

# EXTENT

HERITAGE ADVISORS  
TO AUSTRALIA AND  
THE ASIA PACIFIC



## Light Horse Interchange Business Hub, Eastern Creek, NSW (SSD 9667)

### Aboriginal Cultural Heritage Management Plan

Prepared for Western Sydney Parklands Trust

June 2021 - Version 2

Sydney  
Melbourne  
Brisbane  
Perth

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## Document Control Page

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PROJECT: Aboriginal Cultural Heritage Management Plan

SITE NAME: Light Horse Interchange Business Hub, Eastern Creek, NSW (SSD 9667)

### EXTENT HERITAGE PTY LTD INTERNAL REVIEW/SIGN OFF

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Revision	Date	Description	Page	Prepared by	Approved

### Abbreviations

Acronyms	Glossary
ACHAR	Aboriginal Cultural Heritage Assessment Report
ACHMP	Aboriginal Cultural Heritage Management Plan

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Acronyms	Glossary
AHD	Australian Height Datum
AHIMS	Aboriginal Heritage Information Management System
ASIRF	Aboriginal Site Impact Recording Forms
DECCW	Department of Environment Climate Change and Water (now Heritage NSW - DPC)
EIS	Environmental Impact Statement
EP&A Act	Environmental Planning and Assessment Act, 1979
Heritage NSW – DPC	Heritage NSW – Department of Premier Cabinet
Ka	1,000 years ago
MCoA	Minister's Conditions of Approval
NPW Act	National Parks & Wildlife Act, 1974
OEH	Office of Environment and Heritage (now Heritage NSW - DPC)
RAP	Registered Aboriginal Party
SSD	State Significant Development



## Executive Summary

Western Sydney Parklands Trust intends to redevelop part of 475 Ferrers Road, Eastern Creek and 165 Wallgrove Road, Eastern Creek (hereafter referred to as the 'subject area') to accommodate industrial and light industrial land use activities. The proposed development was determined to be a State Significant Development (SSD 9667) and was issued the Secretary's Environmental Assessment Requirements (SEARs) on 7 November 2018. In accordance with the requirements of the SEARs, Extent Heritage was commissioned by WSPT, to prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) of the subject area.

The ACHAR resulted in the identification of nine Aboriginal sites registered on Aboriginal Heritage Information Management System (AHIMS) database:

- LHIBH BS (AHIMS ID 45-5-5285)
- LHIBH Eskdale Creek terrace (AHIMS ID 45-5-5283)
- LHIBH Eastern Creek terrace (AHIMS ID 45-5-5284)
- IF1 (AHIMS ID 45-5-2564)
- IF2 (AHIMS ID 45-5-2565)
- LIBH AS1 (AHIMS ID 45-5-5183)
- LIBH AS2 (AHIMS ID 45-5-5185)
- EC6 (Eastern Creek) (AHIMS ID 45-5-0756)
- WSP17 (AHIMS ID 45-5-3264)

The ACHAR assessed LHIBH Eskdale Creek terrace (AHIMS ID 45-5-5283) and LHIBH Eastern Creek terrace (AHIMS ID 45-5-5284) as being of high archaeological significance. The remaining sites were assessed as being of low archaeological significance. An assessment of impacts was completed, and it was identified that LHIBH Eastern Creek terrace (AHIMS ID 45-5-5284) would not be impacted by the proposed development. As a result, salvage excavations were recommended at LHIBH Eskdale Creek terrace (AHIMS ID 45-5-5283).

Approval for the Project was granted by the Minister for Planning and Public Spaces on 31 August 2020, under Division 4.7 of the Environmental Planning and Assessment Act 1979 (Minister's Conditions of Approval [MCoA] SSD-9667). Condition B24 of this approval notes that an Aboriginal Heritage Management Plan (ACHMP) (this document) is needed. In accordance with the recommendations of the ACHAR and the requirements of the MCoA SSD-9667 this ACHMP includes the following:

- Processes, timing, and methods for maintaining Aboriginal community consultation through the remainder of the project.
- Descriptions and procedures for development impact mitigation, including archaeological salvage, to be undertaken in advance of proposed development.
- Description and methods of post-excavation analysis of chronological, soil, and environmental samples that will be recovered as part of the archaeological mitigation of development impacts.
- Procedures for the long-term curation of Aboriginal cultural materials recovered as part of the project.
- Processes for reviewing, monitoring, and updating the ACHMP as the project progresses.

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## 1. Introduction

### 1.1 Project Description

Western Sydney Parklands Trust intends to redevelop part of 475 Ferrers Road, Eastern Creek and 165 Wallgrove Road, Eastern Creek (hereafter referred to as the 'subject area') to accommodate industrial and light industrial land use activities (Figure 1 and Figure 2). Key features of this are the demolition of existing structures and bulk earthworks, the creation of approximately 29.5 hectares of developable industrial zoned land and its associated access roads, bridge crossings, estate road, estate basin and infrastructure, as well as the realignment of Eskdale Creek. Approval for the Project was granted by the Minister for Planning and Public Spaces on 31 August 2020, under Division 4.7 of the *Environmental Planning and Assessment Act 1979* (Minister's Conditions of Approval [MCoA] SSD-9667). Condition B24 of this approval notes that an Aboriginal Heritage Management Plan (ACHMP) (this document) is needed (Table 1).

This document provides guidance on the process and management of Aboriginal cultural heritage in the post-approval phase of the Project. It further outlines the processes and timeframes associated with Aboriginal consultation, and any off-site heritage measures that may be required as part of the project.

### 1.2 Purpose of the ACHMP

The purpose of this plan is to define the rationale, policies and procedures to be implemented for management and mitigation of known, and as yet unknown, Aboriginal objects, sites and/or deposits during the construction phase of the Project.

#### 1.2.1 Objectives

The overall objectives of this ACHMP are to:

- Present overall heritage management principles and guidelines for the design and construction phase of the Project;
- Summarise potential impacts on identified heritage sites arising from the Project;
- Describe how measures will be implemented to prevent or mitigate Aboriginal heritage impacts;
- Provide specific guidelines for the mitigation of known heritage sites that will be directly and indirectly impacted by the Project;
- Provide specific guidelines and procedures for unexpected finds and possible discovery of human remains;
- Provide procedures for consultation with the Aboriginal community including Registered Aboriginal Parties (RAPs) timeframes and processes; and
- Outline an effective monitoring, auditing and reporting framework to assess the effectiveness of the controls implemented.
- Fulfil the requirements of the Project Approval issued by DPE (Table 1)

The draft ACHMP will be provided to the RAPs for the Project for a 21-day review period. Comments and recommendations made by the RAPs (Appendix 1) are included in this document.



Table 1. Project Approval conditions and where this report addresses them.

Condition	Location in this Report
B24. Before the commencement of any clearing or construction works, the Applicant must prepare an ACHMP for the development to protect and manage aboriginal heritage within the site. The plan must form part of the CEMP required by Condition C2 and must:	Entire report.
(a) be prepared by a suitably qualified and experienced expert in consultation with the Registered Aboriginal Parties;	This report was written by Extent Heritage Pty Ltd (Document Control Page cover page for specific authorship details). Section 5.2 provides details regarding consultation with the RAPs
(b) be submitted to the satisfaction of the Planning Secretary prior to construction of any part of the development;	See Document Distribution and Control for details regarding this task.
(c) address the recommendations within the Aboriginal Cultural Heritage Assessment Report prepared by Extent Heritage dated February 2020.	The Aboriginal Cultural Heritage Assessment Report (ACHAR) (Extent Heritage 2020) recommended the preparation of this ACHMP. Therefore, this entire report has been prepared to meet this requirement.

## 1.2.2 Approach

This ACHMP is designed to articulate how the conditions of planning approval, statements of commitment and relevant legislative requirements are to be met as design and construction of this Project occurs. The ACHMP is an operational document to guide the specific heritage mitigation measures.

## 1.3 Limitations

This report is based on existing and publicly available environmental and archaeological information, previous investigations of the study area, and the findings of the ACHAR. It did not include any independent verification of the results or interpretations of externally sourced reports (except where archaeological investigation indicated inconsistencies). The Aboriginal Heritage Information Management System (AHIMS) data was provided to Extent Heritage by Heritage NSW – Department of Premier Cabinet (DPC). Information in the archaeological assessment report reflects the scope and the accuracy of the AHIMS site data, which in some instances is limited.

This report does not address historical archaeological heritage, built heritage or landscape components (Condition B28 and B29 of MCoA SSD-9667).

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## EXTENT HERITAGE ADVISORS

 Study area

Drawn by: Tom Sapienza  
Checked by: Georgia Burnett  
Date: 27 August 2018  
Projection: GDA 1994 MGA Zone 56  
Data sources: Extent, LPI, Nearmap, OSM

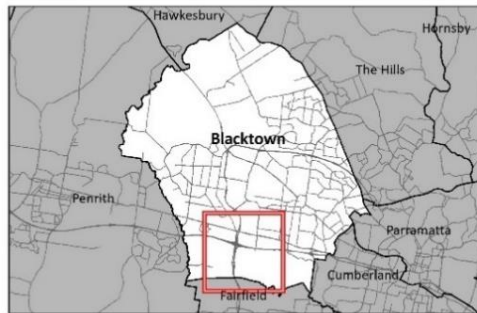
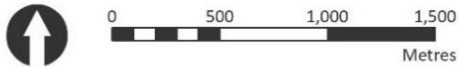

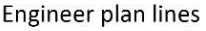


Figure 1. The subject area.

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-  Study area
-  Engineer plan lines

**Drawn by:** Tom Sapienza  
**Checked by:** Megan Sheppard Brenndan  
**Date:** 18 November 2019  
**Projection:** GDA 1994 MGA Zone 56  
**Data sources:** Extent, LPI, NSW DFSI, OSM, WSPT

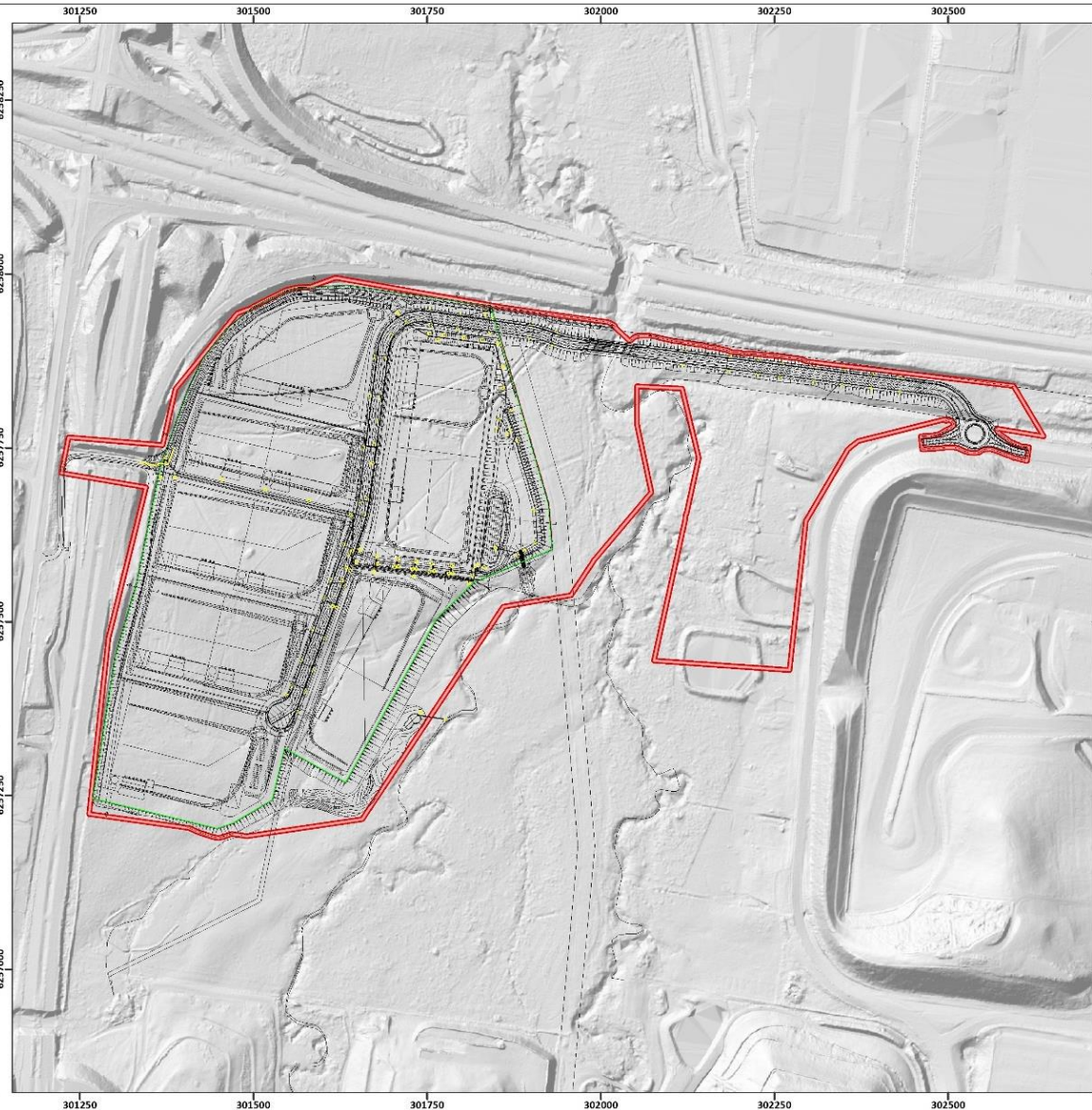
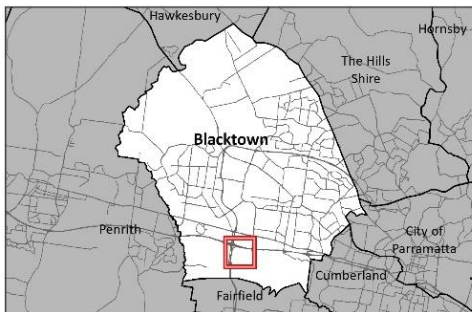
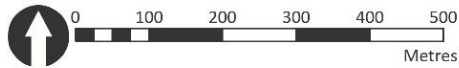


Figure 2. The proposed development. Source: WSPT (April 2019).



## 2. Legislative and Regulatory Requirements

### 2.1 Key Environmental Legislation

Aboriginal heritage is protected and managed under the following legislation:

- *Commonwealth Environment Protection and Biodiversity Conservation Act 1999;*
- *Commonwealth Native Title Act, 1993*
- *NSW National Parks and Wildlife Act 1974;*
- *NSW Heritage Act 1977; and*
- *NSW Environmental Protection and Assessment Act 1979.*

*The National Parks & Wildlife Act, 1974* (NPW Act) provides blanket protection for Aboriginal objects (material evidence of indigenous occupation) and Aboriginal places (areas of cultural significance to the Aboriginal community) across NSW.

*The Environmental Planning and Assessment Act, 1979* (EP&A Act) requires that environmental impacts are considered in land-use planning, including impacts on Indigenous heritage. Where Project approval is to be determined under Division 4.7 of the Act, further approvals under the *National Parks & Wildlife Act, 1974* are not required. In those instances, management of Aboriginal heritage follows the applicable Aboriginal assessment guidelines, any relevant EIS recommendations and the MCoA developed for the Project.

### 2.2 Approvals, Permits, Licences

Approval of a project under Division 4.7 of the EP&A Act removes the requirement to obtain certain statutory approvals including:

- The requirement to obtain an Aboriginal heritage impact permit under section 90 of the *National Parks and Wildlife Act 1974*.

### 2.3 Guidelines and Standards

The ACHMP has been developed using best practice heritage guidelines and standards. These guidelines and standards, established by the Heritage NSW – DPC, were developed to guide the assessment, conservation and mitigation of Aboriginal heritage in New South Wales. Many of the guidelines are designed to obtain permits and approvals under the *National Parks and Wildlife Act 1974*.

Not all guidelines are applicable for Division 4.7 project approvals (such as Aboriginal community consultation guidelines); however, they are useful documents to guide the general direction of assessment of the significance of heritage sites; and their conservation and mitigation.

Relevant guidelines include:

- *Due Diligence Code of Practise for the Protection of Aboriginal Objects* in New South Wales (Department of Environment Climate Change and Water [DECCW] 2010a) [the Due Diligence Code].



- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010b) [the Code of Practice].*
- *Aboriginal cultural heritage consultation requirements for proponents 2010 (DECCW 2010c) [the Consultation Requirements].*
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH 2011) [the Guide].*



## 3. Identified Aboriginal Heritage Sites

### 3.1 Background

Extent Heritage was commissioned by WSPT, to prepare an ACHAR of the subject area in advance of proposed development. The ACHAR included:

- Comprehensive Aboriginal stakeholder consultation completed in accordance with the Consultation Requirements.
- A search of AHIMS database to identify previously recorded Aboriginal heritage sites within the subject area.
- An archaeological survey to relocate known Aboriginal heritage sites and to identify any previously unknown Aboriginal heritage sites by project archaeologist(s) and Aboriginal community members.
- A test excavation program to determine if any subsurface Aboriginal objects are present within the study area.

In addition, as part of the document finalisation process, consultation was undertaken with the RAPs (Section 5.2), and any information provided in relation to tangible and/or intangible cultural heritage is included here.

### 3.2 Assessment Results

The ACHAR resulted in the identification of nine AHIMS registered sites:

- LHIBH BS (AHIMS ID 45-5-5285)
- LHIBH Eskdale Creek terrace (AHIMS ID 45-5-5283)
- LHIBH Eastern Creek terrace (AHIMS ID 45-5-5284)
- IF1 (AHIMS ID 45-5-2564)
- IF2 (AHIMS ID 45-5-2565)
- LIBH AS1 (AHIMS ID 45-5-5183)
- LIBH AS2 (AHIMS ID 45-5-5185)
- EC6 (Eastern Creek) (AHIMS ID 45-5-0756)
- WSP17 (AHIMS ID 45-5-3264)

#### **LHIBH BS**

*Small, low-density artefact scatters and isolated finds*

Low-density distribution (<10 artefacts/0.25m<sup>2</sup>) of cultural material across the study area, present on a variety of upper, mid, and lower slope landforms, and occasionally in association with low-order drainage lines and tributaries of Eastern, Eskdale and Reedy Creek. Cultural material is present both on the partly-eroded ground surface, or in shallow, duplex topsoils of the Blacktown and South Creek soil landscapes. Historical development, drainage management works and erosional processes have caused localised disturbance to underlying soils, but has not completely removed evidence for Aboriginal occupation.

This low-density distribution of background material reflects an ephemeral or transient use of much of the study area in the past.

### **LHIBH Eskdale Creek terrace**

#### *Artefact, PAD*

Elevated terrace of varying depth (between 500 and 900mm) above Eskdale Creek, characterised by deep, fine sandy clay alluvium overlying fine sandy clay with increasing clay content and ironstone staining at depth. Artefact densities within the Eskdale Creek terrace are broadly comparable with the rest of the study area; however, a discrete, highly localised ~100m<sup>2</sup> patch of increased artefact density centred on TP151 was identified. The main artefact concentrations typically occurred between 100 and 500mm below the current land surface (between 46.3 and 45.9m AHD), with peaks at 200 and 300mm below ground surface. These levels broadly date to within the last 3,000 years.

The localised patch is considered to reflect a focus of intense, but perhaps short-lived, visitation of the study area in the past, within which heat treatment of raw materials occurred.

### **LHIBH Eastern Creek terrace**

#### *Artefact, PAD*

Elevated, flat terrace above Eastern Creek, characterised by moderately deep, fine sandy clay alluvium, to depths of 500mm. Artefact densities within the Eastern Creek terrace are broadly comparable with the rest of the study area; however, a discrete, highly localised ~100m<sup>2</sup> patch of increased artefact density centred on TP57 was identified. Artefact concentrations typically occurred between 0 and 400mm below the current land surface (between 45.1 and 44.7m AHD), with peaks at 200 and 300mm below ground surface. These levels broadly date to within the last 4,000 years.

The localised patch is considered to reflect a focus of intense, but perhaps short-lived, visitation of the study area in the past, where the manufacture of stone artefacts occurred.

### **IF2**

#### *Isolated find*

An isolated white chert flake on the eroded edge of a minor drainage line in the area to the west of the ex-RAAF transmission station.

### **IF1**

#### *Isolated find*

An isolated red-brown silcrete flake exposed in a dirt track just west of the ex-RAAF transmission station.

### **EC6 (Eastern Creek)**

#### *Artefact scatter*

A total of 35 artefacts located on two dam walls in the south east of the study area. Majority of the artefacts recorded were silcrete with some chert.



## WSP17

### *Artefact scatter*

A total of eight artefacts located along a dirt track (20m x 20m) in the north east of the study area immediately adjacent to M4. 200m west of Eastern Creek on a hill slope. Surrounding area quite disturbed with clay, ploughing, animal grazing and dams.

## Eastern Creek 1

### *Artefact scatter*

A total of 11 artefacts were recorded, 9 silcrete, 1 chert and 1 indurated mudstone. The artefacts were found in exposures either side of the drainage line <100m from creek. Very disturbed

## EC 11

### *Artefact scatter*

Ten artefacts (nine silcrete and one indurated mudstone) found in a 3m x 3m area, on a haul road immediately adjacent to study area and on a flat rise adjacent to Eastern Creek tributary.

## 3.2.1 The Archaeological Resource

Based on the archaeological investigations undertaken to date, the archaeological resource of the study area conforms well with the model of Aboriginal occupation for the south western Cumberland Plain. Systematic archaeological excavation identified several Aboriginal archaeological sites within the study area and recovered 276 lithics (made up of 253 artefacts and 23 heat shatter fragments) from the excavation of 66.25m<sup>2</sup>. The study area is dominated by a low-density distribution (<10 artefacts) of cultural material across the site on a variety of upper, mid, and lower slope landforms. Cultural material is present both on the ground surface or in shallow duplex topsoils. This background reflects an ephemeral or transient use of the region in the past. For management purposes, this background scatter has been registered as a single AHIMS site on the AHIMS database, LHIBH BS (AHIMS ID 45-5-5285) and incorporates a large proportion of the low-density scatter sites and isolated finds, and artefacts recovered from test excavation, within the study area.

Within this broader background, two landforms of archaeological interest were identified along elevated terrace landforms adjacent to Eskdale and Eastern Creeks and have subsequently been registered as AHIMS sites on the DPIE AHIMS database ('LHIBH Eskdale Creek terrace' AHIMS ID 45-5-5283 and 'LHIBH Eastern Creek terrace' AHIMS ID 45-5-5284). Overall, when considering these landforms, an artefact density was identified that is broadly comparable with the wider study area (<10 artefacts). However, two discrete and highly localised ~100m<sup>2</sup> patches of increased artefact density were identified at each location, centred on TP151 and TP57 respectively. These sites are considered to reflect foci of intense, but perhaps short-lived, visitation of the study area in the past.

These two high-density artefact foci provide a number of interesting observations about the past use of the region. Of note is the dominance of silcrete raw materials and the presence of backed artefacts, which is suggestive of a late Holocene occupation; as well as evidence for heat treatment along Eskdale Creek (TP151) and manufacture and production of backed blades, elongated flakes and other tools along Eastern Creek (TP57). A suite of OSL ages from both sites suggest that formation of the terrace



deposits likely began in the LGM approximately 26,000 years ago; but with little evidence of occupation until the late Holocene (3-4,000 years ago), as the soil profile developed and human populations intensified with improved climate relative to that prevailing during the early-mid Holocene.

Unsurprisingly, the sites located and excavated during the fieldwork program conform well to the accepted site patterning of the south western Cumberland Plain, and the predictive modelling for the site is broadly in agreement with the accepted model of settlement, but with some caveats. Predictive modelling undertaken before excavation highlighted areas within 200m of major third- and fourth-order creeklines as having high and very high archaeological potential; and that sites of increased density and complexity would be located within these zones. However, targeted archaeological excavation undertaken for this project found that low-lying areas adjacent to Eastern Creek, and at the confluence of Reedy and Eskdale Creek below 44m AHD recovered little, if any, artefactual material. It is plausible that areas below 44m AHD were subjected to periodic, high-energy flooding rendering them periodically unsuitable for occupation. Alternatively, it may have been the case that the soil deposits below these elevations—and which may have contained physical remains of Aboriginal occupation—have been scoured away by flooding. Other studies have noted a preference for more complex and extensively used sites on elevated terraces and levees above major watercourses, and we suggest here a tangible elevation of 44m AHD as an appropriate flood consideration benchmark for future studies in the Eastern Creek locality. In addition to the low-lying areas of Eskdale Creek not being conducive to occupation, there has been disturbance to this creek line in the past to allow for the surrounding floodplain to drain or dry and therefore improve its suitability for agricultural purposes. This alteration would have resulted in significant change to the hydrology of Eskdale and Reedy Creeks, which would account for the deep incision and channel widening evident along the lower reaches of Reedy Creek and the establishment of Eskdale Creek as a more permanent waterbody.

Systematic archaeological survey and test excavation of the study area provides an understanding of the archaeological resource and its significance, as well as raising additional questions on the nature and use of the area by Aboriginal people in the past. Specifically, the excavations demonstrated the presence of two source-bordering alluvial terraces along Eskdale and Eastern Creek, within which discrete ~100m<sup>2</sup> patches formed key locales of Aboriginal visitation and occupation over the last 4,000 years. The nature of the cultural assemblage suggests intense but short-lived occupation, with a focus on the exploitation of locally available stone resources for artefact and tool production. Certain raw lithic material improvement strategies in the form of heat treatment were also employed on site, especially along Eskdale Creek. Though both source-bordering terrace landforms began forming in the LGM, in drier and windier conditions, the findings demonstrate little evidence for Aboriginal occupation until the late Holocene, as the soil profile developed and population intensified with improved climatic conditions.

Along with other regional findings of work at Riverstone (AHMS 2016), the assemblage here lends strong support to Aboriginal populations exploiting and using levee banks and locally elevated areas along the Eastern Creek corridor from the late Holocene (<5,000ka); and it is therefore considered these deposits, while unique, are ultimately representative of other similar sites in the region. It is considered, however, that additional information on the nature, size and integrity of these foci of occupation may be obtained through further investigation and analysis of the material evidence of these sites, and as such these discrete ~100m<sup>2</sup> areas are still considered to contain significant research potential. In addition, despite the modification of the study area by Defence in the past, these source-bordering terrace deposits are on the banks of some of the few permanent and large rivers within the Cumberland Plain, and have aesthetic significance not typically found for these types of site.



In contrast, the remainder of the study area is dominated by a low-density distribution of cultural material (<10 artefacts) in the form of small artefact scatter sites and isolated artefacts, and reflects an ephemeral or transient use of the wider area in the past. Such sites have limited research potential (typically restricted to only the technological attributes of the artefact assemblage), limited stratigraphic integrity, and are representative of other sites in the south western Cumberland Plain; and as such are considered of low archaeological significance.

### 3.2.2 Cultural Values

While no formal written feedback from the Aboriginal stakeholders has been received regarding cultural significance to date, several on-site discussions identified the discrete patches of high-density cultural material as being of importance to the RAPs. More broadly, sites of increased artefact density and/or complexity are frequently identified as being of cultural significance to local Aboriginal stakeholders.

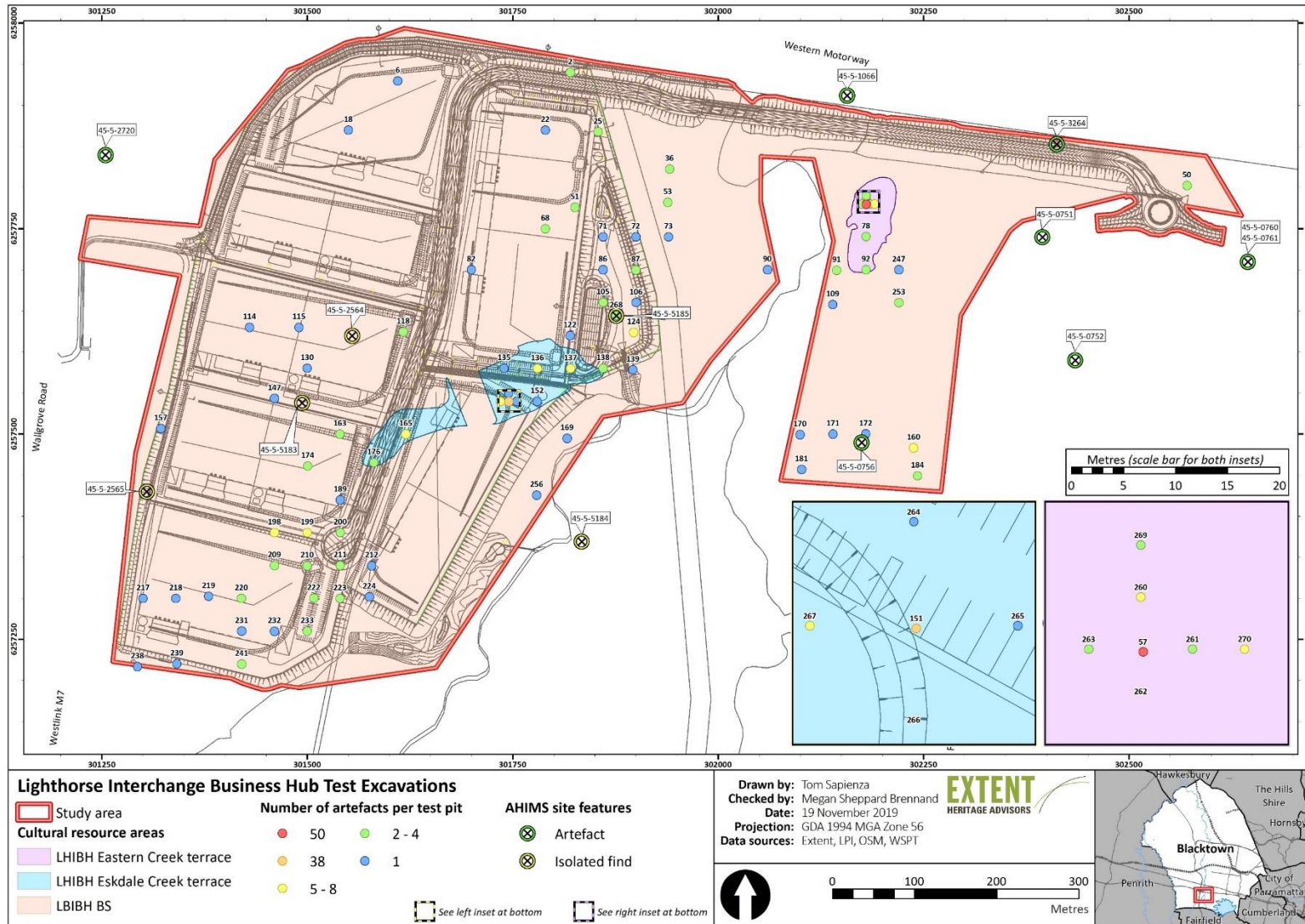


Figure 3. Archaeological resources identified within the subject area.

## 4. Project Impacts

### 4.1 Evaluation of Impacts

Western Sydney Parklands Trust intends to redevelop the study area to accommodate industrial and light industrial land use activities. This is in accordance with the *State Environmental Planning Policy (Western Sydney Parklands) 2009*, the Western Sydney Parklands Trust Plan of Management 2030 and the Western Sydney Parklands Trust Plan of Management 2020 supplement.

An indicative concept masterplan and subdivision plan have been prepared for the study area and illustrates indicative building development areas and works. Key features of the concept proposal are:

- ◆ **Land use and built form:** indicative building envelopes are provided for the future construction of largescale industrial-style buildings including:
  - Approximately 157,000m<sup>2</sup> floorspace to accommodate a range of industrial and light industrial land use activities, which could include advanced manufacturing, freight and logistics and warehouse and distribution facilities.
  - Approximately 8,000m<sup>2</sup> floorspace comprising ancillary offices to support the primary industrial and light industrial use.
- ◆ **Landscaping:** the front setbacks of the future industrial lots will be landscaped to complement the architectural design of the future industrial buildings and present an attractive appearance within the streetscape. Additional landscaping will be provided within the rear and side setbacks where required to provide visual screening of the proposed buildings from the surrounding road network.
- ◆ **Transport, access and car parking:** primary vehicle access to the development site is proposed from Ferrers Road. Any new roads and road improvement works required to service the proposed development will be designed to address Blacktown City Council requirements and facilitate their dedication as part of the industrial subdivision. A secondary access point for lighter vehicles (i.e. excluding B-double trucks) may be provided via the existing Wallgrove Road entry/exit driveway, however this is for emergency only.
- ◆ **Stormwater management and flooding:** a comprehensive stormwater management system will be provided to manage the quality and quantity of water flows across the site, including mitigation measures to address potential flooding risk and avoid adverse impacts to the development potential of the upstream and downstream properties.
- ◆ **Biodiversity:** the site contains scattered trees and more concentrated areas of vegetation along the riparian corridors and within the south-western corner which will be assessed in further detail during the preparation of the SSDA. The final concept masterplan, the EIS and the BDAR address the removal of vegetation, including any biodiversity off-set requirements.
- ◆ **Bushfire protection measures:** the site is identified as Vegetation Category 2 bushfire prone land and the final concept masterplan and EIS addresses the required bushfire protection measures to avoid risk and provide adequate safety for future building occupants and fire-fighting personnel (Peterson Bushfire 2019). This involves including defendable space, consideration of ember protection for building works, access and egress for emergency response, perimeter access and internal roads, and accessibility of reticulated water supply and hydrant provisions for fire-fighting.

- ◆ **Utility services:** the final siting and design of the proposed industrial subdivision will incorporate the existing easements for high-pressure gas and sewer, as well as any required augmentation of existing utility services to service the proposed development.

The detailed proposal will include the following early site works:

- ◆ **Demolition and remediation:** removal of existing buildings and structures and completion of any site remediation works required to ensure the site is suitable for its intended use as a business hub.
- ◆ **Bulk earthworks:** cut and fill details for the future building pad sites to facilitate the future development of the site as an industrial business hub.
- ◆ **Infrastructure:** provision of roads, utility services, stormwater works and flood mitigation (if required) measures required to facilitate the future development of the site as a business hub.
- ◆ **Subdivision:** creation of development lots, public roads, easements/restrictions, etc to facilitate the leasing and development of individual lots to accommodate industrial and light industrial land use activities, including freight and logistics and warehouse and distribution centres.

## 4.2 Potential Aboriginal Heritage Impact

Development for uses in accordance with the plan will likely result in impacts to the ground surface resulting from demolition works, cutting, levelling and fill works, installation of services and infrastructure, as well as landscaping and revegetation works. These works, with perhaps the exception of some minor landscaping and revegetation works, would likely result in the removal of much, or all, of the upper soil profile.

Based on the proposed development above, the greatest impacts to the Aboriginal heritage resource of the study area would result from the construction of large-scale industrial style buildings and associated roads and landscaping, in the western half of the study area between the Westlink M7 and Eskdale Creek. This would include impacts to 100% of the Eskdale Creek terrace landform (equivalent to 12,851m<sup>2</sup>) and its associated patch of high density cultural material and would also include impacts to a large portion of the low density background scatter, which is present across much of the rest of the study area (Figure 3).

It was initially considered that there would be considerable impacts to the Aboriginal cultural resource of the eastern half of the study area, from the proposed construction of the flood mitigation infrastructure. However, through design progression the eastern portion of the study area has been largely avoided. Therefore, there will be no impact to the Eastern Creek terrace landform (equivalent to 4,798 m<sup>2</sup>) and its associated patch of high-density cultural material.

Other proposed works within the study area have the potential to cause localised impacts to the low-density background scatter present across the site. These include construction of an OSD basin and access road (northern boundary), and realignment of Eskdale Creek.

At present, there is potential for small portions of the background scatter (equivalent to 157,487m<sup>2</sup> or 29% of the deposit) to be conserved as part of the proposed development, in areas designated as passive open space, environmental conservation, and/or riparian corridor.

## 5. Aboriginal Archaeological Management Plan

### 5.1 General Approach

To implement a consistent and clear framework for the Aboriginal cultural heritage management for the subject area, this ACHMP proposes a strategic approach to manage Aboriginal heritage for the subject area which puts in place measures for the investigation, assessment and management of unexpected finds throughout the course of the development.

The following mitigation policies and procedures should be adopted as part of the overall management of the site's archaeological resource.

#### 5.1.1 Prior to Construction

- An Aboriginal cultural heritage awareness induction should be included in the general site induction for all staff and contractors involved in the works, so that all personnel involved are aware of heritage and archaeological requirements.
- The heritage induction should be formulated to include information on the Aboriginal archaeological and cultural resource of the subject area, its cultural values, archaeological sensitivity zones, and protocols that apply to their protection.
- Salvage excavation program must be completed within any locations of high archaeological significance to be impacted by the proposed works.

#### 5.1.2 During Construction

- In order to implement relevant Aboriginal cultural heritage controls, the Project Archaeologist should be regularly involved in the Project team communication about the progress of development within the subject area. Depending on the nature of impact, activities in accordance with Section 6 should be implemented, which may include archaeological excavation. This should include documented inspections by specialised staff (heritage architect, arborist, environmental officer and/or the Project archaeologist) to ensure mitigation measures are working effectively, and to ensure timely decision making and timely delivery of advice in the event of any unexpected changes to the Project, or unexpected archaeological discoveries.
- In the event that suspected or known Aboriginal object/s are identified, the unexpected finds procedures as defined in this document must be implemented. This would likely involve all works in the area to cease, while the find is managed.

#### 5.1.3 Post Construction

- Within 12 months of the construction being completed, a report summarising any archaeological excavations and/or monitoring undertaken during the works must be developed and lodged with Heritage NSW – DPC. Further details of this report are presented in Section 6.5.

### 5.2 Aboriginal Community Consultation

The engagement and involvement of the Aboriginal community is an important part of the heritage management processes of the Project. Formal Aboriginal consultation commenced in 2018 during the completion of the ACHAR. The process resulted in the identification of 21 stakeholder organisations

who registered an interest in the Project. Consultation with these (21) Aboriginal stakeholders should continue throughout the course of the Project. Consultation includes the following (Table 2):

1. **Liaison and development of the ACHMP** – the RAPs has been provided with a copy of the draft ACHMP for their review and feedback, prior to its adoption. Comments have been received and incorporated, where relevant. A period of 21 days will be provided for stakeholder review, or when comments from all RAPs are received. This phase has been completed, with changed made throughout the document, as well as the specific discussions in Appendix 1.
2. **Involvement in archaeological investigation and/or mitigations** – all RAPs with appropriate OH&S and insurance requirements will be asked to tender for works on the project, and were successful afforded the opportunity to participate in the mitigation works outlined in this ACHMP.
3. **Provision of post-excavation reports** – Any reports prepared to document the results of mitigation works will be provided to the RAPs for their records.

Table 2: Aboriginal community consultation tasks and timeframes for the Project.

Task	Details	Timeframe (estimate)	Dates (estimate)
<b>Liaison and development of the ACHMP</b>	The RAPs will be provided with a copy of the ACHMP for their feedback and review, prior to its implementation	3 weeks	<b>24 June 2021 - 15 July 2021</b>
<b>Review of updated ACHMP</b>	RAPs will be provided with a copy of the updated ACHMP for their feedback and review, prior to its endorsement	1 week	<b>Varies</b> <b>Over course of the Project</b>
<b>Involvement in archaeological mitigation works</b>	Timeframes will vary depending on the type of mitigation (collection, monitoring, salvage excavation) and the work area.	Varies Over course of the Project	<b>Varies</b> <b>Over course of the Project</b>
<b>Final Reporting</b>	Finalised versions of archaeological reports will be provided to the RAPs in digital format (or hardcopy where specifically requested).	Varies Over course of the Project	<b>Varies</b> <b>Over course of the Project</b>

The ACHMP was distributed to RAPs on 24 June 2021 for a 21 day review period, ending on 15 July 2021. Three responses were received:

- Kamilaroi Yankuntjatjara Working Group: KYWG support the findings and management recommendations of the ACHMP. KYWG reiterated their close connection to country and the significance of waterways and burial sites. KYWG wish for an interpretation plan to be undertaken for this development, with examples including native gardens, art, design, digital display, yarning circles and an app (digital).
- A1 Indigenous Services emailed in support of the ACHMP.
- Muragadi indicated an issue in the consultation section, with the incorrect number of registered parties included. This was amended and has been included in the final report.

## 5.3 Hierarchical Management Actions

With types of impact broadly defined based on current knowledge (Section 3), the strategic approach proposed includes the following hierarchical management options, each of which will be further described in Section 6.

### 5.3.1 Areas of High Archaeological Significance

Currently, **two areas of high archaeological significance** have been identified within the subject area. Where avoidance of impact in these areas is unfeasible, minimising such impact through development design and controls should be prioritised, and appropriate heritage mitigation measures should be implemented. This may include a staged program of archaeological salvage excavation.

### 5.3.2 Areas of Moderate Archaeological Significance

Currently, **no areas of moderate archaeological value or potential** have been identified within the subject area, however, this may require revision as work is undertaken and cultural material (if present) is identified and assessed. Should such deposits be identified, the development should consider re-design and/or modifications to avoid impact.

Where avoidance of impact is unfeasible, minimising such impact through development design and controls should be prioritised, and appropriate heritage mitigation measures should be implemented. This may include a staged program of archaeological salvage excavation.

### 5.3.3 Areas of Low Archaeological Significance

An area of low archaeological significance has been identified across the majority of the subject area (Figure 3). The procedure for discovery of possible human remains and unexpected finds procedure as outline in Condition B26 and B27 of MCoA SSD-9667 should be implemented for this area.

## 6. Methods and Procedures

### 6.1 General

This section provides information relating to the overarching archaeological methodology, team, timeframes and other requirements to meet the strategic Aboriginal heritage approach outlined in Section 5.

The methodologies are also based on the type of impact (direct or indirect) and the type of construction techniques. The construction methodologies include demolition of existing structures, piling and excavation. Indirect impacts may include vehicle movement, spoil removal, site facilities establishment, and other logistical activities.

### 6.2 Areas of High – Moderate Archaeological Significance

The ACHAR resulted in the identification of **two areas of high archaeological significance** (LHIBH Eskdale Creek terrace and LHIBH Eastern Creek terrace). Based on the current design plans, only LHIBH Eskdale Creek terrace will be impacted by the proposed works.

Any areas identified as of high archaeological significance should be subject to development avoidance and/or additional heritage mitigation. As a default, additional heritage mitigations would consist of further sub-surface (salvage) archaeological excavation. However, other types of mitigation may be considered instead or, and/or in addition to such works, where agreed by the Project Archaeologist and the RAP. Any mitigation that does not consist of sub-surface (salvage) archaeological excavation must be correlated to the cultural values and/or material culture of the subject area.

#### Research Objectives

In the event that sub-surface (salvage) archaeological excavation is undertaken, the following research objectives should form the focus of the work:

- Using fine resolution excavation and environmental analyses to further characterise the archaeological deposits relating to the past Aboriginal occupation of the Eskdale and Eastern Creek alluvial terraces. This includes a greater understanding of resource exploitation; technological attributes (e.g., heat treatment); identification of any change through time in spatial and chronological phases of activity; and site formation processes.
- To obtain the largest possible assemblage of Aboriginal objects, for detailed documentation and long-term curation, within the spatial limits of the development footprint and the financial/time constraints of the project.
- To allow greater cultural association between the site and the Aboriginal stakeholders (i.e., a form of 'cultural salvage') through involvement in the excavation, and options for the interpretation of the results, should the community decide that this is appropriate.
- To ensure that the development can proceed with a minimised risk of unknown or unexpected significant Aboriginal objects/features being harmed during construction.
- To further supplement the existing knowledge of past Aboriginal activities along this portion of the Eastern Creek corridor.

## Archaeological salvage program

Overall, we propose to undertake up to 100m<sup>2</sup> of open area excavation, with a series of hold points, in the Eskdale Creek terrace landform within the impact footprint. This number provides an equitable balance between the volume of archaeological material that may be recovered, compared with the costs and time to undertake such works.

The area would be up to 10 x 10m in size (equating to a maximum of 100m<sup>2</sup>) and centred on TP151. It is considered that this approach is similar in extent, approach and methodology to other sites in the Cumberland Plain (that usually undertake open area excavations in 100m<sup>2</sup> (10 m x 10 m) increments (e.g. ENSR AECOM, 2008; Jo McDonald Cultural Heritage Management, 2005; Staib, 2002, Williams et al., 2014; O'Connell Street Public School site (undertaken as part of a SSD [SSD 15/7372], Extent 2018), Moorebank Intermodal Terminal (also a SSD [SSD 6766], Extent in prep), Fernadell Precinct, Pitt Town (AHIP no. 1129099; Williams et al., 2014), Tarro-Beresfield water main renewal (AHIP no. C0000616) and 21 Hassall Street, Parramatta (AHIP no. C0001505).

It should be noted that an assessment conducted by Ecoplanning (2019) reported a low contamination risk across the site (EIS). The Eskdale Creek terrace landform is located ~50m southeast of a hydrocarbon leak detected from two underground storage tanks in the former army compound. The horizontal extent of the leak is constrained to the immediate surrounds of the tanks (<2 m) due to the high plasticity clay soils. Additionally, there was bonded asbestos containing material detected at the former army compound, and in topsoil around the impacted buildings. There was no asbestos noted during the excavation of TP151 (within the Eskdale Creek landform) in the test excavation, and there is little potential for it to be present in this wider area, which is located ~35m from the nearest structure with asbestos recorded. The Eskdale Creek terrace is located outside the area of concern assessed by Environmental Earth Sciences in 2018, and there appears to be no threat of contamination within the salvage area.

The excavation would be conducted with a series of hold points to determine whether to continue expanding the salvage area, or whether to cease the archaeological program. For this consideration, the following criterion will be adopted:

- The identification of any features of archaeological interest, such as hearths, burnt clay features, shell middens or burials;
- The potential to recover significant artefact densities reflective of occupation must be obtainable. Based on regional information above, it is considered that >30 artefacts/m<sup>2</sup> on average would be needed to achieve these aims, and as such this is the limit at which further archaeological works would be considered.
- Artefacts of potential great antiquity, typologically dated to the Pleistocene (>10,000 years ago (ka));
- Artefacts manufactured of unusual or rare raw stone materials—those exotic to the region, and which may provide further information on trade and exchange between Aboriginal populations;
- Unusual or rare artefact tool types and formal tools, such as Bondi points, shell artefacts, core tools, burin blades, hammerstones, ground edge implements etc, or those with potential to retain usewear/residue for further analysis; and/or
- Aboriginal objects made during or shortly after the period of European contact, such as worked glass, worked flint etc.

It will be for the Excavation Director in consultation with the RAP representatives present on site during the fieldwork and WSPT to determine whether these thresholds are met and prompt the requirement for further expansion of archaeological works.

The proposed salvage works would adopt the following methods:

- Excavation would consist of contiguous 1m<sup>2</sup> test pits totalling up to 100m<sup>2</sup> of targeted manual excavation undertaken as a series of hold points. At each hold point, the above criteria would be considered, and only where the triggers continue to be met would work proceed. The decision to continue would be made by the Excavation Director, in consultation with RAPs present on site and WSPT. The initial hold point would be at 25m<sup>2</sup> (5 m x 5 m) centred on the area of archaeological interest, the next hold points would be at 36m<sup>2</sup>, 49m<sup>2</sup>, and 81m<sup>2</sup>.
- All excavation would be undertaken manually, using shovels and trowels, etc, by a team of archaeologists and Aboriginal stakeholders.
- Excavations would be undertaken in 50mm spits, with Australian Height Datum (AHD) heights being obtained every fourth spit, to ensure vertical integrity. Excavations would extend to either the geological substrate, or until three consecutive cultural sterile spits are encountered.
- Each test pit would be given an alphanumeric label for identification purposes. A standard site recording form would be used for each spit of each excavation unit (1m<sup>2</sup>). Details would include site name, date, site recorder, spit number and depth, description of finds, description of soil, sketch plan of excavation (if relevant to show features) and a bucket tally.
- Sediment from each 50mm spit would be bucketed separately and wet-sieved through 3mm mesh. Any Aboriginal objects recovered from the sediments would be retained in a plastic bag with the relevant pit alpha-numeric code written upon it.
- Soil samples may be collected for description, sedimentological, palaeo-environmental and chronological analysis where such analysis is considered likely to contribute significant information. Radiocarbon and/or OSL samples would be taken in areas where Aboriginal objects are found, and generally try to bracket the deposit (to provide a maximum and minimum age), as well as provide further understanding on the formation history of the deposits. Material for radiocarbon analysis may also be undertaken opportunistically if archaeological features containing charcoal or other dateable material are evident.
- If dangerous material, such as asbestos or contaminated soils, is encountered, the extent of the salvage could be amended. This would be at the discretion of the Excavation Director, in consultation with the RAPs present on site and WSPT.

If discrete high-density artefact concentrations or cultural features, such as hearths, are revealed during the excavation, these will be excavated and recorded (by photography and planning). The locations of in situ artefacts in such features may also be individually recorded.

Excavation procedures and protocols may be modified at the discretion of the Excavation Director, in consultation with the Aboriginal stakeholders present on site and WSPT as the conditions in the field and nature of the excavations develop.

### 6.3 Areas of Low Archaeological Significance

The procedure for discovery of possible human remains and unexpected finds procedure as outline in Condition B26 and B27 of MCoA SSD-9667 should be implemented for areas of low-nil archaeological potential (Figure 3).

## 6.4 Post Excavation Analysis

If archaeological excavations were to occur, post excavation analysis would be required to appropriately document the archaeological and cultural findings of the field program. The post-excavation analysis would be designed to address the research objectives and specific research questions, along with other relevant questions that may arise based on the results of the excavation. Results of analysis would be presented in relation to comparative site data where possible and where useful in addressing the research questions.

Post-excavation analysis may include (but not be limited to):

- **Lithic Analysis:** cataloguing of all cultural material recovered, including measurements, weight, raw material, reduction and tool identification. A program of conjoin analysis, and investigation of usewear/residue analysis may also be considered.
  - It is recommended that a programme of conjoining using the Minimum Analytic Nodule methodology is applied to a maximum of three suspected knapping floors with a total maximum of 300 stone artefacts. This would provide a good sample of the knapping events and the opportunity to understand reduction behaviour and post-depositional movement. It would place a clear limit on the extent of analysis required.
  - It is recommended that usewear analysis using a x20 stereo microscope with oblique lighting is limited to complete or broken tools. With an upper cap of usewear analysis on a maximum of 100 tools.
  - It is recommended that residue analysis is limited to formal tools that have the greatest potential to retain residue, based on their typology and preservation conditions. With an upper cap of residue analysis on a maximum of 20 tools.
- **Geomorphology:** collection of soil samples excavation to assist in understanding the site formation and post-depositional disturbance.
  - It is recommended that the allowance for limited additional soil micromorphological analysis and or palaeo-environmental analysis, and only in circumstances where it would build on or clarify earlier analysis.
  - It is recommended that the allowance is limited to analysis of up to a maximum of three soil or environmental samples.
- **Palaeo-environmental:** this analysis can utilise the material from the geomorphological samples and should include the investigation of pollen and phytoliths to understand the past vegetation and climate of the region prior to, and during periods of Aboriginal visitation and occupation.
  - It is recommended that the allowance for limited additional palaeo-environmental analysis, and only in circumstances where it would build on or clarify earlier analysis.
  - It is recommended that the allowance is limited to analysis of up to a maximum of three soil or environmental samples.
- **Chronology:** OSL and/or radiocarbon samples should be collected during the program, and should bracket any cultural materials recovered from each open area excavation to provide a strong chronology for the deposit. Radiometric dating would be limited to the dating of any Aboriginal hearths encountered during the salvage, up to a maximum of three conventional C14 dates.

The aim of this work is to both adequately document, analyse and record the cultural deposits and assemblages for future generations, and to build upon the findings of the archaeological test excavation analysis.

## 6.5 Reporting

Each area investigated, salvaged and/or mitigated in some way would have a brief interim or compliance report developed. This avoids the need to undertake detailed and time-consuming post excavation analysis before or during the construction. Post excavation analysis would be ongoing throughout the Project, and at, or nearing, completion of the Project, a detailed report on all archaeological works would be compiled.

The following general approach would apply to all reporting:

- A short summary.
- Describe Aboriginal consultation undertaken during the project.
- Provide details of the Aboriginal objects which were partially or completely harmed (i.e., recovered through the excavations) during the works.
- Provide a description of the methods and results of the any excavations.
- Comment on the effectiveness of the mitigation measures (i.e., salvage excavations).
- Comment on the effectiveness of any management plan if in place.
- The current and proposed long term location of any Aboriginal objects recovered.
- Details the results of any analysis of recovered Aboriginal objects.
- Ensure the necessary Aboriginal Site Impact Recording Forms (ASIRF) are lodged with Heritage NSW – DPC at completion of the project.

## 6.6 Storage of Archaeological Material Collected

The mitigation program may result in artefactual material and the long-term curation of this material needs to be ensured. This will be developed in consultation with the RAPs, but is likely to include (in preferential order):

- Re-burial on site, in an appropriate location in the vicinity of the subject area;
- Lodged with a RAP under a Care and Control Agreement; or
- Deposition with the Australian Museum.

The following general approach would apply to artefact storage:

- During the Project, all archaeological materials would be stored with the Project Archaeologist for analysis and documentation. Storage and labelling would be undertaken in accordance with Australian Museum collection policies, since these currently form the most rigorous curation methods.
- Towards the end of the Project, the Project Archaeologist would undertake steps to determine the long term storage of any archaeological material collected, with a focus on the preferential order outlined above.
- Once the archaeological materials have been situated in their long term storage location, a site card should be lodged with the AHIMS database. The site card should lodge all relevant information about the archaeological materials, including where it was found/recovered, relevant reports associated with it, and its final storage location.

## 6.7 Discovery of Potential Human Remains Procedures

During construction works, it is possible that previously possible human remains may be discovered. Refer to Appendix 2 for the Possible Discovery of Human Remains Procedure.

## 6.8 Unexpected Finds Procedures

During construction works, it is possible that previously unknown Aboriginal objects or sites may be discovered. Refer to Condition B26 and B27 of MCoA SSD-9667 and Appendix 3 for the Unexpected Finds Procedures.

## 7. Risk Assessment

### 7.1 Basis for Assessment

The key construction activities and potential impacts on Aboriginal archaeology are summarised in Table 3.3. The risk assessment is based on (1) the likelihood of an impact occurring as a result of a proposed activity; and (2) the consequences of the impact if the event occurs. The risk matrix, and definition of likelihood and consequence are provided in Table 3 and Table 4.

Table 3: Key construction activities, risks and impacts.

Activity	Potential Impact	Residual Risk		
		Consequence	Likelihood	Risk
Demolition work results in physical disturbance of Aboriginal sites/objects.	Damage to Aboriginal archaeological resources. Non-compliance with development consent conditions.	Moderate	Unlikely	Medium
Construction work results in physical disturbance of Aboriginal sites/objects.	Damage to Aboriginal archaeological resources. Non-compliance with development consent conditions.	Moderate	Unlikely	Medium
Construction work results in disturbance of previously unidentified of Aboriginal sites/objects, or skeletal remains.	Inadvertent damage, destruction or removal of Aboriginal archaeological resources.	Moderate	Unlikely	Medium
	Failure to notify and properly manage discovered objects.	Moderate	Unlikely	Medium

Table 4: Risk matrix

Likelihood	Consequence				
	Insignificant	Minor	Moderate	Major	Severe
Almost Certain	Medium	High	High	Extreme	Extreme
Likely	Medium	Medium	High	High	Extreme
Possible	Low	Medium	Medium	High	High
Unlikely	Low	Low	Medium	Medium	High
Rare	Low	Low	Low	Medium	Medium
Extreme	Intolerable - Risk reduction is mandatory wherever practicable. Residual risk can only be accepted if endorsed by senior management.				
High	Intolerable or tolerable if managed to as low as reasonably practicable - Senior management accountability				

Medium	Tolerable if managed to as low as reasonably practicable - Management responsibility
Low	Tolerable - Maintain systematic controls and monitor

Table 5: Classification of Likelihood and Consequence.

Likelihood	Description
Almost Certain	The event is expected to occur in most circumstances. This event could occur at least once during a project of this nature. 91-100% chance of occurring during the Project
Likely	The event will probably occur in most circumstances. This event could occur up to once during a project of this nature. 51-90% chance of occurring during the Project
Possible	The event could occur but not expected. This event could occur up to once every 10 projects of this nature. 11-50% chance of occurring during the Project
Unlikely	The event could occur but is improbable. This event could occur up to once every 10-100 projects of this nature. 1-10% chance of occurring during the Project
Rare	The event may occur only in exceptional circumstances. This event is not expected to occur except under exceptional circumstances (up to once every 100 projects of this nature). Less than 1% chance of occurring during the Project
Consequence	Description
Insignificant	Minor disturbance of archaeological resources. No damage to Aboriginal sites/objects or historical relics.
Minor	Moderate disturbance of archaeological resources or repairable damage to Aboriginal sites/objects or historical relics.
Moderate	Considerable damage to Aboriginal sites/objects or historical relics.
Major	Major damage to Aboriginal sites/objects or historical relics.

## 7.2 Risk Management

The following risk management measures will be implemented to minimise potential impact to Aboriginal archaeological resources (Table 6). The measures identified are based on:

- Anticipated impacts to archaeological resources;
- Assessed scientific (archaeological) significance, and (where known) overall heritage significance;
- Legislative requirements and the planning approval framework; and
- Recommendations in previous reports.

Overarching mitigation policies and procedures for the risk management measures outlined below are provided in Section 5.

Table 6: Risk Management Measures.

Activity	Risk Management Measure
Demolition or construction work results in physical disturbance of Aboriginal sites/objects.	<p>All staff, contractors and other relevant personnel carrying out activities with potential to disturb subsurface cultural deposits must undertake a project induction to ensure that they have an understanding and are aware of the Aboriginal archaeological issues which may affect the activity.</p> <p>Mitigation measures and procedures from this ACHMP will be included in relevant activity or area specific Work Method Statements, where required.</p>
Discovery of possible human remains	If human remains are uncovered, all works in the area would cease and project would follow procedures outlined in Appendix 2.
Discovery of previously unidentified Aboriginal or historical archaeological resources.	In the case of unexpected Aboriginal objects or historical archaeological relics being uncovered by the works, immediately stop all works that would impact on the find and follow the procedure detailed in Appendix 3.

## 8. Compliance Management

All project personnel, sub-contractors, consultants and visitors will receive training in environmental and heritage obligations during the site inductions and toolbox talks. Training will include an archaeological awareness component to reinforce the importance of heritage issues and the management measures that will be implemented. Specific archaeological awareness training will cover:

- Protection of identified Aboriginal sites and archaeological resources;
- Adherence to approval conditions and any consultation requirements with RAPs;
- The means of identifying Aboriginal archaeological resources and the roles of personnel with regard to archaeological management measures.

Records would be kept of all personnel undertaking the site induction and training, including the contents of the training, date and name of trainer/s.

Key staff will undertake more comprehensive training relevant to their position and/or responsibility. This training may be provided as 'toolbox' training or at a more advanced level by the Site/Environmental Manager or delegated representatives.

### 8.1 Auditing

Audits (both internal and external) will be undertaken to assess the effectiveness of environmental controls, and compliance with this ACHMP.

The planned audit process is detailed in the relevant Environmental Management Plan.

### 8.2 Reporting and Review

Reporting will be undertaken by an appointed officer and will include a staged Performance Report/Review. Each report will detail relevant training, inspections, monitoring and auditing undertaken for the reporting period relating to archaeological management on the Project.

This ACHMP will be updated every six months or as required.

## 9. Review and Improvement

### 9.1 Continual Improvement

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

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

### 9.2 Plan Update

This plan would be updated and revised as necessary every six months from finalisation, until the completion of the ground disturbance phase of the Project.

Changes to this plan will be approved by the client and in consultation with RAPs (if required) and documented in the document control section for each revision. A copy of the updated plan and changes will be distributed to all RAPs.

## References

AHMS. 2016. Aboriginal Cultural Heritage Assessment Report 81 Riverstone Parade Riverstone NSW. Prepared for Riverstone Parade Pty Ltd.

Extent Heritage (2020) Aboriginal Cultural Heritage Assessment Report Light Horse Interchange Business Hub, Eastern Creek, NSW (SSD 9667). Unpublished Report to Western Sydney Parklands Trust.



## Appendix 1: Aboriginal Community Consultation

<b>ACHMP Review</b>				
All RAPs	Various	21.06.2021	Emailed all registered RAPs a copy of the ACHMP for review. ACHMP feedback required by 15 July 2021.	Coral Hardwick
Kamilaroi Yankuntjatjara Working Group	Kadibulla Khan	01.07.2021	Kadibulla emailed in support of the ACHMP, further highlighting the significance of waterways and burial locations.	Coral Hardwick
A1 Indigenous Services	Carolyn Hickey	04.07.2021	Carolyn emailed in support of the ACHMP.	Coral Hardwick
Muragadi	Darleen	05.07.2021	Darleen emailed some issues with the consultation section of the report (including incorrect registered group numbers). This was amended and conveyed to Darleen by return email.	Coral Hardwick
All RAPs	Various	12.07.2021	Coral emailed all registered RAPs to remind them that the draft ACHMP review period ends 15 July 2021.	Coral Hardwick

## Coral Hardwick

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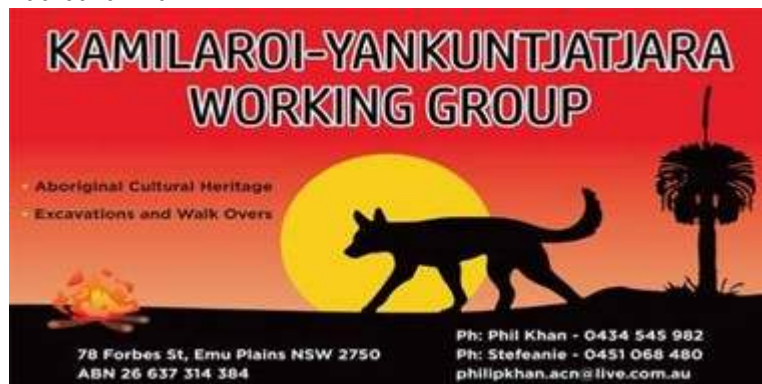
**From:** philip khan <philipkhan.acn@live.com.au>  
**Sent:** Thursday, 1 July 2021 3:34 PM  
**To:** Coral Hardwick  
**Subject:** Re: Lighthouse Business Hub ACHMP Review

Dear Coral,

Thank you for your ACHA for Light Horse Interchange Business Hub. Aboriginal people have walked this land for tens of thousands of years and continue to do so. We have had as spiritual connection to this land since long ago. Our ancestors passed their knowledge to the younger generations and so on. We hold lore and kingship within our community, we have a belief system one practiced for tens of thousands of years, some still practiced today. We did not just hunt and gather we utilised the land through craftsmanship, our tools were made of organic materials. Our way of giving back to mother earth our way of conservation. Our water ways are highly significant to us as we follow the water ways, utilised them for fishing, bathing, drinking water, healing etc. we looked to the skies for guidance. Our burials are still unfound and we need to be aware of them, as they are highly significant to our people. Interpretation plans, is there a plan in place other wise some ways you can incorporate culture in interpretation is through native gardens, art work, design, digital display, yarning circles and or an app are some examples. We would like to agree ACHA and support your report, we look forward to working with you on this project.

Kind Regards

Kadibulla Khan



## Coral Hardwick

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**From:** Carolyn .H <cazadirect@live.com>  
**Sent:** Sunday, 4 July 2021 8:52 PM  
**To:** Coral Hardwick  
**Subject:** Re: Lighthorse Business Hub ACHMP Review  
**Attachments:** A1.PL2022.pdf; A1.WC2022.pdf



Contact: Carolyn Hickey  
M: 0411650057  
E: Cazadirect@live.com  
A: 10 Marie Pitt Place, Glenmore Park, NSW 2745  
ACN: 639 868 876  
ABN: 31 639 868 876

Hi,  
I have reviewed the document and support the Information for the ACHMP.

A1 would like to be involved in any future Meetings and field work.

I am a traditional custodian with over 20 years experience in helping preserve Aboriginal cultural heritage on projects.

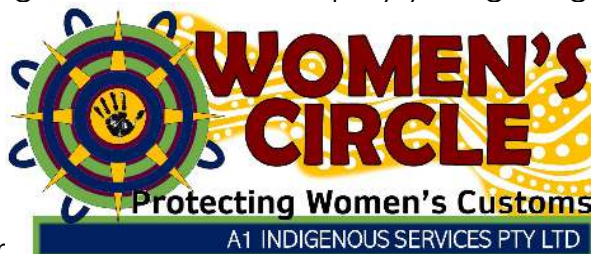
I hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects and values that exist in the project area.

**I have attached A1 Indigenous Services Insurances.**

We would like the Proponent to consider including A1's, Kawalkan youth and the Women's Circle Employees for all future field work.



The Kawalkan Youth Program is a designed program created to employ young indigenous



youths between the ages of (18-29) year

The Women's Circle was created with the need to always have Experienced Indigenous Women present in all field work.

To aim for not only gender equality in the workplace but, to help identify and protect any women's sacred places.

### **OUR MISSION**

#### **Building strength in aboriginal families, communities, and services.**

It is our mission to commit to an innovative approach to a better future for indigenous employment.

Giving our people the opportunity to gain employment in a culturally sensitive work environment also giving them the opportunity to work on country and continue the tradition of protecting and passing down

**Cultural knowledge from one generation to the next – continuing the importance of keeping culture.**

Please feel free to contact me on details supplied

Kind Regards,  
Carolyn Hickey  
Managing Director

INSURANCES ARE ATTACHED

Kind regards  
Carolyn Hickey

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## Coral Hardwick

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**From:** jesse johnson <muragadi@yahoo.com.au>  
**Sent:** Monday, 5 July 2021 12:34 PM  
**To:** Coral Hardwick  
**Subject:** Re: Lighthouse Business Hub ACHMP Review  
**Attachments:** BRW9C305B451BEF\_003611.pdf

Hi Coral

I was just reading through the reports for the above project, and I noticed that we are not on the letter as being registered for the project. We did register, can you give me a call on 0490051102

Thanks

Darleen

On Thursday, 24 June 2021, 02:44:49 pm AEST, Coral Hardwick <chardwick@extent.com.au> wrote:

Dear All,

Thank you for your ongoing involvement in the Aboriginal heritage assessment for the proposed Light Horse Interchange Business Hub. As you will be aware, the Aboriginal Cultural Heritage Assessment (ACHA) report for this project was drafted in 2019. Since distribution of the survey and test excavation ACHA reports, Extent Heritage has been commissioned to develop an Aboriginal Cultural Heritage Management Plan (ACHMP) for the development.

Please find the link below to the draft ACHMP report for your review and input. The link is live for a three weeks, please let me know if you need another one sent. If you wish to provide input and/or comment, please can you do so by the **15 July 2021**. Once comments have been received, the document will be modified and finalised.

<https://we.tl/t-DlmeFilgzH>

Kind Regards,

Coral Hardwick

**Coral Hardwick** | BA (Hons), MRes (Macquarie University)

Heritage Advisor

T 02 9555 4000 | M 0436 333 686

[chardwick@extent.com.au](mailto:chardwick@extent.com.au)

[extent.com.au](http://extent.com.au)

Connect with us on:



## Appendix 2: Procedure for Unexpected Finds – Human Skeletal Remains

## Procedure for Discovery of Possible Human Skeletal Remains

### Purpose

This procedure details the actions to be taken when possible human skeletal material (remains) are found during construction activities.

### Scope

This section outlines the procedure for handling human remains in accordance with the Skeletal Remains: Guidelines for the Management of Human Skeletal Remains under the Heritage Act 1977 (NSW Heritage Office 1998) and the Aboriginal Cultural Heritage Standards and Guidelines Kit (NPWS 1997); and the relevant NSW legislation.

### Procedure

In the event that possible human skeletal material (remains) are encountered during construction, the following steps shall be taken:

- ◆ STOP ALL WORK in the vicinity of the find ( $\leq 50$  m) and immediately notify the relevant Site Supervisor, who will immediately notify the Environment Manager and the Project Manager. The Site Supervisor will demark the area to protect the possible human skeletal material (remains), and inform all site personnel of restricted access to the area of discovery until further notice.
- ◆ The Environment Manager is to record the details, take photos of the find and its context (without causing further excavation or disturbance) and notify the Project Archaeologist and the NSW Police.
- ◆ All directions dictated by the NSW Police, in discussion with the Project Archaeologist (where relevant), must be followed.
- ◆ In the event that the human remains are considered archaeological, and NSW Police release the finds location, the Environment Manager must contact Heritage NSW - DPC on 02 9995 6864. Notification should provide a verbal description of the remains as well as the burial context.
- ◆ All directions dictated by the Heritage NSW - DPC, in discussion with the Project Archaeologist (where relevant), must be followed. This may include the need to engage technical specialist (e.g. Forensic Anthropologist), and liaison with the RAPs, to recover the remains.
- ◆ Work is not to commence in the area unless authorised in writing by OEH and/or the NSW Police.

## Appendix 3: Procedure for Unexpected Finds – Aboriginal Heritage

## Procedure for Discovery of Unexpected Finds – Aboriginal Heritage

### Purpose

This procedure details the actions to be taken when a previously unidentified and/or potential Aboriginal heritage item/object/site is found during construction activities.

### Scope

This section outlines the procedure for managing unexpected finds in accordance with the Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales (DECCW 2010) and the Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH 2011); and the relevant NSW legislation.

### Procedure

In the event that a potential heritage artefact/item/object/site is encountered during construction the following steps shall be taken.

- STOP ALL WORK in the vicinity of the find and immediately notify the relevant Site Supervisor. The Supervisor will then notify the Environment Manager and the Project Manager, and demark the area to protect the find.
- The Environment Manager is to record the details, take photos of the find and ensure that the area is adequately protected from additional disturbance.
- The Environment Manager contacts the Project Archaeologist to notify them of the location of the find.
- All instructions provided by the Project Archaeologist are to be followed. This may include:
  - The find is not a potential Aboriginal object: work can recommence.
  - The find is a potential Aboriginal object: appropriate approvals and/or mitigation measures require implementation.
  - The find is a potential historical relic: appropriate approvals and/or mitigation measures require implementation.
- Work is not to commence in the area unless authorised in writing by the Project Archaeologist.

### Management measures

#### Community collection

The RAPs will be provided with an opportunity to collect the identified Aboriginal object, and any other Aboriginal objects that may be identified during the collections. The location and context of recovered objects will be recorded. Artefacts will be removed from site and analysed as part of salvage excavation reporting being undertaken separately.

### **Artefact analysis, storage, and long-term management**

Any recovered artefacts will be analysed in accordance with the salvage methodology outlined in the ACHMP. Any Aboriginal objects that are removed from the land by actions authorised by MCoA SSD-9667 will be moved as soon as practicable to the temporary storage location at the offices of Heritage Consultant engaged to complete the salvage excavations under MCoA SSD-9667.

While in temporary storage, artefacts will be stored in a locked storage cupboard. Aboriginal objects under temporary storage will not be subject to future harm. Objects will be stored until agreement is reached about the long-term management of Aboriginal objects in consultation with the RAPs.

Any Aboriginal objects recovered during salvage excavations, community collection activities and/or the proposed development works conducted under MCoA SSD-9667, will be managed consistently with the previously retrieved Aboriginal objects from the Project site.

### **Salvage reporting**

Details regarding the identification, recording and collection of any Aboriginal objects will be included within the Aboriginal Cultural Heritage Salvage Report prepared in accordance with the requirements of the ACHMP.