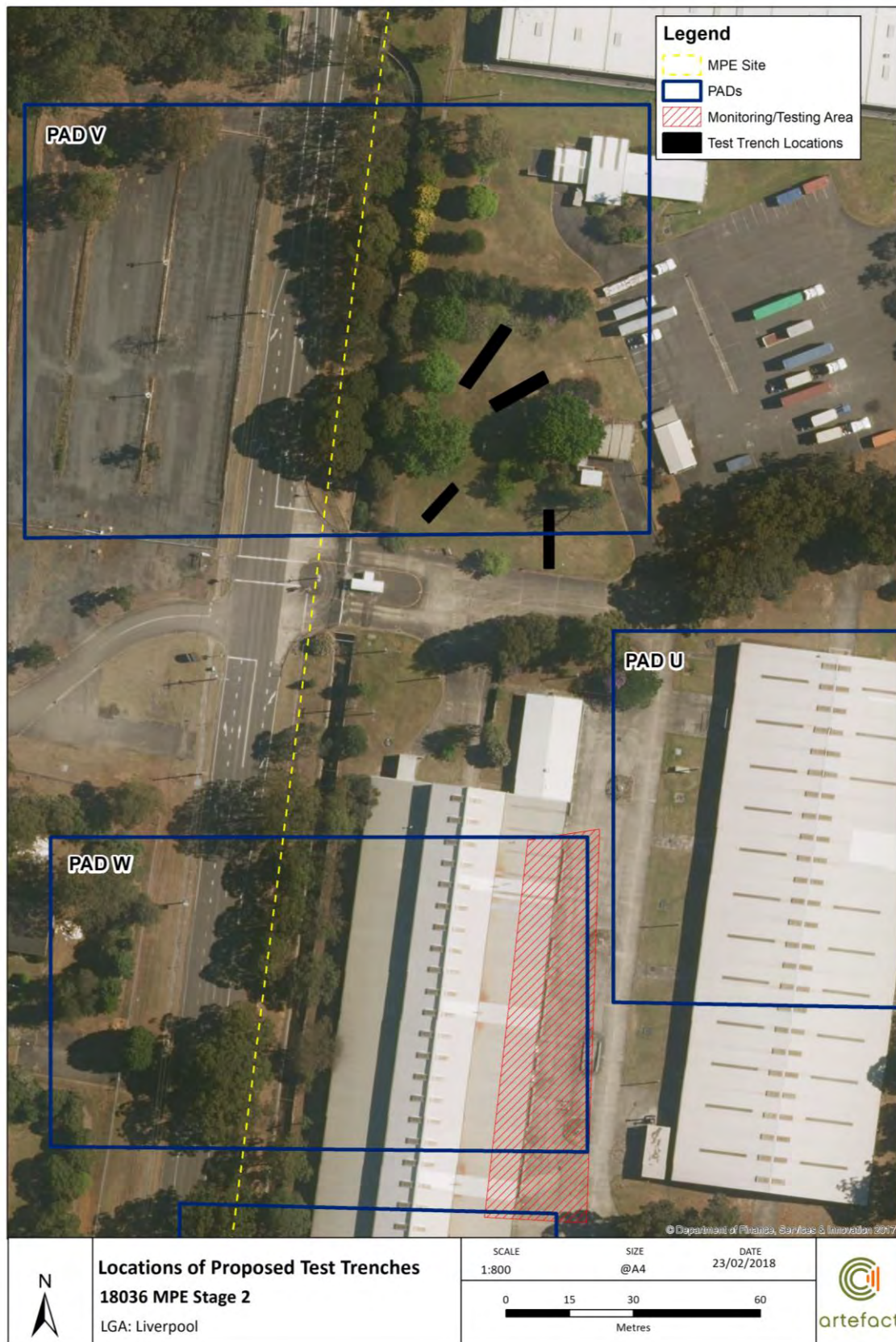
- Are there archaeological remains associated with any intact artefact bearing deposits, such as yard scatters or refuse pits? Can these remains provide information regarding the use of former buildings and individuals who occupied them?
- What natural and cultural taphonomic processes have contributed to the archaeological site and its associated deposits?
- Were fill materials introduced to the site before or after former structures were demolished? If so, what do these comprise of and can they be linked to significant activities in the area?

### **Analytical Questions**

- What happened at the site(s) and what is the location and extent of preservation for these archaeological remains?
- Can the use of former buildings associated with the DNSDC site be interpreted through their archaeological remains?
- What can potential archaeological remains of the army camp and tell us about military training and storage activities that have not been recorded previously?
- How do potential archaeological remains associated with the army camp and DNSDC compare to similar site across NSW, or Australia?



**Figure 4. Location of proposed test trenches in PAD V and proposed archaeological monitoring and testing area in PAD W.**





## Excavation Recording Methodology

### Excavation recording

A record of archaeological investigation would be made in accordance with the Historical Archaeology Code of Practice (OEH 2009). The recording methodology includes the following:

- A site datum would be established;
- Survey and scaled plans of the open area, trench locations and any significant archaeological features uncovered in the test and salvage program. The plans would include elevations recorded with a dumpy level;
- Scaled section drawings 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;
- Should a large amount of archaeological resources be identified during open area excavation, the site would be digitally surveyed and recorded; and
- Artefact collection by context. Large or redundant artefactual materials from individual contexts would be sample collected. Hazardous material would not be collected.

### Human Remains

Discovery of suspected human remains would be managed under the project Unexpected Finds Procedure for skeletal remains as detailed within the Early Works Heritage Management Plan.

### Unexpected Aboriginal Archaeology

If archaeological remains associated with Aboriginal occupation of the site are identified during the testing or monitoring program, the Office of Environment and Heritage (OEH) would be notified in accordance with the Unexpected Finds Procedure.

If Aboriginal objects or areas of intact soil profile were to be identified, this AMS would be updated to outline an appropriate methodology for the works in accordance with the Code of Practice for Archaeological Excavation of Aboriginal Objects in NSW (National Parks and Wildlife Act 1974). Any excavation and analysis would be undertaken in accordance with the code. Reporting of newly discovered sites must be prepared in accordance with statutory requirements and best practice professional standards.

### Reporting

An archaeological report will be submitted to the Secretary within one month of the completion of the archaeological testing and monitoring program within PADs V and W, as per the Minister's Condition of Consent B94.

This report would comprehensively describe and interpret the findings of the excavation program, outline the main results, reassess the heritage significance of the site, and identify if further archaeological work would be required.. It would include photographs and plans of the site and contexts. Recovered artefacts would be catalogued, assessed and analysed by material specialists as required, depending on the nature of the finds. These records and analyses would be developed in response to research questions. The report would recommend whether further archaeological excavation was required during construction.

### Artefact Storage

Upon the completion of artefact analysis and submission of final excavation report, all collected artefacts would be returned to the primary developer (Qube Holdings). Qube Holdings is responsible for storing artefacts within a permanent and secure storage facility.

### Team and timing

#### Archaeological team

The archaeological team would comprise:

- Primary Excavation Director – Jenny Winnett (Senior Heritage Consultant, Artefact Heritage)
  - Jenny Winnett has 8 years' experience in archaeology and cultural heritage management. Throughout her career Jenny has gained extensive fieldwork experience through work on industrial and domestic urban sites and rural town and mine sites both in Australia and in the UK at a supervisory level. Jenny has prepared statements of heritage impact, heritage assessments, research documents, specialist artefact reports and technical reports on archaeological excavations and monitoring projects.
- Supervising Archaeologist – Adele Zubrzycka (Senior Heritage Consultant, Artefact Heritage)
  - Adele Zubrzycka has worked as a Heritage Consultant in Australia and the USA since 2014. She has extensive experience in supervising large open area salvage excavations, archaeological monitoring, project management, planning and carrying out site surveys, interpreting archaeological sites, undertaking primary and secondary source historical research, preparing heritage impact statements, written histories, photographic archival recordings, heritage interpretation plans and liaising with Government and commercial clients.

The Excavation Director meets the requirements of the Condition B93.

### Excavation timing

It is anticipated that the archaeological testing, monitoring and recording program within PAD V would take place over three days.

The proposed timing for archaeological monitoring, testing and recording works within PAD W would be negotiated with Arcadis and the contractor would take place over three days following access to the site and removal of concrete slabs and road surface.

## APPENDIX C

### MPE Heritage Interpretation Strategy

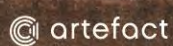


# Moorebank Precinct East

Heritage Interpretation Strategy

Report to Arcadis

February 2017



Artefact Heritage  
ABN 73 144 973 526  
Level 4, Building B  
35 Saunders Street  
Pyrmont NSW 2009  
Australia

+61 2 9518 8411  
[office@artefact.net.au](mailto:office@artefact.net.au)



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# 1.0 INTRODUCTION

## 1.1 Background

The Moorebank Precinct East (MPE) Project, formerly the SIMTA Project, involves the development of an intermodal terminal facility, including warehouse and distribution facilities, freight village (ancillary site and operational services), stormwater, landscaping, servicing and associated works on the eastern side of Moorebank Avenue, Moorebank. The MPE Project also includes a rail link, within an identified rail corridor, which connects from the southern part of the site to the Southern Sydney Freight Line (SSFL). The entire area, the intermodal terminal facility and rail corridor, are referred to as the MPE site. The MPE site is to be developed in three key stages:

- Stage 1- Construction of the Intermodal Terminal Facility and rail link
- Stage 2- Construction of warehouse and Distribution Facilities
- Stage 3- Extension of the Intermodal Terminal Facility and completion of Warehouse and Distribution Facilities.

To facilitate the operation of the MPE Project construction work would be carried out across the whole MPE site which would involve the demolition of all existing buildings and infrastructure. Heritage impacts are expected to include removal of 20 WWII structures, the original road and open drain alignments, original rail tracks, original underground water mains and sewerage lines, and possible impacts to potential archaeological material associated with former structures.

Artefact Heritage has been commissioned by Arcadis to prepare a Heritage Interpretation Strategy (HIS) for the MPE site. The HIS has been prepared to address Condition 14 of Minister's Conditions of Approval (CoA) for MPE Project, granted on 18 December 2015:

*Prior to the commencement of construction activities affecting the WWII store buildings, the Applicant shall prepare a Heritage Interpretation Strategy, in consultation with the Heritage Division. The Strategy shall be submitted for the approval of the Secretary with a copy provided to the Certifying Authority.*

In addition the MPE Stage 2 EIS Non-Indigenous Heritage Assessment<sup>1</sup> states that

*A Heritage Interpretation Strategy should be prepared prior to the commencement of construction, outlining appropriate interpretive measure for the Proposal site in the context of the MPE site as a whole.*

A draft Heritage Interpretation Strategy for Stage 1 of the MPE Project was prepared by Environmental Resources Management Australia in December 2016<sup>2</sup>. While it has been reviewed and cited in this HIS, it is not seen as a comprehensive guide to an interpretive approach for the whole MPE site - Stages 1, 2 and 3.

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<sup>1</sup> Artefact 2016a

<sup>2</sup> ERM 2016

## 1.2 Scope of the Report

An HIS is a tool that provides a strategy for ways of transmitting messages about the cultural heritage values of a site to visitors and other audiences through interpretation. It is intended to inform and guide planning for heritage interpretation by identifying historical themes relevant to the site, and outlining strategies for presenting these through a variety of interpretive media.

The HIS is the first stage in the interpretation planning process. The next two stages are

- Developing a Heritage Interpretation Plan (HIP), including content development and design, and
- Implementation of the HIP.

Aboriginal and European heritage aspects of interpretation relating to the MPE site have been combined within this one document. This is considered appropriate as it allows for a more integrated interpretation strategy across the MPE site.

## 1.3 Methodology and Terminology

This HIS has been prepared in accordance with *the NSW Heritage Manual* (1996), NSW Heritage Office's *Interpreting Heritage Places and Items: Guidelines* (2005) and *Heritage Interpretation Policy* (as endorsed by the Heritage Council in 2005).

The *Heritage Interpretation Policy* states that:

*The interpretation of New South Wales' heritage connects the communities of New South Wales with their heritage and is a means of protecting and sustaining heritage values. Heritage interpretation is an integral part of the conservation and management of heritage items, and is relevant to other aspects of environmental and cultural management and policy. Heritage interpretation incorporates and provides broad access to historical research and analysis. Heritage interpretation provides opportunities to stimulate ideas and debate about Australian life and values, and the meaning of our history, culture and the environment.*

The NSW Heritage Office's *Interpreting Heritage Places and Items: Guidelines* provides 'The Ingredients for Best Practice' is shown in Table 1.

**Table 1: Best practice principles**

Ingredient	Outline
<b>1: Interpretation, people and culture</b>	Respect for the special connections between people and items.
<b>2: Heritage significance and site analysis</b>	Understand the item and convey its significance.

Ingredient	Outline
<b>3: Records and research</b>	Use existing records of the item, research additional information, and make these publicly available (subject to security and cultural protocols).
<b>4: Audiences</b>	Explore, respect and respond to the identified audience.
<b>5: Themes</b>	Make reasoned choices about themes, stories and strategies.
<b>6: Engaging the audience</b>	Stimulate thought and dialogue, provoke response and enhance understanding.
<b>7: Context</b>	Research the physical, historical, spiritual and contemporary context of the item, including related items, and respect local amenity and culture.
<b>8: Authenticity, ambience and sustainability</b>	Develop interpretation methods and media which sustain the significance of the items, its character and authenticity.
<b>9: Conservation planning and works</b>	Integrate interpretation in conservation planning, and in all stages of a conservation project.
<b>10: Maintenance, evaluation and review</b>	Include interpretation in the ongoing management of an item; provide for regular maintenance, evaluation and review.
<b>11: Skills and knowledge</b>	Involve people with relevant skills, knowledge and experience.
<b>12: Collaboration</b>	Collaborate with organisations and the local community.

This document has also been informed by the Australia International Council on Monuments and Sites (ICOMOS) *Burra Charter*, 1999. The *Burra Charter* defines interpretation as “all the ways of presenting the cultural significance of a place”, which may be achieved through a combination of the treatment of heritage fabric, the use of the place, or activities undertaken at the place, and the introduction of material explaining this history (Article 1.17). Interpretation should provide and enhance understanding of the history, significance and meaning, as well as respect and be appropriate to the cultural significance of a place (Article 25).

The ICOMOS *Ename Charter* for interpretation of cultural heritage sites has also informed this document. In recognising that interpretation and presentation are part of the overall process of cultural heritage conservation, this Charter has established seven cardinal principles upon which interpretation should be based:

- Principle 1: Access and understanding
- Principle 2: Information sources
- Principle 3: Attention to setting and context
- Principle 4: Preservation of authenticity
- Principle 5: Planning for suitability
- Principle 6: Concern for inclusiveness
- Principle 7: Importance of research, training and evaluation.

The following definitions used within the HIS are aligned with those in the NSW Heritage Office's *Interpreting Heritage Places and Items Guidelines*:

- Aboriginal people(s) with cultural association – means Aboriginal people(s) with a cultural or historical association with an area not necessarily deriving from descent from original inhabitants. Consideration must also be given to Aboriginal people who reside in an area where there are no identified traditional owners or Aboriginal people who have traditional association to that country (see also Traditional owner).
- Aboriginal Culture – The culture of a group of people or groups of peoples comprising of the total ways of living built up and passed on from one generation to the next, and evolving over time.
- Aboriginal Heritage – The heritage of a group of people or groups of peoples is represented in all that comes or belongs to them by reason of birth and includes their spirituality, language and relationship to land. Associations mean the special connections that exist between people and an item.
- Heritage significance – refers to meanings and values in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic importance of the item. Heritage significance is reflected in the fabric of the item, its setting, use, associations, meanings, records, related places and related objects. Items may have a range of values and meanings for different individuals or groups, over time.
- Interpretation – means all the ways of presenting the significance of an item. Interpretation may be a combination of the treatment and fabric of the item; the use of the item; the use of interpretive media, such as events, activities, signs and publications, or activities, but is not limited to these.
- Interpretation plan – a document that provides the policies, strategies and detailed advice for interpreting a heritage item. It is based on research and analysis and plans to communicate the significance of the item, both during a conservation project and in the ongoing life of the item. The plan identifies key themes, storylines and audiences and provides recommendations about interpretation media. It includes practical and specific advice about how to implement the plan.
- Meanings – denote what an item signifies, indicates, evokes or expresses.
- Media – means the tools, techniques and technologies used to convey the interpretation. These can include signs, orientation, notices, guided and self-guided walks, audio guides, installations, displays, models, dioramas, exhibitions, lighting, street naming, holograms, films, video, soundscapes, oral history, maps, brochures, books and catalogues, public art, writers and artists in residence programs, events, activities, role play, demonstrations, educational programs, websites, CD ROM programs, reconstructions, sets, and replicas and other means of communication.



## 1.4 Resources

Preparation for this HIS involved consideration, review of and sourcing from the following documents:

- AHMS 2012. SIMTA Moorebank Intermodal Facility Concept Plan: Aboriginal Cultural Heritage Assessment. Appendix S of Environmental Impact Statement.
- AHMS 2015. SIMTA Intermodal Terminal Facility Stage 1: Aboriginal Heritage Impact Assessment. Appendix T of Environmental Impact Statement.
- Artefact Heritage 2013. SIMTA Moorebank Intermodal Facility Concept Plan: Non-Indigenous Heritage Assessment. Appendix T of Environmental Impact Statement. Report to Arcadis.
- Artefact Heritage 2015. SIMTA Intermodal Terminal Facility Stage 1: Non-Indigenous Heritage Assessment. Appendix U of Environmental Impact Statement. Report to Arcadis.
- Artefact Heritage 2016a. Moorebank Precinct East Stage 2: Non-Indigenous Heritage Impact Assessment. Appendix V of Environmental Impact Statement. Report to Arcadis.
- Artefact Heritage 2016b. Moorebank Precinct East Stage 2: Indigenous Heritage Impact Assessment. Appendix U of Environmental Impact Statement. Report to Arcadis.
- Artefact 2016c. Moorebank Precinct West Draft Heritage Interpretation Strategy, Report to Arcadis.
- Brooks and Associates 2001 Heritage Assessment of the Moorebank Defence National Storage and Distribution Site DNSDC. Report prepared for Dept of Defence Sydney Property Disposal Unit.
- ERM. 2016. Draft Moorebank Stage 1 Intermodal Development Heritage Interpretation Strategy. Report to Laing O'Rourke.

## 1.5 Authorship

This report has been prepared by Carolyn MacLulich (Senior Heritage Consultant, Interpretation, Artefact), with input and review by Sandra Wallace (Director, Artefact).

## 2.0 SITE CONTEXT

### 2.1 MPE Site Description

The MPE site is located approximately 27 km south-west of the Sydney Central Business District (CBD) and approximately 26 km west of Port Botany. The MPE site is within the Liverpool Local Government Area (LGA), in Sydney's South West subregion, approximately 2.5 km from the Liverpool City Centre.

The majority of the MPE site is situated within the former 'Defence National Storage and Distribution Centre' (DSNDC), on the eastern side of Moorebank Avenue. The remaining sections of the MPE site include a section of Rail Corp land and of Boot land, largely bushland, to the south of the DSNDC; a small part of the southern section of the School of Military Engineering (SME) used as a golf course, and a section of the Glenfield Waste Facility (Figure 1).

The majority of land immediately surrounding the MPE site is owned and operated by the Commonwealth and comprises:

- Former School of Military Engineering (SME), on the western side of Moorebank Avenue directly adjacent to the MPE site.
- Holsworthy Military Reserve, to the south of the MPE site on the southern side of the East Hills Passenger Railway Line.
- Commonwealth Residual Land, to the east between the MPE site and the Wattle Grove residential area.
- The recently developed Defence Joint Logistics Unit (DJLU), to the north and north-east of the MPE site.

### 2.2 Heritage Significance

The MPE site includes two heritage listed items. The Defence National Storage and Distribution Centre (DNSDC) is listed as a heritage item under the Liverpool Local Environment Plan 2008 (item 57A)<sup>3</sup> and is protected under the *Heritage Act 1977* (Heritage Act) and the EP&A Act. The proposed new rail link passes through a small part of the School of Military Engineering (SME) complex, which is also listed as a heritage item under the Liverpool Local Environmental Plan 2008 (item 57) and protected under the *Heritage Act 1977* (Heritage Act) and the EP&A Act.

This section of the HIS, adapted from the MPE Stage 2 EIS Non-Indigenous Heritage Assessment and Indigenous Heritage Assessment<sup>4</sup>, includes descriptions of listed items that are to be impacted by the proposal, as well as information on Indigenous heritage issues related to the MPE site.

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<sup>3</sup> The DNSDC was previously listed on the Commonwealth Heritage List (CHL) but as a result of the Department of Defence vacating the DSNDC site which is owned by SIMTA, the site is no longer included on the CHL

<sup>4</sup> Artefact 2016a, 2016b

**Figure 1: MPE site overview (Source: Arcadis)**



## 2.2.1 Defence National Storage and Distribution Centre (DNSDC)

The DNSDC site is an area of approximately 83 hectares located on the eastern side of Moorebank Avenue. The DNSDC site has accommodated storage for military purposes since 1915, with the establishment of the nearby Liverpool camp along the banks of the Georges River during WWI. During WWII the site accommodated an ordnance depot and workshops. Twenty of the storage buildings from WWII have heritage significance, being timber post and beam or composite timber and steel structures. It is understood that the buildings were prefabricated in the United States and shipped to

Australia on US Liberty Ships.<sup>5</sup> A number of other buildings were constructed on the site, such as large storage sheds smaller ancillary, administration, and workshop buildings, and many of the buildings were refurbished, reclad and some demolished in the 1990s (Figure 6). The buildings of heritage significance on the site are:

- Fifteen warehouses of timber post and beam construction. These buildings retain their original timber structure, though they have been reclad with modern steel sheeting, and have new concrete floors. Nine of these buildings include internal bays.
- Three composite timber and steel warehouses which have three bays of timber post and beam construction on either side of a central raised bay. The central bay has a steel frame to support an overhead gantry crane.
- Two other WWII-era buildings, the Carpentry Workshop and Quarter Masters Store, which are of modified timber post and beam structures.

The MPE Stage 2 EIS Non-Indigenous Heritage Assessment<sup>6</sup> noted that

*The MPE Project involves the demolition and removal of all structures on the site, which includes 20 military stores as well as their associated infrastructures and utilities. Conservation and/or adaptive reuse of some of the WWII structures proposed for demolition was considered in the initial stages of the MPE proposal for mitigation of impact on the significance of the former DNSDC site (MPE site). Suggested measures included conservation in situ and adaptive reuse of some or all of the WWII structures. It was advised that the WWII structures were not suitable for use within the context of the MPE proposal as they would need to have major conversions to meet safety and engineering requirements to enable them to service the required functions as part of the intermodal terminal facility. It was therefore proposed by the proponent to demolish all structures and utilities on the site before it be fully redeveloped. This would include earthworks and levelling of the land, and the construction a freight rail terminal, new warehousing facilities, ancillary structures, infrastructure, utilities and landscape.*

The following Statement of Significance is taken from the Australian Heritage Database entry for the DNSDC<sup>7</sup>:

*The Defence National Storage and Distribution Centre (DNSDC) is historically highly significant. As a military storage site it dates from 1915, and the Centre is important for its associations with the development of Australia's military forces prior to and during the First World War and particularly for its direct association with the military build up in the early years of the Second World War. The DNSDC has continued to play an important role in Australia's military infrastructure, right up to the present time. The place also has an association with early nineteenth century settlement in the Liverpool area. (Criterion A.4).*

<sup>5</sup> Australian Heritage Database (<http://www.environment.gov.au/cgi-bin/ahdb/search.pl>) entry: "Defence National Storage and Distribution Centre"

<sup>6</sup> Artefact 2016a

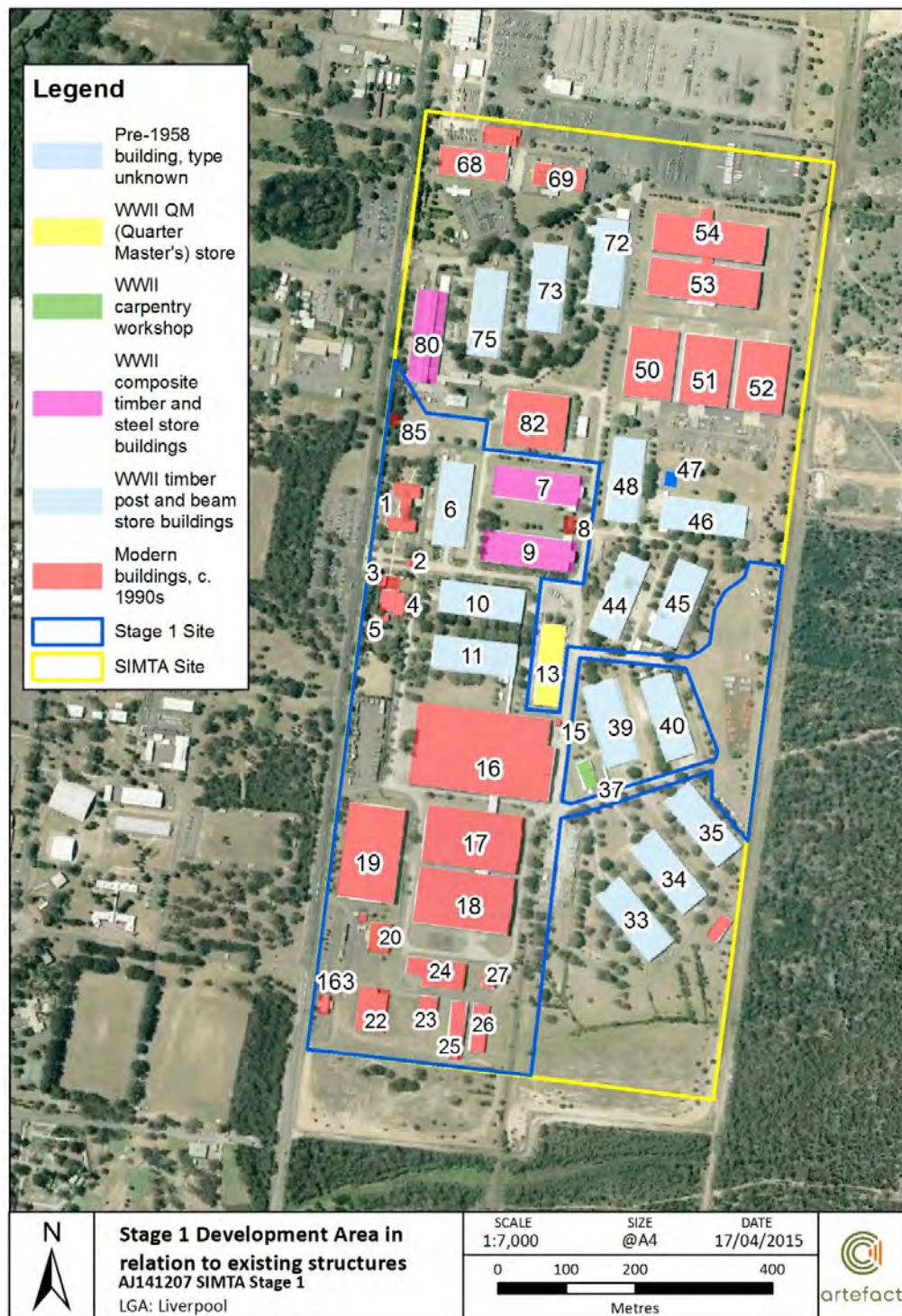
<sup>7</sup> Australian Heritage Database (<http://www.environment.gov.au/cgi-bin/ahdb/search.pl>) entry: "Defence National Storage and Distribution Centre";

*The DNSDC contains twenty Second World War post and beam warehouses, many of which, despite being re-clad, are good examples of their type. Particularly important are the fifteen timber post and beam military warehouses of the nine-bay type which played such an important role during the war and which were the widest post and beam military warehouses. Also important are the three composite steel and timber type warehouses. Post and beam military warehouses are small in number today, giving those at this site substantial rarity value. Additional interest is inherent in the fact that the buildings are understood to have been prefabricated in the United States and shipped to Australia in the early 1940s. Further, the alignment of part of the former military railway system is evidenced by the alignment and siting of some of the buildings and roads at the site. (Criteria D.2 and B.2)*

*The Centre is of social value for Defence personnel, for the Liverpool community and for the broader Sydney community on account of the long-term Defence associations with the site (Criterion G.1).*



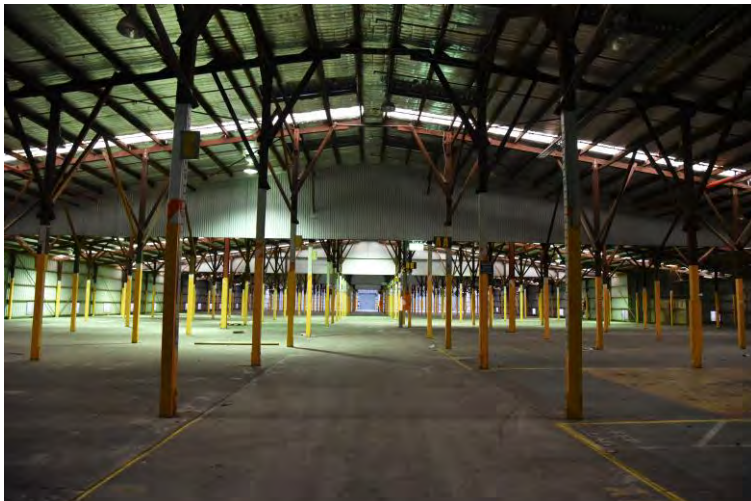
Figure 2: Location of buildings on DNSDC site (Source: Artefact)



**Figure 3: Example of WWII timber post and beam construction, Warehouse 73 (Source: Artefact)**



**Figure 4: Internal views of timber post and beam construction (Source: Artefact)**





**Figure 5: Carpentry Workshop (Source: Artefact)**



**Figure 6: Rail lines at south section of site (Source: Artefact)**



### 2.2.2 School of Military Engineering (SME)

The proposed new rail link on the MPE site passes through a small part of the south of the School of Military Engineering (SME) complex, previously used as a golf course, where no structures are present. The main complex of the SME covers approximately 220 hectares between the Georges River and Moorebank Avenue, and is listed on the Liverpool LEP (2008) under its alternate name, the Australian Army Engineers Group (Item 57). All of these items and structures of the SME complex will be impacted upon by the Moorebank Precinct West (MPW)<sup>8</sup> site development, and impacts to the SME complex have been approved under the MPW Concept and Stage 1 Early Works approval. The rest of the land encompassed by Item 57 on the Liverpool LEP listing now consists mostly of bushland. Since this land was part of Liverpool's military precinct from 1915 and has remained

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<sup>8</sup> Artefact 2016c

undeveloped since the 1940s, it is possible that archaeological evidence for military activities survives there.

The following statement of significance for the SME is taken from the State Heritage Inventory listing<sup>9</sup> for the site:

*The School of Military Engineering demonstrates the military history, particularly the engineering military history of the area. The site encompasses a complex of heritage items that are associated with the Royal Australian Engineers. It traces the evolution of the technologies used by the RAE. Much of the war memorabilia on display is now rare. The site is representative of the RAE's pride in their military past and present. There is the potential to gain more information on the site from further architectural, archaeological and documentary research.*

### 2.2.3 Glenfield Farm

Glenfield Farm is listed on the State Heritage Register<sup>10</sup> and is of exceptional historical significance as one of the few surviving rural farm complexes in NSW dating from the original land grant of 1810 and still capable of use for family living and limited farming activities. The buildings on the property are located to the western part of the listed area on top of a ridge and contain a 14 room homestead, a dairy, coach house and privy. The land to the east of the site consists of former rural pastures and the original site fencing. The house overlooks the Glenfield Waste Facility and the SSFL. The 2002 Conservation Management Plan<sup>11</sup> developed for the site emphasised the importance of the views to and from the east and recommended that they be retained intact.

### 2.2.4 Aboriginal Heritage Context

Previous Aboriginal heritage assessments of the MPE site<sup>12</sup> identified that the DSNSDC site and the proposed rail corridor area are heavily disturbed and/or previously developed areas, and the potential for preservation of archaeological materials is low. In particular, the sections of the rail corridor that include the SME and the Glenfield waste depot are heavily disturbed and modified and as such, these areas would contain limited heritage constraints. Isolated Aboriginal artefacts were identified in three areas on the MPE site and were assessed as having low archaeological significance, and three areas of potential archaeological deposit (PAD) were also identified. Testing at one of the PADs (PAD 2) identified a number of artefacts in a stratified deposit. Consultation with RAPs for the MPE Project at the Concept Plan Approval stage identified an area of cultural heritage value on the western side of Georges River, abutting the rail corridor portion of the MPE site. Information relating to exact locations of Aboriginal sites should not be published or promoted in the public domain.

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<sup>9</sup> State Heritage Inventory listing:

<http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=1970180>

<sup>10</sup> State Heritage Register:

<http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5045531>

<sup>11</sup> Mayne-Wilson & Associates 2002:116

<sup>12</sup> AHMS 2012, AHMS 2015

### 2.2.5 The Moorebank Cultural Landscape

The MPE site, as well as the MPW site, is located within a socially and historically significant landscape - the Moorebank Cultural Landscape - where built, modified and natural features reflect phases of use and associated cultural history patterns. The Moorebank Cultural Landscape was assessed in the MPW Concept EIS<sup>13</sup> as a locally distinct and representative cultural landscape, the product of numerous phases of land-use and occupation spanning Indigenous occupation through to the European settlement and the present day. For the purposes of interpretation, this assessment also applies to the MPE site. The World Heritage Committee has defined cultural landscapes as areas that *“are illustrative of the evolution of human society and settlement over time, under the influence of physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both external and internal”*.<sup>14</sup> The Moorebank Cultural Landscape has strong associations with Thomas Moore, the Australian Army, and the Aboriginal community. It incorporates heritage landscapes surrounding the MPE and MPW sites such as Glenfield Farm, Kitchener House, and Casula Powerhouse. Furthermore, the archaeological deposits identified have the potential to yield information that would contribute to an understanding of its cultural history.

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<sup>13</sup> NOCH 2014

<sup>14</sup> World Heritage Committee 2003



## 3.0 SITE HISTORY

### 3.1 Introduction

The aim of this section is to provide an historical background for the MPE site by identifying key historical characteristics of the area and outlining major historical themes and stories for interpretation. The following historical overview has been adapted from the comprehensive Indigenous and Non-Indigenous historical summaries in the Stage 1 and Stage 2 EIS reports for MPE<sup>15</sup>. This section is provided as a background to the HIS only, to indicate the extensive and varied use of the site and surrounding area over time, and is not intended to be an example of the type or extent of any text that may be included in specific interpretive media.

### 3.2 Aboriginal History

Aboriginal people traditionally lived in small family or clan groups that were associated with particular territories or places. The language groups occupying the region surrounding the MPE site are thought to have been the Darug, the Dharawal, and the Gundungurra<sup>16</sup>. The Campbelltown area may have represented the intersection between the boundaries for these language groups, and the Narellan Valley may have been part of a 'travel corridor' facilitating movement between the northern Cumberland Plain and the Illawarra.<sup>17</sup>

The Darug language group occupied much of the Cumberland Plain between the Blue Mountains and the coast, with the language being divided into coastal and hinterland dialects.<sup>18</sup> The Dharawal language group was largely coastal and may have extended from the Shoalhaven River, north to Botany Bay and then inland to Camden.<sup>19</sup> Historical records show that the Gundungurra were located to the west and southwest of the Dharawal and into the southern Blue Mountains. It is not known whether this represented recent displacement patterns as a result of European colonisation or was part of a longer term interaction with the Dharawal.<sup>20</sup>

British colonisation had a profound effect on the Aboriginal population of the Sydney region. In the early days of the colony Aboriginal people were disenfranchised from their land as the British claimed areas for settlement and agriculture. The colonists, often at the expense of the local Aboriginal groups, also claimed resources such as pasture, timber, fishing grounds and water sources.

In the early 1800s relationships between the Aboriginal people of the Liverpool area and the European settlers were generally amicable. There are several examples of close relationships

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<sup>15</sup> AMHS 2015, Artefact 2015, Artefact 2016a, Artefact 2016b

<sup>16</sup> Attenbrow 2010:221, 222

<sup>17</sup> JMcDCHM 2007:21 after Haglund 1989

<sup>18</sup> Attenbrow 2002:34

<sup>19</sup> Attenbrow 2002:34

<sup>20</sup> Karskens 2010:496

between land owners and local Aboriginal people, including Charles Throsby who gave the Dharawal protection on his Glenfield Estate.<sup>21</sup>

Relations between Aboriginal people and colonists did not remain amicable. A sustained drought in 1814 -1815 and continued disenfranchisement led to tensions between farmers and Aboriginal people in the southwest of Sydney. Aboriginal people were accused of stealing corn and potatoes and spearing cattle, and a number of farmers were killed on their properties. In a dispatch Governor Macquarie wrote that '*The Native Blacks of this country...have lately broken out in open hostility against the British Settlers residing on the banks of the River Nepean near the Cow Pastures*'. Aboriginal people were targeted and it was ordered that Aboriginal men be strung from trees when they were killed as an example.<sup>22</sup>

Although the numbers of Aboriginal people in the Liverpool area decreased as settlers and farmers moved into the locality, communities remained living at Camden Park and along the Georges River near Liverpool.<sup>23</sup>

### 3.3 Early European Settlement and Land Use

The first European activity in the area was exploratory, shortly followed by settlement in the 1790s. The MPE site was formerly part of the Moorebank Estate that was established and built up by Thomas Moore, initially Master Boat Builder, then the new Colony's Surveyor of Timber, then the first Magistrate of Liverpool. Land grants along the Georges River in the Moorebank area were first made in 1798. These were given to military or naval officers who cleared some of the land for agricultural uses. The land that would become Moorebank was left uncleared until 1805 when Thomas Moore acquired grants along the eastern bank of Georges River. Over the next 15 years, Moore received almost 8000 acres of land in grants. Moore used the land for agricultural activities (Figure 7). Before his death, Moore transferred his Moorebank estate of approximately 6,400 acres, together with lots he owned in the township of Liverpool, to the Church of England to be held in trust (Figure 8). He similarly left his house and grounds to the church for the establishment of a college for young Protestant men, which later became the Moore Theological College which was transferred to Newtown in 1891.

The Church of England leased out the land to tenants who had poultry farms, orchards and vineyards. In the 1860s many small farmers moved away from the river after a particularly large inundation and the area became open to larger scale agriculture including dairy farming. By the mid 1880s the church sold the site under the title of Moorebank Farms Estate. The river front land, parcelled in lots from 7 to 100 acres, sold quickly and tenant farmers used the land for poultry farming, orchards, vineyards, and a dairy. Parish maps indicate that in 1888 part of the MPE site formed part of the 'PE Barker' Orchard and Vineyard (Figure 8). In 1889 - 90 the government started drilling for coal on the estate. Although coal was found, it was not mined. Through this period the Estate remained mostly uncleared and was

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<sup>21</sup> Karskens 2010

<sup>22</sup> Turbet 2011:234

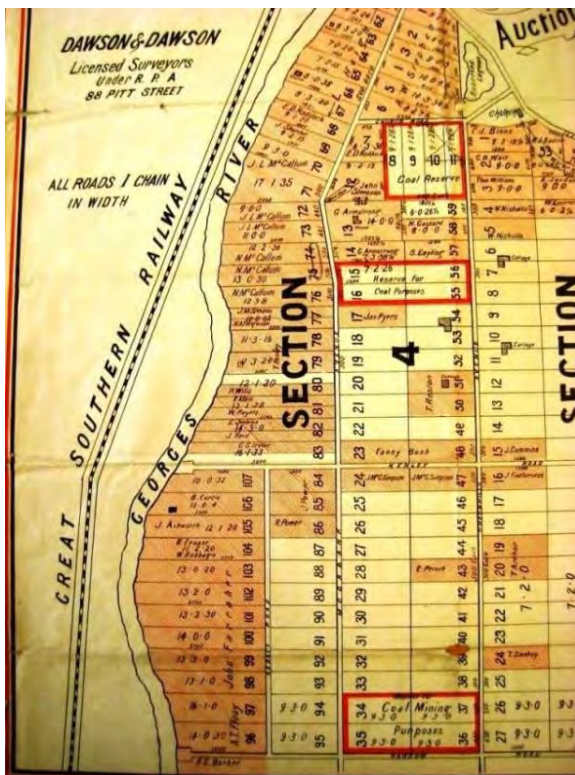
<sup>23</sup> Liston 1988

used for agriculture. In the 1930s, sandmining occurred on the eastern bank of the Georges River and a light railway to service the operation was constructed.

**Figure 7: Real estate agent's description of life on Moorebank Farms Estate c. 1888 (Source: Estate plan, Map folder 93, LFSP 1351, NLA)**



**Figure 8: Moorebank Farms Estate 2<sup>nd</sup> Subdivision, c 1888, including the northern part of the site (Source: Estate plan, Map Folder 93, LFSP 1352, NLA)**



### 3.4 Australia's Military Defence

The MPE site has a significant military history, ranging from the late nineteenth century to the present day. This section uses a chronological format to outline the various phases within the overarching military history theme.

### 3.4.1 Phase 1: Pre-WWI

From 1811 the Liverpool area was subject to extensive Defence involvement as military troops were stationed at Liverpool to protect the town and oversee convict work gangs. From 1870 annual training military camps were routinely held at Richmond, Campbell Fields, Windsor, the Royal National Park, and Campbelltown. The Easter camp was held at Campbelltown in 1891 with the artillery camping overnight near Liverpool. 1894 saw the first military use of Moorebank Estate with artillery, cavalry, light horse, engineer and medical units being used for training in mock military engagement over several days. By 1907, a military camp had been established on the eastern side of the Georges River, with a rifle range further south. The land which is currently occupied by the MPE site formed part of this large camp which also included portions of the MPW site and an area to the north, adjacent to the Georges River.<sup>24</sup>

This area would continue to be used as a training camp until Lord Kitchener's visit in 1910. Lord Kitchener was invited by Prime Minister Deakin to advise the Commonwealth on developing its land defence, as after Federation, it was felt that an overhaul of the defence system in Australia was required. Lord Kitchener, with a delegation, undertook a nationwide tour in 1910 to review the status of the Australian Army. For the duration of his stay, Kitchener stayed at Kitchener House. His visit and recommendations would result in the establishment of the Australian Imperial Forces. *The Daily Telegraph* described the area at the Liverpool camp used for the manoeuvres:

*The camp was pitched upon the paddocks to the left of the railway station on the ground that has been similarly occupied in recent years and which is nearly all included in the military manoeuvre area which the Commonwealth Government is endeavouring to secure ... the training ground embraces a stretch of country extending from Liverpool, on the southern line, across Heathcote on the Illawarra system, and it provides not only very fair opportunities for moving large bodies of troops in tactical exercises, but also has within its limits well equipped ranges for artillery and infantry shell and ball practice.*<sup>25</sup>

Kitchener recommended that large, central training grounds should be established in each State. His visit resulted in the acquisition of large areas of land around Liverpool by the Government, for use as permanent military training camps in NSW. The land was resumed in stages over the following years and included the acquisition of 883 acres near Holsworthy in 1912 for the establishment of a Remount Depot and a Veterinary Hospital for horses, followed by 16,868 acres in 1913, which included the MPE site.<sup>26</sup> Buildings that were established up to 1915 included a military isolation camp, mobilisation stores, small arms ammunition stores, a rifle range, and the official Moorebank parade ground.

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<sup>24</sup> Brooks and Associates 2002:8

<sup>25</sup> *The Daily Telegraph* 7/1/1910:7

<sup>26</sup> Brooks and Associates 2002:4

### 3.4.2 Phase 2: WWI and Interwar

By 1913, the Liverpool camp accommodated 2,000 troops in tents<sup>27</sup>, and during WWI it became the main training centre for new recruits in New South Wales. The camp extended southward from Newbridge Road for three to four kilometres along the eastern bank of the George's River, between the river and Moorebank Avenue. The buildings included a guard room, prison, ordinance store, ammunition stores, officer's mess and kitchen, numerous barrack blocks, kitchens, showers and latrines, a canteen and a billiard hall and shooting gallery. To the east of the camp was an area marked 'stores' on a 1915 plan (Figure 9), which encompassed the northern part of the current MPE site, while east of the stores area, outside the MPE site, was a rifle range.

Initially, new recruits were encamped in long lines of tents on the eastern bank of the river to the north of the MPE site, though these had been replaced with huts by the end of 1916 (Figure 10). A detailed plan of the camp from 1917 (Figure 11) shows that it was well established and included a large number of huts, kitchens, and mess buildings, as well as a saw mill, four church buildings, a post office, bank, power house, Y.M.C.A building, hospital buildings, nurses' quarters, and buildings for the Salvation Army and the Red Cross. Units that trained at the camp during the WWI included the Engineer and Field Mining companies, the field hospital, infantry and reinforcement units, and the artillery and light horse units.

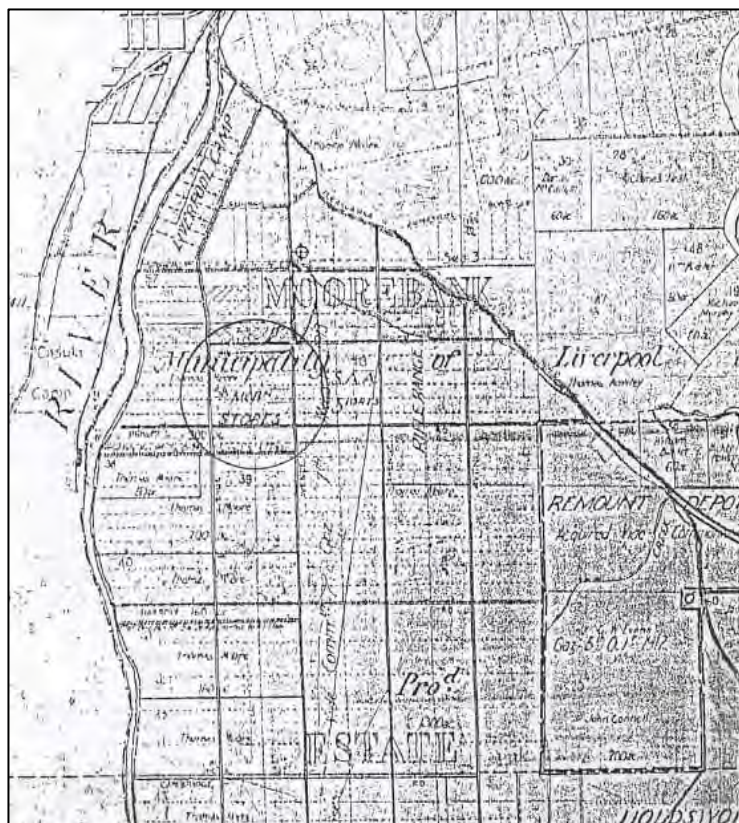
Although these facilities were outside the MPE site, this demonstrates the extent of military occupation of the area and provides context to the assessment of heritage significance for the MPE site.

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<sup>27</sup> SMH 3/1/1913:10



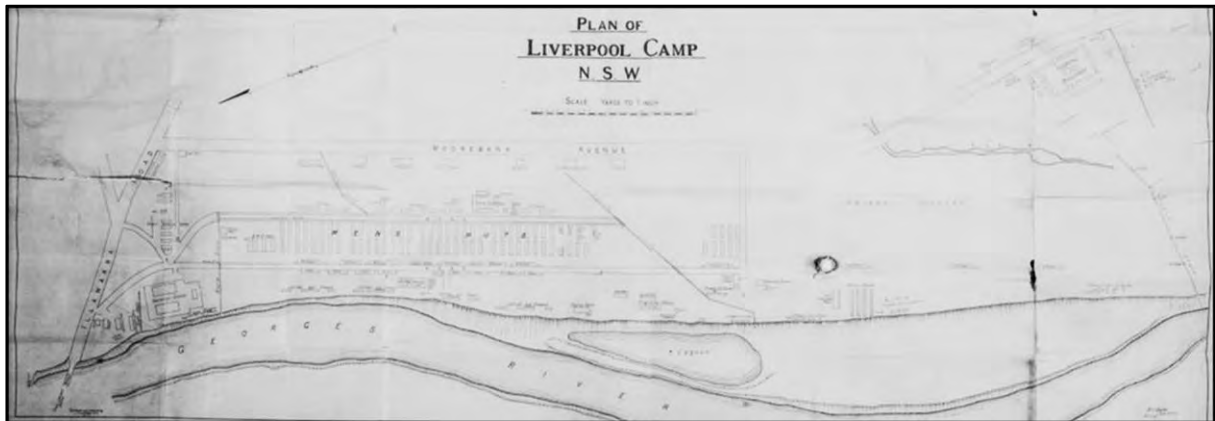
**Figure 9: Plan of the Liverpool Manoeuvre Area c.1915 (Source: Brooks and Associates 2002:7)**



**Figure 10: Accommodation huts, Oct 1916 (Source: AWM, ID No: C01205)**



**Figure 11: Plan of Liverpool Camp, 1917 oriented north (Source: Liverpool City Council)**



The Remount Depot established at Holsworthy in 1912 approximately four kilometres south-east of the Liverpool camp was responsible for purchasing, breaking in, and caring for military horses. Initially, it mainly supplied horses for artillery and transport, but during WWI it provided mounts for the enlisted Light Horsemen who came from other parts of NSW and Queensland to enrol, train, and embark from Sydney. By 1914, a Veterinary Section was also established at Holsworthy, to care for the horses (Figure 12).

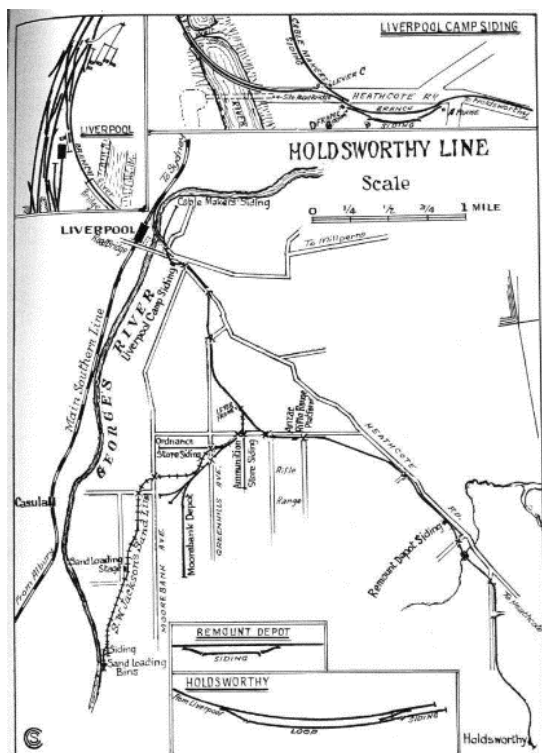
Also located at Holsworthy was a large internment camp for 'enemy aliens' and prisoners-of-war, which became known as the German Concentration Camp. The area occupied by the camp was never clearly defined, but measured approximately 1.5 kilometres by one kilometre, and was located south of the Remount Depot and Veterinary Section.

Internees from the German Concentration Camp assisted in the construction of new railway lines to link the different military establishments at Liverpool and Holsworthy. The Government wanted the new lines to service the Liverpool camp, the Artillery Range to its east, ordnance and ammunition stores two miles from the main camp, the Remount Depot, Veterinary Section, and German Concentration Camp. Construction of the line began in February 1917 and was completed in January 1918, with additional sidings added in the following years. First the Ordnance Store Siding opened in April 1919, followed by the Ammunition Stores Siding on Anzac Road which opened in October 1920. These rail sidings were located just to the north of the MPE site. The facilities at Liverpool and Holsworthy continued to be used for military training during the interwar years, although on a much reduced scale.

Figure 12: 1917 plan showing Liverpool camp, the Remount Depot, the Veterinary Section, and the Holdsworth internment camp located north of the MPE site (Source: Ludlow & Snowden 1993:56)



Figure 13: Plan showing rail lines (Source: P. Neve, Australian Railway Historical Society Bulletin no. 322, August 1964)



### 3.4.3 Phase 3: WWII

The beginning of WWII necessitated the nation-wide expansion of sites associated with defence training, manufacture, and storage. In the Liverpool area there was an enormous expansion of army installations, with about 40,000 troops in-training at Liverpool, Holsworthy, and Ingleburn<sup>28</sup>. The School of Military Engineering (SME) was established to the south of Liverpool camp in 1939, immediately after the declaration of war. During the war 7,450 students were trained at the school.<sup>29</sup> By 1943, the area of Liverpool camp between the Georges River and Moorebank Avenue accommodated the Armoured Fighting Vehicle Trade Training Centre (AFVTTC), and the Australian Electrical and Mechanical Engineers (AEME), while a sub depot had been established on the southern corner of Moorebank Avenue and Anzac Road to the north-west of the MPE site.

In 1943, it was proposed that Ordnance Stores should be established at Moorebank for the 5<sup>th</sup> Australian Base Ordnance Depot and a plan for the proposed layout was drawn up. In January 1944, urgent approval was sought for the construction of four of the proposed storehouses (Numbers 10, 11, 12 and 13) due to a shortage of storage facilities in the area. Approval was granted in February, and these buildings formed the first construction phase of the depot, now known as the DNSDC.<sup>30</sup> A plan from April 1944 (Figure 17) shows the proposed layout of the completed depot, which was to include:

- 17 stores (400' x 150' in size).
- Two crane served stores (400' x 150').
- 19 offices attached to each store (40' x 20').
- One transit store (500' x 83'4").
- Office acc. inside transit store.
- One cinematograph store (60' x 40').
- Two inflammable stores (100' x 50').
- 20, 000 square feet of equipment shelters.
- One traffic control building (18' x 17'8").
- One strong room (50' x 50').
- One Depot Administration building in three blocks (135'4" x 111' combined size).
- One combined garage, service station, fire station, P.O.L store, Tpt office (97' x 25').
- One SW guard house (60' x 20').
- One case making building (3,750 square feet).
- Seven men's latrines.
- Three AWAS latrines.
- Three AWAS latrines and rest rooms

<sup>28</sup> Department of Defence 'History of the 5th Brigade' [http://www.army.gov.au/HQ5BDE/Unit\\_History.asp](http://www.army.gov.au/HQ5BDE/Unit_History.asp).

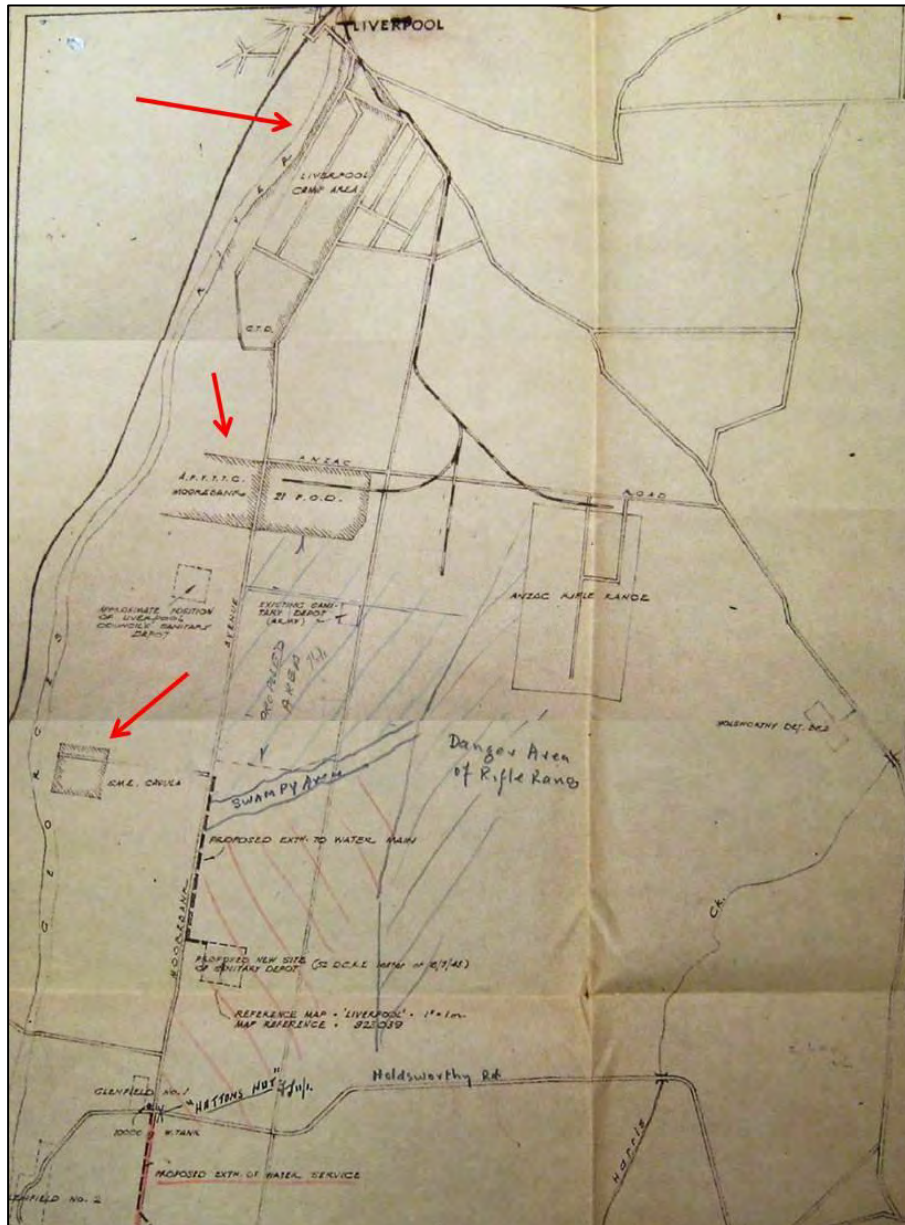
<sup>29</sup> Liverpool Library Local Studies pamphlet *'The Army at Liverpool'*

<sup>30</sup> *Letter from Quarter-Master General 16/2/44*, NAA: SP459/1, 420/7/1153



It was intended that the depot would have an ongoing role in peacetime as well as wartime.<sup>31</sup>

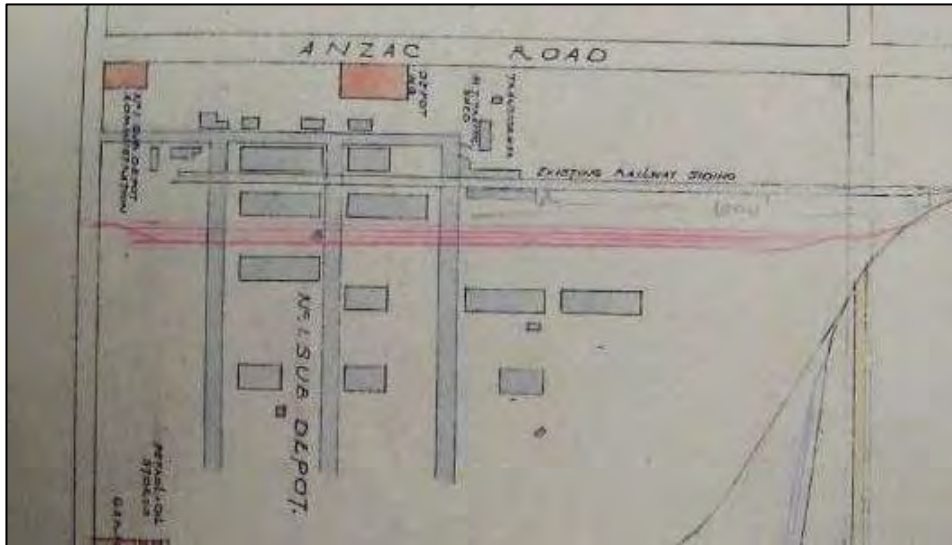
**Figure 14: Plan of Liverpool military area 6/10/1943. Red arrows indicate the Liverpool camp area (top), the AFVTC base (centre) and the School of Military Engineering (bottom) (Source: NAA: SP459/1, 420/7/1153)**



<sup>31</sup> Letter from Colonel Garnsey 5/4/44, NAA: SP459/1, 420/7/1153



**Figure 15: Detail of No. 1 Sub depot on corner of Anzac Rd and Moorebank Avenue 16/9/43 to the north-west of the MPE site (Source: NAA: SP459/1, 420/7/1153)**



In April 1944, the AFVTTC transferred to the Ingleburn army camp, and the vacated Liverpool camp buildings to the west of Moorebank Avenue were then used to accommodate the personnel of 5 Aust. BOD, as well as the 8<sup>th</sup> Australian Advanced Workshops of the AEME, who had been transferred from Bathurst. By 1945, the Australian Women's Army Service (AWAS) was also housed there.

**Figure 16: 5th Aust. BOD exterior view of No. 9 Bulk (Crane Served) Technical Store Shed, 23/1/46 (Source: AWM, ID No. 124623)**



[illegible]

Aerial photographs of the MPE site show that little change occurred at the site between the late 1940s and early 1990s (Figures 18 and 19). In the early 1990s, the site became the DNSDC as part of a reorganisation of defence supply services and warehousing arrangements. During the refurbishment of the DNSDC, five of the original 20 timber post and beam store buildings were demolished and replaced with larger modern buildings. The remaining 15 timber post and beam WWII store buildings were retained and reclad in about 1990. Modern steel sheeting replaced the original asbestos walls and new concrete floors were laid. The site comprised of 20 of these WWII store buildings - 15 of timber post and beam construction, 3 of composite timber and steel construction, the Quarter Master's Store and the Carpentry Workshop.

 artefact



**Figure 18: Aerial photograph showing the Ordnance Depot/DNSDC in 1951 (Source: Brooks and Associates 2002:9)**



**Figure 19: 2011 aerial photograph of the DNSDC (Source: Artefact)**



### 3.4.5 Phase 5: Recent years

In recent times, the Department of Defence's lease for the site has ceased and the site has been vacated. As a result of Defence vacating the former DSNDC site, the site is no longer included on the Commonwealth Heritage List.

## 3.5 Surrounding Landscape

The following section outlines significant heritage items within the surrounding landscape of the MPE site. Of particular significance is Glenfield Farm, as the views from the farm will be impacted by the development at the MPE site.

### 3.5.1 Glenfield Farm

Glenfield Farm, located at 88 Leacocks Lane, Casula, is one of the few surviving rural properties dating from an 1810 land grant (Figure 20). The house was occupied by Dr Charles Throsby a prominent historical figure, who arrived in Australia in 1802 as a surgeon, and was granted 950 acres of land in Casula.<sup>32</sup> He built a farmhouse on the property in 1817. In the 20th century it was associated with James Leacock. The oldest section of Glenfield Farm was built in 1817, with later additions between 1820 and 1840, and again in the 1890s and 1932.

**Figure 20 Glenfield farm house in 1985 (Source: Campbelltown City Library)**



### 3.5.2 Kitchener House

Kitchener House/located on Moorebank Avenue is a federation bungalow constructed between 1895 and 1905 (Figure 21). It was built on land originally granted to Thomas Moore in 1810. The house was said to be constructed by William Alexander Smith who purchased the property after Moore's land was subdivided. Smith established an orchard and vineyard on the property. The residence was originally known as "Arpafeelie" but was renamed after Lord Kitchener, who stayed at the residence in

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<sup>32</sup> OEHL 1997 *Glenfield Farm*

1910 during a visit to review the Australian Army. Kitchener recommended the setting up of a permanent army establishment in the area.

**Figure 21: Kitchener House, 1910 (Source: Australian War Memorial)**



### 3.5.3 Casula Powerhouse

Casula Powerhouse represents the growth and development of Casula in the mid twentieth century (Figure 22). Casula was changing from a small farming community to a larger residential area. The powerhouse was constructed in the 1950s to meet the needs of the growing demand in the area, whilst providing employment opportunities to the locals.<sup>33</sup> It was closed in 1976 and acquired by the Liverpool Council, and first opened as an Arts Centre in 1994.

**Figure 22: Casula Powerhouse in 1953 (Source: Liverpool City Library)**



### 3.5.4 Collingwood House

On the western side of the George's River, Eber Bunker, known as the 'father of Australia's whaling industry', was initially granted 400 acres of land which he named Collingwood where he built a grand residence between 1881 and 1857. Collingwood farm grew wheat, grazed cattle and operated a flour mill. Dairy and tenant farming were undertaken on the property. Following Bunkers' death, his land underwent significant change as a result of disposal and development. This area was developed as a golf course in the later twentieth century, and has also seen the recent construction of the Southern

<sup>33</sup> OEH 2004 *Powerhouse Regional Arts Centre*



Sydney Freight Line. The original house, known as Collingwood House, is a rare example of modified colonial Georgian residence that demonstrates the evolution of domestic colonial architecture and its adaptation to the Australian environment, and was State Heritage listed in 2006 (Figure 23).

**Figure 23: Collingwood House (Source: Heritage Council of NSW)**




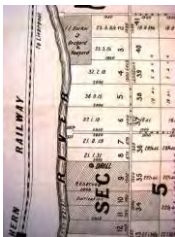

## 4.0 HISTORICAL THEMES

### 4.1 MPE Site Historical Themes

To successfully interpret a site, the contextual background should be presented in a way that is clear, concise, easily accessible, informative and engaging. Successful interpretation is best achieved by structuring the interpretive approach around key themes or stories directly associated with the site in order to provide a clear context for understanding the heritage values of the site.

The Heritage Council of NSW (2001) has established thirty-two NSW Historical Themes to connect local issues with the broader history of NSW and the nation. Historical themes provide a context within which the heritage significance of an item can be understood, assessed and compared. Themes help to explain why an item exists, how it was changed and how it relates to other items linked to the theme. The historical themes which relate to the MPE site are listed in Table 1.

**Table 2: Historical themes**

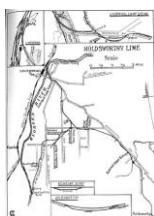
Australian Historic Theme	NSW Theme
<b>Peopling Australia</b>	<b>Aboriginal cultures and interactions with other cultures</b>
	The Liverpool district was home to the Cabrogal clan of the Darug tribe, with Dharawal, Darug and Gundungurra thought to be the main language groups. In the early 1800s generally amicable relationships existed between local Aboriginal people and European settlers but European expansion throughout the Cumberland Plain displaced Aboriginal people from their traditional land and cut off access to many resources.
<b>Developing local, regional and national economies</b>	<b>Agriculture</b>
	The site was initially developed for the Moorebank Estate and later the Church of England for agricultural purposes from the early 1800s to the early 1900s. The regional landscape retained the agricultural presence up until the mid-twentieth century.
<b>Developing local, regional and national economies</b>	<b>Environment – cultural landscape</b>
	The subdivision of the Moorebank Estate and the development of the Moorebank Defence area is reflective of the cultural landscape of the region. The area remained rural with mostly agricultural land use surrounding the defence land.

**Australian Historic Theme****NSW Theme****Developing local, regional and national economies****Events**

The MPE site is connected to WWI and WWII in its use as an Ordinance Store and as part of the School of Military Engineering, all associated with significant events in the history of Australia.

**Developing local, regional and national economies****Pastoralism**

The development of Moorebank Estate, initially owned by Thomas Moore and later the Church of England, for pastoral industry purposes in the nineteenth century demonstrates this theme.

**Developing local, regional and national economies****Transport**

An example of a military storage area used throughout the 20<sup>th</sup> century, which included the movement of goods and preparation of equipment for war efforts. A railway system was constructed in 1917/1918 to link the different military establishments at Liverpool and Holsworthy, with sidings constructed north of the MPE site.

**Building settlements, towns and cities****Land Tenure**

The early nineteenth century land grants were part of the land tenure of the area. This was demonstrated in the subdivision into various estates, such as the passing of Moorebank Estate to Church of England in the mid nineteenth century.

**Governing****Defence**

The site demonstrates the historic and contemporary role of Defence in Australia's response to war, from the initial use in early 1900s to the present, and the surrounding military use of the area over a considerable time period, particularly the Liverpool Training Camp. It demonstrates the process of military storage and distribution in Australia, and the built heritage related to that process.

**Developing Australia's cultural life****Creative endeavour**

The WWII timber post and beam, and composite timber and steel, buildings on the MPE site demonstrate the planning and construction of Defence storage buildings within the Australian context, using Australian timbers and other materials.

## 4.2 Key Stories for Interpretation

The MPE site is part of a rich and extensive landscape with diverse histories and, as such, the number and range of key historic themes that provide context for understanding the landscape is great. In order to simplify the interpretive structure and to provide some major anchor-points, three key interpretative stories have been identified which encapsulate the historical evolution of the MPE site. The key stories have been developed through the analysis of the historic themes outlined above.

The key stories are a vehicle for structuring information to convey the layered history of the site and its cultural landscape. They have been grouped chronologically to distinguish the three broad phases of use of the site over time. Key stories for interpretation at the MPE site consist of the following:

- Aboriginal history
- Early settlement and land use
- Australia's military defence (military storage and distribution)

These three interpretive focal points would form the basis for developing the content and structure of a detailed Heritage Interpretive Plan, and will allow interpretive media to be arranged in accessible groupings.

## 5.0 CONSULTATION

A key component for developing this HIS has been community and stakeholder consultation. This has occurred with Registered Aboriginal Parties (RAPs), with the local historical society (Moorebank Heritage Group) and with Defence. Consultation with the NSW OEH Heritage Division, a requirement of Condition of Approval 14, has also commenced and the final HIS is to be submitted to the Heritage Division by the Department of Planning. A summary of the consultation process with these groups is given below, together with any major considerations raised by the groups. A detailed consultation log is included in Appendix A.

### 5.1 Consultation with NSW Heritage Division

A copy of the draft of the HIS was sent to the Heritage Division on 13 February 2017. Two follow-up phone calls were made and one email was sent on 15 and 16 February 2017. On 20 February the Heritage Division confirmed that the draft HIS had been received, however they require that the Department of Planning as the consent authority submit requests for compliance with conditions for State significant developments and, once the Heritage Division has received the final HIS from the Department of Planning, they will proceed with a review.

### 5.2 Consultation with Registered Aboriginal Parties (RAPs) for Aboriginal Heritage Interpretation

Aboriginal community consultation has been conducted throughout the MPE Concept Approval and EIS review processes. Eight RAPs are registered for the MPE project, and all were contacted via email on 19 January 2017 inviting comment on a draft outline of the possible approach to interpretation, key historic themes to be addressed, and possible interpretive media, by 1 February 2017.

The RAPs contacted were:

- Tharawal Local Aboriginal Land Council (TLALC)
- Cubbitch Barta Native Title Claimants Aboriginal Corporation (CBNTCAC)
- Darug Tribal Aboriginal Corporation (DTAC)
- Darug Aboriginal Cultural Heritage Assessments (DACHA)
- Tocomwall
- Darug Land Observations (DLO)
- Darug Custodian Aboriginal Corporation (DCAC)
- Darug Aboriginal Landcare Inc (DALI).

Five responses were received. The remaining three RAPs were contacted again on 13 February 2017, however no response was received. The responses were:



- DCAC: stated that DCAC support the summary report on possible approaches to interpretation at Moorebank East. They expressed concern that the number of groups consulted was high, and stated that many were not from the area.
- DLO: stated that DLO supports the possible interpretative approaches to the Moorebank Precinct East site.
- TLALC: requested confirmation that there would be no mention of any locations of aboriginal artefact finds at the MPE site in any interpretation, and did not consider it appropriate to display reconstructions of any artefacts. TLALC also requested that, as the QR codes that are to be placed on interpretive panels would lead viewers to a central website with further information about the MPE site's history, that TLALC website (and that of all RAPs, if agreed) be included as links on this central website.
- Tocomwall – Tocomwall responded that they declined to comment unless payment was made.
- DTAC – stated that DTAC agreed with the methodology and supported this project.

### 5.3 Consultation for European Heritage Interpretation

A meeting to discuss the approach to European heritage interpretation at the site was held on 23 January 2017 with the Moorebank Heritage Group (MHG) (including local historians, local museum curator, former Defence worker). At the consultation meeting, the general interpretative approach was discussed, including key themes to be covered and possible interpretive media. There was strong support for the approach, and the range of possible media was discussed. Important feedback was provided by the group and is summarised as:

- the need for interpretation to address the context of the surrounding area and its heritage and connections, not just the land of the site itself.
- the need to balance interpretive content to address earlier time periods (in particular, early settlement and land use) as well as the more recent military history of the site.
- the importance of developing a joint Interpretive Plan for both the MPW and MPE sites, as the histories of both sites are so similar, in relation to Aboriginal history, early settlement and land use, and then military ownership.
- following on from that, the importance of grouping interpretive displays for both the MPW site and the MPE site together at one location, so that the shared history of the sites, as well as some of the different military uses, can be interpreted in a cohesive context.
- the importance of having some publically accessible space to display interpretation of both the MPW and the MPE sites at one location, including a small number of public car parking spaces.
- the importance of both on-site interpretation (to create a sense of place and history) and off-site interpretation, like a website (to provide access to the wealth of information about the area).

Details of feedback and responses are provided in the consultation log in Appendix A.

The Moorebank Heritage Group will be an important and informative contact in the next stage of the process, the development of detailed content in a Heritage Interpretation Plan.

## 5.4 Consultation with Defence

Department of Defence A/Assistant Director Environment & Sustainability Service Delivery Division, Estate & Infrastructure Group, Northern NSW, was contacted via email on 31 January 2017 inviting comment on a draft outline of the possible approaches to interpretation, key historic themes to be addressed, and possible interpretive media. The following response was received on 6 February 2017: “The MPE Heritage Interpretation Strategy (HIS) adequately addresses any issues of interest to Defence, and to other matters of heritage significance.” (See consultation log in Appendix A).

## 6.0 INTERPRETIVE STRATEGIES

### 6.1 Interpretive Approach

The key interpretative principles for the MPE site heritage interpretation are as follows:

- present the MPE site, part of the Moorebank Cultural Landscape, as a locally distinct and representative cultural landscape which is the product of numerous phases of land-use
- incorporate documentary research and graphic material to illustrate and express the historic significance of the site in a clear and engaging manner
- ensure that interpretive media are accessible and designed to engage and stimulate interest
- collaborate with Traditional owners and relevant Aboriginal groups to ensure interpretation strategies adhere to the cultural heritage significance of the area
- ensure that on-site interpretive media are developed in a way that complements the facility/landscape design of the site and the historical characteristics of the area and surrounding landscape.

The interpretive approach outlined in this HIS addresses both the Aboriginal and non-Aboriginal heritage aspects of the site. However, it must be noted that the heritage values of the cultural and natural environment of the area are specifically significant to Traditional owners, local Aboriginal groups and local Aboriginal residents of Liverpool/Moorebank area. Any interpretive approach employed would need to acknowledge Traditional owners of the land, consider the significance of the landscape to Aboriginal people, and respect connections which may not be visible in the landscape today but which are key to Aboriginal relationships with the river and surrounding landscape.

### 6.2 Audience Identification.

Heritage interpretation is most effective when potential audiences are identified and specifically targeted. It is important to define audience categories to ensure that interpretive media - their location, orientation, content and design - are designed to provide engaging and informative experiences relevant to those audiences.

Due to the industrial nature of the MPE site, it is unlikely that public access will be available or encouraged. Therefore consideration of both on-site and off-site interpretation approaches should be included in order to reach as broad an audience as feasible, and to encourage public appreciation but not necessarily encourage visitors to the site.

On-site audiences include:

- on-site employees (many with connections to the local area)
- on-site visitors (largely limited to visitors associated with the facility's activities, temporary contractors)

Off-site audiences are broader, including:

- Aboriginal groups and individuals with a connection to the area
- local community with an interest in the site and its history
- local history groups
- enthusiasts of military history, including military history associations and organisations
- secondary school Australian history students

### 6.3 Interpretive Constraints of the Site

In relation to interpretive possibilities, the MPE site has two main constraints:

- The site will not be a public venue, and therefore on-site audiences are largely confined to specific groups as identified above. While part of the site will be accessible to the public (such as the entrance/exit areas, retail sections, car parks, some internal roads and the Freight Village <sup>34</sup>), it is unlikely that this facility would attract many public visitors.
- European heritage items and elements which have not been identified for adaptive re-use, interpretation off-site or relocation will be demolished. An archival recording of all European heritage items has been undertaken. Aboriginal heritage items within the MPE site will be subject to mitigation measures, such as reburial of found artefacts at appropriate locations. As such, no items or elements will remain in-situ to be the subject of interpretation. The aim of on-site interpretation will be therefore to create a sense of place, commemorating the heritage values of the site.

### 6.4 A Joint Approach to Interpretation for MPE and MPW Sites

The two sites which make up the Moorebank Precinct development – Moorebank Precinct East (MPE) and Moorebank Precinct West (MPW) – share a common history. Their proximity, on each side of Moorebank Avenue, means that both sites have a similar Aboriginal history, both were part of the land parcels of the 1880s, both were associated with early military activity in the area, and both were Defence sites for different military usage. Therefore, the key interpretive stories for both sites are largely the same, with a different focus for the extensive military uses at both sites.

Key interpretive stories at MPE site	Key Interpretive stories at MPW site
Aboriginal history	Aboriginal history
Early settlement and land use	Early settlement and land use.
Australia's military defence - military storage and distribution WWI/WWII	Australia's military defence - early years/WWI - later years/School of Military Engineering/WWII

<sup>34</sup> A 'Freight Village' is planned to provide appropriate support services on-site, including on-site management and security, meeting rooms, driver facilities and convenience, retail and business services for employees and site visitors.

For these reasons it is suggested that the majority of the interpretation for the two sites be placed in one location to avoid any repetition of information and to provide a cohesive context. Where relevant, this has been identified in discussion of potential interpretive media in section 6.5 below.

## 6.5 Potential Interpretive Media

Because of the constraints outlined above, a two-pronged interpretive approach is suggested which addresses both the value and significance of the site itself, and provides access to some of the wealth of stories and information about the site that exists in various depositories. By providing these two layers of information and access, the widest possible audiences can potentially be reached. The two interpretive approaches are:

- on-site interpretation, closely integrated with the site design and landscaping; and
- off-site interpretation.

As outlined in section 6.2 above, because of the shared early history and later Defence usages of both the MPW site and the MPE site, the interpretive media suggested are similar for both sites.<sup>35</sup> As such, rather than repeating the information at two locations (one at MPW and one at MPE) it is suggested that one area within either the MPE site or the MPW site is chosen as an interpretive area and that the key stories for both sites be interpreted at that location.

Six possible options for interpretative approaches for the MPE site have been identified. These include five on-site and one off-site interpretive approaches. For each interpretive approach detailed below, a description is given, key themes and possible locations for each interpretive media have been identified, and examples of similar media shown. Additional sections outlining the value of developing connections with key organisations and of developing a maintenance plan have also been included.

### 6.5.1 Option 1 (on-site): Interpretive Panels

Well-designed and written interpretive panels are an excellent media for effectively conveying key messages. If integrated into the design of the site/facility, they can be strategically located to gain appropriate exposure. If a number of panels are installed, each can carry a key message in a clear, concise manner. It is envisaged that three separate panels each addressing one of the key themes, or a wall area where three component panels could be accommodated, could be incorporated in this way<sup>36</sup>. Images could include maps, paintings and sketches of the Moorebank site during Aboriginal occupation, early European settlement and various military uses/occupation. Photographs would also be an appropriate method of creating a visual interpretation of the more recent history of the site.

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<sup>35</sup> Artefact 2016c

<sup>36</sup> If the interpretation for both the MPW site and the MPE site were to be located in one area, then there would be no need to reproduce the Aboriginal history and the Early Settlement and Land Use panels which cover key themes for both sites, as the information would be the same. This would result in five (5) interpretive panels in total.



There are also numerous images of the surrounding site that could be used to provide a contextual reference to the Moorebank Cultural Landscape. Panels would need to be designed and constructed to minimize any maintenance.

### **Key themes**

Key themes appropriate for interpretive panels:

- Aboriginal history
- Early settlement and land use
- Australia's military defence

### **Possible locations**

To be accessible to the widest possible audience, interpretive panels should be located in the Freight Village which will be used by staff daily and will be a focal point for on-site visitors. Placing interpretive panels on publicly accessible external walls or immediate surrounds of cafés, retail buildings or administrative buildings is a possible option, as these locations provide some opportunities for accessible engagement. The precise locations will be determined during detailed design.

**L: Gully Walk, Blue Mountains, interpretive panels (Source: [naturetourismservices.com.au](http://naturetourismservices.com.au))**

**R: Munmorah interpretive panels (Source: [centralsigns.com.au](http://centralsigns.com.au))**



**Adelong Goldmine interpretive panels (Source: [www.littlewood.com.au](http://www.littlewood.com.au))**



L: Uluru interpretive panel (Source: redarrow.com.au)

R: La Vieille prison entrance panel (Source: <http://www.ameriquefrancaise.org>)



L: Sister Cities Par, Philadelphia (Source: phillarchaeology.net)

R: Hyde Park Barracks external panels (Source: [cdn.tourbytransit.com](http://cdn.tourbytransit.com))



L: Upper Landing historical display, Poughkeepsie (Source: [timelysigns.com](http://timelysigns.com))

R: Racoon Valley trail interpretive panels (Source: [raccoonrivervalleytrail.org](http://raccoonrivervalleytrail.org))





L: Old Beechy Rail Trail (Source: nuttshell.com.au)

R: Colorado School of Mines (Source: C.Desmoineaux)



### 6.5.2 Option 2 (on-site): Interpretive Artefact Displays

Interpretive displays of artefacts would provide access to relevant and representative archaeological finds from the site, and enable viewers to more readily visualise the phases of previous use of the site. While highlighting archaeological finds, devices such as photographs, historical images, oral history quotes and minimal text could support the objects and provide a context for appreciating the heritage significance of the area. Any consideration of displaying reconstructions of Aboriginal artefact finds (stone knapped reconstructions only should be considered) should be further discussed with RAPs.

#### Key themes

Key themes chosen will depend on the artefacts located during the archaeological investigations, but could potentially include:

- Aboriginal history (stone knapped reconstructions of artefacts only, and only if agreed by RAPs).
- Early settlement and land use
- Australia's military defence

#### Possible locations

Two possible types of displays could be considered: incorporating artefacts into paving inlays in toughened perspex boxes or recessing small display cases into walls. Both options could be located within the Freight Village for accessibility and security reasons, and should be incorporated into the overall design of the space. The size of the display/s will depend on the size and number of artefacts chosen from those located during the archaeological investigations.

**L: Embedded wall display cases incorporating artefacts located at 161 Castlereagh Street, Sydney (Source: Artefact)**

**R: Relic showcase in building aperture, Rocks Discovery Museum. (Source: 3-D Projects)**



**L: National Museum of Australia display (Source: nma.gov.au)**

**R: Under floor display of artefacts (Source: <http://seattleglassblock.blogspot.com.au>)**



### 6.5.3 Option 3 (on-site): Paving Inlays

Paving inlays are a subtle method of conveying historic and contextual information without distracting viewers from the surrounding landscape and structures. They carry 'bites' of information which are easily absorbable and memorable. A paving inlay map of the unique layout of the MPE site could be a feature of the interpretation area. Selected archaeological finds from the site could also be incorporated into the paving by placing them in perspex inlays. Small architectural elements, such as original plaques/ commemorative engraved stones, could also be incorporated into paving inlays. Single objects displayed this way in a series of small toughened perspex boxes embedded in the paving can provide access to relevant and representative information from the site, and enable viewers to more readily visualise the phases of previous use of the site. This form of interpretation also has the ability to create a narrative as paths are traversed. As paths will be used daily and

frequently by employees and visitors to the site, this interpretive device has the ability to reach all on-site audiences.

Themes could be interpreted via textual references and geometric markers. Text could include information relating to dates, quotes, or specific events. Geometric markers could include horizontal lines placed in the position of earlier significant structures or event locations. A potential list of significant dates, events and locations would need to be developed in consultation with Aboriginal and non-Aboriginal stakeholders. If Aboriginal artefacts are to be included in display inlays, they are to be reconstructions only.

Materials used for inlays could consist of brass, stainless steel or masonry such as sandstone. Toughened glass or perspex boxes could be used for object display inlays. Typography and colours should complement the landscape design and the historical characteristics of the area and surrounding landscape.

### **Key themes**

Key themes appropriate for paving inlays:

- Aboriginal history
- Early settlement and land use
- Australia's military defence

### **Possible locations**

Location options for paving inlays could include each side of the precinct's perimeter roads (perhaps linking with the placement of architectural elements) and frequently used pathways around the Freight Village. Location for a paving inlay map could be at the allocated interpretive area.

**L: Objects embedded in flooring, National Media Museum (Source: <https://www.dexigner.com>)**

**R: Darling Quarter brass paving inlay (Source: Elkemo)**





**L: Darling Quarter brass and stainless steel paving inlay. (Source: Elkemo)**

**R: Pirrama Park brass inlay into concrete pavement (Source: Elkemo)**



**L: Paving inlay map of Chesapeake Bay, Baltimore Aquarium (Source: <http://worldlandscapearchitect.com>)**

**R: Pavement map of Medieval London (Source: <https://segd.org/dimensional-maps>)**



#### 6.5.4 Option 4 (on-site): Adaptive re-use of Architectural Elements

Architectural elements from previous on-site structures can be considered for adaptive re-use to support interpretation of the site. These include timber beams from the WWII timber post and beam, structures. Large timbers could be re-used as either as impressionistic sculptural elements or in a functional manner as walkway/directional signage/shelters, displayed with accompanying signage which provides factual information about the element's original context or QR codes which link to a website. Such structures/elements would need to be closely integrated into the landscape design of the site.

### Key themes

Key themes appropriate for the adaptive re-use of architectural elements:

- Australia's military defence

### Possible locations

Architectural elements, such as a groupings of timber posts and beams, would be best located near the Freight Village, near the site entrances/exits or car parks so as to have the maximum exposure. Associated signage would provide contextual information about the structures/elements' original uses, and would need to be designed and constructed to be weather sturdy so as to minimize any maintenance. The exact locations would need to be assessed once the specific elements have been chosen.

**L: Recycled beams as canopy (Source: [europaconcorsi.co](http://europaconcorsi.co))**

**R: Outside shelter, Maruja Primary School using timber beams (Source: [thors.com.au](http://thors.com.au))**



**Interpretive panel constructed using original timbers, Point Gellebrand (Source: [challisdesign.com.au](http://challisdesign.com.au))**





**L: Timber beam seating (Source: [bbstimbers.co.nz](http://bbstimbers.co.nz))**

**R: Wooden slabs as steps (Source: [heritagebarns.com](http://heritagebarns.com))**



#### 6.5.5 Option 5 (on-site -> off-site): QR Codes

QR codes (Quick Response Codes) are a simple and effective way of accessing layered interpretive information. They are two-dimensional barcodes which, when scanned by a smartphone (most smartphones have a QR APP), direct users to a URL/website. At the MPE site, incorporation of QR codes in on-site panels or architectural elements could lead users to a website with relevant layered information. The main role of QR codes is to provide a link between the on-site media (interpretive panels, architectural elements, display) and the off-site media (website). QR codes are free, though they must be linked to a URL/website which requires development and some maintenance (see option 6.5.6 below).

The audiences using QR codes would be the same as those for the on-site panels and architectural elements themselves, but the advantage of this device is that it can provide access to much more in-depth information where users control the level of information they wish to explore.

**L: QR code on River Walk, San Antonio, USA (Source: [mysanantanio.com](http://mysanantanio.com))**

**R: QR code at Thaddeus Mosley exhibition, New York (Source: [qfuse.com](http://qfuse.com))**



### 6.5.6 Option 6 (off-site): Website

A website is one of the most flexible and accessible of interpretive devices available. It can reach an extremely wide audience, and be promoted with little effort. It provides a vehicle for layering of information, and easy access to a wide range of images, photographs and historical information.

A website could include both Aboriginal and non-Aboriginal historical contextual information, images, maps, etc. (including Aboriginal archaeological and cultural context, European historical context, and geomorphological context) and so would provide the opportunity to access much more detailed information than would appear on on-site panels. By linking the on-site media via QR codes to the website, a wealth of information would therefore be accessible on-site with no extra investment. Similar websites have been created with historical military information for the Ingleburn Army Camp: 1<sup>st</sup> Battalion Royal Australian Regiment at [www.1rar.org.au/ingleburn/](http://www.1rar.org.au/ingleburn/), and the Royal Australian Electrical and Mechanical Engineers at [www.nsw.raeme.org.au/index.php/publications/articles/17-history-of-ingleburn-army-camp](http://www.nsw.raeme.org.au/index.php/publications/articles/17-history-of-ingleburn-army-camp).

The audience for such a website is very wide. It could include individuals or groups interested in local military history or local area history, military enthusiasts, historical researchers, Aboriginal groups and individuals, and senior secondary history students.

#### *Key themes*

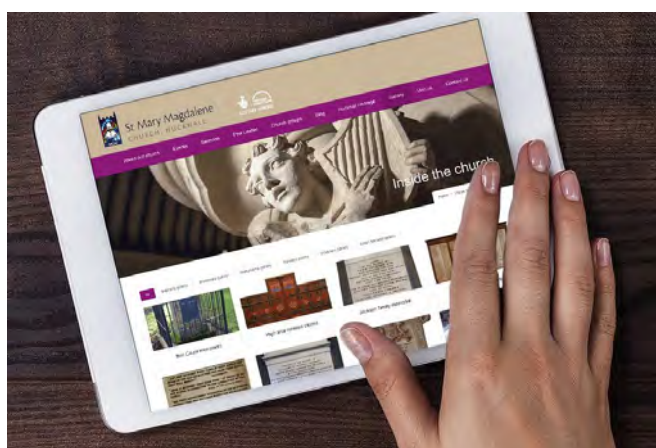
Key themes appropriate for a website:

- Aboriginal history
- Early settlement and land use
- Australia's military defence

#### *Possible locations*

The website would include information pertaining to both the MPW and the MPE site, as much of the sites' histories are shared. It could be hosted by SIMTA during the life of the development of the site, and then transfer over to the Moorebank Logistic Park website when the facility is complete. A key aspect would be ongoing maintenance of the site: while it is not anticipated that any updating of historical information would be regularly required, an active comments/feedback section would allow an ongoing connection with the community.

## Website examples: L: St Mary Magdalene church, R: Ingleburn military training area



## 6.6 Off-site relationships: Relationships with Holsworthy Barracks and Liverpool City Council

The nearby Australian Army Museum of Military Engineering, under the Army History Unit, at Holsworthy Barracks is a new facility, opened in July 2015, which collects, preserves and exhibits the history of the Australian Army Engineer and Survey Corps. No items from the MPE site have been salvaged as part of the Museum's collections as significance is primarily related to the warehouse structures themselves. However, as the MPE site's history is interconnected with the overall military history of the area, it would be advantageous for the management of the completed MPE site to maintain positive relationships with the Museum, so as to enable inquiries about the history of the site to be handled productively.

There may be the opportunity to open a dialogue with Liverpool City Council to request the Council to consider installing interpretive signage about the MPE and MPW sites in nearby public areas, such as Rifle Range Park, to reach a wider local community. The decision and any subsequent development of interpretive signage would be the responsibility of the Council.

## 6.7 Maintenance

Any on-site panels, structural elements or display areas will require some on-going maintenance, such as regular cleaning and perhaps periodic remedial work. The work should be coordinated within the normal site maintenance duties. If artefacts are displayed, an Object Management Plan will be developed which will address any on-going care or maintenance required.

The maintenance of a website will need to be managed by the website host. If the host is SIMTA, and then the resulting Moorebank Logistics Park, the maintenance could form part of the organisation's general website maintenance.



## 7.0 CONCLUSIONS

### 7.1 The Proposed Strategy

This HIS has been prepared to comply with the heritage management and mitigation measures included in the Conditions of Approval, and in accordance with the *NSW Heritage Manual*, the NSW Heritage Office's *Interpreting Heritage Places and Items: Guidelines*, and the NSW Heritage Council's *Heritage Interpretation Policy*.

Six options for interpreting the significant historic themes of the MPE site have been outlined in this HIS: five on-site interpretive options (to create a sense of place and history) and one off-site interpretive option (to provide access to the wealth of information about the area). These are:

#### *On-site:*

- Option 1: Interpretative panels (3) – at the Freight Village area  
(NB: if a single location for both MPE panels (3) and MPW panels (4) is chosen, then the total number of panels encompassing both sites would only be 5 due to the shared early histories of the sites)
- Option 2: Interpretive Artefact Displays – at the Freight Village area, either as paving inlays or recessed cases
- Option 3: Paving inlays – site entrance/exit areas, pathways
- Option 4: Adaptive re-use of architectural elements – at the Freight Village area, site entrance/exit areas
- Option 5: QR codes – incorporated into panels -> linking to website

#### *Off-site:*

- Option 6: Website – SIMTA (then Moorebank Logistics Park) as host

When finalising which of the above options to employ, it is important to take into account the need to address the context of the surrounding area – the Moorebank Cultural Landscape, of which both MPE and MPW are a part – and its heritage and connections, and to consider the value of providing both on-site interpretation (to create a sense of place and history) and off-site interpretation (to provide access to the wealth of information about the area).

### 7.2 The Next Steps

This HIS has provided the strategy for interpreting the MPE site and satisfies the first step in the interpretation planning process. Following client review and confirmation of the preferred interpretive media and locations, the next steps in the process are the development of a Heritage Interpretation Plan (content development and detailed design), and then implementation.

It is recommended that:

- This report should be submitted for review and comment by the client and design team who would provide final confirmation of the preferred heritage interpretation media to be employed, and the feasibility of developing a Heritage Interpretation Plan to address both the MPW and MPE sites jointly.
- This report should be submitted to NSW Heritage Division for review and comment.
- Once the preferred options for interpretation - themes, locations and media - have been confirmed by the client and the project/design team, the next stage of developing a detailed Heritage Interpretation Plan should be undertaken. This will include the following:
  - developing content for the interpretive media chosen (drafting text, sourcing images, consulting with relevant groups);
  - selecting and sourcing high resolution images for use in interpretive media;
  - seeking permission for use or copyright of selected images;
  - preparing final text for interpretative media;
  - providing an overview maintenance strategy; and
  - undertaking detailed design of the interpretive media chosen, working with graphic, website and/or landscape designers.

Implementation of the Heritage Interpretation Plan would be the final step.

- Should media which will include themes relating to Aboriginal heritage be adopted for interpretation, consultation with RAPs should be undertaken in developing content.
- Should media which will include themes relating to the site's military history be adopted for interpretation, consultation with relevant stakeholders including the MHG and Defence should be undertaken in developing content.
- A copy of the HIS should be provided to relevant stakeholders for information.

## 8.0 REFERENCES

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## 9.0 APPENDIX A

### 9.1 Consultation Log: MPE HIS

Agency	Contact	Action Date	Outcome/Notes	Comments /Feedback	Response
Office of the Environment and Heritage, Heritage Division	Darby Foto	13/02/2017	Draft HIS report emailed to Heritage Division.		
		15/02/2017	Artefact phoned Heritage Division.	Heritage Division confirmed they had received the draft HIS. Message then left with Darby Foto for follow-up.	
	Rebecca Newell	16/02/2017	Artefact phoned Heritage Division. Directed to Rebecca Newell (HD archaeologist). Left message.		
	Rebecca Newell	16/02/2017	Artefact emailed Heritage Division. (Rebecca Newell).		
	Rebecca Newell	20/02/2017	Rebecca emailed Artefact to clarify process.	Rebecca stated in email "requests for compliance with conditions for State significant developments such as these, need to come to the Heritage Division through the Department of Planning as the consent authority and not through archaeologists or project applicants. As this has not occurred, we are not currently processing this request. Once we have received this information from the Department of Planning we will be able to proceed with the review."  Consultation closed.	



Agency	Contact	Action Date	Outcome/Notes	Comments /Feedback	Response
<b>Tharawal Local Aboriginal Land Council (TLALC)</b>	Denise Ezzy	19/02/2017	Denise was contacted via email and sent a copy of the draft HIS approach, with a letter requesting comments by 1 Feb 2017.		
		01/02/2017	Denise sent an email with two questions; what does using reconstructions entail, and what are QR codes. Artefact phoned to respond. TLALC happy with reply. Confirmation email with TLALC response sent 01/02/2017.	<p>1. TLALC requested that there be no mention of any locations of aboriginal artefact finds at the MPE site in any interpretation, and did not consider it appropriate to display reconstructions of any artefacts.</p> <p>2. TLALC requested that their website (and that of all RAPs, if agreed) be included as links on the central website, one of the proposed strategies.</p>	<p>Artefact responded in the phone conversation 01/02/2107, and followed up with an email on same date, that there would be no mention of any locations of aboriginal artefact finds at the MPE site in any interpretation, that TLALC's comment about not using reconstructions of artefacts would be noted in the HIS, as would their request about website links (Section 2.2.4, 5.1.2)</p> <p>Consultation complete.</p>
<b>Cubbitch Barta Native Title Claimants Aboriginal Corporation (CBNTCAC)</b>	Glenda Chalker	19/02/2017	Glenda was contacted via email and sent a copy of the draft HIS approach, with a letter requesting comments by 1 Feb 2017		
		13/02/2017	A follow up email was sent. No response.		
		16/02/2017	Phone call made, no answer.	Consultation complete.	
<b>Darug Tribal Aboriginal Corporation (DTAC)</b>	John Riley	23/02/2017	John was contacted via email and sent a copy of the draft HIS approach, with a letter requesting comments by 1 Feb 2017.		

Agency	Contact	Action Date	Outcome/Notes	Comments /Feedback	Response
		13/02/2017	A follow-up up email was sent. John phoned Artefact.	Via phone on 13/02/2017, DTAC expressed agreement with the methodology of the HIS and support for the project.	Via phone on 13/02/2017, Artefact responded acknowledging the feedback, and requesting the feedback in an email. No email received.  Consultation complete.
<b>Darug Aboriginal Cultural Heritage Assessments (DACHA)</b>	Celestine Everingham	20/02/2017	Celestine was faxed a copy of the draft HIS approach, with a letter asking for comments by 1 Feb		
		13/02/2017	A follow-up text was sent. No response.	Consultation complete.	
<b>Tocomwall</b>	Danny Franks/ Sarah Franks	19/02/2017	Danny/Sarah were contacted via email and sent a copy of the draft HIS approach, with a letter requesting comments by 1 Feb 2017		
		20/02/2017	Danny sent email to Artefact	Danny requested that he be the sole contact for Field Work. He declined to comment on the HIS unless payment was involved.	Artefact responded on 25/01/2017 that the client had indicated that no payment can be available for voluntary review of a short document.  Consultation complete.
<b>Darug Land Observations (DLO)</b>	Gordon Workman/ Jamie Workman	19/02/2017	Gordon was contacted via email and sent a copy of the draft HIS approach, with a letter requesting comments by 1 Feb 2017		
		31/01/2107	Letter received from DLO.	DLO stated "Darug Land Observations Pty Ltd has reviewed the draft Heritage Interpretation Strategy Consultation, and supports the possible interpretative approaches to the Moorebank East site." "	Artefact responded via email on 31/01/2107 acknowledging the feedback.  Consultation complete.

Agency	Contact	Action Date	Outcome/Notes	Comments /Feedback	Response
Darug Custodian Aboriginal Corporation (DCAC)	Justine Coplin	19/02/2017	Justine was contacted via email and sent a copy of the draft HIS approach, with a letter requesting comments by 1 Feb 2017		
		05/02/2107	Letter received from DCAC.	<p>DCAC stated 'we support the summery report.' and gave additional information: "We have received the Interpretation at Moorebank East site, We would like to add that our sites are a complex and not all separate sites and recommend that the connections are interpreted throughout the project. Information gathered during these projects is of high significance, once our sites are gone there is no other evidence of the sites or connections. This area has shown in recent excavations and surveys that this is a Darug landscape and there are still numerous parts of our histories to be recorded. Darug people stayed in this area to present times, the oral histories of this area support the families staying here for thousands of years.</p> <p>Within this document the amount of groups for consultation is high with many groups not from this area, we do not support personal profit groups and also do not support any input that they have into the recommendations. Apart from the amount of people consulted we support the summery report. "</p>	<p>Artefact responded via email on 06/02/2017 acknowledging the feedback.</p> <p>Consultation complete.</p>
Darug Aboriginal Landcare Inc	Rich Fields	19/02/2017	Rich was contacted via email and sent a copy of the draft HIS approach, with a letter		

Agency	Contact	Action Date	Outcome/Notes	Comments /Feedback	Response
(DALI).			requesting comments by 1 Feb 2017.		
		13/02/2017	A follow-up up email was sent. No response..	Consultation complete.	
<b>Department of Defence</b>	Robert Kolano, A/Assist.Dir, Envmt & Sustainability Service Delivery Div, Estate & Infrastructure Grp, Nth NSW Manager	30/01/2017	Robert contacted via email asking for comments.		
		06/02/2017	Email response received from Robert.	Defence response: "The MPE Heritage Interpretation Strategy (HIS) adequately addresses any issues of interest to Defence, and to other matters of heritage significance."  Consultation complete.	
<b>Moorebank Heritage Group (MHG)</b>	Phil Hurren, Pam Brown, Vicki Andrews	09/01/2017	Email to MHG to arrange consultation meeting. Meeting planned for 23/01/2017 at Moorebank.		
		23/01/2017	Meeting with MHG, Artefact, Tactical and Arcadis reps. at Moorebank, 10.15-11.30am.	The following comments were raised at the meeting:  1. MHG raised the need to address the context of the surrounding area and its heritage and connections, not just the land of the MPE site itself.  2. MHG discussed the need to balance	The following responses were given at the meeting:  1. Agreed that this was an important point and would be included in the MPE HIS. This point had also been raised at the MPW HIS meeting, and was included in the MPW HIS.( Section 2.2.5)  2. The themes suggested for the MPE addressed

Agency	Contact	Action Date	Outcome/Notes	Comments /Feedback	Response
				<p>interpretive content to address earlier time periods as well as the more recent military history of the site, and requested that the Early Settlement and Land Use theme be included in MPE site interpretation (as the site had been part of the Moore Estate, as was the MPW site).</p> <p>3. MHG raised the importance of developing a joint Interpretive Plan for both the MPW and MPE sites, as the histories of both sites are so similar, in relation to Aboriginal history, early settlement and land use, and then military ownership.</p> <p>4. MHG requested there be a small number of public car parking spaces at interpretive area.</p> <p>5. MHG asked for clarification of the items left on-site at MPE, in particular the cranes, and items outside the building areas - memorials and rail sidings.</p> <p>6. MHG queried if there would be a maintenance/conservation plan developed if artefacts were to be put on display.</p> <p>7. MHG asked what would occur if artefacts of significance were located.</p> <p>8. MHG queried whether any rail tracks could be included in the paving inlays, perhaps as part of an in-paving map.</p>	<p>earlier time periods than the military usage. It was agreed to include Early Settlement and Land use as a major theme. (Section 4.2)</p> <p>3. Agreed that this was desirable, and would be included as a recommendation in the MPE HIS. (Section 6.4)</p> <p>4. This was noted.</p> <p>5. It was explained that Defence had removed all items they wished to salvage and that an Archival Recording was to take place so any remaining items would be identified.</p> <p>6. A maintenance plan would be flagged in the HIS, and when/if artefacts were to be displayed a maintenance/ conservation plan would be developed. (Section 6.7)</p> <p>7. It was explained that, depending on the origin of the artefact (Indigenous or non-Indigenous), there were standard procedures to be put into place to ensure the artefacts were properly recorded, stored and managed.</p> <p>8. This was noted and will be considered.(Section 6.5.3)</p> <p>9. This was noted, and will be considered when/if a website were to be developed for the site. (Section 6.5.6)</p> <p>10. The location of these items will be checked during the Archival Recording.</p> <p>11. Tactical noted this for future reference, as the rail line is outside the footprint of the current</p>



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				<p>9. MHG stated that, if a website were to be developed, then they would like to see a feedback/inquiry section so interested parties' queries/comments could be addressed.</p> <p>10. MHG mentioned the existence of some memorial plaques on MPE site and a large army map on the wall of the admin bld.</p> <p>11. MHG requested some portions of the rail lines, so that they could include them in the interpretation area they are planning for the nearby Harris Creek Bridge</p> <p>12. The re-use of timber posts for the WWII structures was discussed.</p>	<p>Stage 1 works.</p> <p>12. Tactical explained that 1600 linear meters of timber posts were being salvaged for interpretive use. Only vertical posts salvaged, as the rafters and purloins had been subjected to falling asbestos dust. (Section 6.5.4)</p> <p>Email sent to MHG on 24/01/2017 acknowledging their feedback.</p> <p>Consultation complete.</p>



artefact

Artefact Heritage  
ABN 73 144 973 526  
Level 4, Building B  
35 Saunders Street  
Pyrmont NSW 2009  
Australia  
+61 2 9518 8411  
[office@artefact.net.au](mailto:office@artefact.net.au)  
[www.artefact.net.au](http://www.artefact.net.au)

