

ABORIGINAL HERITAGE IMPACT ASSESSMENT

FORMER RACHEL FORSTER HOSPITAL

FOR

KAYMET CORPORATION PTY LTD



Final Report
December 2012

AHMS

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GLOSSARY

Aboriginal Cultural Heritage Assessment	A document developed to assess the archaeological and cultural values of an area, generally required as part of an Environmental Assessment (EA).
Aboriginal Heritage Impact Permit (AHIP)	The statutory instrument that the Director General of the Office of Environment and Heritage (OEH) issues under Section 90 of the <i>National Parks and Wildlife Act 1974</i> to allow the investigation of (when not in accordance with certain guidelines), impact to and/or destruction of Aboriginal objects. AHIPs are not required for a project subject to Part 3A of the <i>Environmental Planning and Assessment Act 1979</i> or State Significant Major Developments subject to Part 4 of the Act.
Aboriginal object	A statutory term defined under the <i>National Parks and Wildlife Act 1974</i> as, ‘any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises NSW, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains’.
Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales	Guidelines developed by DECCW (now OEH) that prescribe the structure and content of certain Aboriginal Cultural Heritage Assessments and associated archaeological investigations/excavations. The Code of Practice applies to non-State Significant projects subject to Parts 4 and 5 of the <i>Environmental Planning and Assessment Act, 1979</i> .
Department of Environment, Climate Change and Water (DECCW)	Now known as the Office of Environment and Heritage (OEH).
Department of Planning and Infrastructure (DoPI)	A NSW government department that, among other things, is the assessing authority for State Significant developments subject to Part 3A and 4.1 of the <i>Environmental Planning and Assessment Act 1979</i> .
Director General’s Requirements (DGRs)	Project specific requirements of the Director General, Department of Planning and Infrastructure (DoPI), for State Significant development under Part 3A (now superseded) or

	Part 4.1 of the <i>EP&A Act</i> .
Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales	Guidelines developed by DECCW (now OEH). These guidelines prescribe the structure and content of a two stage process to determine whether Aboriginal objects and/or areas of archaeological interest are present within a subject area. The results of a due diligence assessment can find that an Aboriginal Cultural Heritage Assessment may be subsequently required.
Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation , July 2005	Requirements for Aboriginal heritage assessments for projects subject to Part 3A of the <i>Environmental Planning and Assessment Act, 1979</i> . The Guidelines include site assessment and Aboriginal community consultation process and are now also used for Part 4.1 State Significant developments.
<i>National Parks and Wildlife Act 1974</i>	Legislation that protects Aboriginal cultural heritage in NSW. Part 6 of the Act outlines the protection afforded to and offences relating to disturbance of Aboriginal objects. The Act is administered by the OEH.
Office of Environment and Heritage (OEH)	Formerly the Department of Environment, Climate Change and Water (DECCW). A State government agency that manages and regulates Aboriginal cultural heritage under the <i>National Parks and Wildlife Act, 1974</i> .
Proponent	A corporate entity, Government agency or an individual in the private sector that proposes to undertake a development project. The proponent for this project is Kaymet Corporation Pty Ltd.

ABBREVIATIONS

ACHA	Aboriginal Cultural Heritage Assessment
AHD	Australian Height Datum
AHIMS	Aboriginal Heritage Information Management System
AHMS	Archaeological and Heritage Management Solutions Pty Ltd
BP	Before present (AD 1950)
CHL	Commonwealth Heritage List
DCP	Development Control Plan
DECCW	Department of Environment, Climate Change and Water (now OEH)
DGRs	Director General's Requirements.
DP	Deposited Plan
DoPI	Department of Planning and Industry
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
LALC	Local Aboriginal Land Council
LEP	Local Environmental Plan
LGA	Local Government Area
LTO	Land Titles Office
NHL	National Heritage List
NPW Act	<i>National Parks and Wildlife Act 1974</i>
OEH	Office of Environment and Heritage (formerly DECCW)
PAD	Potential Archaeological Deposit
PEA	Preliminary Environmental Assessment
SSD	State Significant Development

ACKNOWLEDGMENTS

- Theo Loucas, Kaymet Corporation Pty Ltd.
- Anthony Betros and Vanessa Lennox, ABC Planning Pty Ltd.
- Paul Morris, Victoria Haines and Kevin Telford, Metropolitan Local Aboriginal Land Council.

EXECUTIVE SUMMARY

- Kaymet Corporation Pty Limited proposes to re-develop the former Rachel Forster Hospital site for residential and open space purposes. The proposed development received Concept Plan Approval under Part 3A of the *Environmental Planning & Assessment Act 1979* in 2007, and the proponent is now applying for Project Approval.
- A preliminary assessment was undertaken by AHMS in 2007 as part of the Concept Plan Approval process. This assessment identified a number of potential Aboriginal heritage issue, and included recommendations to undertake a formal Aboriginal Heritage Impact Assessment, Archaeological Management Plan and consultation with the Aboriginal community. These recommendations were incorporated into the Director-General's Requirements (DGRs) under the Concept Plan Approval. This report has been developed to address these DGRs. Unfortunately, due to time constraints for the production, this report fails to address all aspects of these conditions, but it provides a more thorough consideration of Aboriginal heritage issues within the subject area. Informal consultation with the Metropolitan Local Aboriginal Land Council (LALC) was also undertaken.
- The assessment identified that most of the subject area is heavily disturbed and/or previously developed by the extant Rachel Forster Hospital. The assessed potential for the site to contain archaeological materials is low.
- However, evidence from geotechnical studies and site observations identified three areas that have potential for intact soil profiles that may contain Aboriginal objects (Figure 29):
 - o The eastern quadrant of the subject area encompassing the driveway and associated landscaping. While some parts of the driveway are likely to have been truncated (mainly to the south), the geotechnical investigation indicated a natural soil profile below fill deposits up to 1.5 m in places. This area extended beneath the front of Building 2, since substantial *in situ* remnant soil profile was observed in parts of the structure's basement.
 - o The southern margin of the subject area encompassing the access road running east-west. This area is approximately some 3 m wide and runs the entire length of the site immediately south of Building 1. Some areas in the southwest corner may have been impacted by the installation of a vehicle servicing bay. Geotechnical information suggested that a natural soil profile was present <50cm below the current ground surface.

- o The western margins of the subject area, immediately west and northwest of Building 5. Geotechnical information suggests a small triangular area of remnant soil in this area.
- The proposed development includes sub-floor levels and underground car-parking and will either directly or indirectly impact all areas identified as of potential archaeological sensitivity. The significance of these areas could not be adequately assessed, since the presence or absence of Aboriginal objects is unknown. However, this report includes recommendations to investigate any Aboriginal objects that exist within the sub-floor levels, should they be present, and mitigate the impact of the development if necessary.

Recommendations

The Statement of Commitments prepared for the Environmental Assessment for the proposed Project Approval application should include the following commitments:

- This assessment investigated and considered the proposed development area (as outlined in **Figure 2**). Should the proposed development be modified to include areas outside of those in **Figure 2**, additional assessment and/or investigation of new areas may be required.
- Kaymet Corporation Pty Ltd should advise all relevant personnel and contractors involved in the design and construction of the project of the relevant legislative requirements and the recommendations of this assessment in relation to Aboriginal heritage.
- Three areas of Aboriginal archaeological sensitivity (**Figure 29**) were identified as part of this assessment. Should development impacts result in these areas, Kaymet Corporation Pty Ltd must:
 - o ensure a demolition management plan is designed to facilitate removal of the superstructure without disturbance of identified areas of potential heritage significance is developed in consultation with the archaeological consultant and demolition contractor.
 - o ensure that an appropriate test excavation is undertaken to identify whether or not Aboriginal objects are present. The investigation, removal, disturbance or destruction of any Aboriginal object, site or place should be undertaken professionally, in consultation with relevant Aboriginal stakeholders and DoPI/OEH, according to applicable heritage statutory requirements and should be documented as appropriate to the level of significance.

- o ensure all recovered Aboriginal objects and/or archaeological material is temporarily stored in a suitable lockable container until the completion of the development.
 - o consult with relevant Aboriginal stakeholders about a final storage repository for objects/material and if appropriate, develop a care and control agreement for the storage and/or repatriation of all recovered Aboriginal archaeological objects/material.
 - o ensure that any archaeological analysis and reporting concerning Aboriginal heritage complies with applicable statutory requirements, are prepared to best practice professional standards and, where appropriate, ensure findings are provided to the OEH AHIMS Registrar and the relevant Aboriginal stakeholders.
- Should Aboriginal objects be recovered from any test excavations, mitigation measures should be considered. Implementation of mitigation measures should be based on the significance of the archaeological finds, and the views of the heritage professional, Aboriginal stakeholders, Kaymet Corporation Pty Ltd and DoPI/OEH. Mitigation measures may include salvage excavations, cultural collection and/or monitoring of areas of archaeological/cultural interest. Any mitigation measures should:
 - o ensure all recovered Aboriginal objects and/or archaeological material is temporarily stored in a suitable lockable container until the completion of the development.
 - o include consultation with relevant Aboriginal stakeholders about the final storage location for the objects/material and, if appropriate, development of a care and control agreement for the storage and/or repatriation of all recovered Aboriginal archaeological objects/material.
 - o ensure that any post-excavation analysis, reports or documents for the project concerning Aboriginal heritage comply with applicable statutory requirements, are prepared in accordance with best practice professional standards and, where appropriate, ensure findings are provided to the OEH AHIMS Registrar and the relevant Aboriginal stakeholders.
- Formal Aboriginal consultation in accordance with *Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* (DEC, 2005) (which themselves defer to *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010)) should be implemented prior to any further Aboriginal heritage investigations. Consultation should identify cultural and contemporary values of the subject area, and ensure that interested Aboriginal stakeholders are consulted and included within Aboriginal heritage test excavations, mitigation, long-term management of any recovered Aboriginal objects, and any heritage interpretation processes following the development's completion.

- In the event that previously undiscovered Aboriginal objects, sites or places (or potential Aboriginal objects, sites or places) are discovered during construction, all works in the vicinity of the find should cease and Kaymet Corporation Pty Ltd should determine the subsequent course of action in consultation with a heritage professional, relevant Aboriginal stakeholders and/or the relevant State government agency as appropriate.
- If suspected human skeletal material is identified, all works in the immediate vicinity (>50m) of the find, should cease and the area incorporating the discovery should be temporarily fenced as an exclusion zone. Kaymet Corporation Pty Ltd should immediately contact the NSW Police, NSW Coroner's Office and a heritage professional to determine the appropriate subsequent course of action. Please note in such situations, extended delays to the works in this area may result.
- This assessment should be provided as a draft for review to the Metropolitan LALC. Comments and recommendations received should be incorporated into the final version of the assessment.
- A copy of the final assessment should be lodged with the OEH AHIMS Registrar in accordance with relevant guidelines.

1. INTRODUCTION

1.1 Proponent Details

This report has been prepared by Archaeological & Heritage Management Solutions (AHMS) for Kaymet Corporation Pty Ltd (Table 1).

Table 1. Proponent contact details.

Proponent	Archaeological Advisor
Kaymet Corporation Pty Ltd L6/4 Hogben Street Kogarah NSW 2217	Archaeological & Heritage Management Solutions Pty Ltd 349 Annandale Street Annandale NSW 2038
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1.2 Purpose of the Assessment

This report presents the findings of an Aboriginal Heritage Impact Assessment of the former Rachel Forster Hospital site, 134-144 Pitt Street, Redfern (hereafter the ‘subject area’).

In 2007, Kaymet Corporation Pty Limited (Kaymet) sought and obtained a Concept Plan Approval under Part 3A of the *Environmental Planning and Assessment Act 1979* from the Department of Planning and Infrastructure (DoPI) for the residential and open space re-development of the subject area. The proposal included the adaptive re-use of the existing structures and the creation of approximately 150 new dwellings. As part of the Concept Plan Approval application, AHMS undertook a preliminary Aboriginal heritage assessment, and identified a number of issues. Recommendations to address these issues were subsequently incorporated within the Statement of Commitments in the Concept Plan Approval. The Concept Plan Approval (MP07_0029) was issued in October 2007.

Subsequently between 2009 and 2012, Kaymet has applied several times for Project Approval for the re-development under Part 3A of the *Environmental Planning and Assessment Act 1979*, but a failure to address heritage issues according to the existing Concept Plan Approval

has led (in part) to repeated rejection of the application by DoPI. Specifically, in a letter from DoPI rejecting the most recent application (MP09_0068), the key Aboriginal heritage issues were listed as follows:

Commitment No. 7 - Archaeology, specifically submission of an Aboriginal Heritage Impact Assessment and Archaeological Management Plan;

European Heritage and Aboriginal Heritage

The consideration of whether the site has any significance to Aboriginal cultural heritage (Note: This may be considered within the required Aboriginal Heritage Impact Assessment).

(Letter from DoPI to Architecture and Building Works, 19 October 2012)

This report seeks to address some of these outstanding heritage issues. However, due to project time constraints, several of the findings and recommendations of the preliminary assessment remain incomplete. Specifically, only informal consultation with the Metropolitan Local Aboriginal Land Council could be achieved in the timeframes allowed for the assessment, rather than the formal processes required by the Office of Environment & Heritage (OEH) *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, April 2010) guidelines. The Archaeological Management Plan could also not be completed, since this document forms the long term management of the archaeological resource within the subject area, and there is still some uncertainty as to the extent and nature of such a resource (if present on the site).

Notwithstanding these issues, this report provides further assessment, consideration and recommendations in relation to the Aboriginal heritage within the subject area. Where possible, this report was undertaken in accordance with the following guidelines:

- *Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* (DEC 2005).
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, April 2011).
- *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, April 2010).
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW, September 2010).

1.3 Subject Area

The subject area consists of the former Rachel Forster Hospital at 134-144 Pitt Street, Redfern (**Figure 1**). It consists of Lot 7, DP 664804. The subject area is situated within the centre of Redfern and is bounded to the east by Pitt Street; to the north by Albert Street; and to the south and west by residential housing.

The subject area currently contains the remains of the Rachel Forster Hospital, which was constructed in the early 1940s. This building consists of a multi-storey structure in an ‘H’ shape, and covers most of the subject area. Only a small number of parks or open space areas exist around the periphery of these structures.

1.4 Proposed Development & Approval Context

Kaymet proposes to construct a series of residential building within the subject area. The residential buildings will form an ‘H’-shape similar to the existing plan on the site (**Figure 2**). The development will comprise of some 159 residential dwellings in four buildings. The buildings will require excavation of two basement levels (**Figure 3**).

As outlined above, a Concept Plan Approval under Part 3A of the EP&A Act has already been obtained for the project (MP07_0029), and Project Approval under the same Act is being sought in late 2012 (MP09_0068).

1.5 Report Aims and Objectives

The principle aims of the assessment are to:

- Outline the statutory requirements relevant to the subject area with regard to Aboriginal cultural heritage.
- Carry out background research to identify known Aboriginal objects, sites and places, and to identify the potential for any unknown objects and places of significance.
- Undertake Aboriginal community consultation.
- Carry out a survey of the subject area to assess known items, identify previously unrecorded items, and to assess the Aboriginal archaeological potential of the subject area.
- Develop preliminary mapping of the known and potential Aboriginal cultural heritage sites in the subject area.

- Assess the archaeological (scientific) significance of any Aboriginal sites or objects that may be impacted by the proposed development.
- Identify any possible constraints to the proposed development.
- Assess the potential for direct and indirect impact to Aboriginal cultural heritage.
- Identify and recommend measures to mitigate any potential adverse heritage impacts.

1.6 Limitations

This report is based on existing and publically available environmental and archaeological information, reports about the subject area, and relevant site visits. It did not include any independent verification of the results or interpretations of externally sourced reports (except where the site inspection indicated inconsistencies). This report includes some predictions about the probability of subsurface archaeological materials occurring in certain landforms/landscapes of the subject area. The predictions were based on surface indications noted during the field investigation, environmental context and standard geology and soil mapping. It is acknowledged, however, that sub-surface materials may survive in landform/landscape contexts despite surface and environmental indicators that may suggest that they do not. The converse also applies.

The relevant Aboriginal Heritage Information Management System (AHIMS) information was provided to AHMS by OEH. Information in the archaeological assessment report reflects the scope and the accuracy of the AHIMS site data, which in some instances is limited.

1.7 Investigator and Contributors

This report was written by Alan Williams, B.Sc., M.Sc., MAACAI, Senior Archaeologist, AHMS. Peter Douglas, Director, AHMS, reviewed the draft report.



Figure 1. Location of the subject area.

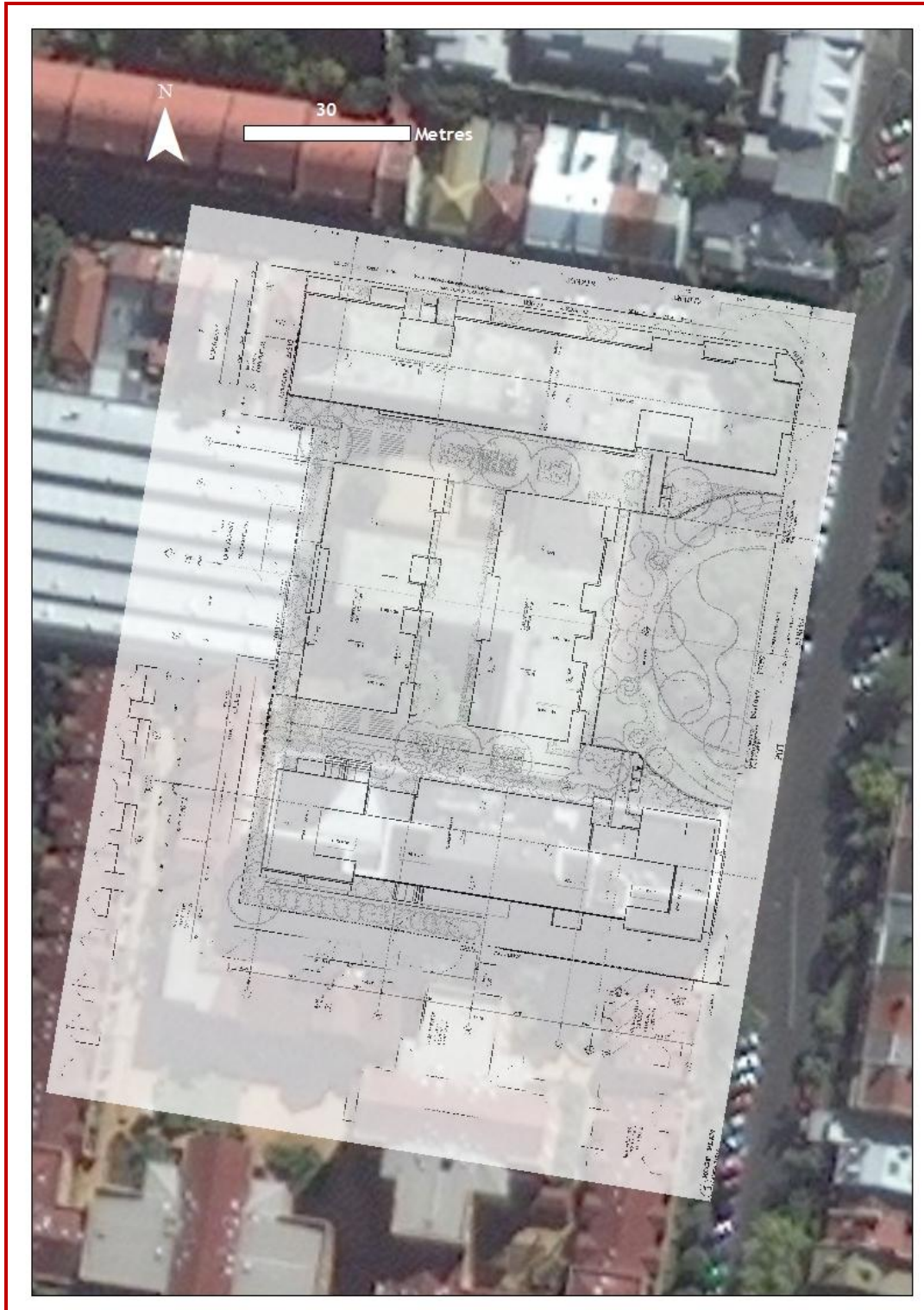


Figure 2. Proposed development overlaid over the subject area. The development comprises four new residential buildings, largely the same size and shape as the existing buildings currently within the subject area. (Source ABC Planning Pty Ltd).

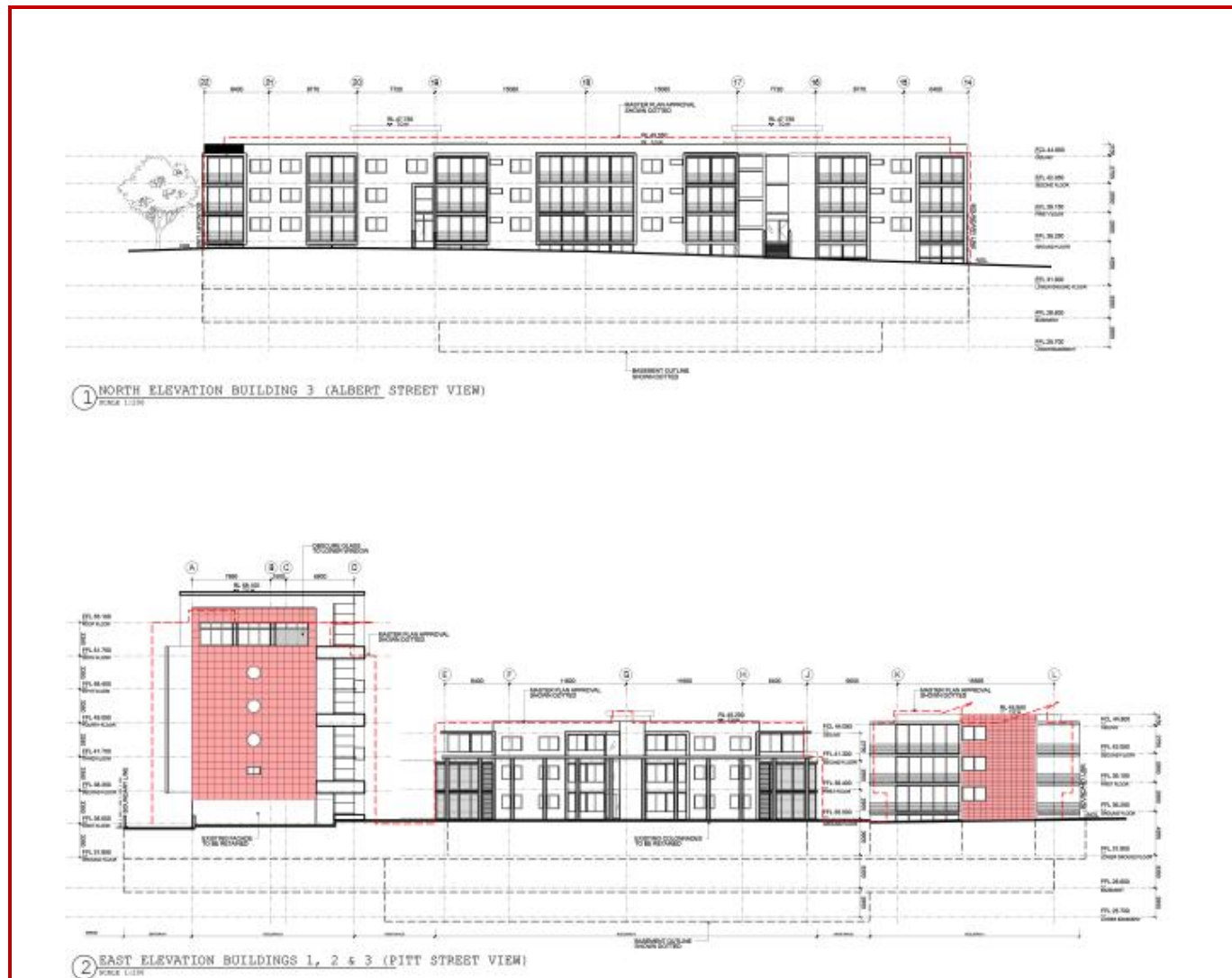


Figure 3. A cross-section of the proposed development, looking west from Pitt Street. Note the proposed two level basement. (Source ABC Planning Pty Ltd).

2. STATUTORY CONTEXT

2.1 Commonwealth Legislation

2.1.1 Aboriginal and Torres Strait Islander Heritage Protection Act 1984

The *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Commonwealth) was enacted at a Federal level to preserve and protect areas (particularly sacred sites) and objects of particular significance to Aboriginal Australians from damage or desecration. Steps necessary for the protection of a threatened place are outlined in a gazetted *Ministerial Declaration* (Sections 9 and 10). This can include the preclusion of development.

As well as providing protection to areas, it can also protect objects by *Declaration*, in particular Aboriginal skeletal remains (Section 12). Although this is a Federal Act, it can be invoked on a State level if the State is unwilling or unable to provide protection for such sites or objects.

No Aboriginal sites or places within the subject area are currently subject to a Declaration.

2.1.2 Environment Protection & Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth) provides for the protection of natural and cultural heritage places. The Act establishes (amongst other things) a National Heritage List (NHL) and a Commonwealth Heritage List (CHL). Places on the NHL are of natural or cultural significance at a national level and can be in public or private ownership. The CHL is limited to places owned or occupied by the Commonwealth which are of heritage significance for certain specified reasons.

Places listed on the NHL are considered to be of State and local heritage value, even if State or local various heritage lists do not specifically include them.

The heritage values of places on the NHL or the CHL are protected under the terms of the *EPBC Act*. The Act requires that the Minister administering the *EPBC Act* assess any action which has, will have, or is likely to have, a significant impact on the heritage values of a listed place. The approval (or rejection) follows the referral of the matter by the relevant agency's Minister.

No Aboriginal sites or places within the subject area are currently listed on the NHL or CHL.

2.1.3 Native Title Act 1993

The *Native Title Act 1993* (Commonwealth) provides recognition and protection for native title. The Act established the National Native Title Tribunal to administer land claims by Aboriginal people. The Act also provides for Indigenous Land Use Agreements, which allow native title claimants and/or holders control over the use and management of affected land and waters.

A search of the National Native Title Tribunal Registers was undertaken on 19 November 2012, and identified no active or successful claims for the subject area. Two previous claims by the Eora People (NC 98/10) and Darug Tribal Aboriginal Corporation (NC 97/8) encompassed parts of the Sydney Local Government Area, but have both been dismissed.

2.2 NSW State Legislation

2.2.1 Environmental Planning & Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) requires that environmental impacts are considered in land-use planning, including impacts on Indigenous and non-Indigenous heritage. Various planning instruments prepared under the Act identify permissible land use and development constraints.

Where Project Approval is to be determined under Part 3A (Transitional Arrangements) or Part 4 (Division 4.1) of the Act, further approvals under the *National Parks and Wildlife Act 1974*, which protects Aboriginal cultural heritage in NSW, are not required. In those instances, management of Aboriginal heritage follows the applicable Aboriginal assessment guidelines (the *Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation*, July 2005) and any relevant statement of commitments included in the project's Approval.

2.2.2 National Parks & Wildlife Act 1974

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

An Aboriginal place is any place declared to be an Aboriginal place by the Minister for Environment and Heritage, under Section 84 of the NPW Act.

No Aboriginal places are within or in close proximity to the subject area.

The provisions of the NPW Act that require various approvals or permits to disturb or discover Aboriginal deposits, objects and places are not applicable to Part 3A or Part 4 (Division 4.1) Projects.

2.2.3 Aboriginal Land Rights Act 1983

The *Aboriginal Land Rights Act 1983* allows for the transfer of ownership to an Aboriginal Land Council of vacant Crown land not required for an essential purpose or for residential land. These lands are then managed and maintained by the Local Aboriginal Land Council.

No places within the subject area are currently subject to Aboriginal Land Claims.

3. ABORIGINAL COMMUNITY CONSULTATION

Due to time constraints in the preparation of this assessment, formal Aboriginal consultation in accordance with OEH's *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, April 2010) could not be undertaken.

Informal Aboriginal consultation was undertaken with the Metropolitan Local Aboriginal Land Council (MLALC). Following initial contact with Paul Morris and Vanessa Haines of the MLALC, a site visit was undertaken with Kevin Telford on 22 November 2012.

The site meeting covered discussion of the previous assessment, an inspection of the property (which is largely developed), and discussion on the cultural and contemporary values of the subject area. The Metropolitan LALC representative indicated that pre-Contact camp sites and other activities were believed to have existed, and that the subject area may have potential for such remains. No specific cultural values were identified by the representative, but he advised that he would discuss the project with elders and other knowledge holders within the MLALC, and provide feedback.

A draft version of this report was provided to the Metropolitan LALC in late November 2012. Metropolitan LALC provided agreement of the findings and recommendations of this report (**Appendix 2**), but no further information on cultural or contemporary values were forthcoming.

4. ETHNOGRAPHIC INFORMATION

4.1 General

This section presents a summary of Aboriginal life at contact, as recorded by early European settlers in documents, maps, plans, images and ethnographic records. By studying these sources, we can reconstruct aspects of traditional Aboriginal lifestyle and economy. Although such accounts are fragmentary and present a biased European view of Aboriginal culture, they provide an important insight into traditional Aboriginal use and occupation of the land.

The Sydney Basin was occupied and used by Aboriginal people for thousands of years before European settlement. Within the Sydney Basin (which includes the current subject area), creeks, floodplains, swamps and woodlands provided Aborigines with rich and varied resource zones and occupation areas. Aboriginal sites across the Sydney Basin provide tangible evidence and an on-going link with the long history of Aboriginal use and occupation of this area.

4.2 The Traditional Owners

The Sydney Basin was occupied and used by Aboriginal people for thousands of years prior to European settlement. Creeks, floodplains, swamps and woodlands provided Aborigines with rich and varied resources and places for habitation.

Aboriginal sites across the Cumberland Plain provide tangible evidence and an on-going link with the long history of Aboriginal use and occupation in this area.

Ethnographic and linguistic evidence indicate that people of the *Darug* language group may have been associated with this landscape, however, there is still much debate regarding the identity of the people who traditionally occupied the local area.

Darug was first described as a language (or dialectic group) by pioneer surveyor, anthropologist and linguist R H Mathews in the early 20th century. He described the extensive range of this language group as follows:

‘The Dharruk speaking people adjoined the Thurrawal on the north, extending along the coast to the Hawkesbury River, and inland to what are now Windsor, Penrith, Campbelltown and intervening towns’.

(Mathews, 1901:135)

There is considerable ongoing debate about the nature, territory and range of pre-contact Aboriginal language groups of the greater Sydney region. These debates have arisen largely because by the time colonial diarists, missionaries and proto-anthropologists began making

detailed records of Aboriginal people in the late 19th Century, pre-European Aboriginal groups had been broken up and reconfigured by European settlement activity.

Sydney region archaeologist and historian Val Attenbrow (2002: 34-45) has cautioned:

‘Any boundaries mapped today for (these) languages or dialects can only be indicative at best. This is not only because of an apparent lack of detail about such boundaries in the historical documents, but because boundaries between language groups are not always precise lines’.

Language groups such as the *Darug* included a number of sub-groups often referred to as ‘clans’, based upon religious and/or totemic associations to country. Ethno-historical evidence indicates the Redfern area was probably part of the land occupied by the *Cadigal* clan.

4.3 Subsistence

The subsistence and economy of Aboriginal groups depended largely on the environment in which they lived. While coastal groups exploited marine and estuarine resources, hinterland groups relied on freshwater and terrestrial animals and plants.

Inland population densities were assessed by early settlers as being less than those on the coast. A recent study of these early historical sources from the Cumberland Plain has suggested that there was a minimum population density of 0.5 persons per square kilometre (Attenbrow, 2002) . This compares with an estimate of 0.75 persons per square kilometre in the coastal zone around Port Jackson (Attenbrow, 2002). The relative scarcity of resources in the hinterland and the greater work required to procure terrestrial foods through hunting meant that the hinterland was more thinly populated than the coast.

The ethnographic record suggests that large semi-sedentary populations existed on the coast. For example, during an expedition to the south of Port Jackson, Tench(1996:58) observed :

“On the north-west arm of Botany Bay stands a village which contains more than a dozen houses and perhaps five times that number of people.....Governor Phillip, when on an excursion between the head of the harbour and that of Botany Bay, once fell upon a party which consisted of more than 300 persons”

Aboriginal groups in the Sydney basin lived in bark huts and within rockshelters formed from natural overhangs in sandstone. Tench described how native huts were constructed by laying pieces of bark together in the form of an ‘oven’. The end result consisted of a low shelter, which was opened at one end and sufficient to accommodate one person lying down .

Tench (1996:53) goes on to conclude that:

"there is reason, however, to believe that they depend less on them (huts) for shelter than on the caverns with which the rocks abound".

Rivers and creeks were a major resource for Aboriginal people who lived in the Sydney area. Rivers provided a source of finfish, shellfish, crustaceans, and birdlife, while creeks and swamps supported aquatic and terrestrial food resources. Beyond the waterways, the banks and alluvial flats featured varied woodland and forest containing trees, shrubs and grasses that provided a range of usable products from canoe bark to traditional medicines, and habitat for food animals including possums, kangaroos and emus (Tench, 1996).

Fish and fishing were of major social and economic importance to Sydney Aborigines. Early colonial observer and diarist Watkin Tench (1979) wrote that:

'Fishing, indeed, seems to engross nearly all of their time, probably from its forming a chief part of their subsistence'.

Dr Lang, writing in the 1830s also noted:

'It is well known that these Aborigines in no instance cultivate the soil, but subsist entirely by hunting and fishing, and on the wild roots they find in certain localities (especially the common fern), with occasionally a little wild honey; indigenous fruits being extremely rare'.

The methods used to obtain fish were many and varied, however the principle methods appear to have been line fishing, spearing and netting. Generally, the type of fishing was strictly divided according to sex - Aboriginal women line fished the river and creeks from bark canoes; men speared fish from canoes and riverbanks. Netting was the most labour intensive and involved members of both sexes.

Bark canoes were used for travelling along rivers and large creeks, and as mobile fishing platforms. Generally canoes were between 2.5 and 6 metres long, were made of bark, and were propelled by wooden paddles, between 0.6 and 0.9 metres long. Small fires were kept alight on clay beds in the centre of the canoes to provide light and warmth and to cook meals.

Captain James Cook was one of the first to describe the fishing canoes of the Sydney Aborigines when he noted during the Endeavour's voyage of Discovery to Botany Bay:

'... Three canoes lay upon the bea(c)h the worst I think I ever saw, they were about 12 or 14 feet long made of one piece of bark of a tree drawn or tied up at each end and the middle kept open by means of pieces of sticks by way of thwarts'.

(Curby, 1998:3)

The bark used to build canoes in the Sydney area was often sourced from the Grey or Saltwater Swamp She Oak (*Casuarina glauca*), Bangalay (*Eucalyptus Botroides*) and several

species of stringybark (*Eucalyptus agglomerate* and *E. acmeniodies*). Canoe bark was removed with stone axes, and later in the post-contact period, with metal axes. Plant fibres bound the canoes together at each end. As indicated by the Cook's observations, the bark canoes were serviceable but flimsy craft, and in order to keep them operational they were occasionally patched with the resin from grass trees (*Xanthorrhoea* sp.) and lined with Cabbage Tree Palm leaves (*Livistonia australis*).

Canoes facilitated access to fishing locations that could not be reached from shore, such as deep holes, drops offs, snags and weed beds, where fish were speared or line caught. Spearing involved the use of long, wooden spears with a pronged tip. Line fishing, generally the domain of women, utilised twine fishing line and baited shell or animal bone hooks. Interestingly, catch rates on hook and line appear to have been improved by the prodigious use of 'ground baiting' or burleying. Lieutenant David Collins noted in his Account of NSW in 1798 that:

'While fishing, the women generally sing: and I have seen them in their canoes chewing muscles or cockles and spitting them into the water as bait'.

(Collins, 1975)

Along the coast and adjacent rivers, fish were also caught in casting nets and traps. One method of net fishing (utilized to trap shoaling mullet) involved a 'drive' along shallow creeks where Aborigines advanced in line abreast to a netted end point (Yeates, 1993). As with the fishing lines, these nets were made from plant fibres.

Resource rich swamps and lagoons were resource zones of great importance to hinterland Aborigines. Within these small freshwater bodies were eels, fish and a variety of shellfish including freshwater mussels (*Velesunio ambiguus*, *Hyridella australis* and *Hyridella depressa*).

The swamps also harboured water rats, frogs, echidnas, as well as a variety of bird life including ducks. Birds in particular were targeted in a number of ways and were harvested by nets, spearing, ensnared in pit-traps and hand caught by stationary Aborigines using fish pieces as bait (Ross, 1990; Attenbrow, 2002).

4.4 Contact History

The decrease in population after British colonisation is well documented. The traditional life of the local people was broken through the course of the early 19th century. The impact of smallpox and influenza decimated the Aboriginal population. Early European settlement of traditional hunting lands deprived Aboriginal groups of access to food sources, and camping and ceremonial sites. People who survived outbreaks of disease and massacres were forced to live in marginal areas, integrate with European settlers or resist

(Liston 1988). Resistance by Aboriginal groups was often met with retaliatory action by white settlers and the colonial administration.

Factors including disease, dislocation and violence led to the demise of traditional lifestyles and a decrease in the Aboriginal population, particularly in and around the early centres of colonial settlement in Sydney, Parramatta and Liverpool.

4.5 Aboriginal Life in Redfern

After European arrival, the swamp at Redfern (in the vicinity of Redfern Park, 200 metres east of the subject area) was a focus of Aboriginal use and occupation, being favoured by Indigenous people visiting the town of Sydney, and the site of ritualised disputes following the enclosure of Hyde Park (Marriott 1988).

Obed West, a 19th century Sydney resident, recalled:

Boxley's Clear [Redfern] was a great rendezvous of the blacks and was one of their great feasting grounds as well as the scene of many a hard-fought battle. The clearing at Redfern, being nicely adjacent, was chosen by the natives as the place of meeting for the settlement of disputes, in lieu of the Racecourse. This also was the spot where the blacks were punished by their comrades for breaches of their tribal laws....

(Marriott 1988:45-46)

West also noted the diverse food resources available to the Aboriginal inhabitants of early 19th Century Redfern:

....Boxley's Lagoon these days was the home of vast numbers of red-bills, wild ducks, snipe, landrail and other game now rarely seen anywhere near Sydney. Eels were also plentiful in the water, and in the bush were bandicoots, possums and native cats which the youths of the time would chase with dogs when the nights were favourable....

(Marriott 1988:45-46)

West observed Aboriginal camping around the fringes of Redfern, possibly including the elevated landforms such as the current subject area:

Round the edges of the clear were camping grounds of the blacks, and little do people know who live in comfortable houses with steam trams running past their doors, realize that they are sleeping on the houses and graves of the aboriginals.

A traditional pathway corresponding with the line of Botany Road reportedly passed through Redfern, connecting Sydney Cove with the northern shore of Botany Bay (Aplin 1988: Figure 2.3). It should be noted that in December 1790 a heavily laden punitive

expedition mounted against Pemulwuy covered the distance between Sydney Cove and the north shore of Botany Bay in the space of five hours on foot (Tench 1793: 171). This suggests that they followed an established route rather than cutting through scrub. This traditional path would have passed some 200 metres to the west of the subject area.

The historical evidence summarised above indicates Aboriginal people occupied Redfern during the early 19th Century and used the local area for camping, gathering food, traditional fighting, meeting and transit. This indicates that material evidence of Aboriginal occupation and use is likely to survive in less disturbed areas of Redfern.

5. ARCHAEOLOGICAL CONTEXT

5.1 General

This section discusses the regional and local archaeological context within which the subject area is situated. For the purposes of determining settlement and site location patterns, archaeologists examine regional and local trends in the distribution of known sites in relation to environment and topography. This provides evidence about economic and social systems in the past and also assists archaeologists in predicting likely site types, site locations and the nature of the archaeological resource in any given area.

5.2 Regional Context

The subject area falls biogeographically within the Cumberland sub-region of the Sydney Bioregion (see **Section 6**). The archaeology of the region has been well documented through a large number of academic studies, regional management studies and impact assessment investigations over the past 30 years.

5.2.1 Early Occupation

Aboriginal occupation in the region dates back well into the Pleistocene period (i.e. before 10,000 years ago). This evidence comes from radiocarbon dates retrieved from excavated sites at Cranebrook Terrace (41,700 years before present [BP]), Shaw's Creek K2 (14,700 BP), and George and Charles Streets Parramatta (c.25,000-30,000 BP) (Jo McDonald Cultural Heritage Management 2005; Kohen *et al.* 1984; Nanson *et al.* 1987). Other sites include Burrill Lake and Bass Point on the south coast with dates >15,000, and Loggers Shelter and Tempe House, the latter a hearth on Cooks River, both dating to early Holocene (5-10,000 years BP) (Attenbrow 1987; Bowdler 1976; Lampert 1971; Jo McDonald Cultural Heritage Management 2006). More recently, AHMS has recently obtained ages of between 12,000 and 15,000 years BP for PT12, an artefact scatter within a sand dune overlooking Hawkesbury River in Pitt Town (Williams *et al.* 2012). The dating of Cranebrook Terrace has largely been discredited (see Williams *et al.* 2012 for discussion), so at this time the George and Charles Streets site is considered as the oldest reliable date for Aboriginal occupation in the Sydney region, although these dates also have interpretation issues.

The early occupation sites dating to the late Pleistocene/early Holocene have been found in deep stratified rockshelter deposits and within alluvial deposits, particularly on the margins of large rivers such as the Hawkesbury-Nepean and Parramatta Rivers. Drawing on this evidence, McDonald has recently argued that early occupation of the Sydney Basin was focused on these primary river systems and characterised by a high degree of 'residential

mobility' between a small number of sites (McDonald 2005). However, the survivability and loss of older sites in such a heavily urbanised environment must also be considered.

5.2.2 Intensification During the Holocene

The vast majority of dated sites in the Sydney region are less than 5,000 years old (35 out of a total of 48 dated sites) (Attenbrow 2002). It has been argued that this is a result of increased populations and 'intensification' of cultural activity during this period. The prevalence of sites dating to the last 5,000 years may also be a result of the last significant rise in sea level, approximately 7,000 years ago (Sloss *et al.* 2007). The sea level rise would have submerged many of the older sites along the coastal fringe and forced Aboriginal groups westward to the current coastline.

In an attempt to better understand changes in use and occupation during the Holocene period, Val Attenbrow undertook a detailed study of the Upper Mangrove Creek catchment to the north of Sydney (Attenbrow 2004). Attenbrow's study found significant changes in site patterning during the Holocene. She concluded that population was unlikely to have changed, but that the use of sites, most notably in the last 2,000 years, did. This increased use of sites appeared in the archaeological record as increasing population.

Holdaway *et al.* (2008), similarly suggest that populations did not increase in the late Holocene, but that the changes seen in the archaeological record instead reflect taphonomic change. Conversely, Smith *et al.* (2008) and Williams *et al.* (2010), both suggest that populations were in fact larger in the last 2,000 years than in any preceding period. Using radiocarbon data and regional studies, they demonstrate that there is an increasing use of sites in all locations at this time, which cannot be explained by movement of people across the landscape, but rather points to increasing numbers of people using more of the landscape.

This issue is still widely contested in archaeological literature, but whatever the reason, archaeological sites within the Sydney Basin are dominated by late Holocene sites.

5.2.3 Regional Site Patterns

More than 4,500 sites have been recorded and registered with the OEH *Aboriginal Heritage Information Management System* (AHIMS) for Sydney, reflecting both the wealth of archaeology in the region and the number of archaeological investigations undertaken.

The dominant site types in the Sydney region (in the 15-20 per cent frequency range) are rock shelters with midden deposit, rock shelters with art, rock art engravings and open artefact scatters (Attenbrow 2002). Less common site types, in the 5-15 per cent range, include rock shelters with artefacts, grinding grooves and open middens (Attenbrow 2002).

The distribution, density and size of sites are largely dependent on environmental context. For instance, middens are found in close proximity to marine, estuarine and, less often, freshwater bodies. Rock shelters are only found in areas of exposed sandstone escarpment and grinding grooves are found on areas of exposed flat bedded sandstone near a source of water.

A study of the regional archaeology of the Cumberland Plain by Kohen made a number of findings about site location patterns in the Sydney area. The study demonstrated that proximity to water was an important factor in site patterning. Kohen found that 65 per cent of open artefact scatter sites were located within 100 metres of permanent fresh water (Kohen, 1986). Only 8 per cent of sites were found more than 500 metres away from permanent fresh water. In short, Kohen argued that open artefact scatters are larger, more complex and more densely clustered along permanent creek and river lines. Kohen's study also found that silcrete (51%) and chert (34%) are the most common raw materials used to manufacture stone artefacts. Other raw materials include quartz, basalt and quartzite.

Although the patterns described above have been generally supported by subsequent investigations, Kohen's study was limited by a reliance on surface evidence. Extensive excavation across the Cumberland Plain has since shown that areas with no surface evidence often contain sub-surface deposits buried beneath current ground surfaces. This is a critical consideration in aggrading soil landscapes, such as those commonly found across the Cumberland Plain. In a 1997 study of the Cumberland Plain, McDonald found that:

- 17 out of 61 excavated sites had no surface artefacts before excavation.
- The ratio of recorded surface to excavated material was 1:25.

None of the excavated sites could be properly characterised on the basis of surface evidence. In short, surface evidence (or the absence of surface evidence) does not necessarily indicate the potential, nature or density of sub-surface material.

The results of McDonald's study clearly highlight the limitations of surface survey in identifying archaeological deposits in this landscape. The study also shows the importance of test excavation in establishing the nature and density of archaeological material on the Cumberland Plain.

McDonald has undertaken over 20 years of consulting archaeology in the Cumberland Plain, and, like Kohen, has developed a predictive model for the distribution of Aboriginal objects. In a recent publication, White and McDonald (2010:29) summarised this model as follows:

'Topographic and stream order variables correlate with artefact density and distribution. High artefact density concentrations may have resulted from large number of artefact discard activities and/or from intensive stone flaking. Highest artefact densities occur on terraces and lower slopes associated with 4th and 2nd

order streams, especially 50-100 metres from 4th order streams. Upper slopes have sparse discontinuous artefact distributions but artefacts are still found in these landscape settings’.

5.2.4 Stone Artefacts

Aboriginal stone artefacts are an important source of archaeological information because stone is preserved for long periods of time whereas organic materials such as bone, shell, wood and plant fibres decay. Stone artefacts provide valuable information about technology, economy, cultural change through time and settlement patterning. Stone has also been used for ‘relative’ dating of sites where direct methods such as radiocarbon dating cannot be applied. A technological sequence for stone artefacts for the region was first described in the late 1940s by Fred McCarthy and has since been refined by various authors. Currently, the most widely accepted typological sequence is known as the ‘Eastern Regional Sequence’ (Hiscock & Attenbrow 1998; 2002). The ERS phases are as follows:

- Capertian - Distinguished by large uniface pebble tools, core tools, horsehoof cores, scrapers and hammerstones. Backed artefacts occasionally present. Generally dates to before 5,000 years BP.
- Early Bondaian - Aspects of the Capertian assemblage continue, but backed artefacts and ground-edged artefacts increase. Artefacts during this period were predominantly made from fine-grained siliceous stone such as silcrete and tuff. Generally dated from 5000 BP to 2800 years BP.
- Middle Bondaian - Characterised by backed artefacts, particularly Bondi Points and ground-edged artefacts. Artefacts made from siliceous materials, however quartz becomes more frequent. Generally dated from 2800 to 1600 BP.
- Late Bondaian - Characterised by bipolar technology, eloueras, ground-edged artefacts, and bone and shell artefacts. Bondi points are virtually absent and artefacts are predominantly made from quartz. Generally dated from 1600 BP to contact.

5.3 Local Context

This section provides a brief summary of archaeological investigations in the local area to provide an indication of local site patterning and the nature of the local archaeological resource.

A limited number of Aboriginal sites have been identified and recorded in urban Sydney contexts. Recorded site types include open campsites, middens, rock engravings, rock shelters and historic burials.

Known Aboriginal sites within the Sydney CBD include (**Figure 8**):

1. Dawes Point Park - Rock Engraving;
2. Moores Wharf - Open Camp Site;
3. Goat Island - Midden/Open Camp Site;
4. Bennelong Point - Middens;
5. Lilyvale - Middens;
6. MSB Tower - Rock Engraving;
7. Goat Island Cave - Shelter with Midden;
8. First Government House - Burials/Historic Place;
9. Goat Island - Midden/Shelter with Deposit;
10. Angel Place - Open Camp Site;
11. Broadway 1 - Open Camp Site;
12. KENS (Kent, Erskine, Napoleon and Sussex Streets) Site Sydney - Open Camp Site;
13. William Street - Open Camp Site.

A source of silcrete, a type of stone commonly used by Aboriginal people to manufacture stone implements, is known to occur in Newtown (**Figure 8**). This indicates that good quality workable stone was locally available to Aboriginal people in the past.

The limited number of recorded sites within the Sydney CBD area is directly related to the long and intensive history of development. More than 200 years of European development has destroyed the majority of Aboriginal sites that would have originally existed along the shores of Sydney Harbour and its associated streams and bays. Of particular note was the early colonial practice of excavating Aboriginal shell middens to extract shells for lime burning for use in the production of mortar.

The majority of Aboriginal sites identified within the Sydney CBD were recorded during the course of historical archaeological excavations associated with development projects. Aboriginal sites and objects were identified in pockets of remnant topsoil either beneath or between historical archaeological contexts.

The 1997 excavations at Angel Place, along the margins of the former Tank Stream, are an excellent case in point. During an historical archaeological investigation, 54 Aboriginal artefacts were recovered from remnant topsoils immediately below the earliest historical levels on site (Steele 1997). The results from Angel Place demonstrated that even in areas of earliest European settlement, Aboriginal objects and sites may still survive, buried at depth within remnant soils. Although the evidence from Angel Place was recovered from isolated pockets of surviving remnant soils, the range of artefact types (core reduction, small flakes and heat affected debitage) and raw materials (silcrete, indurated mudstone and chert) suggests the site was originally a continuous complex occupation site along the margins of the Tank Stream.

Other excavations within the Sydney CBD, such as those at William Street (Baker 2003), the KENS site (Steele 2005) and the Quadrant development on Broadway (Steele 2003) provide context for the current archaeological assessment. Of these, the Quadrant site is in the closest proximity to the subject area. Excavation of a discrete pocket of remnant A-horizon topsoil was undertaken as part of the investigation prior to development of the site. This excavation revealed 20 un-diagnostic Aboriginal flaked stone artefacts (Steele 2002). The presence of such artefacts is physical evidence of Aboriginal occupation in the local area.

Excavation at Shea's Creek, now Alexandra Canal, in the 1890s, revealed the presence of two shell horizons. Archaeological evidence in these horizons included stone axes and butchered bone. The finds were made in two locations, 232 and 824 m to the north of Ricketty Street, Alexandria (Attenbrow 1984). A sample of the bone was later dated to $5,520 \pm 70$ BP (conventional age) (JMCHM 2005).

Previous archaeological investigations clearly indicate the potential for Aboriginal cultural material to survive within deposits underlying buildings and below filled ground in the Sydney CBD. Evidence of Aboriginal occupation prior to the arrival of European people clearly exists on some urban sites, where remnant portions of the original soil profile still exist.

5.3.1 Site Specific Studies

Two studies have direct relevance to the subject area:

- 1) an assessment and test excavation of the National Indigenous Development Centre (now the National Centre of Indigenous Excellence), Redfern, located some 75-100 m south-east of the subject area, undertaken by AHMS in 2007; and
- 2) a preliminary assessment undertaken of the subject area by AHMS in 2007 as part of an earlier stage of the project.

In 2007, AHMS undertook an assessment of the proposed National Indigenous Development Centre located between George, Phillip and Cope Streets, Redfern (**Figure 9**) (AHMS, 2009). The study identified that the study area had potential to be on aeolian (wind-blown) dunes in the general vicinity of Black Wattle Creek, a significant water source running through the southern edge of the (now) Sydney CBD. These findings, along with the relatively undisturbed nature of the study area, prompted test excavations of the study area. Excavations consisted of four 1m² test pits located within a larger historic excavation of several mid-late 19th Century residences on the site. The test pits reached depths of up to 90cm and confirmed the aeolian nature of the area (**Figure 10**). However, no Aboriginal objects were recovered as part of the excavations.

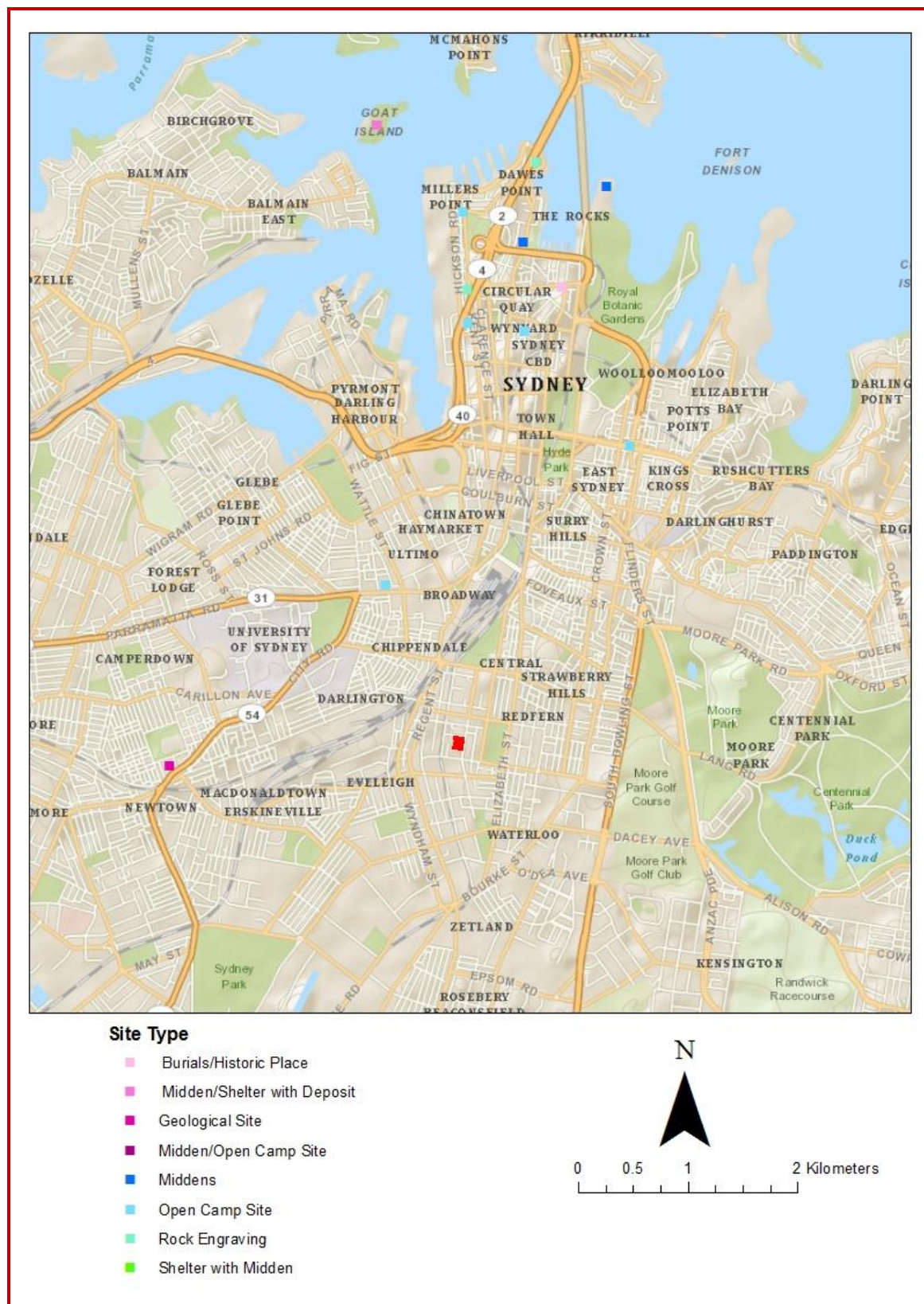


Figure 4. Map showing Aboriginal objects and/or sites recovered during historical excavations in heavily disturbed contexts. Further discussion is presented in the text.

As part of the Concept Plan Approval application for the former Rachel Forster Hospital site in 2007, AHMS undertook a preliminary assessment of the subject area (AHMS 2007). The assessment was constrained to background and surface investigation, but identified that much of the subject area was extensively disturbed by the existing structures, many of which have basements. The assessment did, however, identify one area of potential archaeological sensitivity (**Figure 11**). This area consisted of the open space immediately east of the main hospital structure, and was identified based on the presence of a natural soil profile that could be observed in parts of the structure's basements. The report concluded that, in this area:

The naturally occurring soil deposits observed below historic occupation layers are typical of those found within the Tuggerah and Newport soil landscapes which cover extensive portions of south and eastern Sydney. Both are Aeolian sands, laid down c10,000 years BP, with the Tuggerah landscape forming extensive dune fields, while the Newport landscape forms a sand mantle over earlier soil horizons. The date of formation of these sand deposits is therefore well within the known timeframe for Aboriginal occupation in the Sydney Basin.

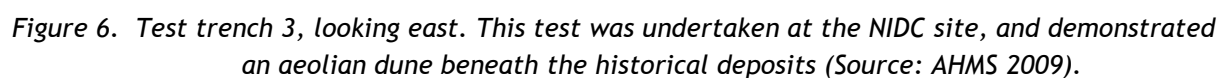
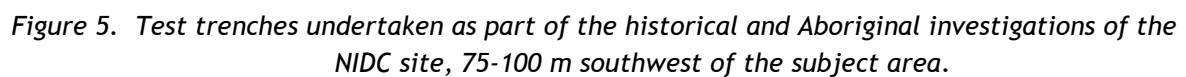
The site does not contain any registered Aboriginal sites and no Aboriginal sites or objects were observed at the site during the current investigation, however the former presence of numerous streams and swamps within these soil landscapes was a resource zone that was attractive to Aboriginal people, as demonstrated by numerous early historic accounts of the late Eighteenth and early Nineteenth Centuries. This, combined with the documented identification of Aboriginal sites by archaeological investigations within development contexts on former dune fields and beside former water sources (e.g. Angel Place, Sydney, and Prince of Wales Hospital, Randwick), suggests that the natural soil profiles in the basement at the North Wing of Rachel Forster Hospital have some potential to contain remains of Aboriginal occupation.

The significance of any such sites cannot be determined without further archaeological investigation and consultation with relevant Aboriginal community organizations and any registered Traditional Owners of the land incorporating the Hospital site.

This assessment provided a number of recommendations, which formed the basis of the existing Concept Approval conditions of consent. For Aboriginal heritage, these included:

- 3) Preparation of an Aboriginal Heritage Impact Assessment (AHIA), in accordance with draft Department of Conservation Guidelines 1997.¹

¹ Note that Aboriginal heritage statutory framework and guidelines have significantly changed since these recommendations (see Section 2 for further discussion).



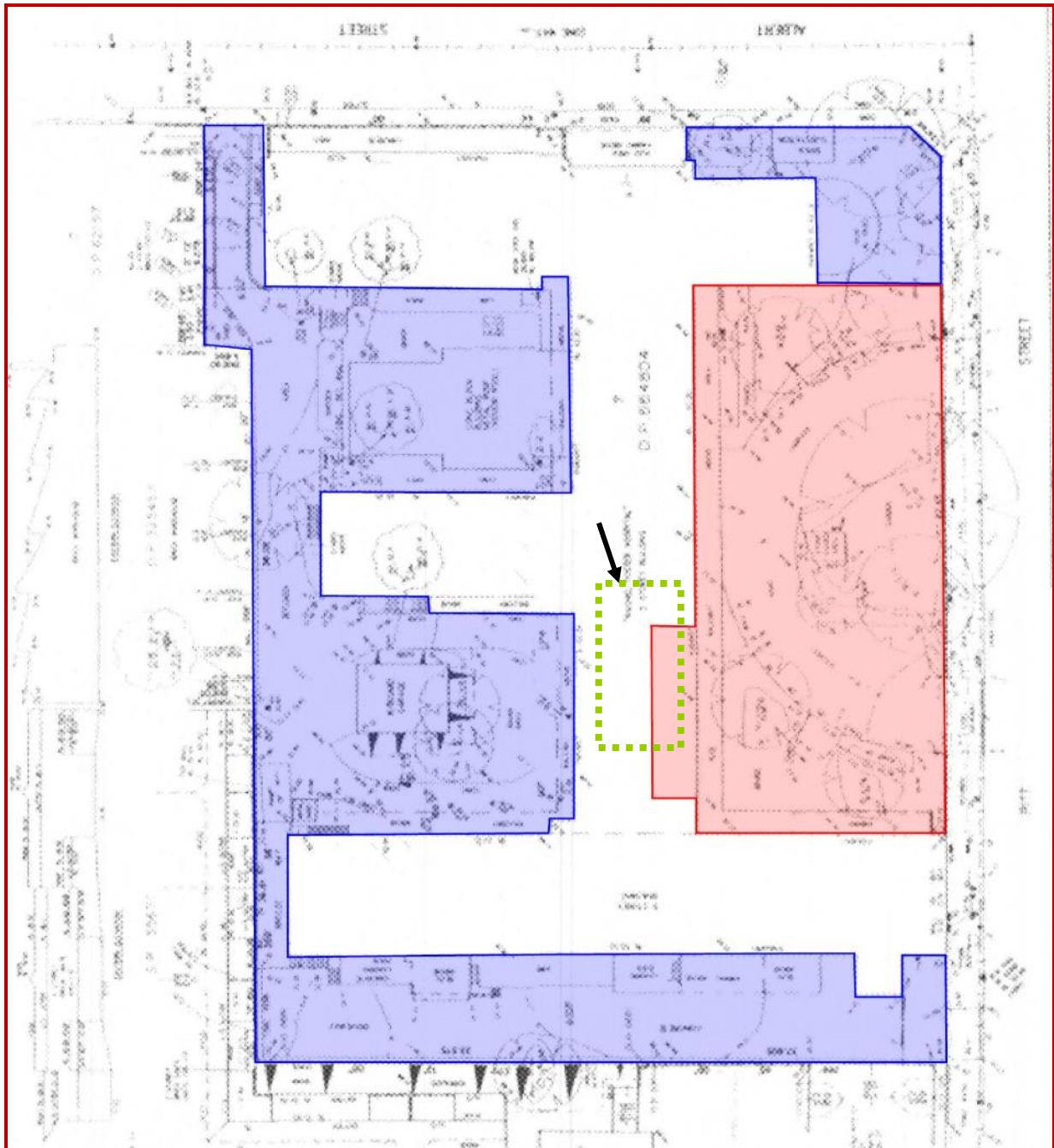


Figure 7. A map of the subject area identifying potential archaeological sensitivity (red), and potential impacts (dashed green) based on the proposed design. The extant hospital is shown as uncoloured areas (north is to the top of the page). Areas in blue were under concrete paving, and were considered to be disturbed along with the uncoloured parts of the subject area. The arrow refers to an historic well found within the Building 2 of the hospital. (Source: AHMS 2007).

5.4 AHIMS Search Results

A search of the Aboriginal Heritage Information Management System (AHIMS) database, maintained by OEH, was carried out on 20 November 2012 (**Appendix 1**). No previously recorded Aboriginal sites were identified within the subject area.

A combination of searches from other nearby projects over the last few years identifies 16 Aboriginal sites within a 4-5km radius of the subject area (**Figure 12**). These sites were primarily artefact scatters and/or shell midden material often found during historical excavations within the Sydney CBD (see **Section 5.3**).

Only one site is in close proximity to the subject area; #45-6-2597, identified as ‘Wynard Street 1’. A review of the site card indicates that this site was actually a midden recorded by Diyan Coe, and located on the western side of Alexandria Park on Wyndham Street. The site co-ordinates appear incorrect, since the site is likely to be some 500 m southwest of the subject area, rather than in close proximity as shown in **Figure 12**.

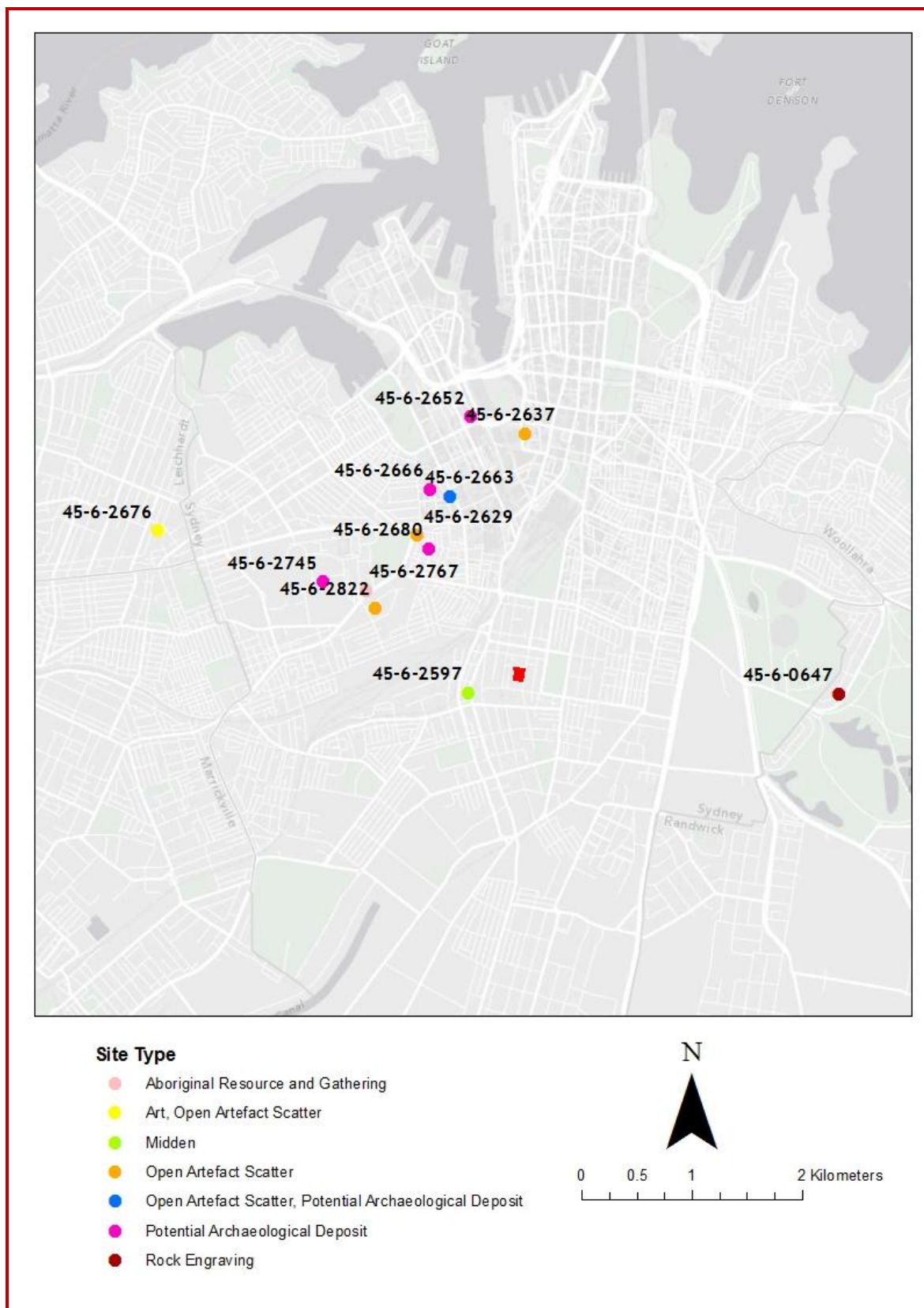


Figure 8. Map showing previously recorded AHIMS sites in the vicinity of the subject area (red).

6. LANDSCAPE CONTEXT

Environmental and landscape characteristics contribute to the availability of natural resources. In turn, landscape characteristics and available natural resources influence land use. Ultimately, these affect the types of archaeological sites that may exist in a given area. A determination of the past environmental context is essential to develop accurate models of cultural activity, site distribution patterns and the archaeological potential of any given area. The environmental context of the subject area is discussed below.

6.1 Landscape Characteristics

The topography of the subject area has been significantly altered through the development of Redfern. Visual inspection of the subject area suggests that it is situated on the edge of a crest that drops sharply away to the southwest, and more gently to the east. The subject area itself is largely flat with occasional undulations and steps in various parts of the site, and is between 26-28 m AHD.

Evidence at the nearby NIDC site indicates that this area would have formed part of a dune system extending to Botany Bay. There is no indication that the subject area contained swamps or watercourses. However, wetlands and creeks were plentiful in the local area. In particular, the Blackwattle Swamp Creek was located less than 1 kilometre to the north (**Figure 13**) and large wetlands were located to the south and east in the vicinity of Redfern Oval and Waterloo. Shea's Creek is also located approximately 1 kilometre south of the subject area.

A silcrete stone source has been identified to the east near King Street in Newtown.

The subject area is located on the edge of the Cumberland Plain sub-region (**Figure 14**), which consists of about 9% of the Sydney Basin bioregion (Thackway & Cresswell 1995). The main landforms in the sub-region include low hills, low dissected plateaux and low escarpments and ridges. Geology is predominantly Mesozoic sediments with a range of sandy loam and texture contrast soils. Siliceous dune sands also occur. Vegetation is dominated by forest red gum (*Eucalyptus tereticornis*), grey gum, spotted gum (*Eucalyptus maculata*), scribbly gum (*Eucalyptus haemastoma*), grey box (*Eucalyptus moluccana*), white box, yellow box (*Eucalyptus melliodora*), fuzzy box (*Eucalyptus conica*), narrow-leaved ironbark (*Eucalyptus crebra*), broad-leaved ironbark (*Eucalyptus fibrosa*), rough-barked apple, yellow bloodwood and extensive stands of swamp oak.

Of relevance to hunter-gatherer activities in the region is the close proximity of the subject area to the edge of the Pittwater sub-region. This region has increasing coastal characteristics, and its interface with the inland Cumberland Plain sub-region would have likely created a significant range of resources that would have been attractive to Aboriginal people in the past.

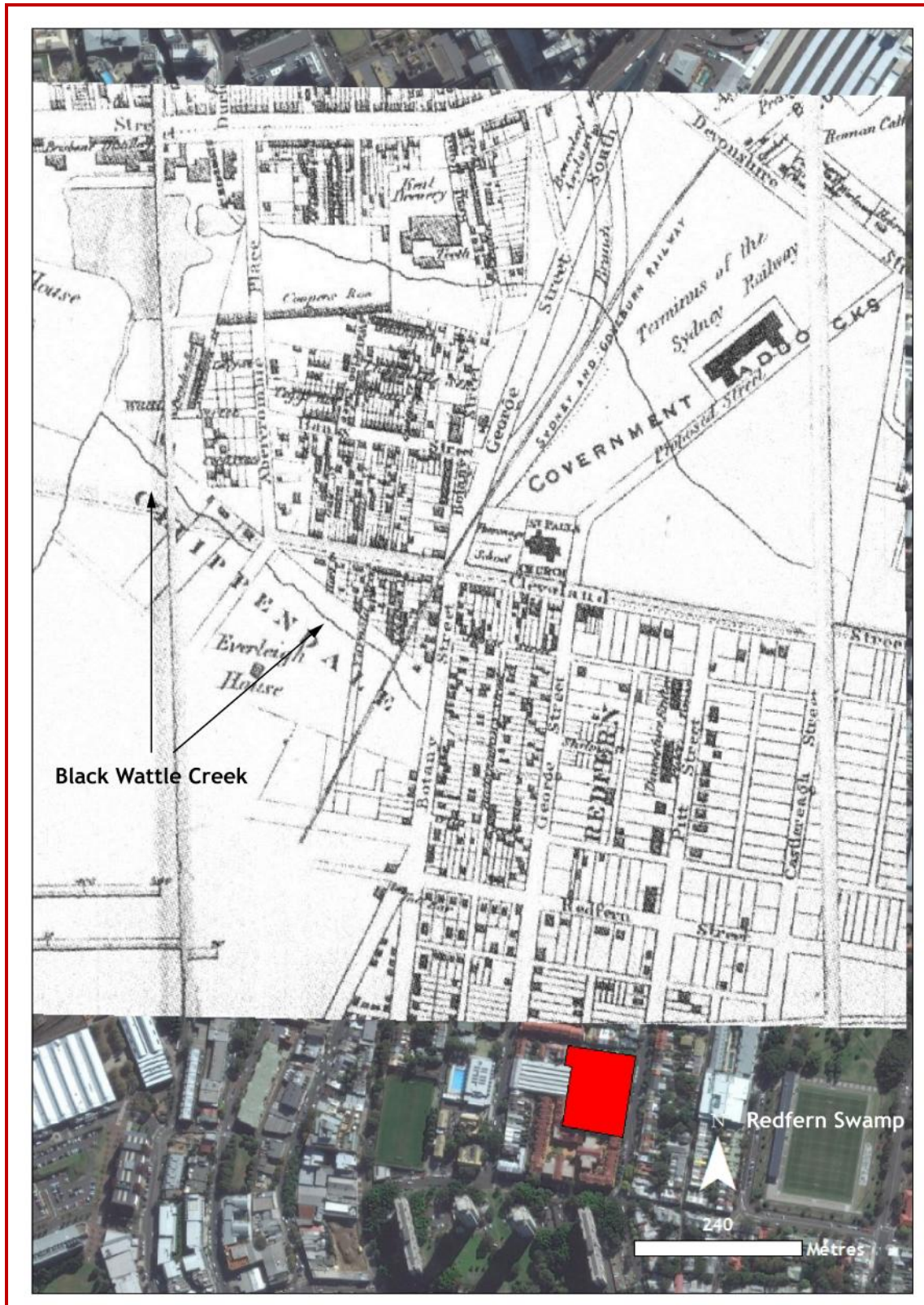


Figure 9. Map showing the location of Blackwattle Creek in relation to the subject area (red). The overlay is an 1854 map by Woolcott and Clark, and shows Blackwattle Swamp Creek as a thin black line immediately above the reference to Chippendale. The general location of the Redfern Swamps (now within Redfern Park) is also shown.

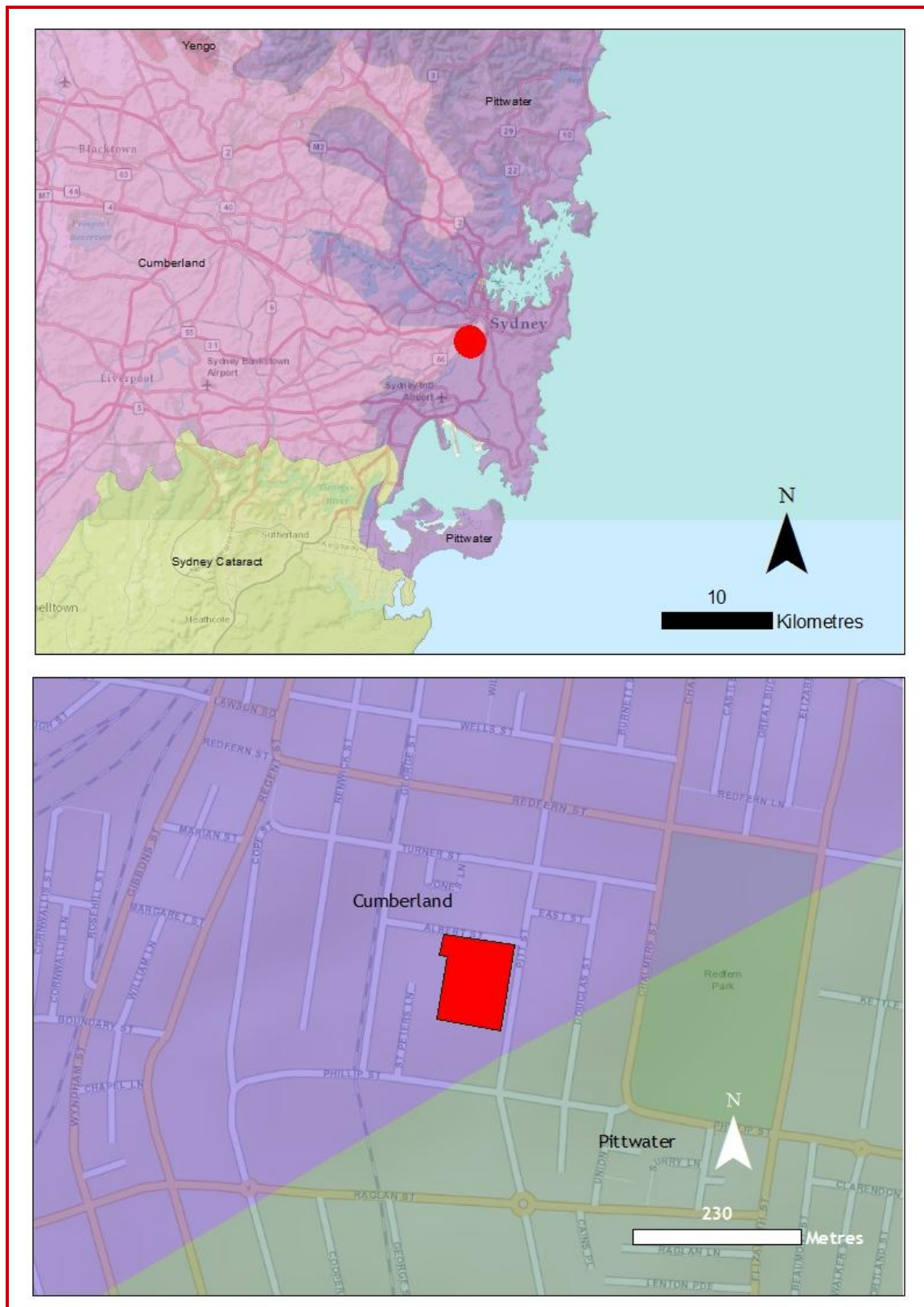


Figure 10. Map showing the Interim Bioregionalisation for Australia sub-regions for the Sydney region. The subject area is situated on the edge of the Cumberland Plain and Pittwater sub-regions - an interface that would have been rich in resources (source: Thackway & Cresswell 1995).

6.2 Geology and Soils

The subject area is situated on the north-western edge of the Botany Basin. The natural stratigraphy of this area comprises stabilised aeolian sand overlying alluvial and residual plastic clays. Local bedrock is Ashfield Shale.

The *Soil Landscapes of the Sydney 1:100,000 Map Sheet* indicates the subject area is located on the Tuggerah aeolian soil landscape. This landscape covers most of the Eastern Suburbs, comprising mobile dunes that were stabilised with vegetation cover during the Pleistocene and Holocene. After the dunes stabilised, pedogenesis occurred and sandy loam topsoils developed. There is a potential for Aboriginal cultural deposits within intact portions of Tuggerah landscape sand.

6.2.1 Geotechnical Studies

Two geotechnical studies have been undertaken within the subject area. The first was undertaken in 2003 by Douglas Partners Pty Ltd as part of the Concept Plan application, and the second was undertaken in 2012 by Environmental Investigations as part of the current Project Approval application. Both studies were primarily focussed on contamination from the existing structures, but included bore-logs of the soil profile encountered.

Each study investigated 10 bore-holes across the subject area, and revealed a fairly consistent stratigraphy:

The soil profile across the site was characterised generally by fill materials consisting of brown to light brown/grey to light grey gravely silty sand with brick and crushed concrete fragments and minor ash traces, grass and tree rootlets, dry; overlying natural brown to light grey sand, fine to medium grained, dry (0.3 to 2.5 m BGL [below ground surface]); overlying natural red/grey clay, medium-high plasticity, dry (0.3 to 6m BGL).

(Environmental Investigations 2012: 37).

For the purposes of Aboriginal heritage, the natural sand between 0.3 and 2.5 m below ground surface is of interest. This sand unit probably reflects part of the under-lying dune system common in this region, and has been demonstrated to be a deposit with potential to contain buried Aboriginal objects. Grey coloured sands and sandy loams are indicative of former A-horizon topsoils because it suggests they contain a humic content derived from surface vegetation. It is these upper units that have potential to contain cultural deposits associated with Aboriginal use of the area before European settlement. The overlying fill unit is also of some interest, since Aboriginal objects are routinely found within disturbed or historical soil units in urban contexts (Section 5.3). The nature of the fill has yet to be determined, however, and may relate to the 1940s construction of the hospital.

With the exception of four bore-holes drilled in the existing building footprint, the majority of the bore-holes were located around the edge of the subject area, and show variable levels of fill and sand deposits at those points. The most intact deposits appear to be situated in the southern and south-eastern corner of the subject area, although mixed results are also observed along the western margins. Areas within the existing buildings, and to the north of the subject area, appear to have been truncated to under-lying clays and have low to nil likelihood of containing Aboriginal objects.

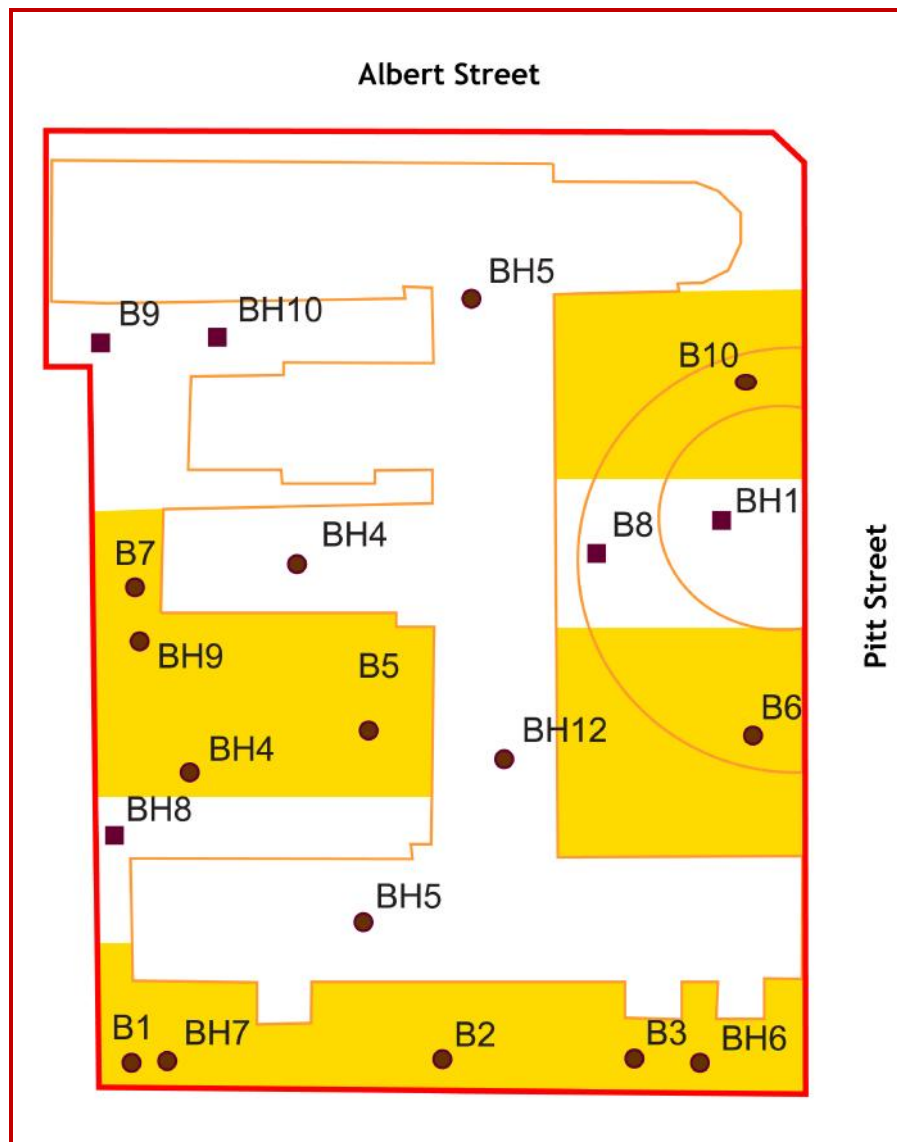


Figure 11. Schematic map showing the location of boreholes undertaken across the subject area (numbers referenced as 'B' relate to the Douglas Partners 2003 study; 'BH' relate to the Environmental Investigations 2012 study). Areas containing relatively thick deposits of sand that occur less than 1 m from current ground surface are highlighted in yellow. The specific distribution and extension of these areas can only be hypothesised based on the bore-hole distribution. Bore-holes shown as squares also contain >1m of fill deposits, which may also be of archaeological interest. All other areas have generally been truncated to underlying clays and have low to nil archaeological potential.

6.3 Vegetation

The natural vegetation of a landscape is an important consideration in an Aboriginal cultural heritage assessment because it provides an indication of the natural resources once available to Aboriginal people. Bark from trees could be stripped to make canoes, shields and other items. The vegetation itself could provide food resources, such as edible plants, and also habitats for animals, such as possums and birds, which could be hunted.

The original vegetation associated with the Tuggerah Soil Landscape within the Sydney region was sclerophyll eucalypt and apple woodland. Dominant trees species would have included smooth-barked apple (*Angophora costata*), Sydney peppermint (*Eucalyptus piperita*), and old man banksia (*Banksia serrata*). Under-storey species would have included bracken (*Pteridium esculentum*), Christmas bush (*Ceratopetalum gummiferum*), woody pear (*Xylomelum pyriforme*) and prickly moses (*Acacia ulicifolia*) (Chapman & Murphy 1989).

Original vegetation was cleared from the subject area during the early phases of site development in the 19th century. An arborist study undertaken as part of the Concept Approval application identified 19 trees on site, all of which were exotic or culturally planted (Landscape Matrix Pty Ltd 2007). Trees included brush box, camphor laurel, Chinese camellia and Chinese hackberry.

6.4 Previous Land Use and Disturbance

A separate historical archaeological assessment of the subject area has been undertaken by AHMS. This section identifies previous impacts to the subject area that may impact the potential for Aboriginal objects to exist.

The subject area was already a developed residential suburb by the 1930s (**Figure 17**). Residential structures line Pitt and Albert Streets, although an undeveloped paddock or field is evident in the south and western parts of the subject area. The road located to the south of the subject area, and showing the most intact soil profile (**Section 6.2**), had been established by this time and images from subsequent years reveal little change.

In 1940, the current hospital was developed on the subject area, and a photograph of the construction shows extensive construction impacts to the central parts of the site (**Figure 16**). The truck in the background, however, appears to be situated on a natural land-surface (and the area correlates with B7 and BH9 in **Figure 15**). However, areas south, north and east (through the windows) of the truck show extensive excavation and/or truncation. The floating slab that forms the main entrance way (and which is situated upon a remnant soil profile - see **Section 7.2**) is evident in the right of the photograph.

The southern portion of the hospital was built by 1943 (**Figure 18**). An aerial photograph from this date shows the southern portions of the hospital complete. A structure also stood to the north of the subject area, but this was replaced by 1949. The large driveway and grassed area to the east of the subject area was established as part of the hospital construction and is still present today (**Figure 1**). In the 1949 aerial image, the hospital was well established (**Figure 49**). A new building was being constructed to the north and northwest of the subject area, and extensive areas of the dune surface can be observed in the photograph. Cleared areas in the south-western portion of the subject area also show vehicle activity (probably a turning circle during the construction). The southern and eastern quadrants of the subject area, however, showed little change since the initial construction.

No further major development occurred on the site following the construction of the northern part of the hospital in 1949 (**Figure 1**). Where not already done so, the margins of the subject area were concreted and bitumened, and no natural land surface remained. The driveway area to the east and the portions to the south show little change from the early 1940s or earlier.

It is likely, however, that much of the pre-existing soil deposits in the subject area were disturbed during construction of the hospital. Based on the historical photographs, these impacts have been most extensive within and in close proximity to the structures, as a result of the installation of foundations and basements, etc. Areas on the east, south and west margins of the subject area, however, do not appear to have been subject to extensive construction activities (with the exception of vehicle movement) and an intact soil profile may remain in these areas.



Figure 12. Photograph of the Rachel Forster Hospital construction in September 1940. The photograph was probably taken from the southeast corner of the site, looking northwest. (Source: Weir Phillips Architects 2007).

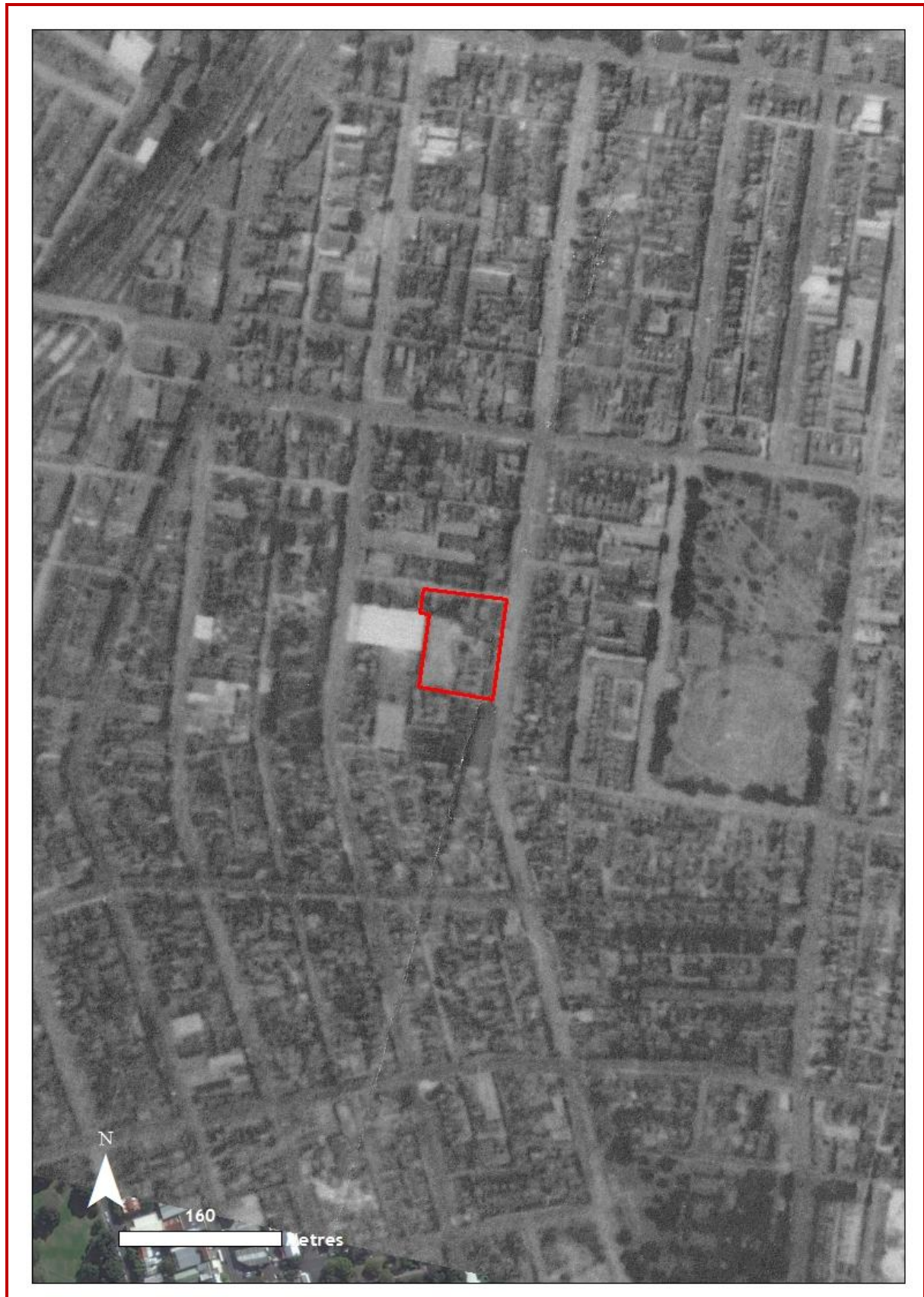


Figure 13. Aerial photograph of the subject area, 1930. (Source: Land and Property Information).

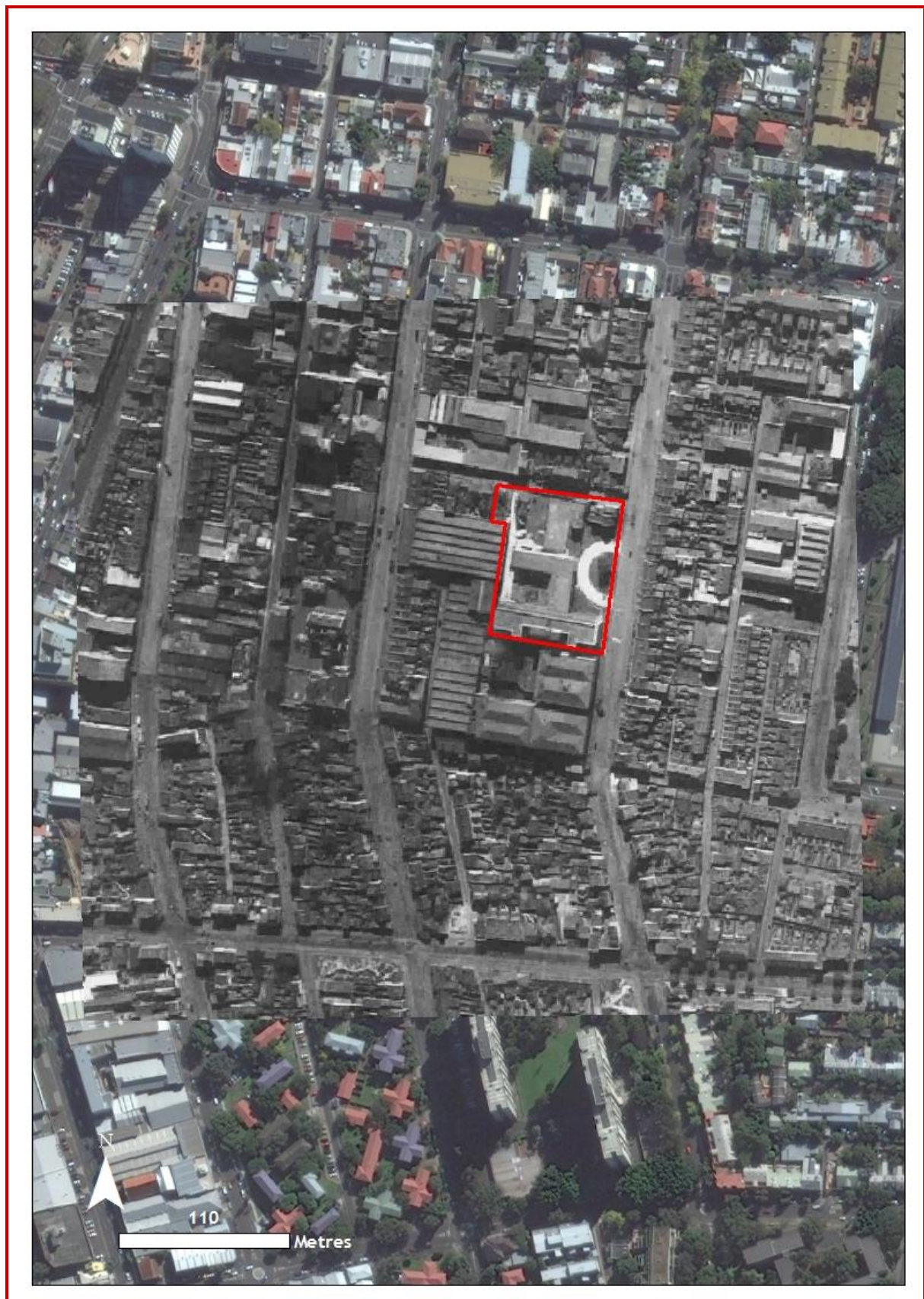


Figure 14. Aerial photograph of the subject area, 1943. (Source: Land and Property Information).



Figure 15. Aerial photograph of the subject area, 1949. (Source: Land and Property Information).

7. SITE INSPECTION

7.1 Background

A site inspection was undertaken by Alan Williams and Laura Matarese (AHMS) accompanied by Kevin Telford (Metropolitan LALC) on 22 November 2012.

Due to the developed nature of the subject area, the focus of the survey was to try and interpret the original landscape characteristics of the site, and to identify existing development impacts that were not evident in the background review.

AHMS also undertook discussions with the Metropolitan LALC representative to identify cultural and contemporary Indigenous perspectives about the subject area.

A systematic survey of the subject area was not undertaken. Rather, areas identified in the background review as having potential to contain an *in situ* soil profile were targeted. In addition, the preliminary assessment by AHMS in 2007 identified under-floor deposits near the front of the main building. These were also relocated and re-inspected as part of the investigation.

7.2 General Results

The site investigation confirmed that the subject area was extensively developed by the hospital and associated activities. Where structures were not present, the subject area had been covered with concrete, paving or bitumen, and no natural soil surfaces were evident (**Figures 20 and 21**).

Based on a review of the general area, the subject area appeared to be situated on a crest or ridgeline, with a significant fall of slope to the south and southwest. The subject area was several undulations suggesting a gradual fall of slope from the northwest corner to the southeast. A large cut was evident in the northwest corner of the subject area indicating that material had probably been removed from the northwest and north portions of the subject area (**Figure 22**), and used to fill other parts of the site. Based on available geotechnical information (**Section 6.2.1**), extensive filling was undertaken across parts of the eastern edge and central-southern parts of the subject area.

The site investigation identified several areas of additional disturbance that were not evident in the background review. Generally these impacts were in close proximity to the buildings, such as exterior vents, doors, stairways, etc, servicing the basement levels. A large vehicle service bay in the southwest corner of the subject area was present and has probably removed significant portions of the soil profile in this location (**Figure 23**). In contrast, areas along the southern and eastern margin of the subject area revealed little evidence of disturbance or change from the aerial photographs shown in **Section 6.4** (**Figure 24**).

Based on the preliminary assessment, an area below the main foyer was inspected. A significant portion of a natural soil profile was identified in this area (**Figures 25-28**). It appears that the front of the hospital structure sits on part of a floating slab situated above relatively undisturbed deposits (**Figure 25**). These deposits consist of a disturbed dark sandy topsoil over a narrow band of grey/light brown sand overlying a hard red brown clay. The entire profile was estimated to be approximately 2 m in depth (**Figures 26 and 27**). The deposits were situated about 1 m below the basement ceiling (i.e. the ground floor floating slab). They correlate well with the geotechnical information relating to the eastern edge of the subject area (**Section 6.2.1**) which suggests a natural soil profile below 1-1.5m of fill, and basal clay at 1.8-2m below surface. Despite heavy disturbance from the construction, the soil profile appeared relatively natural with little signs of significant disturbance. The topsoil did contain brick and other construction debris, but this may have related to the previous historical structures on the site, rather than to construction of the hospital. The deposit - effectively a pedestal of the natural dune soil landscape - continued for at least 10 m beneath the building, and may extend beyond cross walls to the south and east of the basement but could not be observed (**Figure 28**).

An important result of the identification of this remnant soil profile is that a natural soil surface, and an indication of the extent of original impact to the soil profile by the 1940s construction. The top of the natural soil profile appeared to be some 1 m below the basement floor, and therefore the natural soil profile is probably situated at a depth of some 1-1.5 m below the concrete surface, at least for the eastern portion of the subject area. The soil profile consists of some 40-60cm of deposit before basal clays occur. In other areas, the sand can be as much as 1.5-2m thick. The distance between the basement wall and the remaining soil profile was approximately 1 m. It is proposed that this gap represents the original trench/excavation made for the installation of the building. Therefore, the construction of the 1940s structures probably involved impact to an area of about 1-1.5m around the buildings.



Figure 16. The northwestern portion of the subject area, looking north. Note the gradient of slope from left to right, and the lack of visible soil surface.



Figure 17. The southwestern corner of the subject area, looking east.



Figure 18. The northwestern portion of the subject area, looking east. Note the excavation of this area to create a level building site.



Figure 19. The southwestern corner of the subject area, looking south. Note the service areas for vehicles running through the centre of the thoroughway. Inspection suggests excavation to significant depths in these areas.



Figure 20. The eastern portion of the subject area, looking south. This area has remained largely unchanged since the hospital's construction in the 1940s.

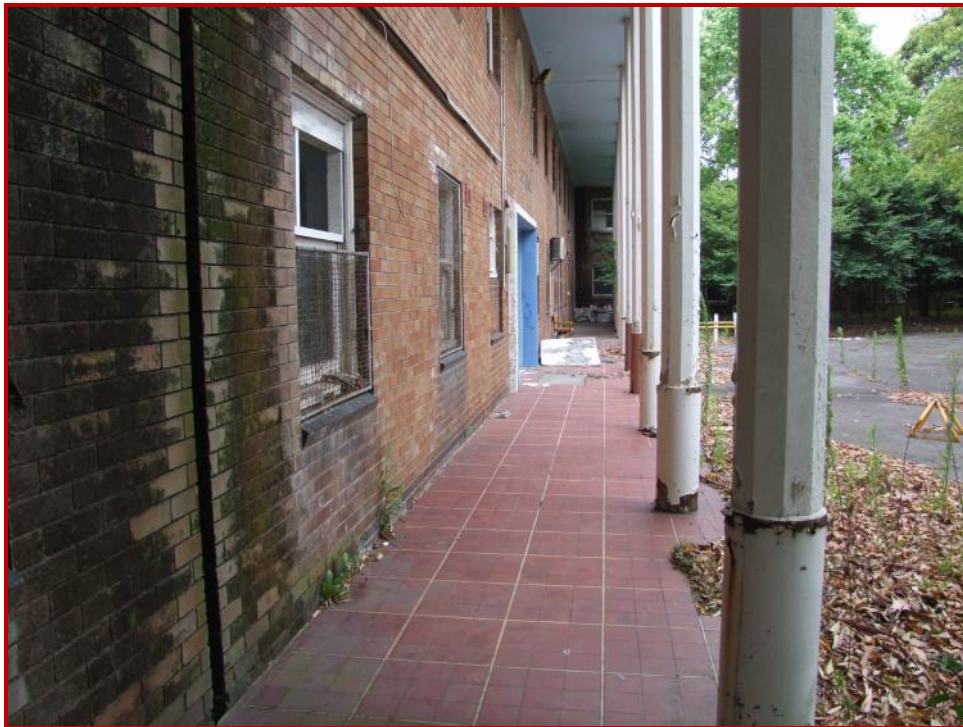


Figure 21. Photograph of the main eastern entrance to the hospital, looking north. Investigations of the basement beneath this area revealed a largely undisturbed soil profile.



Figure 22. Photograph of an intact soil profile in the basement of the main hospital building, looking south. Note the dark black/brown topsoil overlying a thin pale sand unit over orange/red brown clay. The deposit extended to the south for several metres.



Figure 23. Photograph of an intact soil profile in the basement of the main hospital building, looking north. Note the dark black/brown topsoil overlying a thin pale sand unit over orange/red brown clay. The deposit extended to the south for several metres. The remains of an historic well are also shown in this photograph.



Figure 24. An overlay of the ground floor plan of the hospital (a basement plan is unavailable). Areas highlighted were observed to contain an in situ soil profile beneath/within the current structure. It is considered that they may extend further south, but this could not be confirmed due to access difficulties.

8. REGIONAL CHARACTER

This section provides a synthesis of the archaeological and environmental information for the subject area to identify key issues and develop predictions in relation to the presence of Aboriginal objects.

8.1 Archaeology

Based on the regional and local archaeological context of Sydney CBD, a number of conclusions can be reached regarding the Aboriginal archaeological potential of the subject area.

Previous excavations in the Sydney region indicate that Aboriginal sites are larger and more frequent in close proximity to former water sources. The size (scale and repetition) of sites generally increases with permanence of water (stream order) and localised stream characteristics like permanent ponds and wetlands. It is unclear how close the subject area would have been to the nearest water sources or wetlands because European development has fundamentally changed the local landscape and hydrology. It is clear, however, that abundant water sources and wetlands did exist in the local area.

Ethno-historical evidence indicates the subject area overlooked a traditional transit route from the eastern suburbs area along the present line of Botany Road. Historical sources also indicate that Redfern was used by early 19th century Aboriginal people as a place for camping, feasting, fighting and other social gatherings.

Previous excavations in the Sydney CBD and surrounds have been characterised by very low-density stone artefact deposits, suggesting that occupation of areas back from the immediate foreshore was sporadic. This finding broadly concurs with ethnographic reports of large groups living in semi-permanent villages in the modern eastern suburbs area and north arm of Botany Bay. It may be the case that Aboriginal occupation was specifically focused on particular landforms or resources, possibly permanent water sources. More work is required to satisfactorily resolve these issues relating to local settlement patterning. In this regard it is noted that there have been very few archaeological investigations of the western portions of the Botany Sand Dune, including the Redfern - Waterloo area.

The subject area is situated in close proximity to the interface of two sub-regions. Interfaces typically form resource rich areas, and often formed a focus of hunter-gatherer activity in the past.

A previous study of the subject area as part of the Concept Plan Approval application identified an area of potential archaeological sensitivity within the eastern edge of the

subject area. This identification was based on the background outlined above, and the presence of an undisturbed soil profile within the hospital basement. This soil profile was re-visited as part of this assessment, and was similarly concluded to be a largely *in situ* soil profile. Correlations between the soil profile and geotechnical information (**Section 8.2**) suggested that this profile extended across much of the eastern, southern and western portions of the subject area. The soil profile was suggestive of a thin sand dune (<1.5m) overlaying basal clays. In all locations, the soil profile was overlain by a unit of fill of varying depths (that may pre-date the hospital development).

8.2 Existing Disturbance

While the regional and local archaeological records suggest moderate to high potential for archaeological material within the subject area, the past land use history indicates significant disturbance has occurred across the subject area reducing the likelihood of any such Aboriginal sites surviving in several parts of the subject area.

Historical photographs, most notably those taken during the construction of the 1940 hospital, show extensive earthworks across central parts of the subject area. Excavations can clearly be observed in close proximity to the existing buildings, and truncation to clay has occurred in several areas. A small section of intact soil profile appeared to be present along the western edge (where the truck was situated in **Figure 16**).

Geotechnical information indicated that several parts of the subject area have been heavily disturbed or truncated to basal clays, especially those along the northwestern and northern areas of the subject area, and within the existing structures. Conversely, areas to the east, west and south suggest remnants of intact original soil profile generally buried by concrete and fill deposits (some >1m thick).

Existing buildings across the subject area all have basements and sub-surface structures, as well as ancillary structures for servicing these areas (such as stairways, vents, etc). Areas within the curtilage of the existing buildings have generally been completely disturbed to the basal clay and have very low to nil potential to contain Aboriginal objects (see exceptions in **Section 8.3**).

A site investigation also identified extensive landscape modification within the subject area, most notably the apparent cutting of the northwest corner of the subject area to level the structure. A vehicle bay in the southwest corner also contained sub-surface structures that would have impacted the soil profile in existence before 1940.

An inspection of a remnant pedestal of soil profile within the basement of Building 2 indicated that the original building construction probably impacted up to 1m around the existing structures.

8.3 Aboriginal Archaeological Sensitivity

A review of the archaeology of the region suggests that the subject area would have moderate to high potential for Aboriginal objects/sites to be present. The location of the subject area, on the crest of a dune in the vicinity of several water resources, increases the likelihood that the locality was used by Aboriginal people in the past.

However, a review of the historical land use of the subject area demonstrated that several parts of the subject area have experienced significant modification - most likely leading to the destruction of any Aboriginal objects/sites that may have been present in these parts of the site. The majority of the development occurred through the construction of the Rachel Forster Hospital in the 1940s. These structures all required the levelling and truncation of extensive parts of the site, most notably along the northern portion.

Only three areas within the subject area have potential for Aboriginal objects/sites to be present because the soil profile existing by 1940 does not appear to have been truncated (**Figure 29**):

1. The eastern quadrant of the subject area encompassing the driveway and associated landscaping. While some parts of the driveway suggest that excavation and levelling has taken place (mainly to the south), the geotechnical investigation indicated a natural soil profile below fill deposits of up to 1.5 m in depth in places. This area extended beneath the front of Building 2, since a large *in situ* remnant soil profile was observed in parts of the structure's basement.
2. The southern margin of the subject area encompassing the access road running east-west. This area is some 3 m wide and runs the entire length of the site immediately south of Building 1. Some areas in the southwest corner may have been impacted by the installation of a vehicle servicing bay. Geotechnical information suggested that a natural soil profile was present <50cm below the current ground surface.
3. The western margins of the subject area. The exact nature and extent of deposits in this area cannot be determined based on current information, but is likely to include areas immediately west and northwest of Building 5. Geotechnical information suggests an *in situ* soil profile in BH8, BH9, B4 and B7 (**Figure 15**), and suggests a small triangular area of remnant soil. Areas in the vicinity of Buildings 4 and 5, however, appear to have a completely truncated natural soil profile.



Figure 25. Areas of potential Aboriginal archaeological sensitivity (red) based on the analysis of background review and existing disturbance data. All uncoloured areas were considered to have been extensively disturbed (generally to basal clays) by the existing development.

9. SIGNIFICANCE ASSESSMENT

9.1 General

Significance assessment is based on the guidelines and requirements outlined in the *Burra Charter* (Australia ICOMOS, 1999). The significance of Aboriginal archaeological sites is assessed using two criteria: Aboriginal (cultural) and archaeological (scientific) significance. These criteria recognise that Aboriginal sites are valuable in a number of ways, namely:

- To the Aboriginal community as an aspect of their cultural heritage and as part of continuing traditions;
- To the broader community, for educational, historical and cultural enrichment values; and
- To the scientific community for potential research value.

9.2 Cultural Values

This area of assessment concerns the relationship and importance of sites to the Aboriginal community. Aspects of cultural significance include people's traditional and contemporary links with a given site or landscape, as well as an overall concern by Aboriginal people for sites and their continued protection.

Unmodified natural features in the landscape can signify sacred sites or places of significance. As such, they are archaeologically invisible and can only be identified with the aid of Aboriginal interpretation. If such sites are known, they hold particular cultural significance to contemporary Aboriginal people. Furthermore, sites of significance are not restricted to the period prior to contact with Europeans. Often events related to the Contact period, and to the period since European settlement, may be important to the local Aboriginal communities. If these events relate to a specific place in the landscape, then that place (i.e. the site) may become sacred or highly significant to the local Aboriginal communities.

No specific cultural values of the subject area were identified by the Metropolitan LALC representative, although he did indicate the region was used by Aboriginal people in the past. Any comments on the cultural and contemporary values of the subject area will be included here following distribution of the draft report.

9.3 Scientific Significance

Scientific value is associated with the research potential of a site. Rarity and representativeness are also related concepts that are taken into account. Research potential or demonstrated research importance, is considered according to the contribution that a heritage site can make to the present understanding of human society and the human past. Heritage sites, objects or places of high scientific significance are those which provide an uncommon opportunity to provide information about the specific age of people in an area, or a rare glimpse of artistic endeavour or a chronological record of changing life through deep archaeological stratigraphy.

The comparative rarity of a site is a consideration in assessing scientific significance. A certain site type may be “one of a kind” in one region, but very common in another. Artefacts of a particular type may be common in one region, but outside the known distribution in another.

The integrity of a site is also a consideration in determining scientific significance. While disturbance of a topsoil deposit with artefacts does not entirely diminish research value, it may limit the types of questions that may be addressed. A heavily cultivated paddock may be unsuited to addressing research questions of small-scale site structure, but it may still be suitable for answering more general questions of implement distribution in a region and raw material logistics.

The capacity of a site to address research questions is predicated on a definition of what the key research issues are for a region. As discussed above, substantial impact from early and ongoing European development, has meant that archaeological evidence of past Aboriginal occupation of the Sydney and Redfern area is sparse. In the Sydney Basin more generally, the key research issues revolve around the chronology of Aboriginal occupation and variability in stone artefact manufacturing technology. Sites with certain backed implements from the Holocene are very common, but sites with definite Pleistocene evidence are extremely rare, and hence of extremely high significance if found.

Once a site’s cultural significance and scientific significance has been identified, they are combined to form an overall significance ranking for the site. In accordance with precautionary principles, the higher significance value from either of the criteria (cultural and scientific) is assigned to the site in question.

9.4 Assessment

No Aboriginal objects were identified as part of this assessment. However, several areas of potential Aboriginal archaeological sensitivity were identified, based on analysis of landform and geotechnical records. These areas consist of variable depths of a remnant sand dune along a general pre-contact transit route for Aboriginal people between Sydney Harbour and Botany Bay. The assessment of these areas will require subsurface investigations to identify their research potential, condition, integrity, representativeness, and rarity.

While it can be suggested that these areas are likely to retain moderate to high research potential due to their accumulating nature and possible stratigraphic integrity, the level or density of archaeological material (if any) present is unclear. Further, as outlined in **Section 8**, these areas of potential Aboriginal archaeological sensitivity may be dominated by post-contact deposits which were disturbed by construction. Hence archaeological material recovered may be in disturbed contexts, lowering its research value. In contrast, there may be in situ stratigraphy from the pre-contact period, which would be of high research value. Hence, the significance of these areas is unclear at this stage.

10. POTENTIAL IMPACTS

10.1 Proposed Development

Kaymet Corporation is proposing to undertake residential and open space re-development of the subject area. The development would consist of the construction of four buildings in broadly the same configuration as the current structures on the site. Building 1 is proposed for retention and adaptive re-use.

The proposed development will include the excavation of underground car-parking and other sub-surface structures that extend across most of the subject area. Based on an overlay of the basement and underground car-parking, only small parts of the southern, western and eastern margins would remain un-impacted through the proposed development (Figure 30).

10.2 Potential Impact

Based on an overlay of the proposed sub-surface structures within the subject area, all areas identified as having potential archaeological sensitivity would be impacted (Figure 30). While some areas along the southern and eastern margins would remain, it is considered likely these would be indirectly impacted during the development for access, stock-piling, site sheds, etc.

Therefore, it is considered that the entire subject area would be impacted to basal clays as part of the proposed development.



Figure 26. The footprint of the proposed development (purple) - sub-surface activities only - in relation to areas of potential archaeological sensitivity (red). It is considered that those areas outside of the development footprint would be impacted through indirect activities, such as access, stock-piling and the installation of site sheds, etc.

11. CONCLUSIONS & RECOMMENDATIONS

11.1 The Archaeological Resource

The subject area is located in a former dune system that extended through parts of the southern suburbs of the Sydney CBD. Site investigation and geotechnical information suggests that the subject area was situated on the crest of a dune (dropping down to wetlands and/or swamps to the south and west), and that some parts of the natural soil profile still remain. However, the construction of the Rachel Forster Hospital has significantly impacted several parts of the subject area.

Based on regional data, archaeological deposits in this area are likely to be constrained to artefact concentrations, isolated finds, and/or potential archaeological deposits. In urban environments, these types of finds frequently occur within, or are disturbed by, historical archaeological occupation. When overlaying archaeological potential with areas of known disturbance, only three parts of the subject area are considered to have potential to contain Aboriginal objects/sites (**Figure 29**). These include a large area encompassing the current driveway of the hospital (and parts of the existing structure where observations in the basement reveal an exposed, but not impacted natural soil profile); and both the southern and western margins of the subject area.

The identification of these areas was based primarily on geotechnical information indicating the presence of a natural soil profile, since the entire subject area is completely covered in structures and/or concrete paving. Due to time constraints on the development of this report, further characterisation of these deposits was not undertaken as part of this assessment.

11.2 Management Strategy

Based on the proposed development footprint, all areas of Aboriginal archaeological sensitivity would be impacted through the installation of sub-floor and underground car-parking levels. Further, it is considered that those areas outside of the development footprint would receive indirect impacts during the construction phase. In summary, the entire subject area would be impacted to basal clays (i.e. the complete removal of the natural soil profile, including any Aboriginal objects if present) through the proposed development.

The proposed development is being considered under Part 3A of the *Environmental Planning and Assessment Act 1979*, and as such there is no requirement for an Aboriginal Heritage

Impact Permit (AHIP) typically required prior to development of sites to allow harm or destruction to Aboriginal objects (**Section 2**). Instead, this report provides a series of recommendations that should form part of the Statement of Commitments for the Project Approval application, to be adopted as conditions of consent by DoPI. These recommendations outline the process to appropriately investigate and manage any Aboriginal objects within the subject area and mitigate the potential Aboriginal archaeological impact of the proposed development.

Since test excavations could not be undertaken to determine the presence or absence of Aboriginal objects within identified areas of potential archaeological sensitivity as part of this assessment, the recommendations include requirements for both investigation and subsequent mitigation measures.

Test excavations should be undertaken in the identified areas of potential archaeological sensitivity to determine whether or not Aboriginal objects are present. Test excavations should include controlled excavation of the soil profile, sieving of sediment, and the recovery of any Aboriginal objects present in the excavated areas. The test excavation methodology should be developed by a heritage professional in consultation with Aboriginal stakeholders and DoPI/OEH, but should broadly consist of a systematic grid of test pits across the areas highlighted in **Figure 29**. Given the depths of fill over-lying the natural soil profile, options to include mechanical excavation should be considered and employed where relevant. The overlying fill materials themselves may also contain disturbed Aboriginal objects, and these deposits should also be investigated.

Mitigation measures would only be required if Aboriginal objects were identified during the testing phase. These measures typically consist of further ‘salvage’ excavation to recover a larger assemblage of any Aboriginal objects present within the subject area. Excavations are usually undertaken by hand and include contiguous open area excavations of key areas of archaeological interest. As with test excavations, any mitigation measures should be developed in consultation with Aboriginal stakeholders and DoPI/OEH, and the use of mechanical excavation may require consideration in some instances.

Aboriginal heritage investigation and mitigation must be undertaken prior to any form of significant earthworks in the identified areas of sensitivity. However, demolition of existing structures and the development of areas outside those identified in **Figure 29** may occur prior to the implementation of Aboriginal heritage investigations/mitigations. A demolition management plan designed to facilitate removal of the superstructure without disturbance of identified areas of potential heritage significance should be prepared by an archaeological consultant in consultation with the demolition contractor. In such situations, all areas identified in **Figure 29** should be appropriately fenced off to avoid indirect or accidental impacts until investigations/mitigations have been completed.

Following the completion of any Aboriginal heritage investigations/mitigations, appropriate post-excavation analysis and long-term management of any Aboriginal objects must be considered. Post-excavation analysis should include the appropriate analysis of any Aboriginal objects and the soil profile revealed by test or salvage excavations; reporting; and its lodgement with the OEH AHIMS Registrar. The management of Aboriginal objects should include a strategy for their long-term storage, which commonly includes re-burial in the subject area (unless proven to be of significant scientific and/or cultural value sufficient to warrant Australian Museum accession).

Formal Aboriginal consultation in accordance with OEH guidelines should be initiated, and undertaken as part of the Aboriginal heritage investigations. The investigations and mitigations should involve ongoing consultation and liaison with Aboriginal stakeholders who express an interest in the project through this process.

11.3 Recommendations

- This assessment investigated and considered the proposed development area (as outlined in **Figure 2**). Should the proposed development be modified to include areas outside of those in **Figure 2**, additional assessment and/or investigation of new areas may be required.
- Kaymet Corporation Pty Ltd should advise all relevant personnel and contractors involved in the design and construction of the project of the relevant legislative requirements and the recommendations of this assessment in relation to Aboriginal heritage.
- Three areas of Aboriginal archaeological sensitivity (**Figure 29**) were identified as part of this assessment. Should development impacts result in these areas, Kaymet Corporation Pty Ltd must:
 - o ensure a demolition management plan is designed to facilitate removal of the superstructure without disturbance of identified areas of potential heritage significance is developed in consultation with the archaeological consultant and demolition contractor.
 - o ensure that an appropriate test excavation is undertaken to identify whether or not Aboriginal objects are present. The investigation, removal, disturbance or destruction of any Aboriginal object, site or place should be undertaken professionally, in consultation with relevant Aboriginal stakeholders and DoPI/OEH, according to applicable heritage statutory requirements and should be documented as appropriate to the level of significance.

- o ensure all recovered Aboriginal objects and/or archaeological material is temporarily stored in a suitable lockable container until the completion of the development.
 - o consult with relevant Aboriginal stakeholders about a final storage repository for objects/material and if appropriate, develop a care and control agreement for the storage and/or repatriation of all recovered Aboriginal archaeological objects/material.
 - o ensure that any archaeological analysis and reporting concerning Aboriginal heritage complies with applicable statutory requirements, are prepared to best practice professional standards and, where appropriate, ensure findings are provided to the OEH AHIMS Registrar and the relevant Aboriginal stakeholders.
- Should Aboriginal objects be recovered from any test excavations, mitigation measures should be considered. Implementation of mitigation measures should be based on the significance of the archaeological finds, and the views of the heritage professional, Aboriginal stakeholders, Kaymet Corporation Pty Ltd and DoPI/OEH. Mitigation measures may include salvage excavations, cultural collection and/or monitoring of areas of archaeological/cultural interest. Any mitigation measures should:
 - o ensure all recovered Aboriginal objects and/or archaeological material is temporarily stored in a suitable lockable container until the completion of the development.
 - o include consultation with relevant Aboriginal stakeholders about the final storage location for the objects/material and, if appropriate, development of a care and control agreement for the storage and/or repatriation of all recovered Aboriginal archaeological objects/material.
 - o ensure that any post-excavation analysis, reports or documents for the project concerning Aboriginal heritage comply with applicable statutory requirements, are prepared in accordance with best practice professional standards and, where appropriate, ensure findings are provided to the OEH AHIMS Registrar and the relevant Aboriginal stakeholders.
- Formal Aboriginal consultation in accordance with *Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* (DEC, 2005) (which themselves defer to *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010)) should be implemented prior to any further Aboriginal heritage investigations. Consultation should identify cultural and contemporary values of the subject area, and ensure that interested Aboriginal stakeholders are consulted and included within Aboriginal heritage test excavations, mitigation, long-

term management of any recovered Aboriginal objects, and any heritage interpretation processes following the development's completion.

- In the event that previously undiscovered Aboriginal objects, sites or places (or potential Aboriginal objects, sites or places) are discovered during construction, all works in the vicinity of the find should cease and Kaymet Corporation Pty Ltd should determine the subsequent course of action in consultation with a heritage professional, relevant Aboriginal stakeholders and/or the relevant State government agency as appropriate.
- If suspected human skeletal material is identified, all works in the immediate vicinity (>50m) of the find, should cease and the area incorporating the discovery should be temporarily fenced as an exclusion zone. Kaymet Corporation Pty Ltd should immediately contact the NSW Police, NSW Coroner's Office and a heritage professional to determine the appropriate subsequent course of action. Please note in such situations, extended delays to the works in this area may result.
- This assessment should be provided as a draft for review to the Metropolitan LALC. Comments and recommendations received should be incorporated into the final version of the assessment.
- A copy of the final assessment should be lodged with the OEH AHIMS Registrar in accordance with relevant guidelines.

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APPENDIX 1

AHIMS DATA

Archaeological & Heritage Management Solutions Pty Ltd (AHMS)

Date: 20 November 2012

349 Annandale Street

Annandale New South Wales 2038

Attention: Alan Williams

Email: awilliams@ahms.com.au

Dear Sir or Madam:

**AHIMS Web Service search for the following area at Lot : 7, DP:DP664804 with a Buffer of 200 meters.
conducted by Alan Williams on 20 November 2012**

A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

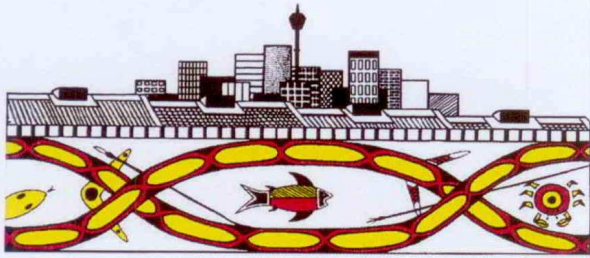
- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette](http://www.nsw.gov.au/gazette) (<http://www.nsw.gov.au/gazette>) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not to be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

APPENDIX 2

ABORIGINAL COMMUNITY CONSULTATION



Metropolitan Local Aboriginal Land Council

36-38 George Street Redfern NSW 2016

PO Box 1103 Strawberry Hills NSW 2012

Telephone: (02) 8394 9666 Fax: (02) 8394 9733

Email: metrolalc@metrolalc.org.au

Thursday, 22nd November 2012

Archaeological & Heritage Management Solutions (A&HMS)

Mr Alan Williams

349 Annandale St

Annandale NSW 2038

Re: Aboriginal Heritage Site Assessment Rachel Forster Hospital - Redfern

Dear Alan,

An Aboriginal Site Assessment was undertaken at Rachel Forster Hospital – Redfern. The assessment was to identify any potential Aboriginal heritage constraints associated with the proposed site.

The site assessment was carried out on foot on the 22nd November 2012 by Kevin Telford site officer of the Metropolitan Local Aboriginal Land Council (MLALC), and Alan Williams Archaeological & Heritage Management Solutions consultant.

The MLALC have reviewed the Aboriginal Archaeological and Cultural Heritage Assessment report and concur with Archaeological & Heritage Management Solutions findings that I will be contacted to monitor the excavation of the proposed area for the ongoing development of this site.

If there are any Aboriginal cultural materials discovered during any stage of the proposed construction, all work is to cease immediately and MLALC and NSW National Parks & Wildlife are to be notified immediately.

If you require any further information do not hesitate to contact myself on 0412 733 157.

Regards,

Kevin Telford

Aboriginal Site Officer