

# 1 & 2 Murray Rose Avenue, Sydney Olympic Park


Archaeological Survey Report

Report to Austino Property Group

Auburn Local Government Area

October 2018



 artefact

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## EXECUTIVE SUMMARY

Austino Property Group are proposing a residential development at 1&2 Murray Rose Avenue, Sydney Olympic Park. The proposed development has been assessed as a State Significant Development, and Secretary's Environmental Assessment Requirements (SEARs) have been issued for the site (SSD\_9403). The requirements for heritage are as follows:

- Prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) identifying any cultural heritage values, impacts and mitigation measures (Artefact Heritage 2018a).
- Prepare a Heritage Impact Statement (HIS) addressing impacts of the proposed development on any state or local heritage Items in the vicinity (Artefact Heritage 2018b) Prepare a Historical Archaeological Assessment (HAA) detailing the likely impacts and outline the proposed management and mitigation measures to protect and preserve the non-Aboriginal archaeology (Artefact Heritage 2018c)

Artefact Heritage have been engaged by Austino Property Group to undertake an ACHAR for a proposed development at 1&2 Murray Rose Avenue, Sydney Olympic Park. Key issue 1 of SSD\_9403 states that the assessment must be completed in compliance with the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (Code of Practice) (Department of Environment, Climate Change & Water [DECCW] 2010a) and the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (the Guide) (DECCW 2010b).

As per section 2.3 of the Code of Practice and section 3.2 of the Guide, an ACHAR must include a standalone technical report which provides evidence about the material traces of Aboriginal land use that is integrated with the other findings from the assessment of Aboriginal heritage to support the conclusions and management recommendations in the ACHAR. This Archaeological Survey Report (ASR) has been completed the fulfil this requirement.

The HAA and HIS will be provided in separate reports to meet the remaining heritage requirements of SSD\_9403.

### Overview of findings

- No Aboriginal archaeological sites or areas of PAD are located within the study area.

### Recommendations

- An Aboriginal Cultural Heritage Assessment Report (ACHAR) must be prepared in compliance with the heritage requirements of SSD\_9403
- The ACHAR would not recommend further Aboriginal archaeological investigations
- Any changes to the scope of the proposal, such as a change in impact footprint, may require further archaeological survey and addendum ASR reporting
- An unexpected finds policy should be implemented, with the following conditions:
  - Stop work within the affected area, protect the potential archaeological find, and inform environment staff or supervisor.
  - Contact a suitable qualified archaeologist to assess the potential archaeological find.

- If Aboriginal archaeological material is identified, works in the affected area should cease, and the NSW OEH should be informed. Further archaeological mitigation may be required prior to works recommencing.

# CONTENTS

<b>Executive summary</b> .....	<b>ii</b>
<b>Figures</b> .....	<b>vi</b>
<b>Tables</b> .....	<b>viii</b>
<b>Abbreviations</b> .....	<b>ix</b>
<b>1.0 Introduction</b> .....	<b>1</b>
1.1 Background.....	1
1.2 Study area .....	1
1.3 Description of works .....	1
1.4 Study scope and objectives.....	2
1.5 Limitations.....	2
1.6 Authorship.....	2
<b>2.0 Legislative context</b> .....	<b>6</b>
2.1 State legislation .....	6
2.1.1 <i>National Parks and Wildlife Act 1974</i> .....	6
2.1.2 <i>Native Title Act 1994</i> .....	6
2.1.3 <i>Aboriginal Lands Right Act 1983</i> .....	6
2.1.4 <i>Environmental Planning &amp; Assessment Act 1979</i> .....	6
2.2 Commonwealth legislation.....	7
2.2.1 <i>Environment Protection and Biodiversity Conservation Act 1999</i> .....	7
2.2.2 <i>Aboriginal and Torres Strait Islander Heritage Protection Act 1984</i> .....	8
<b>3.0 Environmental context</b> .....	<b>9</b>
3.1 Geotechnical investigations.....	9
3.2 Landscape, geology and soils .....	10
3.3 Hydrology.....	10
3.4 Natural resources .....	10
3.5 Vegetation.....	11
3.6 Historical background .....	11
3.6.1 Overview .....	11
3.6.2 Twentieth century industries 1907-1988 .....	12
3.6.3 Sydney Olympic Park Redevelopment 1990s .....	14
<b>4.0 Aboriginal context</b> .....	<b>16</b>
4.1 Ethno-historical background .....	16
4.2 Archaeological context .....	16
4.2.1 Previous archaeological reports .....	16
4.2.2 Summary .....	18
4.3 Aboriginal Heritage Information Management System.....	18

4.4	Predictive modelling .....	21
<b>5.0</b>	<b>Survey methodology .....</b>	<b>22</b>
5.1	Aims .....	22
5.2	Site definition and recording .....	22
5.3	Protocol for recording Potential Archaeological Deposits .....	22
5.4	Sample survey .....	22
5.5	Method .....	23
<b>6.0</b>	<b>Survey results .....</b>	<b>25</b>
6.1	Survey Unit 1 .....	25
6.2	Survey Unit 2 .....	26
6.3	Survey coverage .....	27
<b>7.0</b>	<b>Discussion .....</b>	<b>30</b>
7.1	Ground disturbance .....	30
7.2	Analysis of archaeological potential .....	30
<b>8.0</b>	<b>Significance assessment .....</b>	<b>31</b>
8.1	Significance assessment criteria .....	31
8.2	Archaeological significance assessment .....	31
<b>9.0</b>	<b>Impact assessment .....</b>	<b>32</b>
9.1	Proposed development .....	32
9.2	Impacts to potential archaeological resources .....	32
<b>10.0</b>	<b>Management measures .....</b>	<b>33</b>
<b>11.0</b>	<b>Recommendations .....</b>	<b>34</b>
<b>12.0</b>	<b>References .....</b>	<b>35</b>

## FIGURES

Figure 1.1: Location of the study area .....	4
Figure 1.2: Proposed plans .....	5
Figure 3.1: View of modified creek banks of Boundary Creek, west aspect .....	10
Figure 3.2: Boundary Creek with artificial retaining embankment, northeast aspect .....	10
Figure 3.3: 1916 St John Parish map of area with approximate study area shown in red. State Abattoir located to the southwest, and the brick works to the north (Source: LPI) .....	12
Figure 3.4: View of the waste deposited in Homebush Bay taken in 1972 (Source: State Library of NSW) .....	13
Figure 3.5: View of the study area in 1943 (Source: Six Maps) .....	13
Figure 3.6: View of the study area in 2005 (Source: Google Earth) .....	14
Figure 3.7: View of the study area in 2014 (Source: Google Earth) .....	15
Figure 4.1: Distribution of AHIMS sites within extensive search area .....	20
Figure 5.1: Location of survey units .....	24
Figure 6.1: View of west of Samsung Electronics Australia (Photographed by R. Taddeucci, 24 September 2018) .....	25
Figure 6.2: View east of the artificial slope of the property down to Murray Rose Avenue (Photographed by R. Taddeucci, 24 September 2018) .....	25
Figure 6.3: View east of the bitumen footpath (Photographed by R. Taddeucci, 24 September 2018) .....	25
Figure 6.4: Ground exposure (Photographed by R. Taddeucci, 24 September 2018) .....	25
Figure 6.5: Fallen telephone pole (Photographed by R. Taddeucci, 24 September 2018) .....	26
Figure 6.6: View west of garden bed (Photographed by R. Taddeucci, 24 September 2018) .....	26
Figure 6.7: Retaining wall located at the south of the property (facing northwest) (Photographed by R. Taddeucci, 24 September 2018) .....	26
Figure 6.8: Retaining wall located at the south of the property (facing west) (Photographed by R. Taddeucci, 24 September 2018) .....	26
Figure 6.9: Vegetated area at the south of the property (Photographed by R. Taddeucci, 24 September 2018) .....	27
Figure 6.10: View north west of the Landlease car park (Photographed by R. Taddeucci, 24 September 2018) .....	27
Figure 6.11: Ground exposure (Photographed by R. Taddeucci, 24 September 2018) .....	27
Figure 6.12: View west from the north of the property (Photographed by R. Taddeucci, 24 September 2018) .....	27
Figure 6.13: View west of retaining from outside the property (Photographed by R. Taddeucci, 24 September 2018) .....	27
Figure 6.14: View west of artificial slope along the south of the property (Photographed by R. Taddeucci, 24 September 2018) .....	27
Figure 6.15: Transects covered during survey .....	29



## TABLES

Table 4.1: Frequency of site features within the AHIMS extensive search results .....	19
Table 4.2: Newington sites .....	19
Table 6.1: Survey coverage summary.....	28
Table 6.2: Landform survey coverage.....	28

## ABBREVIATIONS

ACHAR	Aboriginal Cultural Heritage Assessment Report
AHC	Australian Heritage Council
AHIP	Aboriginal Heritage Impact Permit
AHIMS	Aboriginal Heritage Information Systems
ALR	<i>Aboriginal Land Rights Act 1983)</i>
Artefact Heritage	Artefact Heritage Services Pty Ltd
ASR	Archaeological Survey Report
ATSIHP Act	<i>Aboriginal and Torres Strait Islander Heritage Protection Act 1984</i>
BP	Before Present (that is 1950)
Code of Practice	Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales
CHL	Commonwealth Heritage List
Consultation Requirements	Aboriginal cultural heritage consultation requirements for proponents 2010
DCP	Development Control Plan
DECCW	Department of Environment, Climate Change and Water (now OEH)
Due Diligence Code of Practice	Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EPBC Act	<i>Environment Protection and Diversity Conservation Act 1999</i>
GPS	Global Positioning System
Guide	Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW
ha	hectares
HAA	Historical Archaeological Assessment
HIS	Heritage Impact Statement
km	kilometres
LALC	Local Aboriginal Land Council
LEP	Local Environmental Plan
LGA	Local Government Area

m	metres
mm	millimetres
NHL	National Heritage List
NPW Act	<i>National Parks and Wildlife Act 1974</i>
OEH	Office of Environment and Heritage
PAD	Potential Archaeological Deposit
RAP	Registered Aboriginal Party
RNE	Register of the National Estate
SEARs	Secretary's Environmental Assessment Requirements
SSD	State Significant Development
SU	Survey Unit

## 1.0 INTRODUCTION

### 1.1 Background

Austino Property Group are proposing a residential development at 1&2 Murray Rose Avenue, Sydney Olympic Park. The proposed development has been assessed as a State Significant Development, and Secretary's Environmental Assessment Requirements (SEARs) have been issued for the site (SSD\_9403). The requirements for heritage are as follows:

- Prepare a Historical Archaeological Assessment (HAA) detailing the likely impacts and outline the proposed management and mitigation measures to protect and preserve the non-Aboriginal archaeology
- Prepare a Heritage Impact Statement (HIS) addressing impacts of the proposed development on any state or local heritage Items in the vicinity
- Prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) identifying any cultural heritage values, impacts and mitigation measures.

Artefact Heritage have been engaged by Austino Property Group to undertake an ACHAR for a proposed development at 1&2 Murray Rose Avenue, Sydney Olympic Park. Key issue 1 of SSD\_9403 states that the assessment must be completed in compliance with the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (Code of Practice) (Department of Environment, Climate Change & Water [DECCW] 2010a) and the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (the Guide) (DECCW 2010b).

As per section 2.3 of the Code of Practice and section 3.2 of the Guide, an ACHAR must include a standalone technical report which provides evidence about the material traces of Aboriginal land use that is integrated with the other findings from the assessment of Aboriginal heritage to support the conclusions and management recommendations in the ACHAR. This Archaeological Survey Report (ASR) has been completed to fulfil this requirement.

The HAA and HIS will be provided in separate reports to meet the remaining heritage requirements of SSD\_9403.

### 1.2 Study area

The study area consists of 1 Murray Rose Avenue (Lot 1/DP1185060) and 2 Murray Rose Avenue (Lot 2/DP1185060), located in the suburb of Sydney Olympic Park (Figure 1.1). 1 Murray Rose Avenue is 0.25 hectares (ha) in area and measures 60 m north south by 77 m east west. 2 Murray Rose Avenue is 0.39-ha in area and measures 56 m north south by 56 m east west.

The study area is located in the Local Government Area (LGA) of Auburn and the Metropolitan Local Aboriginal Land Council (LALC). The study area is within the Parish of St John and County of Cumberland.

### 1.3 Description of works

#### 1 Murray Rose Avenue

The proposed development involves the construction of a 15-storey residential development including three (3) basement levels with a bulk excavation level of approximately 1.85 m.

## 2 Murray Rose Avenue

The proposed development includes the construction of a 15-storey residential development with two (2) basement levels with a bulk excavation level of approximately 0.4 m.

The proposed development design is shown in Figure 1.2.

## 1.4 Study scope and objectives

This ASR has been prepared in accordance with the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (Code of Practice) (Department of Environment, Climate Change & Water [DECCW] 2010a). The scope of this project is to undertake an Aboriginal archaeological survey in conjunction with representatives from Metropolitan LALC to locate and identify Aboriginal sites and objects or areas of potential archaeological deposit (PAD) and provide recommendations in an ASR for mitigation to Aboriginal archaeological and cultural heritage values or where required recommendations for further assessment.

The objectives of this study are to provide an ASR which:

- Assess the Aboriginal cultural heritage values of the study area in accordance with the Code of Practice
- Identify Aboriginal archaeological and cultural heritage values that may be impacted by the proposed works
- Identify any further investigations, and mitigation and management measures that may be required, should the project proceed.

This report includes:

- A description of the project and the extent of the study area
- An archaeological significance assessment of the study area
- A description of the statutory requirements for the protection of Aboriginal heritage
- An impact assessment for recorded Aboriginal sites and areas of archaeological potential
- Provision of measures to avoid, minimise, and if necessary, offset the predicted impacts on Aboriginal heritage values.

## 1.5 Limitations

Only the area within the provided disturbance boundary was surveyed for Aboriginal objects and sites. Areas outside the study area were not assessed for Aboriginal objects or archaeological potential.

## 1.6 Authorship

This report was prepared by Jennifer Norfolk (Heritage Consultant, Artefact Heritage) and Ryan Taddeucci (Senior Heritage Consultant, Artefact Heritage), with management input and review from Vanessa Edmonds (Principal, Artefact Heritage).

Vanessa has graduate and post graduate qualifications in Aboriginal archaeology and palaeoanthropology and over 30 years of experience in cultural heritage management throughout Australia. Vanessa is a Full Member of the Australian Association of Consulting Archaeologists Inc.

Ryan has a Bachelor of Arts with Honours in Archaeology and a Master of Museum Studies. Ryan has six years archaeological consulting experience in NSW, Queensland and Western Australia.

Jennifer has a Master's degree in Archaeology and has five years' experience in Aboriginal cultural heritage management in NSW.

Figure 1.1: Location of the study area



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Figure 1.2: Proposed plans



## 2.0 LEGISLATIVE CONTEXT

### 2.1 State legislation

#### 2.1.1 *National Parks and Wildlife Act 1974*

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

The protection provided to Aboriginal objects applies irrespective of the level of their significance or issues of land tenure. However, areas are only gazetted as Aboriginal Places if the Minister is satisfied that sufficient evidence exists to demonstrate that the location was and/or is, of special significance to Aboriginal culture.

The NPW Act was amended in 2010 and as a result the legislative structure for seeking permission to impact on heritage items has changed. A Section 90 permit is now the only Aboriginal Heritage Impact Permit (AHIP) available and is granted by the OEH. Various factors are considered by OEH in the AHIP application process, such as site significance, Aboriginal consultation requirements, ESD principles, project justification and consideration of alternatives. The penalties and fines for damaging or defacing an Aboriginal object have also increased.

As this project is being assessed under Part 4 Division 4.1 of the EP&A Act 1979 permits issued under the NPW Act 1974 are not required.

#### 2.1.2 *Native Title Act 1994*

The *Native Title Act 1994* was introduced to work in conjunction with the Commonwealth *Native Title Act 1993*. Native Title claims, registers and Indigenous Land Use Agreements are administered under the Act. There are no Native Title claims currently registered in the study area.

#### 2.1.3 *Aboriginal Lands Right Act 1983*

The *Aboriginal Land Rights Act 1983* (ALR Act) established Aboriginal Land Councils (at State and Local levels). These bodies have a statutory obligation under the ALR Act to:

- (a) take action to protect the culture and heritage of Aboriginal persons in the council's area, subject to any other law, and
- (b) promote awareness in the community of the culture and heritage of Aboriginal persons in the council's area.

The study area is within the boundary of the Metropolitan LALC.

#### 2.1.4 *Environmental Planning & Assessment Act 1979*

The proposal will be assessed under Part 4, Division 4.1 of the EP&A Act, which establishes an assessment and approval regime for State Significant Development (SSD). Part 4, Division 4.1 applies to development that is declared to be SSD by a State Environmental Planning Policy (SEPP). Section 4.41 (previously section 89J(c)) of the EP&A Act specifies that approvals or permits under section 90 of the NPW Act 1974 are not required for approved SSD.

## 2.2 Commonwealth legislation

### 2.2.1 *Environment Protection and Biodiversity Conservation Act 1999*

The *Environment and Heritage Legislation Amendment Act (No.1) 2003* amends the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) to include 'national heritage' as a matter of National Environmental Significance and protects listed places to the fullest extent under the Constitution. It also establishes the National Heritage List (NHL) and the Commonwealth Heritage List (CHL).

The *Australian Heritage Council Act 2003* (AHC Act) establishes a new heritage advisory body - the Australian Heritage Council (AHC), to the Minister for the Environment and Heritage and retains the Register of the National Estate (RNE).

The *Australian Heritage Council (Consequential and Transitional Provisions) Act 2003* repeals the *Australian Heritage Commission Act 1975*, amends various Acts as a consequence of this repeal and allows the transition to the current heritage system.

Together the above three Acts provide protection for Australia's natural, Indigenous and non-Indigenous heritage. The new features include:

- A new NHL of places of national heritage significance.
- A new CHL of heritage places owned or managed by the Commonwealth.
- The creation of the AHC, an independent expert body to advise the Minister on the listing and protection of heritage places.
- Continued management of the Register of the National Estate (RNE).

#### **National Heritage List**

The NHL is a list of places with outstanding heritage value to our nation, including places overseas. So important are the heritage values of these places that they are protected under the EPBC Act. This means that a person cannot take an action that has, will have, or is likely to have, a significant impact on the national heritage values of a national heritage place without the approval of the Australian Government Minister for the Environment and Heritage. It is a criminal offence not to comply with this law and there are significant penalties.

#### **Commonwealth Heritage List**

The CHL is a list of places managed or owned by the Australian Government and not of relevance to this project.

#### **Register of the National Estate**

The RNE is an evolving record of Australia's natural, cultural and Aboriginal heritage places that are worth keeping for the future. The AHC compiles and maintains the RNE under the *Australian Heritage Council Act 2003*. Places on the RNE that are in Commonwealth areas, or subject to actions by the Australian Government, are protected under the EPBC Act by the same provisions that protect Commonwealth heritage places (see above).

Following amendments to the *Australian Heritage Council Act 2003*, the RNE was frozen on 19 February 2007, meaning no new places can be added, or removed. From 2012, all references to the RNE were removed from the EPBC Act and the AHC Act. The RNE is now maintained on a non-

statutory basis as a publicly available archive. No Aboriginal sites were listed for Olympic Park on the RNE.

### *2.2.2 Aboriginal and Torres Strait Islander Heritage Protection Act 1984*

The Commonwealth *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (ATSIHP Act), deals with Aboriginal cultural property (intangible heritage) in a wider sense. Such cultural property intangible heritage includes any places, objects and folklore that 'are of particular significance to Aboriginals in accordance with Aboriginal tradition'. These values are not currently protected under the NPW Act. In most cases, archaeological sites and objects registered under the State Act will also be Aboriginal places subject to the provisions of the Commonwealth Act. There is no cut-off date and the ATSIHP Act may apply to contemporary Aboriginal cultural property as well as ancient sites. The ATSIHP Act takes precedence over state cultural heritage legislation where there is conflict. The Commonwealth Minister who is responsible for administering the ATSIHP Act can make declarations to protect these areas and objects from specific threats of injury or desecration. The responsible Minister may make a declaration under Section 10 of the Commonwealth Act in situations where state or territory laws do not provide adequate protection of intangible heritage places.

## 3.0 ENVIRONMENTAL CONTEXT

The environmental context of the study area is to assist in the prediction of:

- The potential of the landscape over time to have accumulated and preserved Aboriginal objects
- The ways Aboriginal people have used the landscape in the past with reference to the presence of resource areas, surfaces for art, other focal points for activities and settlement
- The likely distribution of the material traces of Aboriginal land use based on the above.

### 3.1 Geotechnical investigations

#### 1 Murray Rose Avenue

Geotechnical investigations were conducted on 1 and 5 September 2017, and comprised the auger drilling of four boreholes (BH1 to BH4) to depths between 5.64 m and 7.94 m below existing surface levels using a Tungsten Carbide bit (JK Geotechnics 2017a). The investigation found that the subsurface profile was generally comprised of a sandy and clayey fill over residual silty clay and shale bedrock. The depth of fill ranged from 0.9 m (BH4) to 3.3 m (BH1 and BH3). Natural residual clays were encountered below the fill extending to the underlying bedrock. The natural silty clays were generally of medium to high plasticity and were assessed as very stiff to hard strength. The clays contained varying amounts of fine to medium grained ironstone gravel.

#### 2 Murray Rose Avenue

Geotechnical investigations were conducted on 9 and 10 September 2017, and comprised the auger drilling of four boreholes (BH1 to BH4) to depths between 5.68 m and 6.77 m below existing surface levels using a Tungsten Carbide bit (JK Geotechnics 2017b). The investigation found that the subsurface profile was generally comprised of a sandy and clayey fill over residual silty clay and shale bedrock. Fill was encountered at the surface in all boreholes and extended to depths ranging from 1.2 m (BH2 and BH3) to 1.4 m (BH1). Natural residual clays were encountered below the fill and extended to the underlying shale bedrock. The natural silty clays were generally of medium to high plasticity and were assessed to be of very stiff to hard strength. The clays contained varying amounts of fine to medium grained ironstone and shale gravel.

#### Summary

Overall, the geotechnical investigations found that the deposit within the study area was comprised of a sandy clay fill overlying the natural sediments (residual clay silt and bedrock) to depth of between 1 – 3.3 m.

Archaeological material may be located within the fill layer, however, this is difficult to assess the archaeological potential as it is unknown where the fill was obtained from. If archaeological material is identified within the fill layer, it would not hold any scientific significance, due to a loss of context.

Archaeological material cannot be located within or below the bedrock layer as it is comprised of solid stone. Clay is formed by the gradual chemical weathering of rock and the residual clay in the deposit is likely to be a degraded component of the underlying bedrock, older than human occupation in Australia. Artefacts are unlikely to penetrate clay due to its high consistency. Therefore, there is nil-low potential that Aboriginal artefacts will be located within the remnant natural deposit.

### 3.2 Landscape, geology and soils

The study area is located on a mild southward sloping hill located near to Homebush Bay. The local area has low relief with slopes usually less than <5 per cent. The underlying geology of the study area consists of middle Triassic epoch black to dark-grey shale and laminate deposits belonging to the Wianamatta Group.

The study area was originally located on Blacktown soils. The Blacktown soils are shallow (<1000 millimetres [mm]) hard setting mottled red and brown podzolic soils on crests and yellow podzolic soils on lower slopes and along drainage lines. The Blacktown soil landscape is generally associated with gently undulating rises. The soils are primarily poorly drained with very little erosional activity with minor sheet and gully erosion in zones stripped of vegetation.

The study area today has had extensive modern ground disturbance however, and the natural Blacktown soil profile is almost entirely absent from the area. The soils in the study area, from geotechnical studies, are predominantly degrading organic landfill deposits. Areas of Blacktown soil profiles may still exist in isolated areas of the study area.

### 3.3 Hydrology

The study area is located less than 50 metres (m) west from the Bennelong Pond, which is serviced by Powells Creek and 755 m south of Haslam's Creek.

Prior to the use of the Homebush Bay area as a landfill in the late twentieth century, A tributary of Powell's Creek, Boundary Creek, was present to the south of the study area. The study area is located approximately 887 m north of the present course of Boundary Creek. The present course of Boundary Creek is located between landfill mounds and is not an intact natural creek bank (Figure 3.1; Figure 3.2).

**Figure 3.1: View of modified creek banks of Boundary Creek, west aspect**



**Figure 3.2: Boundary Creek with artificial retaining embankment, northeast aspect**



### 3.4 Natural resources

Aboriginal people were highly mobile hunter-gatherers utilising different landscapes and resource strategies across the Sydney basin. Different resources may have been available seasonally, necessitating movement or trade across the landscape (Attenbrow 2010: 78). Aboriginal people hunted kangaroo and wallaby and snared possums and other small animals and birds for food and skins. Plants were likewise an important source of nutrition for past Aboriginal peoples with numerous plant species utilised for food, manufacture and medicinal purposes (Attenbrow 2010: 41).

Given the location of the study area within close proximity to fresh water sources as well as the shore of Homebush Bay it is likely that Aboriginal people would have employed a range of subsistence activities to take advantage of their local environment. Coastal resources such as saltwater fish and shellfish would have been available to groups as well as small animals, plants, freshwater fish and eels (Tench 1793: 230, Kohen 1986: 77). Banksia flowers, wild honey, varieties of wild yam and Burrawong nut were recorded as important food sources, particularly for inland groups. Small animals such as bandicoots and wallabies were hunted with traps and snares (Collins 1798; Kohen 1985: 9).

### 3.5 Vegetation

All of the vegetation zones which are likely to have characterised the pre - European environmental context of the region have been reduced during the post-contact period, much of this impact having occurred during comparatively recent periods (Steele and Carney 1997: 13). The original landscape included eucalyptus forest on Wianamatta shale soils and wetlands in the lower reaches of Haslams Creek and Powells Creek and on the shores of Homebush Bay and the Parramatta River. Remnants of the Ironbark and scribbly gum eucalyptus forest and Aboriginal archaeological sites are preserved in the Newington Armoury (Dictionary of Sydney – Homebush 2015). The first European observations of the land recorded trees far apart and noted there was long grass and no underwood.

The vegetation fringing the mangrove and saltmarsh wetlands included Casurina (Swamp oak), Maleluca (paper bark) and leptospermum (tea tree) species. In the late 19th century extensive salt marsh and mud flats dominated the estuary and mangrove was widespread. The silt and alluvial deposits from Powells and Haslams Creek and the original shoreline of the bay and river are now completely overlain by reclamation fill (Fox and Assoc 1986: 5).

During the site visit the subject site's vegetation was observed to have a majority native tree canopy, with a native shrub midstorey and a native groundcover layer. Plantings within the car park consist of native grasses and shrubs and semi-mature Ficus, Sheoak, Spotted Gum and Ironbark trees. The majority of plantings on the site are the result of landscaping during the 1980s and 1990s.

Arboreport Vegetation Management Consultants (2015) identified three significant trees on the site which include a mature Morton Bay Fig on the western boundary and a mature Morton Bay Fig and Port Jackson Fig on the northeast corner (Fig and Australia Streets). These trees could be around 100 years old as they are present in 1943 aerial images of the site and appear to be mature specimens at that time.

### 3.6 Historical background

#### 3.6.1 Overview

A full overview of the history of the study area has been provided in the HAA (Artefact Heritage 2018c). The HAA identified four major phases of land use associated with the study area:

- Phase 1: Vegetation clearance for European farming, including the construction of a farmhouse and horse racing track, and later subdivision.
- Phase 2: The area was part of the State Abattoir and continued to be used as a cleared farming area up until the mid- twentieth century.
- Phase 3: Used for waste disposal in the late twentieth century.
- Phase 4: Remediation of contaminated landfill involved extensive earthworks in the study area. Subsequently redeveloped into a carpark prior to the 2000 Olympic Games, with excavation for services and surface landscaping.

The most pertinent land-use activities to the Aboriginal archaeological potential are the phases of waste disposal and the remediation works.

### 3.6.2 Twentieth century industries 1907-1988

An area of Homebush was resumed for the State Abattoir in 1907 and was built on the site in 1910 after the Glebe Island Abattoir was deemed as publicly unsafe following the Plague. This saw development of servicing roads for the abattoir and associated buildings. A branch railway line through the abattoir site was constructed by 1908, which included the levelling of the site (GML 1990: 5). This railway line was further developed in 1910, with site levelling, excavating, and roadways and platforms being constructed. After poor management practices the abattoir ran into a deficit and closed in 1988.

**Figure 3.3: 1916 St John Parish map of area with approximate study area shown in red. State Abattoir located to the southwest, and the brick works to the north (Source: LPI)**



A State Brick Works was located at the northern side of Homebush from 1911. Access roads were constructed, and a railway line was developed to provide access to the Brick Works. The Brick Works was used until its closure in 1940, when it was taken over by the Naval Armament Depot as a munitions store. It was later reopened following the end of World War Two until it ceased trading in 1988. The area has been rehabilitated as a wetland area with a raised walkway for visitors.

The Newington Armament Depot, which lay to the north of Homebush, was expanded after World War One, and took over some of the facilities in Homebush such as the Brick Works pit and some land that was part of the State Abattoir for storage of munitions.

As industrial development in Sydney expanded in the mid-twentieth century, locations to discard industrial waste were required. Homebush, at that time relatively undeveloped, was chosen as a dumping location for toxic waste, including waste from factories such as Timbrol and Union Carbide

that were located nearby in Rhodes. Wentworth Bay was filled in with industrial waste and the natural ecology of the area was severely damaged. The area nearest Homebush Bay became a shipbreaking yard in 1966, with many of the wrecks still visible today. By 1988 there was an estimated 9 million cubic metres of waste and contaminated soils spread over 400-ha within the 760 ha site (Figure 3.4).

**Figure 3.4: View of the waste deposited in Homebush Bay taken in 1972 (Source: State Library of NSW)**



**Figure 3.5: View of the study area in 1943 (Source: Six Maps)**



### 3.6.3 Sydney Olympic Park Redevelopment 1990s

The southern portion of Homebush was developed as Sydney Olympic Park following the 1993 successful bid for Sydney to host the 2000 Olympic and Paralympic Games. Part of this development was the construction of sports facilities, competitor housing, roads, and rejuvenation of parklands and streetscapes. Rehabilitation and stabilisation of the area was conducted due to the contamination from prior industrial use.

In July 2001, the Sydney Olympic Park Authority (SOPA) was established, a statutory body of the NSW Government under the *Sydney Olympic Park Authority Act 2001*. The Authority's charter is to manage and promote the 640 ha Sydney Olympic Park site, including protection of the 425 ha Millennium Parklands, which included the Newington Armament Depot and Nature Reserve.

From at least 2002 the study area was used as a car park up until 2014, when Murray Rose Avenue was constructed.

**Figure 3.6: View of the study area in 2005 (Source: Google Earth)**



Figure 3.7: View of the study area in 2014 (Source: Google Earth)



## 4.0 ABORIGINAL CONTEXT

### 4.1 Ethno-historical background

Prior to the appropriation of their land by Europeans, Aboriginal people lived in small family or clan groups that were associated with particular territories or places. It seems that territorial boundaries were fairly fluid, although details are not known. The language group spoken across Sydney was known as Darug (Dharruk – alternate spelling). The first written use of this term was in 1900, as before the late 1800s language groups or dialects were not discussed in the literature (Mathews and Everitt 1900). The Darug language group is thought to have extended from Appin in the south to the Hawkesbury River, west of the Georges River, Parramatta, the Lane Cove River and to Berowra Creek (Attenbrow 2010: 34). This area was home to a number of different clan groups throughout the Cumberland Plain.

Early historical accounts of Aboriginal people are inevitably subject to the writer's bias, however, they do provide valuable observations of Aboriginal customs and life during the early period of European occupation. Language dialects varied across the Cumberland Plain, although early Europeans recorded observations of interaction and mutual intelligibility between Darug speakers from different regions. Captain Watkin Tench detailed an interaction between two Aboriginal men, one from the coast and one from inland, and noted the range of variability between dialects. Tench observed that though the men conversed on par and understood each other perfectly, many words for common things bore no similarities, yet other words were only slightly different (Tench 1793:122).

There are two possible groups or clans associated with the local area. Bediagal or Bidjigal were observed in association with Arrowanelly 'Island at the Flats' an island originally on the western side of Botany Bay near the mouth of the Bay (Attenbrow 2010: 24). Alternatively, Wangal, Wann-gal or Won-gal were observed from the southern shore of the Parramatta River from near Darling Harbour to Rose Hill (Attenbrow 2010: 26).

The existing archaeological record is limited to certain materials and objects that were able to withstand degradation and decay. As a result, the most common type of Aboriginal objects remaining in the archaeological record are stone artefacts, followed by bone and shell. The locality of the study area along an undulating landscape within close proximity to fresh water sources indicates that the predominant site type would be stone artefact sites and open camp sites.

### 4.2 Archaeological context

#### 4.2.1 Previous archaeological reports

##### **Urbis 2015, 2 Figtree Drive, Sydney Olympic Park, Historic and Aboriginal Archaeological Assessment. Report prepared for Mirvac**

Urbis undertook a historic and Aboriginal archaeological assessment and prepared a heritage impact statement of 2 Figtree Drive, Sydney Olympic Park in August 2015. The assessment deemed the area to have no evidence of Aboriginal occupation and previous excavations of the site had revealed the ground surface was largely an introduced or reformed top soil. This site is located 550 m to the southwest of the study area.

##### **AMBS 2012, Newington Armament Depot & Nature Reserve, Sydney Olympic Park, Aboriginal Heritage Assessment. Report prepared for Tanner Architects Pty Ltd**

The purpose of the survey was to verify the location of previously recorded sites within the study area, if possible, to inspect the area for any new archaeological sites and to identify the potential for

archaeologically sensitive areas to be present within the Newington area. The assessment location is 1.5 km north west of the study area. There are five registered Aboriginal sites within the Newington Armament Depot & Nature Reserve study area registered by Irish (2004). These sites were not relocated during the survey and were assessed as being of low significance. No new Aboriginal sites or areas of Aboriginal heritage sensitivity were identified during the survey. This confirms AMBS (2012) prediction that the early development of the Armoury in the area has strongly impacted Aboriginal archaeological potential.

Given the extent of disturbance to the original land surface within the study area, it is considered that only the woodland area of the Newington Nature Reserve has any archaeological potential for Aboriginal heritage deposits. No Aboriginal cultural issues or sensitivities were identified for the study area by a representative of the Metropolitan LALC.

**Irish 2004, Aboriginal Archaeological Assessment Report Newington Armory Adaptive Re-Use and Rail Extension Project, Sydney Olympic Park, NSW. Report to the Sydney Olympic Park Authority**

Irish (2004) surveyed the woodland and nature reserve buffer zone of the Newington Armory Precinct in 2003. He established that the trees within the woodland were of insufficient age to contain scars of Aboriginal cultural origin and he determined that the scarred trees identified in previous studies were not Aboriginal in origin. Surface visibility was generally low, but during the survey three isolated silcrete and chert artefacts and two potential archaeological deposits (PAD) were identified. Possible silcrete manuports (stone material thought to have been transported to the area by Aboriginal people) were also identified. However, the Aboriginal origin of the presence of these silcrete pieces could not be confirmed.

Irish states that the lack of archaeological material is likely to be a reflection of the early urban development of the Parramatta River, which would have precluded the preservation of sites and the necessity for archaeological assessment; rather than an indication of less intense Aboriginal occupation of the area. Irish (2004) also identified two PADs during this assessment within a woodland conservation zone.

**Brayshaw 1997, Olympic Village Site, Newington, Homebush Bay, Aboriginal Archaeology. Report to MIRVAC Village Consortium**

Brayshaw (1997) surveyed the Olympic Village Site and Newington in 1997. No Aboriginal sites were found, and previous isolated artefacts identified by Rich (1985) were unable to be located. Some unmodified silcrete was identified in the area of sensitivity identified by Rich. A high level of disturbance was noted on the lower slopes west of Haslams Creek and near armament stores, with landfill seen on the flat adjacent to the creek.

Brayshaw (1997) stated that lack of silcrete over the entire Olympic Village and Newington site suggests that the material may not have been an accessible source to Aboriginals occupying the area and has only been exposed by disturbance. Brayshaw (1997) concluded that the area was not archaeologically sensitive, as the disturbance was too great to allow any meaningful interpretation of Aboriginal use of the area, or to offer the possibility of further information being gained from subsurface investigation. Feedback from Metropolitan LALC indicated their desire to monitor excavations for construction works in the vicinity of the previously identified artefacts.

**Dominic Steele & Martin Carney Archaeological Management & Consulting Group Pty 1997, Aboriginal Heritage, Australia Avenue, Fig Tree Circuit, 2000 Olympic Site, Homebush, NSW. Report to The Olympic Co-Ordination Authority**

Steele and Carney surveyed the subject site in 1997 prior to the construction of the current building. The site was at that time functioning as a truck parking area. No evidence for Aboriginal use of the

site was identified during the field-survey, however, archaeological visibility within the surveyed areas was poor. The investigations found that a Pre-European ground surface was likely to survive within the surveyed areas obscured by introduced fills and/or recently developed European soil-profiles. It was recommended that any impact to these subsurface areas be monitored for the presence of Aboriginal artefacts.

Note: Subsequent development works on the site to construct the current buildings involved site clearance and preparation, cut and fill excavation, levelling and grading, and subsequent construction works and service installation. These works are likely to have disturbed or destroyed any Pre-European ground surface.

#### 4.2.2 Summary

Overall, the results of the previous Aboriginal archaeological investigations within the wider area have identified that there is low potential for intact Aboriginal archaeological deposits to be identified due to high levels of past disturbance. The only area within the vicinity of the study area which held archaeological potential was Newington, located 1.5 km north west of the study area. Irish (2004) identified these PADs based on the presence of isolated surface artefacts and the assessment that the area had not been subject to ground disturbance.

### 4.3 Aboriginal Heritage Information Management System

**The location of Aboriginal sites is considered culturally sensitive information. It is advised that this information, including the Aboriginal Heritage Information Management System (AHIMS) data appearing on the heritage map for the proposal be removed from this report if it is to enter the public domain.**

An extensive search of the AHIMS database was undertaken on the 14 September 2018 (AHIMS search ID 370866).

An area of approximately 4 km surrounding the study area was included in the search. The AHIMS search provides archaeological context for the area and identifies whether any previously recorded Aboriginal sites are located within or near the study area. The parameters of the search were as follows:

<b>GDA 1994 MGA 56</b>	E 319938 - 323938 N 6251485 - 6255485
<b>Buffer</b>	0 m
<b>Number of sites</b>	7
<b>AHIMS Search ID</b>	370866

A total of seven sites are listed on the AHIMS database within the search area. The distribution of recorded sites within the AHIMS search area is shown in Figure 4.1. OEH lists 20 standard site features that can be used to describe a site registered with AHIMS, and more than one feature can be used for each site. The frequency of recorded site types is summarised in Table 4.1 below. For the seven sites within the search area, three site features were recorded. The majority of site features recorded were PAD (n=5, 71.4 per cent), with lesser numbers of art sites (n=1, 14.3 per cent) and modified trees (n=1, 14.3 per cent).

The nature and location of the registered sites is a reflection of the past Aboriginal occupation from which they derive, but is also influenced by historical land-use, and the nature and extent of previous archaeological investigations. Although Aboriginal occupation covered the whole of the landscape, the availability of fresh water, and associated resources, was a significant factor in repeated and long-

term occupation of specific areas within the landscape. Certain site types, such as culturally modified trees, are particularly vulnerable to destruction through historical occupation, while others, such as stone artefacts, are more resilient. Previous archaeological investigation has consisted of broad-scale survey. This type of survey is likely to target areas of high potential, such as land near water, and areas of high visibility, and to result in the identification of surface sites.

**Table 4.1: Frequency of site features within the AHIMS extensive search results**

Site Feature	Frequency	Per cent
Art (Pigment or Engraved)	1	14.3
Modified Tree (Carved or Scarred)	1	14.3
PAD	5	71.4
<b>Total</b>	<b>7</b>	<b>100</b>

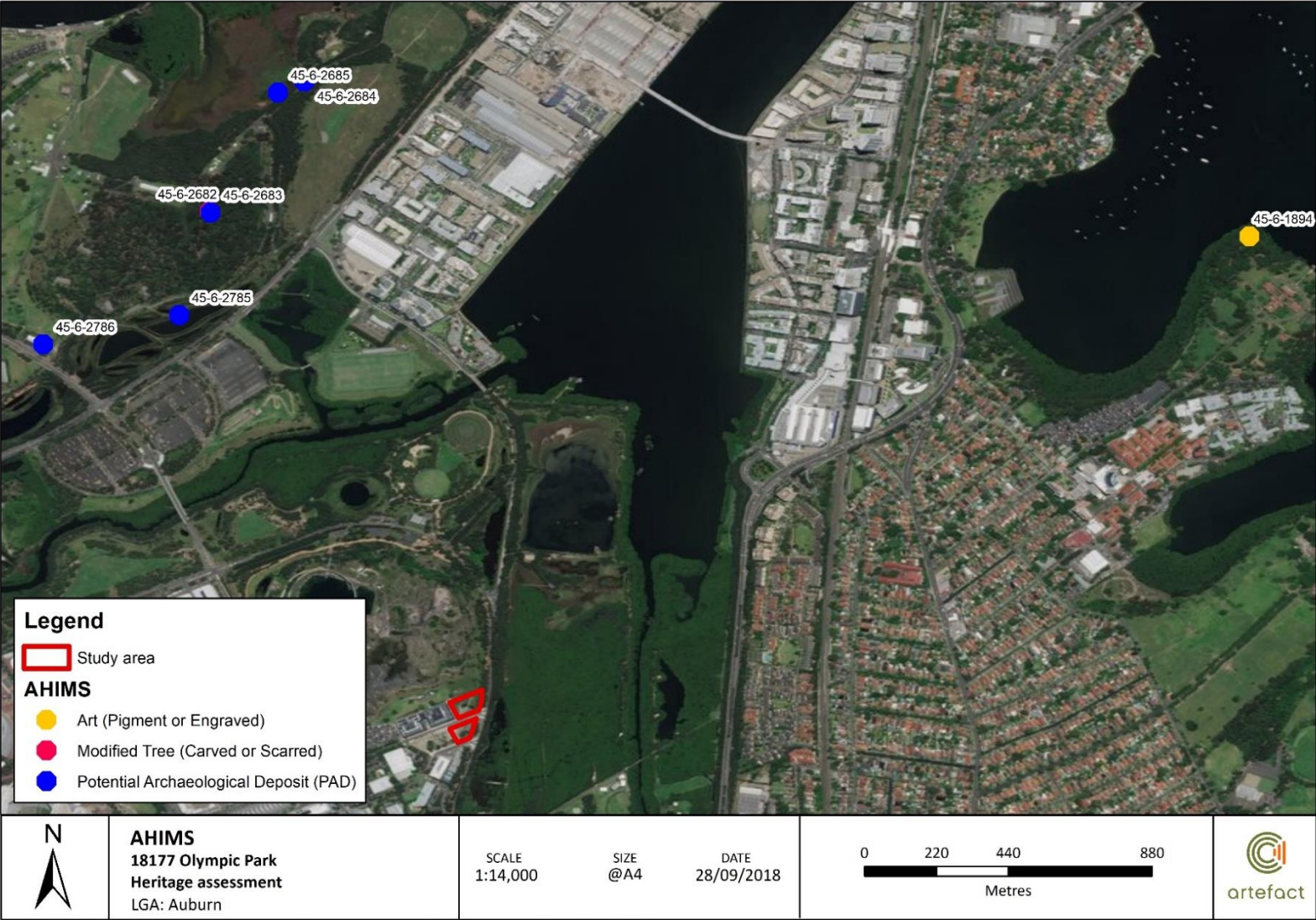
The data available indicates that past Aboriginal occupation of the immediate region was focussed on the natural resources of Haslams Creek and Brays Bay. This is reflected in the predominance of PADs located in the vicinity of these watercourses. However, these watercourses have not been subject to significant modification. While the watercourses within the immediate vicinity of the study area have been heavily altered.

Irish 2004 recorded all of six of the identified AHIMS sites within Newington area. The 2004 report and the names of the sites demonstrates that the site details have been incorrectly entered into the AHIMS database (Table 4.2). There are only two PADs identified within the Newington area, and the remaining three sites are isolated artefacts. Irish (2004) identified the PADs within an environmental conservation area, and due to the low level of disturbance, concluded that the area held potential to retain intact deposits of Aboriginal artefacts.

**Table 4.2: Newington sites**

Site ID	Site name
45-6-2682	Wanngal Woodland Axe-Marked Tree
45-6-2683	Wanngal Woodland IF1
45-6-2684	Wanngal Woodland IF2
45-6-2685	Wanngal Woodland IF3
45-6-2785	Wanngal Woodland PAD2
45-6-2786	Wanngal Woodland PAD1

Figure 4.1: Distribution of AHIMS sites within extensive search area



#### 4.4 Predictive modelling

Urbis (2015) produced the following predictive model which is applicable for the study area:

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*Resource distribution and availability such as the presence of drinking water, plant and animal foods, raw materials of stone, wood and vegetable fibre used for tool production and maintenance is strongly influenced by the nature of soils, the composition of vegetation cover and the climactic characteristics of a given region. The location of site-types such as open camp-sites and middens are strongly influenced by these factors, which are specific to different land systems and bedrock geologies. Understanding the environmental context of any given region is therefore an integral component necessary to modelling past Aboriginal land-use practices and/or predicting site distribution patterns within any given landscape (Carney and Steele 1997:12).*

*Current land use practices have the potential to affect the visibility of archaeological material; they may obscure or expose archaeological sites. In addition, previous disturbances may have also exposed archaeological material, such as excavation for dams or other ground disturbance. It is important that such factors are also considered in making assessments of archaeological resources in an area and understanding the distribution of observed sites. The majority of registered AHIMS sites in the region of the study area are stone artefact sites and middens, which occur along Sydney Harbour (AMBS 2012:16).*

*Aboriginal occupation was often focussed on prominent landforms such as ridges, which were favourable locations for camping and travelling, and from which surrounding plant and animal resources could be viewed. However, they also camped on lower, elevated areas adjacent to reliable water sources, such as the Parramatta River. The subject site is located on high ground approximately 600 m to the west of Powells Creek and the same distance to the mangroves of Homebush Bay.*

*The land was extensively cleared before the 1840s resulting in the loss of the original topsoil. In addition, given the extensive disturbance to the original land surface within the current study area, it is considered that the site does not have any archaeological potential for Aboriginal heritage deposits. The site is not expected to contain Aboriginal cultural objects as the excavation and development of the site would have removed such items.*

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## 5.0 SURVEY METHODOLOGY

### 5.1 Aims

The aims of the archaeological survey were to:

- cover a representative sample of the study area and to include all landforms that will potentially be impacted by the proposed works
- record the landform, general soil information, surface conditions and vegetation conditions encountered during the survey and how these impact on the visibility of objects
- record any Aboriginal objects/sites observed during the survey
- to identify areas of potential archaeological deposit (PAD) that may be present in areas that have had no or minimal disturbance
- to collect information to ascertain whether further archaeological investigations are required.

### 5.2 Site definition and recording

An Aboriginal site is generally defined as an Aboriginal object or place. An Aboriginal object is the material evidence of Aboriginal land use, such as stone tools, scarred trees or rock art. Some sites, or Aboriginal places can also be intangible and although they might not be visible, these places have cultural significance to Aboriginal people.

Office of Environment and Heritage guidelines state in regard to site definition that one or more of the following criteria must be used when recording material traces of Aboriginal land use:

- The spatial extent of the visible objects, or direct evidence of their location
- Obvious physical boundaries where present, e.g. mound site and middens (if visibility is good), a ceremonial ground
- Identification by the Aboriginal community on the basis of cultural information.

For the purposes of this study an Aboriginal site would be defined by recording the spatial extent of visible traces or the direct evidence of their location.

### 5.3 Protocol for recording Potential Archaeological Deposits

Where areas of PAD are identified towards the margins of each survey unit, efforts must be made by the survey team to delineate each area of potential beyond the survey unit. Where the extent of the PAD extends beyond the survey unit, efforts must be made to map the extent of that feature up to approximately 70 m outside the survey unit. If it is likely that these PADs continue beyond that point, the survey team must justify that the distance is adequate to provide an accurate representation of the PAD with regard to future planning and design for the project.

### 5.4 Sample survey

The study area was comprised of two Survey Units (SUs), defined by property boundary and landform (Figure 5.1). A sample survey is acceptable, with justification, under the Code of Practice. Full coverage survey of each survey unit was not practicable due to dense, impenetrable vegetation and

steep slopes in SU1 and surface coverage from temporary infrastructure in SU2. Each survey unit was subject to sample survey, which included as much intensive investigation as was practicable given the access limitations.

Surface visibility was limited to small ground exposures within drainage channels, erosion scours and localised areas of disturbance. Other areas of surface visibility included vehicle tracks and exposures around tree bases. Exposed vertical soil sections could be observed in SU2 along Parkview Drive.

## 5.5 Method

Archaeological survey of the study area was conducted on foot, in accordance with the Code of Practice and SSD\_9403, on 24 September 2018. The survey was undertaken by Ryan Taddeucci (Senior Heritage Consultant, Artefact Heritage), Jennifer Norfolk (Heritage Consultant, Artefact Heritage), and Kevin Telford (Aboriginal Site Officer, Metropolitan LALC).

A handheld Global Positioning System (GPS) was used to track the path of the survey team and record the coordinates of survey transects, as well as, the locations of sandstone outcrops and any Aboriginal sites. Detailed aerial maps marked with grid coordinates for each of the two survey units were carried by the survey team in the field. The coordinate system projection used for all data recording was GDA94 MGA 56. All ground exposures were examined for Aboriginal objects which may have been imported into the study area with the fill.

A photographic record was kept during the survey. Photographs were taken to record aspects of survey units including stone outcrops, stone platforms, vegetation, disturbance and recorded Aboriginal sites. Scales were used for photographs where appropriate.

Figure 5.1: Location of survey units



## 6.0 SURVEY RESULTS

### 6.1 Survey Unit 1

Survey Unit 1 is the mapped extent of 1 Murray Rose Avenue. The area is located north of Murray Rose Avenue and is boarded to the east by Bennelong Parkway and Samsung Electronics Australia to the west (Figure 6.1). To the west the area has been cut into and a retaining wall constructed to accommodate a loading dock for Samsung Electronics Australia. A chain-link fence boarded the entire property.

The area was densely covered by high grasses which restricted ground surface visibility (Figure 6.2). An east west oriented, bitumen footpath was located across the centre of 1 Murray Rose Avenue (Figure 6.3). A few areas of ground exposure were present across 1 Murray Rose Avenue, these areas did not contain evidence of Aboriginal artefacts (Figure 6.4). A concrete garden bed had been established in the centre of the property (Figure 6.6). A fallen telephone pole was also located within the property (Figure 6.5).

From the exterior of the property it was evident that the ground had been artificially elevated from the natural plain located to the east. A retaining wall had been constructed along the east and trees planted to stabilise the elevation of the property.

No Aboriginal objects or areas of PAD were identified within SU1.

**Figure 6.1: View of west of Samsung Electronics Australia (Photographed by R. Taddeucci, 24 September 2018)**



**Figure 6.2: View east of the artificial slope of the property down to Murray Rose Avenue (Photographed by R. Taddeucci, 24 September 2018)**



**Figure 6.3: View east of the bitumen footpath (Photographed by R. Taddeucci, 24 September 2018)**



**Figure 6.4: Ground exposure (Photographed by R. Taddeucci, 24 September 2018)**



**Figure 6.5: Fallen telephone pole**  
(Photographed by R. Taddeucci, 24 September 2018)



**Figure 6.6: View west of garden bed**  
(Photographed by R. Taddeucci, 24 September 2018)



## 6.2 Survey Unit 2

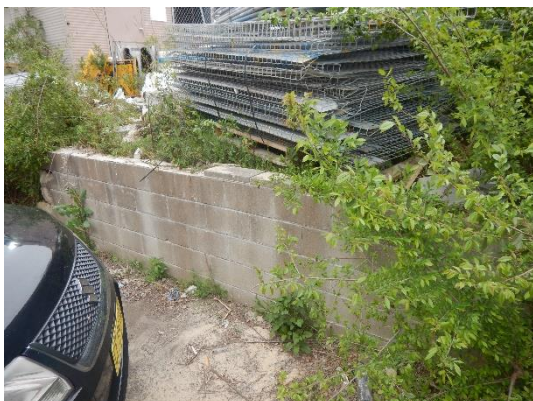
Survey Unit 2 is the mapped extent of 2 Murray Rose Avenue. The area is located south of Murray Rose Avenue and is boarded to the east by Bennelong Parkway and an active construction area to the west. At the time of the site inspection the property was occupied by Landlease and a number of temporary buildings had been constructed within the property.

A large portion of the property had been covered in concrete. Due to the laying of concrete there were very few areas of exposed ground. In the south of the property, no concrete had been laid; however, dense foliage completely obscured surface visibility. Gravel had also been scattered across the study area, obscuring surface visibility (Figure 6.9).

A retaining wall had been established in the property (Figure 6.7). The east of the property was bordered by a large retaining wall, approximately 2 m high (Figure 6.13). At the southern edge of the property there was an artificial slope (Figure 6.14). The slope illustrated that the property was situated on top of fill above clay overlaying bedrock.

No Aboriginal objects or areas of PAD were identified within SU2.

**Figure 6.7: Retaining wall located at the south of the property (facing northwest)**  
(Photographed by R. Taddeucci, 24 September 2018)



**Figure 6.8: Retaining wall located at the south of the property (facing west)**  
(Photographed by R. Taddeucci, 24 September 2018)



Figure 6.9: Vegetated area at the south of the property (Photographed by R. Taddeucci, 24 September 2018)



Figure 6.10: View north west of the Landlease car park (Photographed by R. Taddeucci, 24 September 2018)



Figure 6.11: Ground exposure (Photographed by R. Taddeucci, 24 September 2018)



Figure 6.12: View west from the north of the property (Photographed by R. Taddeucci, 24 September 2018)



Figure 6.13: View west of retaining from outside the property (Photographed by R. Taddeucci, 24 September 2018)



Figure 6.14: View west of artificial slope along the south of the property (Photographed by R. Taddeucci, 24 September 2018)



### 6.3 Survey coverage

A summary of survey coverage, in accordance with the Code of Practice, is outlined in Table 6.1 and Table 6.2 below. It should be noted that because the area is entirely covered in fill, a calculation of survey coverage is not an accurate reflection of the potential for Aboriginal objects to occur unless they have been introduced with the fill.

**Table 6.1: Survey coverage summary**

Survey unit	Landform	Survey unit area (sq m)	Visibility (%)	Exposure (%)	Effective coverage Area (sq m)	Effective coverage (%)
1	Slope	3,931	90	20	707.58	18
2	Slope	2,546	90	5	114.57	4.5

**Table 6.2: Landform survey coverage.**

Landform	Landform Area (sq m)	Area effectively surveyed (sq m)	% of landform effectively surveyed	Number of sites
Slope	6,477	822.15	12.69	0

Figure 6.15: Transects covered during survey



## 7.0 DISCUSSION

### 7.1 Ground disturbance

Based on previous studies in the locality, historical records and geotechnical reports, the study area has been subject to major subsurface disturbance, and therefore has low potential to contain intact archaeological resources.

Aerial photos of the study area illustrate that from at least 1943 a large building was present on SU2 and by 2002 the entire study area was used as a car park up until 2014, when Murray Rose Avenue was constructed. These previous disturbances account for the results of the geotechnical investigations, which found that the majority of the subsurface deposits had been removed and replaced with fill. The field survey identified the exposed profile of the deposit on the southern side of SU2, confirming that the subsurface deposit had been removed down to the clay layer.

Overall, based on the land use history and results of previous studies, there is low potential for archaeological remains to be present within the study area.

### 7.2 Analysis of archaeological potential

The archaeological potential of an area is determined by its landform, its location and the level of disturbance. Certain landforms, such as gentle slopes, are conducive to Aboriginal occupation while others, such as steep slopes, are not. The location of appropriate landforms in relation to natural resources, in particular their proximity to a permanent water source, increases levels of potential. Correlations between site location and proximity to a water source have been proven in previous archaeological investigations where the number of sites and their densities is highest in close proximity to a water source.

In areas where there is high level of disturbance however, the archaeological potential is lowered. It is unlikely that surface finds in these areas are in their original context and it is unlikely that subsurface archaeological deposits are intact. The archaeological potential of an area is rated high, moderate or low, based on all of the above considerations.

- High - Intact archaeological material is likely to be found in this area.
- Moderate - Intact archaeological material may be found in this area.
- Low - It is unlikely that intact archaeological material will be found in this area.

The overall archaeological potential of the study area has been assessed as low. While the study area has been located on a slope in close proximity to a permanent waterway, previous studies and observations in the field indicate that the all potential artefact yielding deposit would have been removed by previous impacts to the area.

## 8.0 SIGNIFICANCE ASSESSMENT

### 8.1 Significance assessment criteria

An assessment of the cultural heritage significance of an item or place is required in order to form the basis of its management. The OEH (2011) provides guidelines for heritage assessment with reference to the Burra Charter (Australia ICOMOS 2013) and the Heritage Office guidelines (2001). OEH requires consideration that includes the following:

- Research potential: does the evidence suggest any potential to contribute to an understanding of the area and/or region and/or state's natural and cultural history?
- Representativeness: how much variability (outside and/or inside the subject area) exists, what is already conserved, how much connectivity is there?
- Rarity: is the subject area important in demonstrating a distinctive way of life, custom, process, land-use, function or design no longer practised? Is it in danger of being lost or of exceptional interest?
- Education potential: does the subject area contain teaching sites or sites that might have teaching potential?

It is important to note that heritage significance is a dynamic value.

### 8.2 Archaeological significance assessment

The survey did not result in the identification of any Aboriginal sites or areas of PAD. Therefore, the study area is of no archaeological significance.

Unexpected Aboriginal archaeological material may be present within the fill layer. Any Aboriginal objects retrieved from the fill would likely be assessed as holding low scientific significance due to a lack of archaeological context and integrity.

## 9.0 IMPACT ASSESSMENT

### 9.1 Proposed development

It is proposed that a 15-storey residential development, including three basement levels with a bulk excavation level of approximately 1.85 m will occur at 1 Murray Rose Avenue. A similar development is planned for 2 Murray Rose Avenue; however, the basement will only have two levels with a bulk excavation level of approximately 0.4 m.

The geotechnical investigations found that 1 Murray Rose Avenue has a fill depth of 0.9 m and 2 Murray Rose Avenue has a fill depth of 1.2 m. Aboriginal archaeological material may be present within the fill layer, redeposited from elsewhere. However, as the provenance of the fill is unknown, it is not possible to assess the potential for Aboriginal archaeological material to be present. If Aboriginal archaeological material is present within the fill, it would be of low scientific significance due to a lack of archaeological context and integrity. It was found that natural deposits were located immediately below the fill layer. However, as these natural deposits are comprised entirely of clay overlaying bedrock, it is very unlikely that the proposed works will encounter intact Aboriginal archaeological deposits.

### 9.2 Impacts to potential archaeological resources

Due to the highly disturbed nature of the ground, archaeological deposits are not likely to exist. The proposed development is unlikely to impact Aboriginal archaeological remains.

## 10.0 MANAGEMENT MEASURES

The proposal is unlikely to impact any intact archaeological remains therefore no further archaeological investigation or mitigation is required.

An unexpected finds policy would be implemented in the event of Aboriginal archaeological deposits being identified during ground works and excavation.

An unexpected finds policy would involve the following actions:

- Stop work within the affected area, protect the potential archaeological find, and inform environment staff or supervisor.
- Contact a suitable qualified archaeologist to assess the potential archaeological find.
- If Aboriginal archaeological material is identified, works in the affected area should cease, and the OEH should be informed. Further archaeological mitigation may be required prior to works recommencing.
- If human remains are found:
  - not further disturb or move these remains
  - immediately cease all work at the particular location
  - notify NSW Police
  - notify DECCW's Environment Line on 131 555 as soon as practicable and provide available details of the remains and their location
  - not recommence any work at the particular location unless authorised in writing by DECCW.

## 11.0 RECOMMENDATIONS

The following recommendations were based on consideration of:

- Statutory requirements under the National Parks and Wildlife Act 1974
- The requirements of the relevant guidelines: Guide (OEH 2011), Code of Practice (DECCW 2010a) Consultation Requirements (DECCW 2010b)
- The results of the background research and archaeological survey results
- SSD\_9403

It was found that:

- No Aboriginal archaeological site or areas of PAD are located within the study area

It is therefore recommended that:

- An Aboriginal Cultural Heritage Assessment Report (ACHAR) must be prepared in compliance with the heritage requirements of SSD\_9403
- The ACHAR would not recommend further Aboriginal archaeological investigations
- Where changes to the scope of the proposal result in impacts beyond the extent of the study area, further archaeological survey and addendum ASR reporting may be required
- An unexpected finds policy should be implemented, with the following conditions:
  - Stop work within the affected area, protect the potential archaeological find, and inform environment staff or supervisor.
  - Contact a suitable qualified archaeologist to assess the potential archaeological find.
  - If Aboriginal archaeological material is identified, works in the affected area should cease, and the OEH should be informed. Further archaeological mitigation may be required prior to works recommencing.
  - If human remains are found:
    - not further disturb or move these remains
    - immediately cease all work at the particular location
    - notify NSW Police
    - notify DECCW's Environment Line on 131 555 as soon as practicable and provide available details of the remains and their location
    - not recommence any work at the particular location unless authorised in writing by DECCW.

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### **Online**

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