

ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT



[The subject land in relation to the nineteenth century landscape]

NEW ACUTE SERVICES BUILDING FOR THE PRINCE OF WALES HOSPITAL RANDWICK NSW

RANDWICK LGA

Mary Dallas Consulting Archaeologists

October 2018

**Incorporating additional information
on the ASB Addition (SSD-10339) 2019**

Report to NSW Health Infrastructure



Table of contents

1.0 Project Overview	3
1.1 Introduction	3
1.2 Report Authorship	4
1.3 Site Identification	4
1.4 Reason for the Current Study	6
1.5 Methods Used	10
2.0 Aboriginal Cultural Assessment	11
2.1 Aboriginal Community Consultation	11
2.2 Aboriginal Cultural Significance within the Subject Lands	15
3.0 Archaeological Assessment	16
3.1 Introduction	16
3.2 Environmental Context	16
3.3 Historical Land Use Context	23
3.4 Archaeological Context	24
3.5 Contact and Post-contact Period Occupation	35
3.6 Archaeological Inspection	37
4.0 Summary of Assessment Results	41
4.1 Assessment of Archaeological Sensitivity	41
4.2 Aboriginal Objects within the Subject Lands	42
4.3 Significance Assessment	42
5.0 Mitigation and Management	44
5.1 Potential Impacts to Aboriginal Objects	44
5.2 Potential Mitigative Measures	44
5.3 Proposed Management	44
6.0 Recommendations	50
7.0 References	52
Appendix A. Aboriginal Community Consultation Records	
Appendix B. AHIMS Register Search Records	
Appendix C. Information on the ASB Expansion 2019	



List of Tables

Table 1. Direct Agency Notices sent 26/04/2018.	11
Table 2. Direct Community Notices.	12
Table 3. Registered Aboriginal Parties.	13
Table 4. Responses to Information and Methodology Mailout.	14
Table 5. Responses to Draft Report.	14
Table 6. Projected Eastern Sydney dune stratigraphy.	19
Table 7. Summary of site types in the AHIMS search area.	25

List of Figures

Figure 1. Prince of Wales Hospital complex in the context of Greater Sydney.	4
Figure 2. The study area and future development area in their local context.	5
Figure 3. The proposed ASB complex in the south and proposed future expansion area to the north.	7
Figure 4. The study area in relation to the nineteenth century landscape.	17
Figure 5. Typical eastern Sydney dune profile missing A1 Horizon.	19
Figure 6. 1866 water board plan showing Birds Gully swamp.	20
Figure 7. Birds Gully Stormwater Channel.	21
Figure 8. Birds Gully Swamp relative to the subject land. Subject land and future development area outlined in red.	21
Figure 9. Subject land in relation to the recreated contact era vegetation and dune/swamp systems of the eastern suburbs.	22
Figure 10. The subject land in relation to 1943 aerial photography.	24
Figure 11. Location of registered Aboriginal sites in proximity to the subject land.	26



1.0

Project Overview

Introduction

This Aboriginal Cultural Heritage Assessment ('ACHA') report has been prepared by MDCA [Mary Dallas Consulting Archaeologists] at the request of NSW Health Infrastructure. It relates to the archaeological investigations for the Randwick Campus Redevelopment Project between Botany Street, High Street, Magill Street and Hospital Road at Randwick, in Sydney's south-east (**Figures 1 & 2**). The subject land is the site of the proposed New Acute Services Building (ASB) for the Prince of Wales Hospital (

Figure 3).

The proposal is part of a State Significant Development Application (SSDA 9113) to be lodged with the NSW Department of Planning and Environment (DPE) under Part 4, Division 4.7 of the *Environmental Planning and Assessment Act 1979* (the EP&A Act). Secretary's Environmental Assessment Requirements (SEARs) have been provided by the DPE, which under SEAR 9 require an Aboriginal Cultural Heritage Assessment report to be prepared, including documentation of Aboriginal community consultation in accordance with the Office of Environment & Heritage (OEH) 2010 *Aboriginal cultural heritage consultation requirements for proponents*. This report has been prepared in accordance with the SEAR Requirements and will inform an Environmental Impact Statement (EIS) for the SSDA.

This report describes the location and nature of the proposed activities, the nature of the areas of archaeological sensitivity proposed for investigation and the proposed methodology for the investigation of these areas. It has been prepared to meet the reporting requirements outlined in the *National Parks and Wildlife Amendment (Aboriginal Objects and Aboriginal Places) Regulation 2010* and relevant policy documents of the OEH, specifically the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (2010) and the *Aboriginal cultural heritage consultation requirements for proponents 2010. Part 6 National Parks & Wildlife Act 1974*.

The report includes:

- A description of the subject land and project (**Section 1**)
- Details of the Aboriginal cultural assessment undertaken (**Section 2**)
- Details of the Aboriginal archaeological assessment undertaken (**Section 3**)
- A discussion of the results and conclusions from the assessments (**Section 4**)
- A discussion of potential impacts and management strategies (**Section 5**)



- A set of management recommendations (**Section 6**)
- References used in the current report (**Section 7**)
- Aboriginal community consultation records (**Appendix A**)
- AHIMS Register Search Records (**Appendix B**)
- Additional information on the ASB expansion above Hospital Road and the lowering of Hospital Road to be included in this report at the request of the DPIE in August 2019 (**Appendix C**)

Report Authorship

This report has been prepared by MDCA Principal Heritage Consultant, Mary Dallas and MDCA archaeologists, Tamika Goward and Lucinda O'Connor.

Site Identification

The subject land comprises the city block bounded by Hospital Road to the east, Botany Street to the west, residential properties and non-residential uses up to High Street to the north, and Magill Street to the south at Randwick NSW. It currently comprises 54 allotments and is approximately 2ha in size and is situated within the Sydney Basin, approximately 6.2km south-east of the Sydney CBD and 1.7km west of Coogee (**Figure 1**). The current subject land is located within the Randwick Local Government Area, Parish of Alexandria and lies within the OEH Metropolitan North East Region.

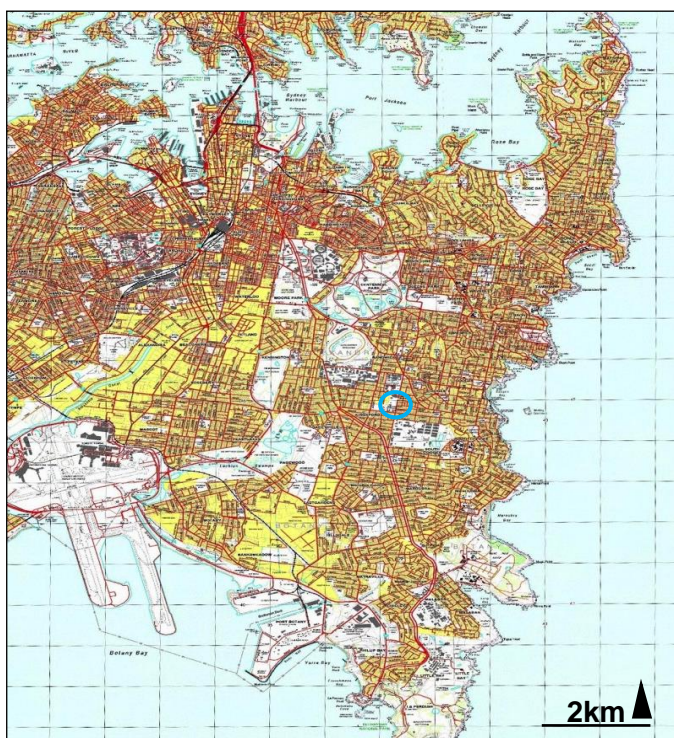


Figure 1. The subject land in the context of greater Sydney.

[Source: Sydney Heads, Parramatta River, Botany Bay and Bondi 1:25,000 topographic maps].



The subject land is on made ground comprising of levelled, asphalted and built over surfaces and all vegetation is relatively recent plantings. Currently, the most significant features include residential and commercial buildings, as well as a portion of Eurimbla Avenue. The subject land has been developed on land which was once situated at the base of a dune ridge adjacent to a low lying, swampy area, which formed part of a broader, undulating coastal dune system extending across much of eastern Sydney, comprising Quaternary wind-blown sands, locally and elsewhere dated to around 35,000 BP.

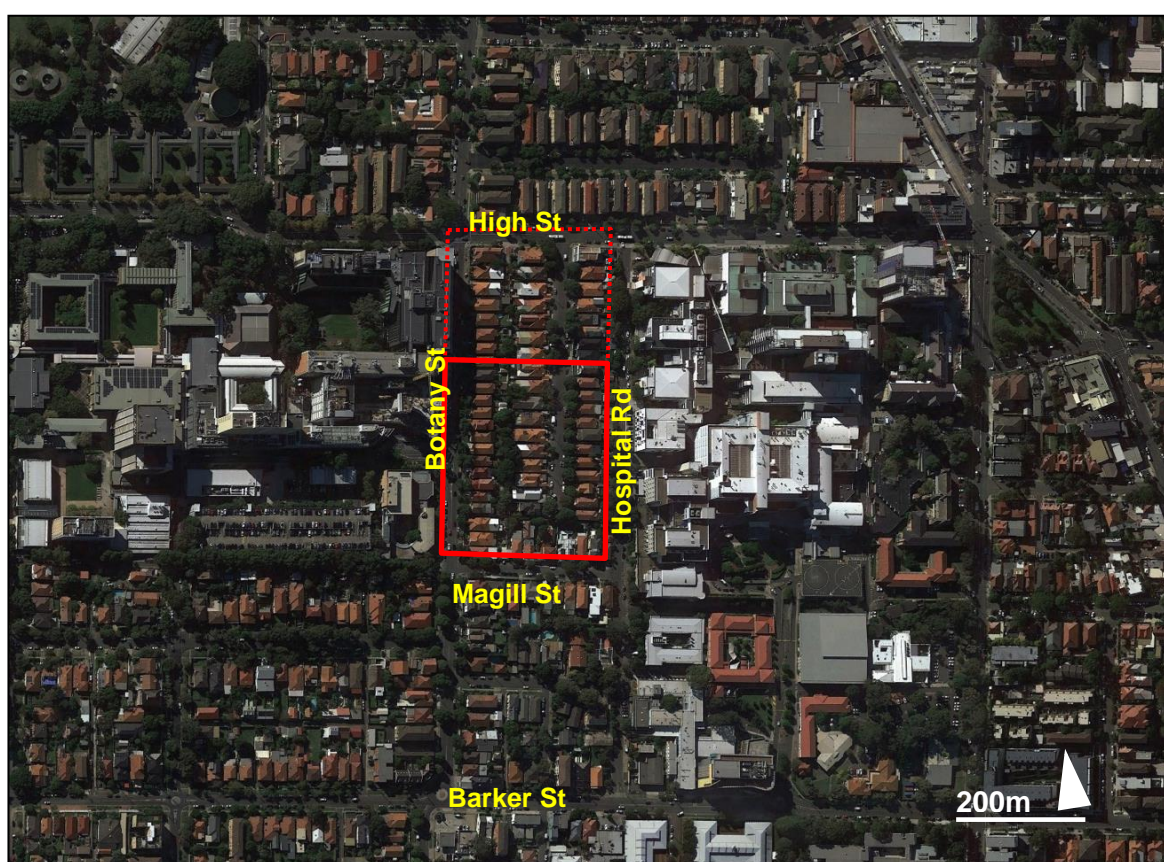


Figure 2. The subject land (red outline) and future development area (dashed line) in their local context. Note: the future development area will be the subject of a separate planning proposal.

[source: Overlay on 2016 aerial image]



Reason for the Current Study

1.1.1 Proposed Development

NSW Health Infrastructure is proposing the Randwick Campus Redevelopment Project. Stage 1 of that proposal is the new Acute Services Building (ASB) for the Prince of Wales Hospital to facilitate the expansion and integration of healthcare, research and education at Randwick NSW (

Figure 3). Land to the north of Stage 1 is under consideration as a future expansion area to be subject of separate development applications (**Figure 2 &**

Figure 3).

The construction of the ASB represents Stage 1 of a multi-stage redevelopment process. Stage 1 is the subject of a SSDA lodged with the NSW DPE under Part 4, Division 4.7 of the *Environmental Planning and Assessment Act 1979*, as noted in Section 1.1.

Development consent is proposed to be sought for the following¹:

- Bulk excavation.
- Site preparation works including shoring and piling.
- Construction of a 13-level building, which includes: An Adults' Emergency Department; Back of House and Front of House services; Operating Theatres; Plant, Central Sterilising Service, Logistics Interchange; Intensive Care Unit and Medical Assessment Unit; Inpatient Units; Plant and Helipad.
- Loading dock and ambulance bays.
- Three level bridge over Hospital Road for clinical and operational connections to the existing hospital campus.
- One level public bridge over Hospital Road for connection to existing hospital campus.
- Upgraded road infrastructure at Magill Street and Botany Street including potential signalised intersection and pedestrian crossing on Botany Street.
- Capacity for a potential future pedestrian bridge link over Botany Street from the ASB to the University of New South Wales (UNSW).
- New circulation roads to be constructed on the newly excavated grade to the west and south of the new building.
- Capacity for additional internal access road to be constructed to the northern part of the Project site.

¹ Advisian pers comm 17.5.18 and updates based on the Request for SEARs dated 15.02.18.



Aboriginal Cultural Heritage Assessment Report

Randwick Campus Redevelopment Project, Randwick NSW

- Hospital square with vehicular access and public drop off areas.
- Building services infrastructure and connections to utilities.
- Stormwater drainage infrastructure including on-site detention.
- Site landscaping.

It could be expected that the proposed development of the area, inclusive of any levelling (cutting and filling) earthworks, road construction and infrastructure installation, would result in the destruction of any Aboriginal cultural material within its boundaries. The demolition of structures (to be carried out under a separate planning approval pathway) vegetation clearance and site remediation will involve archaeological monitoring in areas that may expose or impact natural soil profiles. The current study has therefore been undertaken to define the Aboriginal heritage values of the entire subject land.



Aboriginal Cultural Heritage Assessment Report

Randwick Campus Redevelopment Project, Randwick NSW

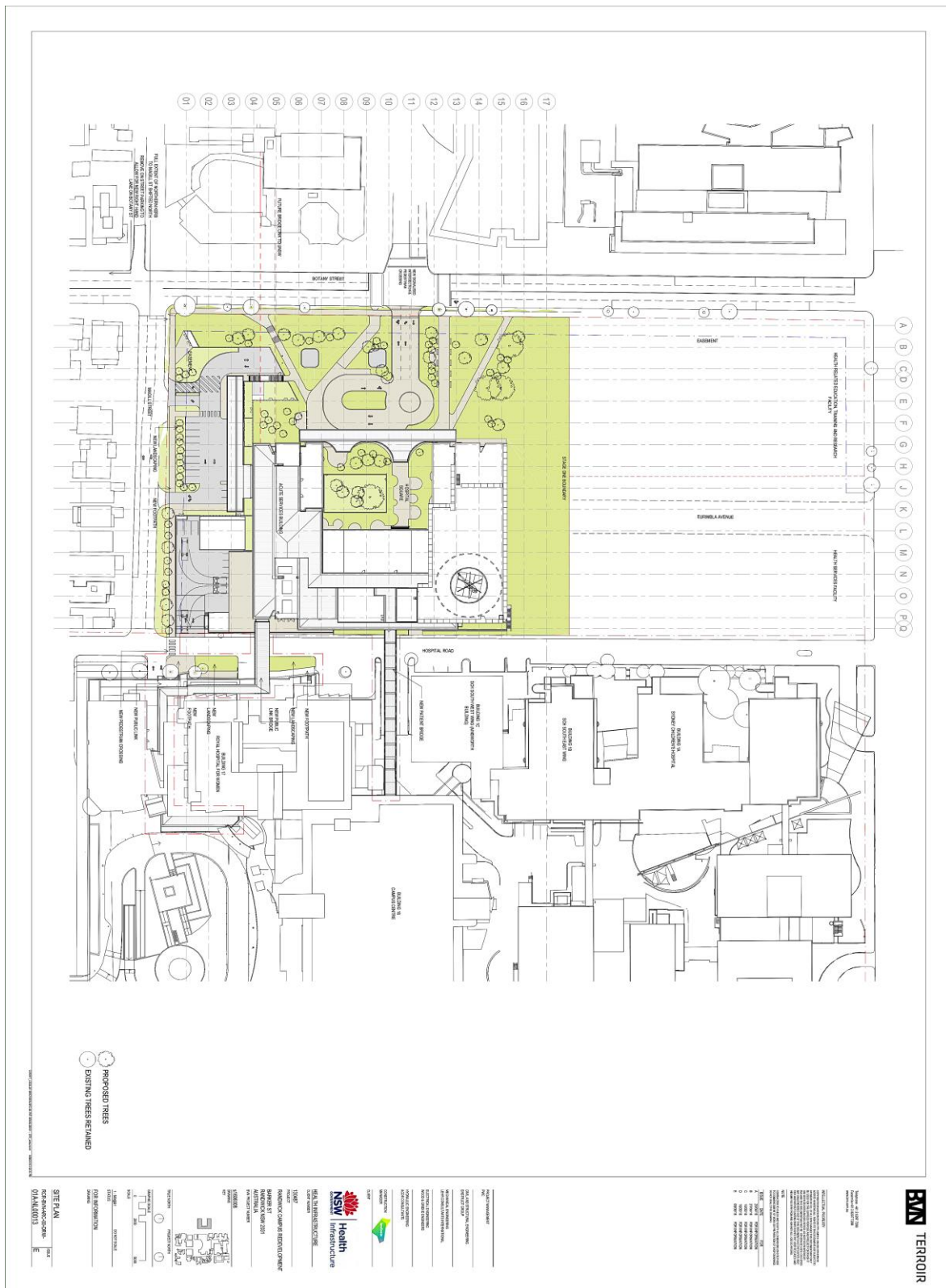


Figure 3. The proposed ASB complex in the south and proposed future expansion area to the north.



1.1.2 Legislative & Policy Requirements

The *National Parks & Wildlife Act (1974)* (NPW Act), administered by the *Office of Environment & Heritage* (OEH²), provides statutory protection for all Aboriginal 'objects' and 'places' where an object is defined as:

“any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains” [Section 5(1)]

An Aboriginal place must be declared under Section 84 of the *NPW Act* and be a place that:

in the opinion of the Minister, is or was of special significance with respect to Aboriginal culture, to be an Aboriginal place for the purposes of this Act.” [Section 84].

Amendments to the NPW Act in 2010 have retained an offence to knowingly *harm* an Aboriginal object [s86(1)] but greatly increased penalties for such offences. The amendments have also introduced a strict liability offence for any *harm* (i.e. knowingly or unknowingly) to Aboriginal objects [s86(2)] or Aboriginal places [s86(4)] without a valid and applicable Aboriginal Heritage Impact Permit (AHIP) under Section 90 of the Act. *Harm* is defined as:

“any act or omission that:

- (a) destroys, defaces or damages the object or place, or*
- (b) in relation to an object—moves the object from the land on which it had been situated, or*
- (c) is specified by the regulations, or*
- (d) causes or permits the object or place to be harmed in a manner referred to in paragraph (a), (b) or (c)”* [Section 5(1)]

It is a defence to the strict liability offence of harm to an Aboriginal object under s86(2) if a process of Due Diligence was followed which reasonably determined that the proposed activity would not harm an Aboriginal object [S87(2)]. Due Diligence assessment can take several forms, including a generic process developed by the OEH (as described in DECCW 2010a) or one of an equivalent standard. An exemption is also provided for 'low impact activities' which result in unknowing damage to an Aboriginal object, including a range of common farm and track maintenance activities.

² Originally known as the National Parks & Wildlife Service and in recent years as the Department of Environment and Conservation, Department of Environment and Climate Change and Department of Environment, Climate Change and Water.



Impacts to Aboriginal objects generally require an Aboriginal Heritage Impact Permit (AHIP), application for which must be accompanied by an Aboriginal Cultural Heritage Assessment report. An exception is the undertaking of archaeological test excavations, which in certain circumstances can be undertaken without an AHIP provided such works are undertaken in full compliance with the 2010 *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010c). Another exception is on the occasion that archaeological investigations are undertaken for a proposal as part of an SSDA under Part 4, Division 4.7 of the EP&A Act. As assessed and discussed below, in the current case it is not considered that proposed archaeological test excavations can be undertaken under the provisions of the *Code of Practice* but that as the investigations are part of a SSDA under Part 4, Division 4.7, it does not require an AHIP.

This report documents the archaeological assessment of the subject land and proposed impacts, in accordance with OEH guidelines (DECCW 2010c). The assessment must include full documentation of a prescribed process of Aboriginal community consultation in accordance with OEH guidelines (DECCW 2010a). This requires placing a public advertisement to seek expressions of interest in the project as well as directly notifying Local Aboriginal Land Councils and government agencies dealing with Aboriginal communities in the area. People or organisations can register as “Registered Aboriginal Parties” which provides them with a right to review and comment on aspects of the assessment, and to provide advice on Aboriginal cultural and historical significance.

Methods Used

The current study documents the archaeological assessment of the subject land and proposed impacts, and includes full documentation of a prescribed process of Aboriginal community consultation in accordance with current OEH guidelines (DECCW 2010b).



2.0

Aboriginal Cultural Assessment

Consultation with the local Aboriginal community was undertaken in order to document the Aboriginal cultural significance of the subject land. This section documents that consultation, which was undertaken in accordance with the requirements of the *National Parks and Wildlife Amendment (Aboriginal Objects and Aboriginal Places) Regulation 2010* (s80C) [‘the Regulation’]. Initially this involved formulating a list of Registered Aboriginal Parties (RAPs) to be consulted about the project.

Aboriginal Community Consultation

2.1.1 Public and Direct Notices

The OEH Aboriginal consultation process does not prescribe the automatic registration of Registered Native Title Claimants or Local Aboriginal Land Councils, however MDCA notes that the latter have a statutory responsibility “to promote the protection of Aboriginal culture and the heritage of Aboriginal persons”³ within their boundaries. As such the La Perouse Local Aboriginal Land Council was automatically listed as a Registered Aboriginal Party for the project.

A public notice seeking registrations of interest in the project was lodged in the Southern Courier on 01/05/2018 giving a date of 15/05/2018 for responses (**Appendix A1**). At the same time (26/04/2018) direct notices were sent to the agencies listed below (**Table 1**) to seek details of potential further Aboriginal parties to contact in relation to registrations of interest (see sample in **Appendix A1**). The responses received (**Appendix A1**) led to follow up letters being sent to the organisations listed in **Table 2**, enquiring whether they were interested in registering an interest in the project (see sample in **Appendix A1**). In response to the public notice, Darug Land Observations registered their interest on 08/05/2018. Outside of the consultation process, Goobah Developments also registered their interest on 04/06/2018.

Table 1. Direct Agency Notices sent 26/04/2018.

Agency	Response Deadline	Response Received?	Additional Contacts to those already Registered
Greater Sydney LLS	15/05/2018	Yes	The LLS states that it only considers heritage in the context of natural resource management projects and cannot provide contact lists for Aboriginal groups or persons to inform planning issues.
NNTT	15/05/2018	Yes	No results.
NTS Corp	15/05/2018	Yes	NTS Corp’s privacy guidelines restrict them from providing contact details of Tradition Owners. NTS Corp

³ Aboriginal Land Rights Act 1983, s52(1)(m).



Aboriginal Cultural Heritage Assessment Report

Randwick Campus Redevelopment Project, Randwick NSW

			have passed on the notice to individual groups and organisations who assert traditional interest.
OEH	15/05/2018	Yes	Walgalu, Thauaira, Dharug, Bilinga Cultural Heritage Technical Services, Gunyuu Cultural Heritage Technical Services, Munyunga Cultural Heritage Technical Services, Murrumbul Cultural Heritage Technical Services, Wingikara Cultural Heritage Technical Services, Gulaga, Biamanga, Callendulla, Murramarang, Butucarbin Aboriginal Corporation, Didge Ngunawal Clan, Ginninderra Aboriginal Corporation, Nerrigundah, Wailwan Aboriginal Digging Group
NSW Department of Aboriginal Affairs/ Registrar of Aboriginal Owners	15/05/2018	Yes	No additional contacts suggested.
La Perouse LALC	15/05/2018	No	
Randwick City Council	15/05/2018	Yes	No additional contacts suggested.

Table 2. Direct Community Notices.

Community group	Date of Letter	Response Deadline	Response Received?	Seeking Registration?
Walgalu	24/05/2018	08/06/2018		
Thauaira	24/05/2018	08/06/2018		
Dharug	24/05/2018	08/06/2018		
Bilinga Cultural Heritage Technical Services	24/05/2018	08/06/2018		
Gunyuu Cultural Heritage Technical Services	24/05/2018	08/06/2018		
Munyunga Cultural Heritage Technical Services	24/05/2018	08/06/2018		
Murrumbul Cultural Heritage Technical Services	24/05/2018	08/06/2018		
Wingikara Cultural Heritage Technical Services	24/05/2018	08/06/2018		
Gulaga	24/05/2018	08/06/2018	04/06/2018	Yes
Biamanga	24/05/2018	08/06/2018	04/06/2018	Yes
Cullendulla	24/05/2018	08/06/2018	04/06/2018	Yes
Murramarang	24/05/2018	08/06/2018	04/06/2018	
Butucarbin Aboriginal Corporation	24/05/2018	08/06/2018	01/06/2018	Yes
Didge Ngunawal Clan	24/05/2018	08/06/2018	24/5/2018	Yes
Ginninderra Aboriginal Corporation	24/05/2018	08/06/2018		
Nerrigundah	24/05/2018	08/06/2018		
Wailwan Aboriginal Digging Group	24/05/2018	08/06/2018	29/06/2018	Yes (by phone)
Goobah Developments	24/05/2018	08/06/2018	06/06/2018	Yes



2.1.1 Registered Aboriginal Parties

On the basis of the notification process above, the following Aboriginal organisations were listed as Registered Aboriginal Parties and details of these organisations were sent to the OEH and La Perouse LALC as required by the *Regulation* (80C[5b]) on Friday 5th June, 2018.

Table 3. Registered Aboriginal Parties.

Name	Abbreviation Used in this Report
La Perouse LALC	LPLALC
Darug Land Observations	DLO
Goobah Developments	Goobah
Murramarang	Murramarang
Butucarbin Aboriginal Corporation	Butucarbin
Didge Ngunawal Clan	DNC
Cullendulla	Cullendulla
Biamanga	Biamanga
Wailwan Aboriginal Digging Group	Wailwan
Gulaga	Gulaga

2.1.2 Project Information and Comment on Methodology

All Registered Aboriginal Parties were sent project information, a proposed assessment methodology on June 25th 2018 with a deadline of July 25th 2018 for responses (see **Appendix A2**). Specifically, all Registered Aboriginal Parties were requested to provide comment on:

- The proposed assessment methodology.
- Any objects or places of cultural value to Aboriginal people which may be located within the current subject land, and any other Aboriginal cultural or historical information relevant to the current assessment and proposal.
- Aboriginal cultural knowledge relating to the subject land.

In addition, Registered Aboriginal Parties were requested to inform MDCA of any information of a culturally sensitive nature so that appropriate protocols of access and use could be developed. The comments received are shown in **Table 4** and where relevant, included in **Appendix A2**.



Table 4. Responses to Information and Methodology Mailout.

Registered Aboriginal Party	Response
DLO	DLO support the proposed methodology. They strongly advocate that if any Aboriginal archaeological material is retrieved during the proposed investigations, that they be reburied on country. DLO also request involvement in the archaeological test excavations, monitoring of the topsoil removal and all other form of works to be carried out on the site.

All RAPs who provided a response supported the proposed assessment methodology presented in the information and methodology document. In their response, DLO have requested involvement in all future works on site relating to the development, including monitoring of the removal of topsoil. Given the artificial, highly disturbed nature of the topsoil in the area proposed for development, this is not considered warranted on archaeological grounds. This conclusion is supported by the environmental information, survey reporting and assessment below. No further investigations beyond the actions outlined below have therefore been adopted in the management strategy.

2.1.3 Comment on Draft Report

The comments of the Registered Aboriginal Parties as discussed above were used in the formulation of the draft Aboriginal Cultural Assessment and draft Aboriginal Cultural Heritage Assessment Report. These draft documents were sent to all Registered Aboriginal Parties for comment on September 25th, 2018 with a deadline of October 24th, 2018 for responses (see **Appendix A3**). Specifically, all Registered Aboriginal Parties were requested to provide comment on:

- Their views on the draft recommendations.
- Their support or otherwise for the proposal.
- Any other views or information relating to the Aboriginal Cultural Heritage Assessment parties believed should be considered.

The comments received are shown in **Table 5** and where relevant, included in **Appendix A3**:

Table 5. Responses to Draft Report.

Registered Aboriginal Party	Response
LPLALC	LPLALC agree with the recommendations set out in the draft ACHA report and are eager to provide advice on the cultural significance of the area throughout the project.
DLO	DLO responded in support of the draft report. They strongly advocate that if any Aboriginal archaeological material is retrieved during the proposed investigations, that they be reburied on country. DLO also request involvement in the archaeological test excavations and all other form of works to be carried out on the site.



Aboriginal Cultural Significance within the Subject Lands

The Aboriginal community consultation undertaken in relation to the current investigations has not identified any specific Aboriginal cultural connections or significance relating to the current subject land, though it is apparent from correspondence that a general level of significance is ascribed to the area and its potential to contain Aboriginal archaeological remains as an indicator of past Aboriginal presence in the landscape.



3.0

Archaeological Assessment

Introduction

The Aboriginal Archaeological Assessment component of the current study is based on the requirements of the OEH *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010c). The current section describes the environmental and archaeological context of the subject land.

Environmental Context

Note: The majority of environmental information comes from historical records, plans and images which represent the landscape as it was around the time of first European contact. It is not known how far back in time this can be projected, but it is worth considering that the Aboriginal archaeology which has so far been found at Prince of Wales Hospital dates to a period (ca. 8,000 years ago) of great landscape change at the end of the last ice age, prior to the stabilisation of sea levels at around their current level. The landscape as seen by Aboriginal people at that time may have been considerably different to that which we can recreate from historical records, especially with respect to the location of ephemeral freshwater swamps (which would have been important sources of fresh water and other resources). The extent of major topographical change to the dunes is also unclear. Caution should therefore be applied in relating this information to likely Aboriginal use of this changing landscape.

The topography of the Randwick area is defined by the Botany Bay dune system. Most of the eastern suburbs are underlain by these Botany sands, which originally encompassed an undulating series of sand dunes which extended from Rose Bay, along the coast to Botany Bay, and inland to Randwick and Alexandria. Dunes are broadly aligned southeast to northwest and are up to 20-30m in height. A sense of the height and parallel nature of these dune ridges can be gained by traveling along the undulating terrain on Barker or High Streets between Avoca Street and Anzac Parade. Due to their substantial nature, the dunes have survived broadly in their original (i.e. 1788) form, though often with significant impacts to their uppermost units from historical land use.

Between the dunes were swales sometimes filled with small freshwater swamps. The current subject land is situated in such a swale, sloping gently to moderately down from north to south and with more elevated dunes to the east and west. Historical plans indicate that in recent centuries, the central portion of the subject land contained a freshwater sedge swamp known as 'Bird's Gully', which drained southwest into the Lachlan Swamp system and into Botany Bay (**Figure 4 & Figure 6**).



Figure 4. The subject land in relation to the nineteenth century landscape.

[Overlay of 1866 Water Board plan as adapted and reproduced in Benson & Howell 1995:91 on current aerial imagery].

3.1.1 Geology, Soils and Hydrology

The subject land is underlain by Sydney Hawkesbury sandstone above which the Quaternary aged Aeolian dune system of ridges and swales have developed. The subject land lies on a dune that is part of an extensive system of dune ridges and swales lying between the Lachlan and Botany Swamps and the eastern Sydney coast. This dune system is of the Tuggerah Aeolian soil landscape (Chapman et al 2009). This landscape comprises undulating to rolling coastal dune fields with a local relief to 20m. Dunes are generally north-south oriented with convex, narrow crests and broad, gentle concave swales. Dune slopes are moderately inclined. This soil landscape is vulnerable to extreme wind erosion, localised flooding and permanently high water tables.



The background radiocarbon ages of >35,000 years (see below) for the dune system indicate its initial formation in the Last Glacial Maximum, prior to the formation of Botany Bay and with the ocean edge a number of kilometres further east than at present. The dunes contain discontinuous peat and mud lenses formed where terrestrial swamps once existed and which were subsequently buried by wind deposited sand. Subsequent induration of the dune formed a precipitation zone also known as Waterloo rock or 'coffee rock.' Above this coffee rock, shifting dunes and associated swales have led to the development of ephemeral swamps, evidenced as peaty layers within the dune above the coffee rock layer. Such layers are likely to be found in the subject land.

The typical eastern Sydney dune profile comprises white or grey sands (A Horizon) above the precipitation zone of hard orange brown to dark brown to black sand (B1 Horizon) and unweathered yellow sands (B2 Horizon) below it and overlying the sandstone bedrock. The dune profile does not contain a weathered bedrock layer (C Horizon) suggesting that the sandstone was exposed at the time of dune formation. The nearest outcropping sandstone in the area is located about 300m east of the subject land on elevated ground immediately west of Avoca Street, although geotechnical and archaeological investigations documented below demonstrate that sandstone is very shallow under the current surface in the north-eastern corner of the subject land along High Street, and may therefore have been exposed prior to the arrival of Europeans (Douglas Partners 2018).

Ages for the upper dune units in the region have been obtained from sediments within a cross-section of the Banksmeadow area. Here, a date of >35,000 years was obtained on peat beneath coffee rock (from the B2 Horizon) and a Holocene date was obtained for freshwater peat above the coffee rock (Smart 1974). The Holocene date is likely to be the result of reworking of the older dune surface during times of revegetation and erosion. A recent study into the geomorphological development of coffee rock in the Botany Basin has questioned the reliability of using the coffee rock as a stratigraphic marker of the time gap separating the deposition of soil horizons within the Botany Basin sequence (Gale et al 2017).

We can assume that the dune within the subject land consists of the stratigraphic sequence common to the whole dune system of eastern Sydney. Because the site lies low in the profile it could be expected that the sand deposits will be relatively thin and may be overlain by fill materials due to the history of development in the area. Peaty swamp deposits and sandstone bedrock may be present. A possible stratigraphic sequence is outlined in Table 6 and illustrated in Figure 5. In general, though, the dune profile in the subject land is likely to show the presence of overlying imported fill (sand and/or rubble) on a truncated natural horizon usually lacking an A1 horizon and the upper portion of the A2 horizon. This truncation is due to a range of historical land use impacts which are observable across the site, such as cuttings prior to construction and levelling.

Table 6. Projected eastern Sydney dune stratigraphy.

Horizon	Typical Thickness	Description
A1	0 - 0.1/0.3m	Thin upper humic topsoil
A2	<1m	Leached white Aeolian sands*
B1	0.5 – 1m	[Precipitation Zone]. Heavily indurated mottled sands described as Waterloo or coffee rock.
B2	Various	Unweathered yellow sand
Bedrock		Sandstone bedrock

- may contain peaty layer



Figure 5. Typical eastern Sydney dune profile missing A1 Horizon.

[Documented in excavations by MDCA at Long Bay Correctional Complex (2007)]



Aboriginal Cultural Heritage Assessment Report

Randwick Campus Redevelopment Project, Randwick NSW

Historical plans indicate that the subject land lies partly on a arm of a freshwater sedge swamp system known as 'Bird's Gully' which drained south-west into the Lachlan Swamp system and on into Botany Bay (**Figure 4 & Figure 6**). One of the southern arms of Bird's Gully was channelised in the 1930s, confirming the accuracy of its location on earlier plans⁴ (see **Figure 7**).

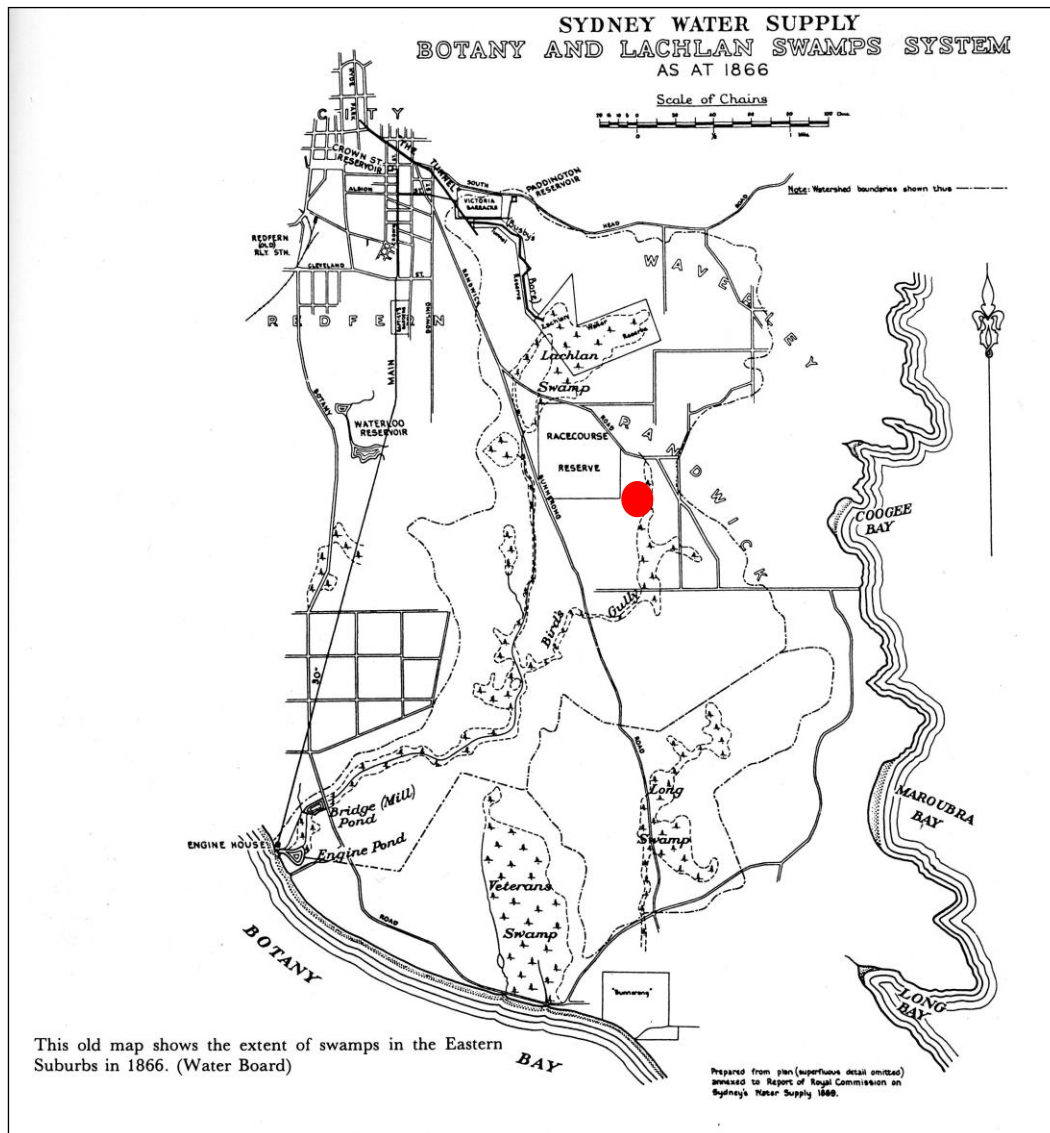


Figure 6. 1866 water board plan showing Birds Gully swamp. Subject land indicated by red marker.

[source: Benson & Howell 1995:91]

⁴ see plan at http://www.sydneywater.com.au/whowere/OurHeritageAssets/_ImageView.cfm?hi=4574209&image=45708
26



Aboriginal Cultural Heritage Assessment Report

Randwick Campus Redevelopment Project, Randwick NSW



Figure 7. Birds Gully Stormwater Channel.

[source: Sydney Water s70 Register entry for Birds Gully Stormwater Channel 10]

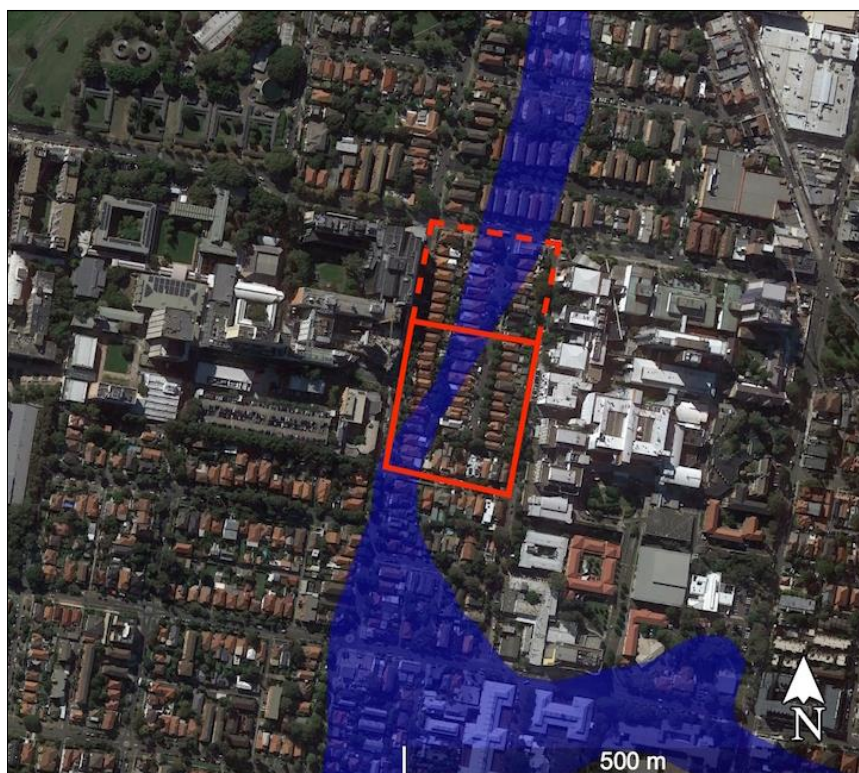


Figure 8. Birds Gully swamp relative to the subject land. Subject land and future development area outlined in red.

[Plotted using overlay of 1866 Water Board plan. Boundaries approximate based on limitations of original mapping]



3.1.2 Vegetation and Resources

The vegetation present on the dune in early historic times was a mixture of 'heath, scrub and low forest vegetation with a rich variety of shrubs' including banksia and grass trees (Benson & Howell 1995:90-91), known collectively as Eastern Suburbs Banksia Scrub. The dune drained into the freshwater sedge swamplands of Bird's Gully. These swamps would have supplied fresh water and a range of valuable plant resources for food and equipment (e.g. fibers) as well as being a magnet for local fauna and birds. The dunes themselves would also have provided an array of plant foods including fruits, nectar, tubers and roots (Benson & Howell 1995:12ff) and probably also freshwater fish, eels and freshwater mussels. Freshwater was also available from rock holes in the general area, as Cook found in 1770 (Navin Officer 2003:11). The interplay of swamp, dune and vegetation at the time Europeans first arrived in Sydney can be seen in **Figure 9**.

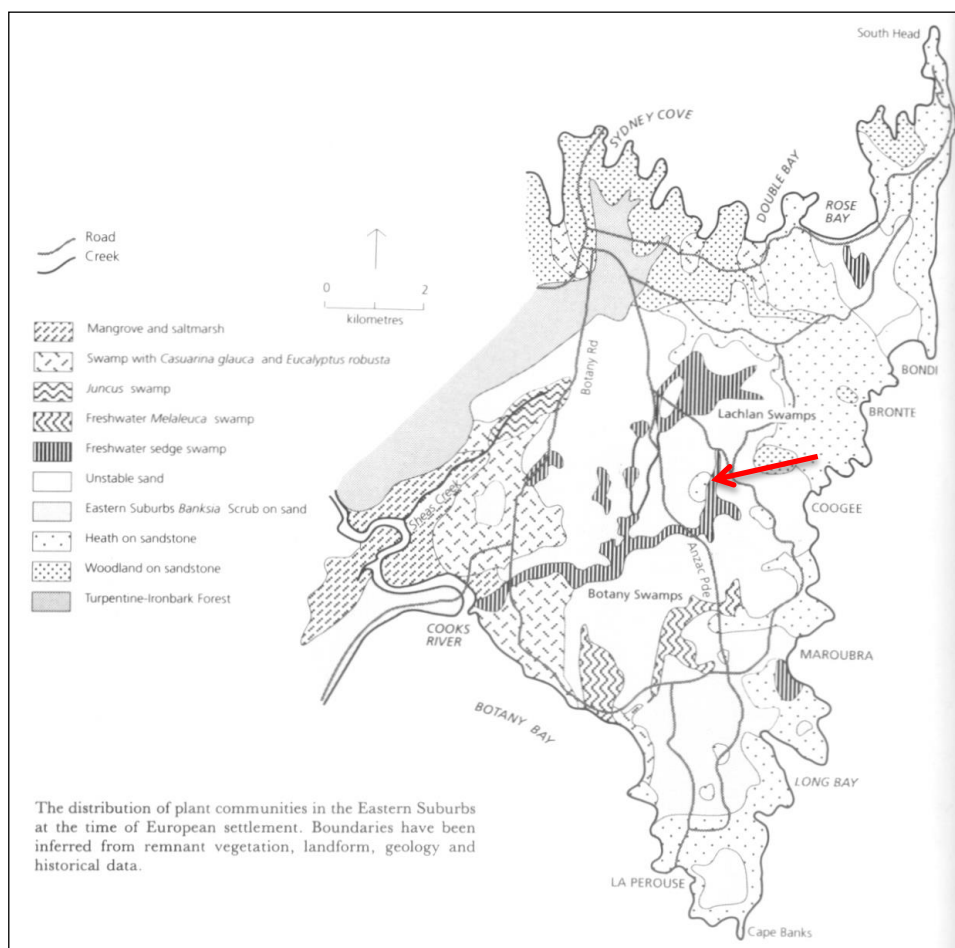


Figure 9. Subject land (red arrow) in relation to the recreated contact era vegetation and dune/swamp systems of the eastern suburbs.

[Source: Adapted from Benson & Howell 1995:90].



The extent to which these resources (or others) were available (and exploited) in the more distant past is not known, though lipid analysis of one of the hearth stones excavated immediately adjacent to the subject land from the dune underneath the former Asylum cemetery, indicated that freshwater fish were cooked on a fire here (Austral/Godden Mackay 1997 Volume 2 Part 3:30). As the rich resources of the ocean shore and Botany Bay were always at least several kilometers away from the subject land, and even further away during the Pleistocene, they are unlikely to have been exploited by Aboriginal people based at a campsite here, within the dune system. These factors, and the low densities of stone artefact evidence from the site, suggest that Aboriginal occupation was of relatively short duration and focussed on the exploitation of local resources particularly the swamplands. However, the nature of Aboriginal occupation in this period is poorly understood due to a lack of archaeological data.

Historical Land Use Context

Few historical descriptions of the landscape setting and use of the precise subject land or the adjacent swamps exist. Road survey and crown plans dated to 1850, illustrate the subject land as comprising mostly swamp lands, with a high sand hill along the eastern portion (Casey and Lowe 2018: 12-13). The subject land was first purchased by Simeon Henry Pearce and James Pearce in 1851. It is known that in 1878 the southern portion of the subject land was in use as a plant nursery, which sold both ornamental and fruit trees. The northern portion of the subject land, which is proposed for future development, is known to have been leased for use as a plant nursery also in 1886. A press article reported on 25 May 1889 that a small watercourse was extant on this property and that wells and ponds did not dry out here (Casey and Lowe 2018:18).

An Asylum period farm, located west of Botany Street, adjacent to the subject land is described as being “a sandy portion at the foot of a sand hill” (Coulter 1916:28), though this may refer to the base of the eastern slope of the parallel dune to the west. The farm was located in this vicinity due to the “poor quality” of the land south of Barker Street, which was originally granted for this purpose (Graham Brooks & Associates 1997:10).

By 1915, much of the subject land was being subdivided and built upon for residential use. The 1943 aerial photograph (**Figure 10**) covering the subject land suggests that it was developed as a high-density residential area at this time, comprising many cottages. For a detailed history of land use within the subject land, refer to the Historical Archaeological Assessment (Casey & Lowe 2018).



Figure 10. The subject land in relation to 1943 aerial photography.

[source: Department of Planning SIX Viewer]

Archaeological Context

3.1.3 Previous Archaeological Work & Site Recordings

Background research into archaeological investigations previously completed within and surrounding the subject land was undertaken for the current study. Sources accessed included the OEH Aboriginal Heritage Information Management System Aboriginal Sites Register ('the AHIMS Register') and Catalogue of Archaeological Reports and other secondary sources. This review allowed the plotting of known Aboriginal sites and a means of predicting the potential location of further unrecorded areas of Aboriginal heritage significance.



OEH AHIMS Register

A search of the OEH AHIMS Register of a 4km by 4km area centered on the subject land revealed that 7 Aboriginal sites had been previously recorded in the area⁵ (see **Appendix B**, see also **Figure 11**). These sites are summarised in **Table 7** below. No Aboriginal sites or objects have previously been recorded within or adjacent to the boundaries of the subject land. The nearest and only known site within 500m of the subject land is a significant open campsite containing a series of deflated hearths and a small number of stone artefacts and manuports, known as the “*Prince of Wales Hospital Aboriginal; Hearth;*” (AHIMS #52-6-2495). This site (see below) was located in an Aeolian sand ridge within and along the western boundary of the former Destitute Children Asylum Cemetery which lay about 100m east of the current subject land.

Most recorded Aboriginal archaeological sites in the local area appear to be middens and rock engravings. This is broadly typical of the eastern Sydney coastline between the harbour and Botany Bay, due to the prevalence of sandstone shelters and platforms, sandy embayments and rocky headlands. Considerable concentrations of sites (rock engravings in particular) occur (and partially survive) at La Perouse, Long Bay, Maroubra, Coogee and Bondi. There are a number of sites containing human burials, whereas open campsites, apart from open shell middens, are not well represented in the local area. The extant sites are mostly located in bushland reserve, national park, golf courses and other lands containing minimally disrupted land surfaces and sub-surfaces.

Table 7. Summary of site types in the AHIMS search area.

Site Type	No. of Sites	Percentage
Potential Archaeological Deposit	3	44%
Artefact Scatter	1	14%
Engraving	1	14%
Hearth	1	14%
Shelter with PAD	1	14%
Total	7	100%

In addition to the AHIMS Register search, updated online searches of several other repositories were undertaken on 24/7/18 to determine whether any Aboriginal sites or areas of potential have been identified within or adjacent to the subject land. The results of these searches can be summarised as follows:

- A search of the Australian Heritage Database (incorporating the Register of the National

⁵ Search conducted on 14/7/2018 under Client Service ID: 357518.



Estate) was undertaken for Aboriginal heritage items within the Randwick Local Government Area. No items are listed for Aboriginal heritage values within or adjacent to the subject land.

- The NSW State Heritage Inventory (incorporating the NSW State Heritage Register) was searched for Aboriginal heritage items within the Randwick Local Government Area. No items on either register within close proximity to the subject lands appear to be listed for their Aboriginal heritage values.



Figure 11. Location of registered Aboriginal sites in proximity to the subject land (orange outline).

Previous Archaeological Investigations

There have been only a handful of subsurface archaeological investigations within the inland dune system of eastern Sydney near the subject land (e.g. MDCA 2007; 2012, Steele 2003, Haglund 2006; Artefact Heritage 2014; MDCA forthcoming), none of which have yet located a definite older land surface with archaeological remains. Only the Long Bay Correctional Complex archaeological excavations retrieved any Aboriginal cultural remains associated within this type of landform.



However it is likely that further targeted excavation will yield more evidence of Aboriginal occupation (such as that found at Prince of Wales Hospital) and/or lead to better definition of the environment available for exploitation at various times in the past. Below are summaries of archaeological investigations pertinent to the current study.

Subsurface Investigations

Prince of Wales Godden Mackay-Austral Investigations 1995-7

The Randwick Destitute Children's Asylum Cemetery at Prince of Wales Hospital was the subject of a series of investigations prior to the construction of the infectious diseases clinic known as the Kiloh Centre, which is located less than 100m south-east of the current subject land. Initial investigations were conducted by Bickford (1994a, b and c), followed by the Austral-Godden Mackay survey and archaeological salvage of the Cemetery. The aim of the latter investigation was to retrieve maximum information concerning the Cemetery, the burials and the Cemetery context. The work is documented in a series of reports (Austral/GM 1995; June and May 1996; Dec 1997: Final Report 4 Vols.)⁶. The latter investigation was undertaken following the demolition of the WW1 Hospital Huts and on exposure of human bone across parts of the post-demolition surfaces. The excavations of the Cemetery were planned and executed as an exhumation of the remaining children's graves for the future re-interment, consecration and commemoration at an appropriate site within the Prince of Wales Hospital grounds.

During the course of the Cemetery investigations a series of deflated stone hearths (Austral/Godden Mackay 1997 Vol. 2, Part 3) of Aboriginal origin were unearthed beneath the children's burials and within the Cemetery boundaries towards its western boundary. The hearths were identified within the A2 Horizon below the children's burials. The hearths had not been disturbed by the graves, but showed signs of having been subject to localised displacement by prevailing winds for a time and subsequent covering by windblown sands. The hearths comprised a series of small sandstone cobbles brought into this particular location for the specific purpose of creating fireplaces on which there is firm evidence that at least one freshwater fish meal was cooked.

Carbon attached to one of the hearth stones was dated to about 8,000 years ago. A thermoluminescence date on one of the hearth stones confirmed this date as the time the hearth was last exposed to sunlight, and others throughout the dune profile confirmed this date in terms of its

⁶ There are also the original records of the investigation including an extensive photographic record and weekly reports made by the Field Supervisor, Peter Douglas pers comm. 3.12.08 The unpublished field records, reports, site plans and section drawings are the subject of a confidentiality agreement between the consultants and the SEAHs.



relative positioning in the A2 Horizon. A lipid analysis on one of the hearthstones showed what type of animal had been cooked at the hearth.

The evidence for the early Aboriginal occupation at this place also included a small number of stone artefacts, the paucity of which was thought to represent a reliance on wooden implements, such as digging sticks, fishing nets or lines, boomerangs, spears, coolamons etc, or those of a type commonly associated with resource extraction in swamp or wetland environments which do not rely on stone artefacts. The highly acidic nature of the dune sands had destroyed any such evidence. The rate of decay of the human remains within the cemetery above this Aboriginal site strongly suggest that animal or fish bone or human remains would not survive beyond about 300 years ago. No shell remains were found in or near the hearth site, or elsewhere throughout the excavated dune. Unless thick shell midden deposits had been laid down by Aboriginal People in the past, within which organic remains may also have been deposited and preserved in this highly alkaline context, there is little or no likelihood that organic remains can survive in the acidic sands. The Aboriginal site was subjected to complete salvage.

Prince of Wales Hospital Cancer and Blood Disorder Clinic 2012

Aboriginal archaeological test excavations were undertaken by MDCA in 2012 in conjunction with the construction of a Comprehensive Cancer and Blood Disorder Clinic within the Prince of Wales Hospital campus at Randwick. This area of the hospital is within its north-eastern extent, 300m from the current subject land. The investigations involved a combined program of historical archaeological and Aboriginal archaeological test excavations to determine whether any Aboriginal or European heritage remains were present in areas proposed for the construction of the clinic.

The Aboriginal archaeological test excavations were initiated by a detailed assessment of the Aboriginal archaeological sensitivity of the area in 2011, which identified an area of low Aboriginal archaeological sensitivity. A total of eight mechanical trenches and four manual pits were excavated during the investigations. The excavations revealed recent historical fill of variable type and depth across the site. This included previous asphalt surfaces, pipe trenches, introduced materials in mixed sands and other rubble. No evidence of an intact upper (A1) original soil profile was located. Instead in most trenches, a truncated A2 horizon consisting of white/grey sands generally 10-25cm in thickness was found overlying a very friable white sandstone bedrock. Although this horizon was sample sieved, no Aboriginal archaeological material was located, and despite its relatively truncated and in some cases partially disturbed nature, this suggests a likely actual absence of archaeological material.



It was concluded that the original dune profile had been considerably disturbed and truncated by recent historical activity such that the A1 horizon most likely to contain Aboriginal archaeological material is absent, as are deeper dune profiles where the A2 horizon may contain such material.

Long Bay Correctional Complex 2007

An archaeological investigation of the site of a new 85 bed Prison Hospital within the Long Bay Correctional Complex, was undertaken by MDCA in 2007. This study aimed to investigate potentially undisturbed subsurface sand dune deposits following the demolition of prison industry and store buildings and exposure of deposits below the footings and concrete slab foundations. The Correctional Complex is 5km south-east of the current subject land.

The Aboriginal archaeological assessment of the prison complex found that the construction of the new Prison Hospital could impact upon potentially artefact bearing dune deposits typical of eastern Sydney and similar to those found at the Prince of Wales Hospital site. The area of sensitivity was identified (Dallas & Tuck 2005; Figure 2) on the basis of its locational suitability (on the eastern end of an elevated ridge along the northern portion of the Long Bay Correctional Complex) as an Aboriginal campsite (in contrast to adjacent boggy areas) and the possibility for the sandy deposits underlying existing structures to retain undisturbed evidence of Aboriginal occupation. The assessment recommended that archaeological test excavations of the area of Archaeological sensitivity be undertaken following demolition of the industry and store buildings at the site.

This demolition work involved removal of all extant structures as well as underground fuel storage tanks. It also included extensive fuel contamination remediation works and asbestos removal. This reduced the extent of the area of Archaeological Sensitivity. Exposure of post demolition deposits showed that the south-eastern half to two thirds of the site were in an area subject to past excavation/levelling to a depth of a metre or more compared to the adjacent area to the northwest. Deposits exposed in this area included basal yellow sands which have been shown to be archaeologically sterile (Dallas, Steele, Barton & Wright 1997). The foundations and footings and underground services of the existing buildings were found to have disturbed subsurface deposits to varying degrees. Some areas had relatively undisturbed natural soil profiles underlying fill of variable thickness and others in which that profile had been truncated by past activities. One area approximately 10m x 15m appeared to also retain original topsoil under about 10cm of recent sand and rubble. There was also an area of level sandstone platform close to the ground surface identified as a potential engraving site which may have been exposed in the past.

The archaeological testing program included manual and mechanical sub-surface excavations which sampled all areas not subject to major disturbance through past and recent activities. Two stone



artefacts were uncovered from both the A2 horizon and from disturbed upper/fill layers. They were not considered indicative of intact or *in situ* archaeological deposit, but rather derived from deposits which have been removed, churned or totally disturbed by the building construction phase. Secure carbon suitable for radiocarbon dating were not retrieved and the stone artefacts could not be relatively dated on typological grounds. All bone retrieved was found to be of recent introduced animal species.

The paucity of Aboriginal cultural remains at this site was considered to be a factor of site disturbance coupled with the likely low intensity usage of the area by Aboriginal people, generating low densities of cultural material susceptible to disturbance by natural erosion and historical activities (MDCA 2007:45).

Moore Park Tennis Centre- CBD South East Light Rail 2014

Recent archaeological excavations by Artefact Heritage were undertaken at the Moore Park Tennis Centre as part of South East Light Rail early works (source: AHIMS ID #45-6-3155). The results of these excavations demonstrated the presence of Aboriginal artefacts in association with a sand layer beneath nineteenth and twentieth century fill. Vast historical disturbance had occurred across the study area including large parts of the sand body which had been truncated and modified. Underneath the car park at Moore Park, under a layer of fill more than half a metre thick, were the remains of the original dune. The top of the dune was missing and some of the remaining dune sands had been mixed with the recent fill material. A small number of stone artefacts were found in the more intact sands.

CBD South East Light Rail Project 2013

Godden Mackay Logan prepared a Heritage Impact Statement for the CBD South East Light Rail project in 2013. The investigations found that that the construction of the Light Rail would not result in any direct impacts to any known Aboriginal sites but that it would impact areas of Potential Archaeological Deposit. Aboriginal test excavations were proposed in key impact areas.

One such excavation has resulted in the finding of over 22,000 stone pieces. In February 2016, GML undertook archaeological test excavations in conjunction with contamination testing of the Randwick Stabling Yard for the CBD South East Light Rail project (NSW Transport 2016⁷). Stone artefacts were identified within 1m (most commonly between 40-60cm) of the surface and are said to be in

⁷<http://sydneylightrail.transport.nsw.gov.au/news/aboriginal-artefacts-randwick-stabling-yard---your-questions-answered>



excess of 22,000. It has been noted that these artefacts do not resemble those commonly found in the area. Subsequent to the test excavations, salvage excavations have been undertaken. The investigation of this site is complete, but a report has not yet been released. It is understood that this site is of high significance and a rarity within the Randwick area. Much of the discussion on the stone material is supposition at this stage.

On-going investigations at the Newmarket Stables Complex 2017-2018

Archaeological test excavations of an area of Aboriginal archaeological sensitivity as well as archaeological monitoring of ground-works within the Newmarket Stables Complex are currently in progress. This area is 250m south-east of the current subject land. An initial assessment conducted by MDCA (2011) concluded that the least impacted portion of the Newmarket complex most likely contained the buried remnants of a dune system that comprises Quaternary wind-blown sands similar to the Prince of Wales Hospital site.

Preliminary findings from both the excavations and monitoring have revealed truncated A2 Horizon dune sands are extant across the entirety of the study area. These sands are impacted to varying degrees by past land use. Coffee rock has been found to occur at 1-1.4m below the surface. There are deep rills in the coffee rock which run north-south. Recent study of the geomorphological development of coffee rock in the Botany Basin (Gale et al 2017), suggests this 'riling' may have been created by the sudden change in water erosion activity when the dunes were truncated by early farming and landscaping activities.

To date very little evidence of past Aboriginal use has been found across the site. A small amount of ochre has been found in the very south-eastern portion, in intact dune sands. A small quartz flake and over 50 pieces of quartz debitage has also been found within a slab hut. Preliminary findings point to the remains of a dune swale landscape, which may have comprised much denser deposits of past Aboriginal use in now truncated portions of the dune. Archaeological deposits may be found on surfaces of the dune which have blown out and been covered over. Possible Aboriginal post-contact use of the site is also likely.

Impact Assessments

Randwick Racecourse 2006

In 2006 DSCA conducted an assessment to inform preliminary Aboriginal cultural heritage management advice to guide future planning at the Randwick Racecourse site. This study was



undertaken for GML who were assembling a Conservation Management Plan (CMP) for the racecourse at this time. The racecourse is 750m north-west of the current subject land.

The study area is located within the Botany sand dune complex and was once partly covered by dune and partly by freshwater swamplands linked to the Lachlan Swamp system. It was noted during the investigations that most of the racecourse had been impacted by historical activities including construction and filling. Despite this a large dune was present within the southeast corner and eastern portion of the property, which rose 5-10 metres above the level of the racetrack. A slightly raised area in the south-western corner of the site was also identified as the original sand dune topography.

These remnant portions of dune were assessed as having archaeological potential in the same way that other remnant portions of the Botany dune system were being assessed following the discovery of the hearths at the Prince of Wales Hospital Aboriginal site. It was recommended that if these areas were to be impacted by future works, that specific Aboriginal archaeological impact assessment and archaeological test excavation may be required to determine the presence/absence of buried archaeological deposits

Prince of Wales Medical Research Institute 2008

A preliminary assessment was conducted by MDCA prior to the POWMRI proposal for the redevelopment of existing medical facilities immediately north of Barker Street and the Newmarket complex. The Aboriginal archaeological assessment aimed to identify and define the subsurface Aboriginal archaeological potential of the site by mapping the remaining stratigraphic profile of the Botany Bay dune system within the study area.

The MDCA investigations identified areas of potential Aboriginal archaeological deposit throughout much of the study area on the basis of previous archaeological excavations in immediately adjacent contexts, extensive geotechnical data providing direct evidence for possibly surviving soil profiles and historic research into building construction and aerial photography review.

Historical plans indicated that the dune on which the study area is located formed a spur between two arms of the Bird's Gully swamp system. It was also determined that the majority of historical impacts within the study area, prior to the construction of the current villas, were of a relatively superficial nature in terms of subsurface penetration.

It was recommended that program of archaeological excavation be conducted within the defined areas of Aboriginal Archaeological Sensitivity. The areas identified as retaining potential archaeological deposit requiring test excavation and consideration prior to the construction phase were also contiguous with potentially surviving historic remains.



Randwick Racecourse Proposed Stable Precinct Redevelopment 2010

An Aboriginal Heritage Impact Assessment of the Randwick Racecourse Proposed Stable Precinct was conducted in 2010 by AHMS. The findings of a previous study (DSCA 2006, see above), which assessed the entirety of the racecourse complex, were confirmed. The previous study had designated a portion of the Stables Precinct as an area of high Aboriginal archaeological sensitivity while the remaining area was assessed as having low Aboriginal archaeological potential.

The majority of the proposed development footprint was within the area of low archaeological potential and was assessed as requiring no further archaeological investigation. Within the area of high sensitivity, it was proposed to construct parking for cars and floats and to conduct clean-up and minor landscaping works. As such, it was recommended that archaeological testing be undertaken to determine the nature and extent of any archaeological deposit remaining within the area of high archaeological sensitivity.

Design modifications at High Street, Randwick for the CBD and South Eastern Light Rail project 2015

Artefact Heritage undertook a Due Diligence Aboriginal and Historic Heritage Assessment in relation to the proposed design modifications at High Street, Randwick for the CBD and South Eastern Light Rail project. This area is 400m north-east of the current subject land. This study used the Heritage Impact Statement (Godden Mackay Logan 2013) of the EIS for the South Eastern Light Rail project as the basis for the assessment.

The study area was assessed as being located on the Botany sand sheet. It was concluded that there was potential for intact archaeological deposits to be present in areas of least disturbance. Where impacts to these areas were proposed, mitigation measures and archaeological test excavation was recommended as outlined in the EIS. Several Historic heritage items were also identified during this study.

It was noted above (**Section 3.0**) that caution should be exercised in projecting the early historical landscape too far back in time (especially to the period of environmental change in which archaeological evidence has so far been documented). This applies even more so to the use of early historical and relatively recent archaeological data on how Aboriginal people used the Sydney region. Firstly, we currently know very little about how Aboriginal people used the Sydney area prior to the stabilisation of sea levels to roughly modern levels by the end of the last ice age (around 6,000 years ago), with the Prince of Wales Hospital Aboriginal archaeological site and a handful of others providing the only direct evidence. Secondly, we know that the period in which these sites were used



was one of significant environmental change which, amongst other things, is evidenced by the subsequent burial of the Prince of Wales Aboriginal hearths by drifting, wind-blown sands. Lastly, we know from archaeological evidence that use of stone and other raw materials and the type of finished implements changed markedly over the last 10,000 years, and we have little archaeological evidence of any organic materials for food extraction or implements prior to around 4,000 years ago.

3.1.4 Modelling and Site Prediction within the Subject Land

As summarised above, there have been many Aboriginal sites, and a range of archaeological evidence recorded and salvaged from the Randwick area. Much of this evidence is associated with specific environmental features, such as dunes or swamp margins. However, the sand dune system which has evolved geomorphologically over thousands of years, has been highly modified by early colonial land clearing and agriculture and more recent urban development. Determining what evidence of past Aboriginal use may be located within a specific parcel of land within this area requires an understanding of what previous land features may be buried within that land, and the level to which they may have been impacted by historical disturbance.

In the case of the subject land, it is likely that the natural dune profile is present as a truncated deposit below layers of historical fill in areas which have been subject to less disturbance, as has been found in other investigations (Austral-GML 1997; MDCA 2007; Artefact Heritage 2014; MDCA ongoing).

The dated dune sequence and Aboriginal occupation deposit from the Prince of Wales Destitute Children's Asylum Cemetery excavations confirms the presence of surviving archaeological deposit in the immediate vicinity of the subject land. These Aboriginal archaeological deposits were only located within the A2 Horizon and date to around 8,000 years ago.

The Prince of Wales Aboriginal archaeological excavations concluded that models of Aboriginal movement and subsistence based on historical and recent archaeological records did not adequately explain the nature of the evidence uncovered, and suggested alternate explanations (see above). If further archaeological evidence is found within the subject land it is likely to greatly advance our understanding of the nature of early Aboriginal occupation of the area.

Soil analysis from across the site of the former Asylum cemetery show that the dune sands are highly acidic (pH 3-5) and therefore survival of any organic materials in an archaeological context is highly unlikely (Austral-Godden Mackay 1997 Volume 2 Part 5 Soil Analysis). In fact, unless embedded within substantial shell midden (i.e. an alkaline matrix) bone artefacts or human remains are unlikely to be present unless deposited in the last 200-300 years. It is worth noting that where soft tissue or bodies are found in European peat bogs they are invariably perched above ground water levels which makes them anaerobic (no oxygen) and highly acidic. In the swamp system here, oxygen will be permeating the deposits at all times and therefore soft tissue will be destroyed by putrefying bacteria.



The acid sandy environment together with the humic acids from decaying vegetation will also destroy bone in a very short time. From an archaeological point of view only stone and wood may have survived from the prehistoric period.

The nature and condition of these underlying landscape features which may have Aboriginal archaeological sensitivity is difficult to determine without actual subsurface investigation, which is the conclusion of the current assessment and basis for the proposed management strategy. However, it is possible to describe the types of evidence that may occur, based on finds elsewhere in the vicinity. Specifically:

- Shell Middens. These sites contain the discarded remains of shellfish meals. They may occur in lens or mounded deposits. The evidence of other activities such as fishing, camping, cooking, artefact manufacture or maintenance and the interment of the deceased may also be found in midden deposits.
- Burial sites. Burial sites are rare and are usually only located when sub-surface sediments have been exposed by erosion or disturbance. Burial practices vary over time and place. Skeletal material may be found as single individuals or in group situations. They may be found in soft sediments such as sand bodies or sandy loam.
- Stone artefacts in isolation or combination may occur in association with buried former land surfaces.

Contact and Post-contact Period Occupation

It was noted above (**Section 3.2**) that caution should be exercised in projecting the early historical landscape too far back in time (especially to the period of environmental change in which archaeological evidence has so far been documented). This applies even more so to the use of early historical and relatively recent archaeological data on how Aboriginal people used the Sydney region. Firstly, we currently know very little about how Aboriginal people used the Sydney area prior to the stabilisation of sea levels to roughly modern levels by the end of the last ice age (around 6,000 years ago), with the Prince of Wales Hospital Aboriginal archaeological site and a handful of others providing the only direct evidence. Secondly, we know that the period in which these sites were used was one of significant environmental change which, amongst, other things, is evidenced by the subsequent burial of the Prince of Wales Aboriginal hearths by drifting, windblown sands. Lastly, we know from archaeological evidence that use of stone and other raw materials and the type of finished implements changed markedly over the last 10,000 years, but we have little archaeological evidence of any organic materials for food extraction or implements prior to around 4,000 years ago due to rate of decay.



We know that Aboriginal people continued to use the general area after the arrival of Europeans. No direct references to the use of the specific subject land by Aboriginal people after this time have been located to date. It is likely that, at least until the mid-nineteenth century, Aboriginal people continued to use the resources of the swamp and dunes, though after this time movement became more restricted by advancing European rural and suburban subdivision.

Research has been undertaken by the current report authors, into post-European contact Aboriginal sites within the Sydney region⁸ (Irish & Goward 2012; Irish 2014). The research database currently contains records for over 250 places, amalgamated from previous and current archival and archaeological research, none of which are within or immediately adjacent to the subject land. The nearest major post-contact Aboriginal settlement was in the La Perouse area. Other foci of post-contact Aboriginal occupation appear to have been along the ocean and bay coasts (e.g. Bondi, Long Bay, Little Bay, Banksmeadow). For example, there are records of a major camp near Long Bay occupied by Aboriginal people before and for some time after the arrival of Europeans (Dallas & Tuck 2005:59). There is also evidence that a shelter with midden in Long Bay may have been used by Aboriginal people in the post-contact period for smallpox victims (Dallas & Tuck 2005:46). Further to this, it can be assumed that an unknown number of Aboriginal pre-contact and post-contact sites have been destroyed by the intense development across the eastern and south-eastern Sydney area.

Aboriginal people were also associated with many of the early industries and recreational sites in the area such as Centennial Park and Randwick Racecourse (Centennial Park and Moore Park Trust 2003, DSCA 2006). The Edmund Blackett Building within the Prince of Wales Hospital was the site of the Randwick Destitute Children's Asylum, where Aboriginal children may have been among those who lived there. The asylum was in use from the 1850s to 1910s and those who died there were among the many burials in the Asylum Cemetery.

Although this has not been the focus of the current research, previous discussions with Aboriginal community representatives during the Prince of Wales Hospital Destitute Children's Asylum Cemetery investigations showed that while the archaeological site there was very important and especially significant to the community as very early occupation data, the area itself was not of special significance, despite the aforementioned nearby places known to be of considerable importance to the Aboriginal community in the post-contact period. Additional investigations within the subject land will provide an opportunity to further examine any possible historical Aboriginal associations with the site, which might be incorporated into site interpretation.

⁸ The Sydney Aboriginal Historical Places Project.



Archaeological Inspection

Given the historical impacts and geomorphological change that has taken place within the subject land, a detailed site survey was considered unlikely to detect surface archaeological evidence and was not undertaken. A site inspection was conducted for logistical reasons in February 2018 by MDCA, primarily to document the location and extent of visible historical disturbance and any other features/evidence that may have been relevant to inform an assessment of the archaeological sensitivity of the subject land.

3.1.5 Preliminary Assessment Observations

MDCA undertook a field inspection of the subject land in conjunction with the La Perouse Local Aboriginal Land Council in February 2018. The aim of the inspection was to assist in a preliminary assessment of the Aboriginal archaeological sensitivity of the subject land. Due to the known lack of exposed original terrain within the subject land, it was not anticipated that Aboriginal archaeological remains would be located, and this was confirmed during the site inspection. The following observations of relevance to the current assessment were made:

- Most of the ground surfaces were obscured by tarred roads, laneways and residential dwellings (see **Figure 11, Figure 12 & Figure 13**).
- Sandy dune deposits were observed on the surfaces of some front yards/gardens, indicating the presence of underlying dune deposits.
- Sub-surfaces were observed in the excavated trenches of the Light Rail, along High Street and in a deep stormwater trench at the end of Eurimbla Avenue at the rear of the dwellings fronting Magill Street (**Figure 14 & Figure 15**).
- The rise and fall of the land is not marked but can be observed from the high points along High Street and the northern ends of Hospital Road and Botany Street (see **Figure 16**).
- The lowest points are along the centre of Eurimbla Avenue which carries a deep storm water drain down to the properties along the central portion of Magill Street.
- Most of the housing appears to be built on slabs, although a few have below-ground swimming pools.
- Referring to the early map projections of the swales and dune ridges and swamps and watercourses, although difficult to observe by a preliminary visual inspection, it would appear there may be a series of low-rise dune slopes above Bird's Gully or at least the form which it took when Europeans first arrived in Sydney over two centuries ago.



Further to these surface findings, recent geotechnical testing has demonstrated that the archaeologically sensitive A2 horizon has survived across much of the subject land, under varying quantities of historical fill, except for areas of shallow (or possibly formerly exposed) sandstone bedrock around the corner of High Street and Hospital Road (Douglas Partners 2018). Borelogs and inferred cross-sections of the subject land based on geotechnical testing suggest that the A2 horizon is generally 0.5-1m below the current ground level and around 1.4 to 2m in thickness in the central and southern portions of the subject land, though it is not always possible to establish the depth of the underlying B Horizon Coffee Rock from geotechnical borelogs. It is also not possible to confirm the presence and nature/thickness of deposits relating to the swamp from this testing.



Figure 11. Typical dwelling form, rendered fences and sealed roads of the study area

MDCA 1.2.18



Figure 12. The eastern end of Magill Street from the southern side of Hospital Road showing low point in landform

MDCA 1.2.18



Figure 13. View south east along Botany Street from UNSW where the highest point in the study area is found

MDCA 1.2.18



Figure 14. Light Rail construction along High Street

MDCA 1.2.18



Figure 15. Storm water drain showing depth of trench and width of pipe at the end of Eurimbla Avenue

MDCA 1.2.18



Aboriginal Cultural Heritage Assessment Report
Randwick Campus Redevelopment Project, Randwick NSW



Figure 16. View to Eurimbla Avenue looking east from Botany Street showing gentle slope down to the centre of study area (and storm water drain) and gentle rise to existing POW buildings along Hospital Road

MDCA 1.2.18



4.0

Summary of Assessment Results

Assessment of Archaeological Sensitivity

From the above review of contextual information and the results of the site inspection and recent geotechnical investigations, conclusions can be drawn about the likely nature of Aboriginal archaeological sensitivity within the subject land.

As other nearby development projects have shown, the likelihood of identifying intact significant Aboriginal occupational evidence is related to the presence/absence and level of historical disturbance to the original dune profile. The current subject land is underlain by Aeolian dune deposits which have been demonstrated in the past to contain significant Aboriginal archaeological remains within 100m of the subject land.

In the recent past, the central portion of the subject land appears to have been a swale between two dunes, characterised by the freshwater swamp of Bird's Gully. For the purpose of archaeological assessment, we need to exercise caution in extrapolating this landscape too far back in time. We do not know for example, if Bird's Gully existed a thousand years ago, let alone 8,000 years ago when the nearby hearth was being used by Aboriginal people. It is therefore also possible that dune horizons extending below the layer of swamp deposit from Bird's Gully may also retain archaeological sensitivity, perhaps once comprised dune sands above or adjacent to more ancient swamps.

Portions of the subject land which may have represented dry land on the margins of the Bird's Gully swamp in recent centuries could contain archaeological evidence of past Aboriginal use, most likely in any remaining original topsoil (A1) Horizons. Geotechnical testing does not provide sufficient resolution to determine whether any such horizons are present, however evidence of historical fill and other activities suggest that they are unlikely to have survived historical impacts such as tree clearance, house and road construction and associated earthworks, and the installation of subsurface services. It seems unlikely then, that evidence of relatively recent Aboriginal use of the subject land, over the past 500 – 1000 years, will have survived.

However, as nearby excavations have shown, considerably older Aboriginal archaeological evidence can also survive deeper within the dune profile, namely in surviving white A2 Horizon sands above B Horizon coffee rock. Geotechnical testing has demonstrated the survival of original A2 Horizon sands across most of the subject land, which are regarded as archaeologically sensitive due to their association with Aboriginal archaeological remains of considerable age in the adjacent Prince of Wales Hospital complex. The A2 Horizon is absent in the north-eastern corner, around the intersection of Hospital Road and High Street, where sandstone bedrock is found very close to the surface. However, it appears to be present across the remainder of the subject land, usually under



0.5m – 1m of historical fill below the current surface. The thickness of the A2 Horizon varies but broadly increased to the south and west from High Street, and is up to around 2m in thickness.

No physical manifestation of the historically recorded swamp has yet been recorded, so it is not possible to determine its age and relationship to the A2 Horizon dune sands. Areas of actual swamp are unlikely to retain Aboriginal archaeological sensitivity, but without knowing how long this swamp has existed, we cannot rule out that Aboriginal archaeological evidence may survive within A2 Horizon white dune sands beneath recent swamp horizons. In other words, that these sands may represent dry land in a period before the formation of the swamp, and therefore have been used by Aboriginal people. It is noted that the recent swamp horizon has been assessed as retaining historical archaeological potential due to the historical process of rubbish dumping and filling of the swale (Casey & Lowe 2018: Figure 5.15).

It is not clear how far south of High Street the shallow sandstone bedrock extends, so for management purposes, the entirety of the subject land is to be considered to retain Aboriginal archaeological sensitivity.

Aboriginal Objects within the Subject Lands

No Aboriginal objects have been located within the subject land to date, or were recorded during the initial inspection in February 2018. However, of greater relevance are the conclusions which can be made regarding its Aboriginal archaeological sensitivity. Specifically, on the basis of the review of contextual information and site inspection described above, it can be concluded that:

It is possible that Aboriginal archaeological deposit could remain in partially truncated A2 Horizons of the natural dune profile known to be present within the subject land. The subject land is considered to be of high archaeological sensitivity for its potential to contain subsurface archaeological material.

Significance Assessment

4.1.1 The Assessment of Significance

Significance assessment of Aboriginal archaeological sites and areas of land is based on three broad criteria. Namely, that they are important to:

- the Aboriginal community
- the scientific community for their potential research value
- the general public for their educational and broader heritage value



With respect to Aboriginal community significance, all Registered Aboriginal Parties consulted during the current study were specifically asked to provide and/or discuss any Aboriginal cultural or historical information which they felt was pertinent to the assessment of Aboriginal heritage significance in relation to the current proposal. As yet, no specific information (e.g. about historical Aboriginal associations with the area) has been presented during this consultation to suggest that the subject land retains any specific or special significance to the local Aboriginal community. It can be anticipated that any archaeological remains which may be located within the subject land will retain at least a general level of significance shared by all such sites as a physical example of past Aboriginal use of the landscape.

Assessment of the scientific and public significance of the subject land cannot occur until Aboriginal archaeological material has been recorded within the subject land, and this is yet to occur. Any such evidence which remains within the subject land is likely to have been disturbed to some degree by the historical activities within the area.

Following the recommended archaeological test excavations and monitoring described below, a full assessment of significance will be undertaken as the basis for finalised management recommendations in relation to the subject land.



5.0

Mitigation and Management

Potential Impacts to Aboriginal Objects

As discussed above, the proposed development would be likely to impact any Aboriginal archaeological remains within the subject land due to extensive excavation and the likely restriction of any archaeological material to the uppermost soil horizons. At this stage no such remains have been identified.

Potential Mitigative Measures

Based on the current assessment, Aboriginal archaeological test excavation and monitoring is required as a first step in establishing whether any Aboriginal archaeological remains exist at the site. If no remains are found to be present during the test excavations or subsequent monitoring, there do not appear to be any grounds for further Aboriginal heritage involvement in relation to the current proposal, as no specific Aboriginal cultural or historical associations have been documented in relation to the subject land.

If the archaeological investigations uncover any Aboriginal archaeological remains, their extent, nature and significance will be used in conjunction with continued Aboriginal community consultation to guide overall Aboriginal heritage management recommendations within the subject land. Potential mitigative measures will be considered at this stage.

Proposed Management

The archaeological potential of the subject land cannot be determined at this stage as the nature and integrity of underlying deposits is not fully known. There remains a possibility for remnants of former (now buried) land surfaces to be present within which Aboriginal archaeological remains may have survived. It is proposed to archaeologically investigate the subject land using a combination of monitoring and archaeological excavation, with an overarching principle of preservation where possible, to provide information on which to formulate final Aboriginal heritage management recommendations for the site.

It is proposed to undertake **Aboriginal archaeological test excavations** of the subject land to determine the presence/absence, extent and significance of any Aboriginal archaeological remains within the subject land. The current study has identified that it is likely that the partially truncated A2 Horizon of the natural dune profile is extant within the subject land. There are a number of remote sensing techniques that are sometimes used in archaeological investigations to try to identify buried features without excavation, but these are not considered to be of practical use in the current study. Ground Penetrating Radar (GPR) for example, may identify solid historical structures (for example



stone foundations, post holes, pits, cisterns or wells), but it is unlikely to identify the more ephemeral or even large Aboriginal archaeological sites without ground-truthing. In addition, the lack of current access to open ground across the highly developed subject land would make such an investigation highly limited.

Accessible portions of the subject land should be the subject of limited subsurface Aboriginal archaeological investigation to determine whether Aboriginal archaeological material is extant here. The main aim of the archaeological test excavations, in the first instance by broad scale mechanical testing, will be to identify any Aboriginal archaeological remains that may be affected by the construction of the proposed development by:

- Identifying surviving original dune/dune interface A Horizon sands and sampling them (where of sufficient intactness/integrity) to determine whether Aboriginal archaeological remains are present; and
- Locating any former contact or pre-contact land surfaces within A Horizon sands upon which past Aboriginal activity may have been focussed and archaeologically testing them.

If Aboriginal archaeological remains are located, further archaeological excavation will determine their extent and significance as the basis for developing an appropriate management strategy in the context of the proposed development.

It is noted that areas of historical archaeological potential have been identified in association with the historical extent of the swamp, and the Violet Hall property at 4 Magill St (Casey & Lowe 2018). Any Aboriginal archaeological excavation methodology will need to be developed jointly with any historical archaeological requirements and mindful of any permit or development consent conditions. It is proposed that Aboriginal archaeological monitoring will take place as a secondary investigation during the historic excavation program by Casey and Lowe on the occasion that natural soil profiles are present.

Whether or not the initial archaeological test excavations outlined above result in the identification of Aboriginal archaeological remains, **archaeological monitoring** of any geotechnical investigations, demolition and earthworks that may expose or impact natural soil profiles, such as the archaeologically sensitive A2 dune horizons, **will be required**. This is most likely in the southern portion of the subject land, where the excavation for the ASB is required. Monitoring is to be conducted by a qualified archaeologist and/or a representative/s of the engaged RAPs.

Should deposits with archaeological potential be identified during archaeological monitoring or test excavation, these would be further investigated in a manner commensurate to their extent and condition. For example, occasional small patches of potential archaeological deposit amongst



service trenches may be most appropriately managed through salvage excavation, whereas more extensive and intact deposits would require archaeological test excavation to determine the presence/absence, extent and significance of any Aboriginal archaeological remains as a basis for appropriate further management decisions.

It is noted that this methodology does not allow the proposed archaeological test excavations to be undertaken under the Code of Practice OEH *Code of Practice for Archaeological Investigation of Aboriginal objects in NSW* (2010). Usually this would require a s90 Aboriginal Heritage Impact Permit (AHIP) to allow the archaeological test excavations to be undertaken. However as the current development proposal is part of a SSDA to be lodged with the NSW DPE under Part 4, Division 4.7 of the *Environmental Planning and Assessment Act 1979*, which if approved, does not require an AHIP.

As noted above, Aboriginal historical associations with the area, for example of Aboriginal children who lived at the Randwick Asylum, are likely to be of on-going importance to the local Aboriginal community. If there are opportunities for onsite interpretation of the history of the place, consultation should be undertaken with the La Perouse Local Aboriginal Land Council (LPLALC) to determine whether recognition of these or other Aboriginal associations with the area would be appropriate to commemorate in some form within the context of the proposed development. This would be consistent with interpretive displays elsewhere within the Prince of Wales Hospital complex.

5.1.1 Excavation and Monitoring Methodology

It is noted that the proposed archaeological excavations and monitoring will be undertaken in conjunction with concurrent historic archaeological excavations in areas where there is overlapping archaeological sensitivity. It is proposed to monitor and excavate with Aboriginal community participation in each discipline.

Based on past recommendations of the OEH, and a review of recent test excavations utilising similar methodologies, the following methodology is proposed:

1. **Demolition works:** To facilitate the archaeological investigations, mechanical removal of built structures (to be undertaken under a separate development application), which are not marked for preservation, may be undertaken to allow access along proposed transects.
2. **Mechanical trenches:** The mechanically excavated trenches will be positioned in locations most likely to intersect a possible buried land surface or archaeological remains (spacing no less than 20m and no more than 50m). The precise layouts of pits/transects will need to be partly determined in the field due to the existing built environment and potential machine accessibility issues. The form/size of the trenches will depend on the location and proposed depth but will seek to minimise subsurface impact and will be in accordance with OH&S guidelines (e.g. metal



shoring boxes may be required). Trenches will be excavated in 20cm spits and will be archaeologically monitored. Should a buried land surface with archaeological potential be uncovered, or any Aboriginal archaeological remains be identified, works will cease and further investigations will take place, if appropriate, by manually excavated squares. Otherwise, trenches will be excavated to groundwater level. Except where clearly introduced, excavated deposits will also be sample sieved through nested 5mm and 2mm mesh sieves on site to determine whether any previously disturbed and dispersed low density archaeological remains may be present. All excavated pits will be backfilled.

3. **Manual Excavations:** If appropriate, a limited number of manual excavation squares (0.5m² or 1.0m² as appropriate) would be excavated to determine the presence/absence and/or nature of any archaeological remains identified in previous testing or to investigate buried land surfaces with archaeological potential. Excavation would proceed in 5-10cm spits or by context (as appropriate). All excavated material will be sieved onsite through nested 5mm and 2mm mesh sieves. Soil pH samples and where possible samples for radiometric dating will be taken and full recording of sections, plans and features will be made. All excavated pits will be backfilled.
4. **Treatment of Human Remains:** It is considered possible that human remains may be encountered during the archaeological test excavations. If any bone is located which is thought to be human, all works will immediately cease in that area. Specialist physical anthropologist and MDCA associate Emeritus Professor Richard Wright will be called in to determine whether the remains are human, and whether they are likely to be Aboriginal or non-Aboriginal in origin. If they are confirmed as, or likely to be Aboriginal and old, discussions will be held with the La Perouse Local Aboriginal Land Council (which will be represented on site at all times) and the OEH to determine the most appropriate way to manage them. In all other cases, such as young Aboriginal bone or Non-Aboriginal bone, the Police will be notified, as it may be a potential coronial matter.
5. **Archaeological monitoring:** Monitoring should be conducted by a qualified archaeologist and/or a representative/s of the LPLALC, during relevant geotechnical investigations, demolition (including service infrastructure removal) and earthworks (inclusive of bulk removal). Monitoring may also occur during relevant historical archaeological subsurface investigations. These works should be monitored if it is likely that they may expose or impact archaeologically sensitive soil profiles, such as the A2 dune horizons. A representative from either MDCA and/or LPLALC will be made available to conduct the monitoring of these works as they occur. As well as archaeological monitoring, any earthworks undertaken during demolition and/or construction would be guided by an Aboriginal Heritage Management Plan that will form part of construction



documentation for the respective works. This management plan will be prepared by MDCA in consultation with Representative Aboriginal Parties.

The areas of Aboriginal archaeological investigation may overlap with areas historical archaeological potential within the subject land. During historic archaeological excavations, on exposure of natural dune deposits containing no historic remains, Aboriginal archaeological excavations will proceed.

It is possible that the Aboriginal and historical archaeological test excavations will run in parallel, due to the possibility for Aboriginal archaeological material to be present within historical archaeological deposits and vice versa. Because of this, the following procedures are proposed:

- Within the areas of overlapping historical and Aboriginal archaeological sensitivity, removal of hard stand will be monitored by both an historical archaeologist and an Aboriginal archaeologist and a LPLALC representative. Which discipline proceeds will depend on the origin of what is uncovered.
- In the event that Aboriginal archaeological remains are located within the areas of historical archaeological sensitivity, historical archaeological excavations are to cease and Aboriginal investigations will proceed until the extent/nature of the deposit is known.

5.1.2 Post-Excavation Analysis and Management

All Aboriginal cultural remains (apart from human bone) retrieved during the test excavations (e.g. animal bone and shell, stone, bone and shell artefacts) will be recorded and bagged prior to specialist analysis. If obtained, radiocarbon dating samples will be submitted to Waikato Radiocarbon Laboratory in New Zealand for dating.

Analysis of food remains (animal/fish/bird bone and shell) will involve species identification and quantification by weight and number of represented individuals for each excavated unit. This will allow for a description of what foods were eaten, in what relative quantities and possibly some information about how different foods were gathered and prepared. This could also be comparable with a range of other analyses undertaken across the Randwick area in recent years. Stone artefacts will be analysed and classified according to established criteria of raw materials, form, reduction sequence and function.

The results of the test excavations and analysis will be fully documented in an updated Aboriginal Cultural Heritage Assessment report which will be used as the basis for final Aboriginal heritage management recommendations within the subject land in relation to the current proposal. If no archaeological material is retrieved, there will be no requirement for additional Aboriginal archaeological investigations. Should archaeological material be documented, this report will contain a significance assessment, documentation of further Aboriginal community consultation in relation to



the proposed management of the remains, and a set of recommended actions in relation to the subject land, commensurate with the assessed significance of the remains, and the results and recommendations of the historical archaeological excavations. These recommendations may include total preservation, partial preservation with or without partial salvage or impact to the whole site with or without additional salvage.

At present, it is not known whether any Aboriginal cultural remains will be retrieved during the proposed archaeological investigations, nor their nature or quantity. Given that this may vary in quantity and nature (e.g. from an isolated artefact to substantial midden deposit) it is considered most prudent to determine final management (storage) of any Aboriginal archaeological material upon completion of the archaeological investigations and for this to be incorporated into finalised reporting for the site resulting from these investigations. Archaeological material retrieved during the investigations will be stored temporarily at MDCA office premises.



6.0

Recommendations

The following recommendations are based upon:

- the legal requirements and automatic statutory protection provided to items of Aboriginal heritage under the terms of the National Parks and Wildlife Act 1974 (as amended), where it is an offence to knowingly or unknowingly harm an Aboriginal object;
- the results of the current study documented in this report; and,
- an OEH recommended methodology for the management of the areas of sensitivity.

It is recommended that:

- I. Prior to the commencement of demolition or earthworks within the subject land a limited program of investigations be undertaken inclusive of machine trenching and manual excavation as outlined in **Section 5.3** across the subject land. The work should be undertaken by a qualified archaeologist and representatives of engaged RAPs. These initial archaeological test excavations should be undertaken in accessible portions of the subject land, in order to determine the presence/absence of any Aboriginal archaeological remains within surviving archaeologically sensitive dune deposits.
- II. Archaeological monitoring of the removal of all-natural soil profiles are to be undertaken. This is to include relevant earthworks conducted during the demolition and/or construction phases of the proposal, geotechnical investigations and historical archaeological investigations.
- III. Any earthworks undertaken during demolition and/or construction would be guided by an Aboriginal Heritage Management Plan that will form part of construction documentation for the respective works. This management plan will be prepared by MDCA in consultation with RAPs.
- IV. Any Aboriginal archaeological monitoring, test or salvage excavations should be designed and developed with reference to any historical archaeological requirements and approvals.
- V. Final management of any retrieved Aboriginal archaeological remains, and recommendations relating to any Aboriginal archaeological deposit which may exist within the subject land, will be made in conjunction with RAPs to the current assessment on completion of the proposed Aboriginal archaeological test excavations and monitoring and be documented in an updated ACHA report.
- VI. One copy of this report should be forwarded to all RAPs.



Aboriginal Cultural Heritage Assessment Report
Randwick Campus Redevelopment Project, Randwick NSW

VII. One copy of the final report should be forwarded to:

The Manager
Aboriginal Heritage Information Management System
NSW Office of Environment and Heritage
P.O. Box 1967
Hurstville NSW 2770



7.0

References

- AHMS 2010. *Royal Randwick Racecourse: Proposed Stables Precinct Redevelopment Aboriginal Heritage Impact Assessment* (Report To Australian Jockey Club/Urbis)
- Artefact Heritage 2014. *CBD and South East Light Rail Project: Early Works, Moore Park Tennis Centre, Aboriginal Heritage Test Excavation Report* (Report to KMH Environmental)
- Artefact Heritage 2015. *Design Modifications at High Street, Randwick for the CBD and South Eastern Light Rail project* (Report to WSP/Parsons Brinckerhoff)
- Austral-Godden Mackay Pty Limited 1995. *Randwick Destitute Children's Asylum Cemetery: Archaeological Investigation - Research Design* (Prepared for South Eastern Sydney Area Health Service, NSW Heritage Council Department of Urban Affairs and Planning)
- Austral-Godden Mackay Pty Limited 1996. *Randwick Destitute Children's Asylum Cemetery. Interpretation Guidelines* (Prepared for South Eastern Sydney Area Health Service)
- Austral-Godden Mackay Pty Limited 1996. *Randwick Destitute Children's Asylum Cemetery. Interim Report* (Prepared for South Eastern Sydney Area Health Service, Heritage Council of NSW, NSW Department of Health)
- Austral-Godden Mackay Pty Limited 1995. *Randwick Destitute Children's Asylum Cemetery. Statement of Significance* (Report prepared for Eastern Sydney Area Health Service)
- Austral-Godden Mackay Pty Limited 1997. *Randwick Destitute Children's Asylum Cemetery Archaeological Investigation. Volume 1. Main Report; Volume 2. Archaeology; Volume 3. Physical Anthropology; and Volume 4. Plans* (Prepared for the South Eastern Sydney Area Health Service, Heritage Council of NSW and the NSW Department of Health)
- Australia ICOMOS 1987. *The Australia Icomos Charter for the Conservation of Places of Cultural Significance (The Burra Charter), Guidelines to the Burra Charter: Cultural Significance and Conservation Policy* (Pamphlet, Australia ICOMOS Inc)
- Benson, D. & Howell, J. 1995. *Taken for Granted: The Bushland of Sydney and Its Suburbs* (Kangaroo Press in association with the Royal Botanic Gardens Sydney)
- Bickford, A. 1994a. *Destitute Children's Asylum Randwick 1852-1916. Excavation of the Site of the Cemetery* (Prepared for Eastern Sydney Area Health Service)
- Bickford, A. 1994b. *Destitute Children's Asylum Randwick 1852-1916. Archaeological Management Strategy for the Prince of Wales Hospital Redevelopment* (Prepared for Eastern Sydney Area Health Service)



Aboriginal Cultural Assessment Report
Randwick Campus Redevelopment Project, Randwick

- Bickford, A. 1994c. *Destitute Children's Asylum Randwick 1852-1916. Background Information for the ESAHS, Report about the Site of the Cemetery and the Human Bones Found* (Prepared for Eastern Sydney Area Health Service)
- Casey & Lowe 2018. *Prince of Wales Randwick Campus Redevelopment. Historical Archaeological Assessment* (Report to Advision on behalf of Health Infrastructure NSW).
- Centennial Park and Moore Park Trust 2003. *Centennial Parklands Conservation Management Plan 2003*.
- Chapman G.A., Murphy, C.L., Tille P.J., Atkinson G. and Morse R.J. 2009. *Soil Landscapes of the Sydney 1:100 000 Sheet (9130)* (Department of Environment, Climate Change and Water, Sydney)
- Coulter, J. 1916. *Randwick Asylum. An Historical Review of the Society for the Relief of Destitute Children from the Year 1852 up to the time of the Requisitioning of the Society's Buildings and Lands in 1915, by the Federal Authorities for Military Hospital Purposes* (Sydney; Society for the Relief of Destitute Children)
- Dallas, M., Steele, D. Barton, H. & Wright, R.V.S. 1997. *POW Project 1995. Randwick Destitute Children's Asylum Cemetery, Archaeological Investigation. Volume 2 Archaeology Part 3 Aboriginal Archaeology* (Report to South Eastern Sydney Area Health Service, Heritage Council of NSW and NSW Department of Health)
- Dallas, M. & Tuck, D. 2005. *Aboriginal Heritage Assessment, Long Bay Correctional Complex* (Report to BBC Consulting Planners Pty Limited on behalf of the Department of Commerce)
- Department of Environment Climate Change & Water 2010a. *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*.
- Department of Environment Climate Change & Water 2010b. *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW*.
- Department of Environment Climate Change & Water 2010c, *Aboriginal cultural heritage consultation requirements for proponents 2010. Part 6 National Parks & Wildlife Act 1974*.
- Dominic Steele Consulting Archaeology 2006. *Aboriginal Archaeological Heritage Impact Assessment: Randwick Racecourse* (Report to Godden Mackay Logan)
- Douglas Partners 2018. *Report on Preliminary Geotechnical Investigation. Randwick Campus Redevelopment. Hospital Road and High, Magill and Botany Streets, Randwick*. (Report to Health Infrastructure).
- Gale S. J., C. A. de Rochefort, S. R. Moore & A. J. C. Timms 2017. 'The origin and stratigraphic significance of the Quaternary Waterloo Rock of the Botany Basin of south-east, Australia'. *Australian Geographer. Volume 48*. Routledge.



Aboriginal Cultural Assessment Report
Randwick Campus Redevelopment Project, Randwick

- Godden Mackay Logan 2013. *CBD and South East Light Rail Heritage Impact* (Report Prepared for Parsons Brinckerhoff on behalf of Transport for NSW)
- Graham Brooks and Associates Pty Ltd 1997. *The Prince of Wales Hospital Campus Randwick Conservation Management Plan* (Report to NSW Department of Health)
- Haglund, L. 2006. *Report on test excavation at Cape Banks, La Perouse, within area to be used as a base for the Southern Region Life Saver Rescue Helicopter Service* (Report to Landcom)
- Irish, P. and T. Goward. 2012. 'Where's the evidence? The archaeology of Sydney's Aboriginal history', *Archaeology in Oceania* 47:60-68.
- Irish, P. 2014. *Hidden in Plain View: Nineteenth-Century Aboriginal People and Places in Coastal Sydney* (Unpublished Ph.D, UNSW)
- MDCA 2007. *Aboriginal Archaeological Test Excavation Report Long Bay Correctional Complex, Malabar, NSW* (Report to NSW Health Department [Justice Health] & The Department of Corrective Services)
- MDCA 2008. *Prince of Wales Medical Research Institute Project. Proposed Neuroscience Research Precinct Concept Plan and Project Application. Aboriginal Archaeology Preliminary Assessment* (Report to Winton Associates Pty Limited on behalf of the Prince of Wales Medical Research Institute)
- MDCA 2011. *Inglis Newmarket Site, Randwick, NSW Aboriginal Archaeology - Preliminary Assessment* (Report to William Inglis & Son Pty Limited)
- MDCA 2012. *Prince of Wales Hospital cnr Avoca St & High St Aboriginal Archaeological Test Excavation Report* (Report to WorleyParsons)
- MDCA 2018. *Preliminary Aboriginal Archaeological Assessment- Proposed New Acute Services Building for the Prince of Wales Hospital* (Report to Advisian Pty Ltd on behalf of Health Infrastructure NSW)
- Navin Officer Heritage Consultants 2003. *Cultural Heritage Assessment of the Proposed Port Botany Expansion. An assessment of maritime and terrestrial archaeological potential* (Report to Sydney Ports Corporation)
- NSW National Parks and Wildlife Service 1997a DRAFT. "Guidelines for Archaeological Survey Reporting" in the *Aboriginal Cultural Heritage: Standards and Guidelines Kit* (Sydney; NSW NPWS)
- NSW National Parks and Wildlife Service 1997b. "Standards Manual for Archaeological Practice in Aboriginal Heritage Management" in the DRAFT *Aboriginal Cultural Heritage: Standards and Guidelines Kit*. (Sydney; NSW NPWS)
- NSW Transport 2016. <http://sydneylightrail.transport.nsw.gov.au/news/aboriginal-artefacts-randwick-stabling-yard---your-questions-answered>
- Steele, D. 2003. *Aboriginal Archaeological Test Excavation Report, NPWS #45-6-2658, 1-81 Little Bay Road, Little Bay, NSW* (Report to CPG Developers Pty Ltd)



Aboriginal Cultural Assessment Report
Randwick Campus Redevelopment Project, Randwick



APPENDIX A

ABORIGINAL COMMUNITY CONSULTATION RECORDS

APPENDIX A1 : Public & Direct Notice and Responses

APPENDIX A2 : Responses to Methodology Discussions

APPENDIX A3 : Responses to Draft Report



APPENDIX A1 : Public & Direct Notice and Responses



APPENDIX A2 : Methodology Document and Responses



APPENDIX A3 : Responses to Draft Report



APPENDIX B

AHIMS Register Search Records and Site Card



APPENDIX C

Additional information on the Integrated ASB Addition (SSD – 10339).

[Information requested by DPIE August 2019 to be
included in this 2018 ACHA].



1.0 Introduction

This Aboriginal Cultural Heritage Assessment Report [ACHAR] was developed to support an Aboriginal Heritage Impact Permit [AHIP] application to the Office of Environment & Heritage [OEHL now called Department of Planning, Industry and Environment (DPIE)] over the non-ASB land at POW Randwick Campus Redevelopment.

An ACHAR is required for an AHIP but an AHIP is not required for SSD lands. While the approval authority [DPIE], may refer to the OEHL regulations, guidelines and policy, in the SEARS and expect the archaeological work to be carried out accordingly, it is unusual to seek subsequent additions to the ACHAR when a AHIP is not required.

The proposed Integrated ASB Addition (the proposed development) comprises the following core elements:

- UNSW Eastern Extension (Base Building only)
- Associated modifications within the ASB
- Lowering of Hospital Road.
- Landscaping

2.0 SEARs for SSD-10339

The SEARs relating to Aboriginal Cultural heritage are as follows:

9. Aboriginal Heritage · Identify and describe the Aboriginal cultural heritage values that exist across the site and document these in an Aboriginal Cultural Heritage Assessment Report (ACHAR). This may include the need for surface survey and test excavation. · Identify and address the Aboriginal cultural heritage values in accordance with the Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (OEHL, 2011) and Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW (OEHL, 2010). · Undertake consultation with Aboriginal people and document in accordance with Aboriginal cultural heritage consultation requirements for proponents 2010 (DECCW). The significance of cultural heritage values of Aboriginal people who have a cultural association with the land are to be documented in the ACHAR. · Identify, assess and document all impacts on the Aboriginal cultural heritage values in the ACHAR. · The EIS and the supporting ACHAR must demonstrate attempts to avoid any impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR and EIS must 7 outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to OEHL.

The proposed development will not require an ACHAR or an AHIP.

Nevertheless this 2018 ACHAR describes the archaeological and Aboriginal investigation for the proposed development which is consistent with previous investigations and Aboriginal community consultation.

2.1 Hospital Road Lowering and Extension of ASB - Aboriginal Heritage Assessment



The 2019 Aboriginal heritage assessment of the proposed development at Randwick between the POW Hospital and the University of NSW is the subject of this Appendix. This assessment is prepared for an EIS for submission to the DPIE. It is understood that planning approval for the Health Infrastructure proposal will be sought through the preparation of an Integrated SSD application (ISSDA).

The subject land is largely located at the mid to southern end of Hospital Road towards Magill Street.

Background

Since late 2018 MDCA and the LaPerouse Local Aboriginal Land Council (LPLALC) have been undertaking Aboriginal cultural and archaeological investigations across the ASB site between Botany Street, Hospital Road, High Street and Magill Street. The method of investigation in both the ASB and non-ASB areas have been conducted in the same manner described in an OEH AHIP (#C0000436) issued for the non-ASB area on 15/02/2019.

These investigations have included monitoring of deep machine trenching and manual excavations into some of the highest Randwick aeolian sand sheets of the Botany Dune system. These sands continue under Hospital Road and can be seen in the west-facing sections between Magill Street and the current site offices of Lend Lease Building, to the north. The investigations also included partial monitoring of a deep trench for an electrical service along the northern fall of the dune spur apex on Hospital Road.

The potential archaeology and Aboriginal cultural significance of the Botany Dune system, underlying the proposed works, can be predicted as a result of those ongoing investigations outlined above. To date sites of significance including sandstone Hearths, open artefact scatters and ochreous stones used in body painting and rock art have been identified and are currently being dated and analysed.

2.2 The Proposal and Aboriginal Heritage requirements.

1. Hospital Road

The lowering of a section of Hospital Road and Delivery Drive will involve the removal of the upper layers of the sand dune. It is understood there are multiple existing underground services within the road. As such, the likelihood of buried undisturbed/intact cultural remains within these layers is assessed as low. Any remains as may be encountered could be recovered by the LPLALC.

It would be usual to undertake a preliminary Aboriginal heritage assessment, in the first instance. However it could be argued that the existing Due Diligence for both the ASB and non-ASB lands, and the subsequent ACHAR accompanying an application for an AHIP developed for the non-ASB lands would also apply to the road in terms of archaeological potential and any required management options.

Refer:



Aboriginal Cultural Assessment Report

Randwick Campus Redevelopment Project, Randwick

- Aboriginal Archaeological Assessment Stage 1 Development and Proposed Future Expansion of The Randwick Hospital Campus Randwick, NSW. Mary Dallas Consulting Archaeologists. 2018. Report to Advician.
- Aboriginal Cultural Heritage Assessment Report. New Acute Services Building for The Prince of Wales Hospital, Randwick NSW. Mary Dallas Consulting Archaeologists. 2018 Report to NSW Health Infrastructure

Minimal management would include a provision for archaeological monitoring of civil excavations along the road as required. This would also involve the participation of the LaPLALC. The likelihood of preserving any Aboriginal site as may be found in situ is also assessed as low. It has been found that the LPLALC prefer collection and, where possible, reconstruction for the purpose of community education and understanding. Their preferred treatment of human remains has been to salvage for reburial at their private repatriation grounds. MDCA do not pre-empt the LPLALC management decisions and therefore recommend continued close consultation from the start of the project.

The OEH cannot issue an AHIP over the SSD lands as shown in the existing ASB project. It is recommended the principles and methods of investigation and community consultation as has taken place over the land to the west of Hospital Road continue and best practice be maintained.

2.3 Eastern Extension of ASB

2. Apart from an area above [cantilevered] Hospital Road, the proposal includes an area within the existing ASB area. This area has been investigated through post demolition monitoring and archaeological test excavation by MDCA as part of archaeological works associated with the rear of demolished properties abutting Hospital Road. These investigations into this area of the ASB, have been sufficient to characterise the subsurface road deposits in terms of archaeological potential. The representatives of the LPLALC who participated in the investigations raised no concerns from a community cultural perspective.



Aboriginal Cultural Assessment Report
Randwick Campus Redevelopment Project, Randwick