

Godden Mackay Logan

Heritage Consultants



University of Sydney Campus Improvement Program

Aboriginal Heritage Due Diligence Report

Report prepared for The University of Sydney
October 2013

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Report Register

The following report register documents the development and issue of the report entitled University of Sydney Campus Improvement Program—Due Diligence Report, undertaken by Godden Mackay Logan Pty Ltd in accordance with its quality management system.

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The report has been reviewed and approved for issue in accordance with the GML quality assurance policy and procedures.

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1.0 Introduction

Godden Mackay Logan (GML) Pty Ltd has been engaged by the University of Sydney to prepare a Due Diligence Aboriginal Heritage Report to fulfil the Director General's Requirements (DGR) for the University's Campus Improvement Program (CIP). This report forms part of the Environmental Assessment for the study area prepared under Part 5 of the *Environmental Planning and Assessment Act 1979* (EPA Act). The DGRs provided, require the Environmental Impact Statement (EIS) to address Aboriginal heritage in accordance with the *Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation 2005* and *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*.

The purpose of this report is to identify whether the study area possesses or has the potential to possess Aboriginal heritage sites, places, objects and/or values, in accordance with the *Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation 2005* Office of Environment and Heritage (OEH) guidelines for due diligence.

This report does not provide a significance assessment of any Aboriginal sites, places and/or values. This project does not include any Aboriginal community consultation. Recommendations are provided as to whether further Aboriginal heritage assessment and management will be necessary.

This report was prepared by Erin Mein, GML Graduate Consultant; with input and review by Dr Tim Owen, GML Senior Specialist Aboriginal Heritage; and Natalie Vinton, Archaeology Manager.

1.1 Description of the Study Area and Context

The University of Sydney is located in Sydney (see Figure 1.1) and is divided into two adjacent campuses—the Camperdown campus is situated on a ridge line, originally known as Petersham Hill, running north–south between Rozelle and Blackwattle Bays. The Darlington campus, located to the southeast of the Camperdown campus, is situated on the mid to lower slope of Petersham Hill and incorporates a formerly swampy valley floor at the head of the now obscured Blackwattle Creek. Figure 1.2 shows the study area with an overlay of previous archaeological work undertaken to date.

The University of Sydney has prepared a CIP which sets out a seven year (2014–2020) program for the delivery of new buildings to accommodate the strategic direction of the University and its programs. This will involve development within six precincts across the Camperdown and Darlington campuses which are identified in Figure 1.3. The University has identified maximum building envelopes and likely land uses to be accommodated (Figure 1.3). The University of Sydney proposes to lodge a major project application with the Department of Planning (DoP) for Concept Plan approval of these six development precincts. The project will then be subject to major projects approval as a State Significant Development (SSD) under the *Environmental Planning and Assessment Act 1979* (EPA Act).

As more specific plans for this development project are yet to be finalised, separate Development Applications for specific elements within the CIP Concept Plan will be lodged at a later date. The six development precincts identified in the CIP are as follows:

The Merewether Precinct

This precinct is located in the west of the Darlington campus and is bounded by City Road, Butlin Avenue and Darlington Lane. It includes the following buildings:

- Merewether Building;
- Institute Building;
- Darlington Centre School Building;
- The Darlington Centre;
- Sydney University Regiment; and
- Darlington Road Terraces.

City Road Precinct

This precinct is located in the north of the Darlington campus and is bounded by City Road, Butlin Avenue and Maze Crescent. It includes the following buildings:

- Wentworth Building;
- Jane Foss Russell Building;
- Wilkinson Building;
- WH Maze Building;
- St Michael's College;
- Wilkinson Building; and
- International House.

Engineering Precinct

This precinct is located in the east of the Darlington campus and is bounded by Cleveland Street, Shepherd Street, Maze Crescent and the raised pedestrian walkway which runs between Shepherd Street and Maze Crescent. This includes the following buildings:

- Civil and Mining Engineering Building and Workshop;
- Chemical Engineering Building;
- Gordon Yu-Hoi Chiu Building;
- PNR Building;
- Rose Street Building;
- Electrical Engineering Building;
- Engineering Link Building;

- Mechanical Engineering Building;
- Seymour Centre;
- Aeronautical Engineering Building;
- The School of Information Technologies; and
- Shepherd Street Car Park.

Health Precinct (Blackburn Bosch)

This precinct is located in the southwest of the Camperdown campus and is bounded by Cadigal Lane, Western Avenue, University Oval No. 1 and the Royal Prince Alfred Hospital. This includes the following buildings:

- Victor Coppleson Building;
- Blackburn Building;
- Bosch Building 1A;
- Bosch Building 1B; and
- The Bosch Glasshouse.

Life Sciences Precinct

This precinct is located in the northwest of the Camperdown campus and is bounded by Parramatta Road, St John's Oval, Regimental Drive, Science Road and the Heydon-Laurence Building. This includes the following buildings:

- RD Watt Building;
- Demountable Village;
- JD Steward Building (Veterinary Sciences);
- Veterinary Science Conference Centre;
- McMaster Annex;
- McMaster Building;
- Gatekeepers Lodge;
- Evelyn Williams Building (including ancillary buildings B07, B09A, B20 & B21);
- The Round House; and
- RMC Gunn Building.

Cultural Precinct (Macleay & Edgeworth David)

This precinct is located in the northeast of the Camperdown campus and is bounded by Parramatta Road, the Footbridge Theatre pedestrian overpass, Science Road and Botany Lawn. This includes the following buildings:

- Edgeworth David Building;
- Macleay Building (and ancillary buildings A13, A13A, A13B, A13C, A13D, A13E, A13F and A37); and
- The western section of the Botany Lawn.

1.2 Statutory Context for Heritage

In New South Wales, cultural heritage is principally protected under three Acts:

- *Heritage Act 1977* (NSW) (Heritage Act);
- *Environmental Planning and Assessment Act 1979* (NSW) (EPA Act); and
- *National Parks and Wildlife Act 1974* (NSW) (NPW Act).

There is also Commonwealth legislation that applies to certain heritage places. Places listed on the National Heritage List (NHL) and the Commonwealth Heritage List (CHL) are protected under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act). Items of National Heritage value (defined by the EPBC Act as being of 'outstanding heritage value to the nation') are listed on the NHL and can be owned and controlled by any agency, organisation or individual. The CHL is for those places owned or controlled by the Commonwealth that have been assessed as having heritage values against the criteria established under that Act.

The Register of the National Estate (RNE) is a national list of Australia's natural, historical and cultural heritage places maintained by the Australian Heritage Council. Since February 2012, the RNE is retained primarily as an archival information resource and inclusion on it does not provide for direct legal protection or management requirements.

In September 2013, The University of Sydney made an application to the Department of Planning and Infrastructure for the Campus Improvement Program (CIP) to be assessed as a State Significant Development (SSD) Project (Application No. SSD 13_6123). As a declared SSD Project, the CIP will be assessed under Part 5.1 of the EPA Act.

The Director General's environmental assessment requirements (DGRs) for the CIP were issued on 3 October 2013 (Application No. SSD 13_6123). The DGRs, with respect to heritage, state that:

- *The Environment Impact Statement (EIS) shall include a statement of significance and an assessment of the impact on the heritage significance of the existing University of Sydney Conservation Area and existing heritage items in accordance with the guidelines in the NSW Heritage Manual.*
- *The University of Sydney Grounds Conservation Plan (2002) shall be revised and/or consolidated within a new Conservation Management Strategy prepared for the University, for endorsement by the NSW Heritage Council that includes:*

- *The identification and significance grading of items and areas of heritage significance within the Camperdown-Darlington Campus and in the vicinity, by research, field survey and mapping. Including, but not limited to, any buildings, works, relics, gardens, landscapes, views, vistas, trees, ovals or places.*
- *The identification of items and areas of heritage significance materially affected by the proposal. Including, but not limited to, any buildings, works relics, gardens, landscapes, views, vistas, trees, ovals or places of heritage significance within the Camperdown-Darlington Campus and in the vicinity, including Royal Prince Alfred Hospital, Colleges and Victoria Park.*
- *An archaeological assessment shall be carried out for each of the development sites in accordance with NSW Heritage guidelines.*
- *Where relevant, the EIS shall address Aboriginal Heritage in accordance with the Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation 2005 and Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010.*

1.3 Due Diligence Approach

As stipulated in the DGR's for this project, the University of Sydney has adopted the *Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation 2005* and *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* as management tools for potential Aboriginal heritage objects, places and values which could be associated with the project.

1.4 Limitations

This is a due diligence assessment of Aboriginal archaeological resources within the study area. As Aboriginal community consultation is not a requirement of the due diligence process, no consultation has been undertaken, nor does it constitute a significance assessment of any Aboriginal sites, places and/or values. No assessment of the historical values or any built heritage issues within the study area has been undertaken as part of this report.

The SSD Approval to be lodged with the Department of Planning is seeking approval of a Concept Plan for the CIP, i.e. building footprints, massing and volume, therefore comprehensive impacts of the proposed work could not be assessed in relation to the Aboriginal archaeology within the study area.



Figure 1.1 General location of the study area. (Source: <www.nearmaps.com> with GML additions)



Figure 1.2 2013 aerial photograph of the study area with the previous Aboriginal archaeological assessment study areas outlined.
(Source: <www.nearmaps.com> with GML additions)

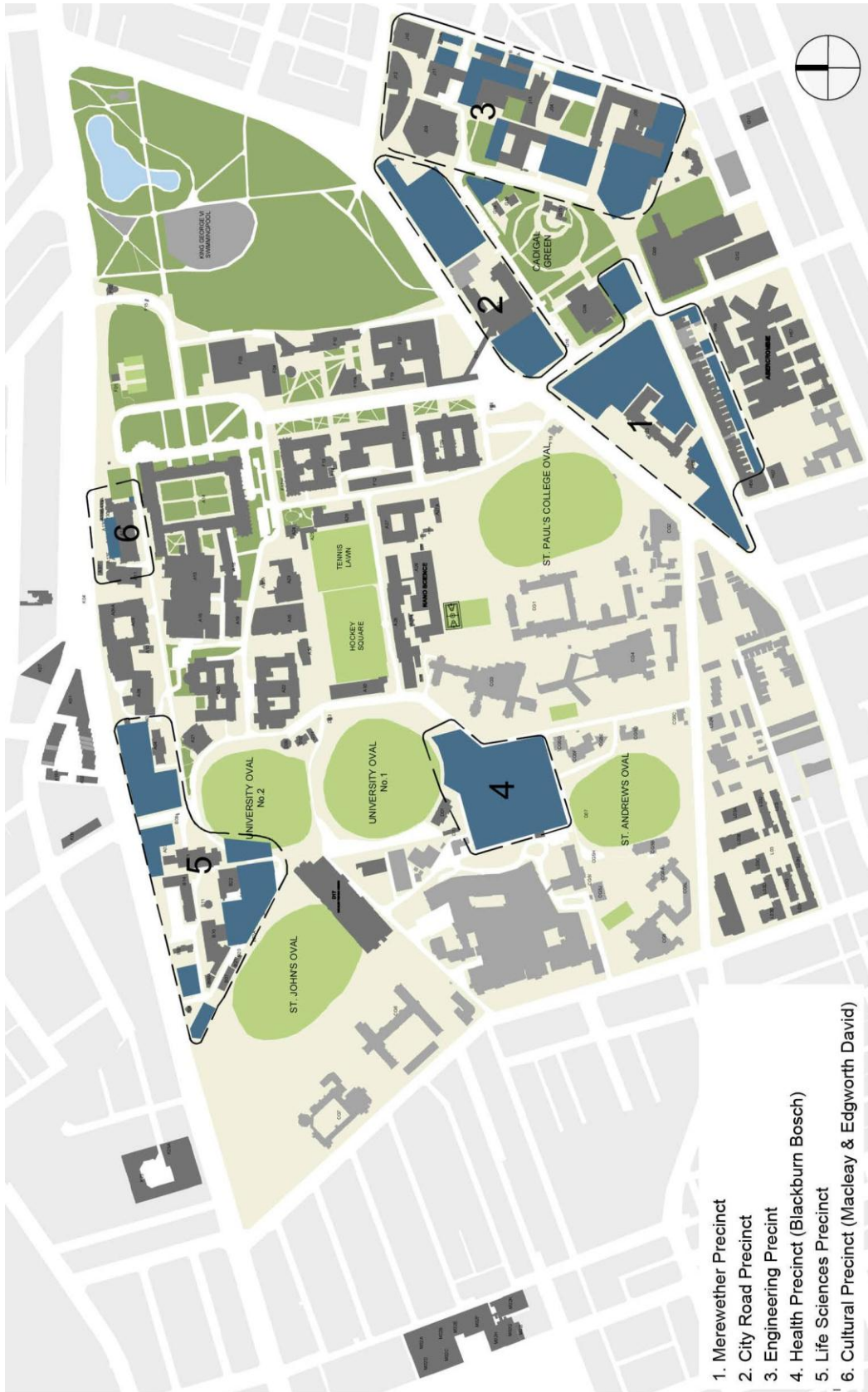


Figure 1.3 Plan of the University of Sydney with six development precincts outlined. (Source: The University of Sydney Campus Improvement Program with GML additions)

2.0 AHIMS and Environment Context

2.1 AHIMS Search

A search of the OEH administered AHIMS register for the area between -33°89'56' S, 151°17'65' E and -33°87'86' S, 151°20'35' E was undertaken on 8 October 2013 (Figure 2.1). This search covered the University of Sydney and the immediate area surrounding the study area. The results of the search are shown in Table 2.1. The search identified 11 recorded Aboriginal sites, which comprised: three stone artefact scatters or isolated finds, one shell midden, six potential archaeological deposits (PADs), and one historic site of Aboriginal Resource and Gathering (Tent Embassy). This search indicated that PADs followed by stone artefact scatters constitute the predominant remnants recorded in this area. Sites #45-6-3071 and #45-6-3064 were found to be a duplication in AHIMS of the same site. See Appendix A for results of the AHIMS search.

Table 2.1 Results of AHIMS Search.

Site Feature	Frequency	Percentage %
Stone Artefacts	3	27%
Midden	1	9%
Potential Archaeological Deposit (PAD)	6	55%
Historic Site	1	9%
	11	100%

The general patterning of Aboriginal sites in the local vicinity shows a strong association with the line of the former Blackwattle Creek and Swamp, now masked by urban development. Historical land use and intensive urban development in and around the University of Sydney can, in part, account for the low numbers of recorded Aboriginal objects and sites. However, it has been suggested that due to the poorly drained nature of the general area around the University of Sydney, this area would not have provided suitable locations for more permanent campsites; but rather would have been used ephemerally for flora, fauna and water resources.¹ Further discussion of the importance of Blackwater Creek and historical land impacts can be found in Section 2.2.

2.2 The Local Landscape Context

The purpose of this section is to provide environmental contextual information for use in developing a predictive model of Aboriginal site locations associated with the study area. Interactions between people and their surroundings are of integral importance in both the initial formation and the subsequent preservation of the archaeological record. The nature and availability of resources including water, flora and fauna, and suitable raw materials for the manufacture of stone tools and other items had (and continues to have) a significant influence over the way in which people utilise the landscape.

Alterations to the natural environment also impact upon the preservation and integrity of any cultural materials that may have been deposited; whilst current vegetation and erosional regimes affect the visibility and detectability of Aboriginal sites and objects. For these reasons, it is essential to consider the environmental context as a component of any heritage assessment.

2.2.1 Geology and Soils

The study area is located on the Blacktown soil landscape which is characterised by a friable brownish black to reddish brown loamy topsoil overlying hard setting clays, and is generally less than 100cm deep. The Blacktown soil landscape is part of the Wianamatta Group consisting of Ashfield and Bringelly Shales, and is occasionally underlain by Hawkesbury Sandstone. Outcrops of Hawkesbury Sandstone have been identified in the northeast corner of Victoria Park and sandstone bedrock was observed in 2012 in the Abercrombie Precinct (Figure 1.2).^{2 3} As no sandstone outcrops have been identified within the current study area, this precludes the possibility for it to contain Aboriginal cultural features such as rock shelters with engravings and/or paintings or grinding grooves.⁴

All six precincts identified within the CIP are located on the Blacktown soil landscape. Previous excavations within the current study area have demonstrated that a remnant Blacktown A soil horizon has been preserved under fill relating to the European settlement of Sydney.⁵ However, this A soil horizon was shown to be highly disturbed by historical land use (see Sections 2.2.5 and 3.1).

Current known sites identified in the AHIMS search have predominately been found within the neighbouring Gymea soil landscape associated with the former Blackwattle Creek corridor. Deep alluvial sediments have been located along the former line of Blackwattle Creek; consequently, several locations are identified within AHIMS as sites of PAD.⁶ The Gymea soil landscape is characterised by coarse sandy loam overlying clayey sands underlain by the Hawkesbury Sandstone formation. The single midden site identified approximately 700m to the southeast of the study area was located on the Tuggerah soil landscape, which is a Quaternary coastal dune system of fine to medium grained sand.

A range of raw material types were exploited for tool use by the Aboriginal people of the Sydney Basin, the most commonly used being silcrete. Other raw materials used in the Sydney region include tuff, chert, quartz, quartzite and basalt. The frequency of these raw materials at any site relates predominately to the proximity of that site to the material source. Silcrete outcrops, which are likely to have been exploited by the Aboriginal inhabitants of the local region, have been identified in the suburb of Newtown to the south of the study area.⁷

2.2.2 Hydrology, Landforms and Landscape Features

The general area around the University of Sydney consists of gently undulating rises of low relief with rounded hills of between 10m–30m. The current study area is located on a rise in the natural topography, previously known as Petersham Hill, which slopes southeast towards the first order tributaries of the Blackwattle Creek catchment. The former Blackwattle Creek once originated in a swampy area (which is now the site of the Old Darlington School) and flowed towards Victoria Park, through Ultimo and emptied into Blackwattle Bay.⁸

The Orphan School Creek is also noted in historical documents as once crossing through the northwest corner of the study area.⁹ These first and second order tributaries have since been covered over by development across the study area.

2.2.3 Geomorphology

Current geomorphological activity within the study area is minimal due to the low relief as well as the degree of coverage by concrete, bitumen and/or turf. Prior to this, some erosion including sheet

wash and colluvial movement of soil downslopes is likely to have occurred, particularly after forest clearing in the early nineteenth century.¹⁰

2.2.4 Fauna and Flora

Prior to clearing in the early nineteenth century, the study area would have been covered in tall open forest and woodland dominated by Sydney Blue Gum (*Eucalyptus saligna*) and Blackbutt (*Eucalyptus pilularis*), Ironbark Eucalypts (eg *Eucalyptus crebra*) and Grey Box (*Eucalyptus moluccana*) with shrubbery including *Acacia*, *Dononea* and *Kennedia* species.¹¹

The terrestrial fauna of Sydney, exploited by Aboriginal people at the time of European settlement, is well documented and includes many species which are still present on the Cumberland Plain today. These include kangaroo and wallaby, wombat, echidna, possums, flying fox, emus and quolls. Historically, the area now occupied by the University of Sydney was called the 'Kangaroo Grounds', suggesting that this species was frequently available in the area.¹²

The presence of the Blackwattle Creek and Swamp system within and around the current study area would have also provided a valuable economic resource for Aboriginal inhabitants of the area. A range of economic aquatic plants such as sedges from the *Epacridaceae* and *Cyperaceae* families, as well as bulrushes (*Typha*) which were exploited for their starchy and fibrous roots, were likely to have been found and used in this area.¹³

The study area is currently located within 1km of Blackwattle Bay; however, this distance would have been even less prior to land reclamation, which has obscured potentially economically important mudflats in the bay.¹⁴ The bay and associated mudflats would have provided Aboriginal people with access to marine and estuarine resources such as fish, shellfish and other crustaceans.

2.2.5 Land Use and Disturbance

The area occupied by the University of Sydney has undergone extensive clearing and development since European settlement. The following timeline presents a summary history of the land use and associated impacts across the current study area since 1788.

- 1790s—previously known at the 'Kangaroo Grounds', the study area was originally set aside as Crown Reserve before being subdivided into four lots.¹⁵ Leases were granted to Lieutenant Governor Francis Grose, Captain Foveaux and Quartermaster Laycock; with the remaining land to the east preserved as Crown Reserve (Figure 2.2). During this time, the land was cleared for farming and grazing, with roads and a timber yard constructed (resulting in topsoil stripping and some erosion).
- 1800–1850s—over the next 50 years, the study area continued to be used for cultivation and grazing with a number of structures including convict stockades, farm buildings, gardens and dams being constructed (Figure 2.3). Johnston's Creek was channelised and the Johnston's Creek Stormwater Channel (SWC) was run through the northwest corner of the University grounds.¹⁶ The Darlington campus was used to pasture cows for the Sydney Market.
- 1850s–1900—in 1855, 126 acres to the north of City Road, formerly occupied by Grose Farm was granted to the University of Sydney; and in 1878 the Darlington Public School was constructed at Maze Crescent in the swampy area at the headwaters of Blackwattle Creek. During this time several University and school buildings, botanical gardens and recreation ovals were constructed across the site. Residential housing and industry was developed in

neighbouring Darlington with the construction of terrace housing and the Eveleigh railway workshops in the 1880s. Development of the University and the public school involved further disturbance of topsoil sediments due to landscaping, the demolition of existing structures and the insertion of footings and foundations of new buildings. In addition, extensive landfill was introduced as levelling fill as well as for raising the area previously covered by the Blackwattle Swamp to make it feasible to construct the public school and surrounding residential housing.

- 1900–1950s—Orphan School Creek flats in the northwest corner of the University were covered with 3m–5m of fill using spoil from the construction of the city railway during the 1920s.¹⁷ During World War II, a number of air raid shelters were constructed across the open areas of the University grounds and Victoria Park (Figure 2.5). In 1958 residential sections of the suburb of Darlington were rezoned for University use, resulting in the demolition of original terrace housing and replacement with University buildings in the later twentieth century.
- 1960–present—the University of Sydney has continued to grow and much of the once open ground within the current study area has now been developed and redeveloped.

Due to the long history of land use and development across the study area, it is clear that the majority of the natural ground surface has been subject to extensive disturbance due to cutting and filling activities associated with the ongoing development and redevelopment of the University and its grounds. As such, any Aboriginal sites within the study area are likely to have been affected in some way. Following JMcDCHM 2004, three general categories of land disturbance are used in this report¹⁸:

- **Heavily Disturbed**—areas with constructed landforms, buildings and constructed surfaces, in particular areas which include late twentieth-century buildings and roads which generally involve significant earthmoving during construction; as well as grading, levelling, introduction of road base and installation of services such as water, power and sewerage. Archaeological evidence such as artefacts may be present here but it would not be possible to determine their origin or context. Many artefacts occurring in this zone may have been destroyed by these processes. This zone includes areas subject to construction, erosion and landscaping works, dams, drainage basins and graded tracks.
- **Moderately Disturbed**—areas with natural landforms but with disturbed soils. Archaeological evidence such as artefacts may be present but may have been moved from their original locations. This zone includes areas which have been cultivated continuously and unformed vehicle tracks.
- **Lightly Disturbed**—areas with natural landforms, which appear from current aerial photographs to be original land surfaces. Archaeological deposits may be present in fairly undisturbed physical condition. This zone includes areas that may have been cleared of timber, grazed or ploughed minimally.

A 2004 JMcDCHM survey which encompassed part of the current study area (Figure 1.2) concluded that no areas could be categorised as lightly disturbed, rather the majority of the area could be classified as heavily disturbed.¹⁹ See Section 3.1 for a discussion of these investigations.

2.3 Aboriginal Ethnohistory

This section reproduces the ethnohistorical background provided in JMcDCHM 2005.²⁰

The Aboriginal people that lived in the area now occupied by the University of Sydney were either Cadigal or Wan(n)gal. These groups are local descent groups, otherwise referred to as local clans

or territorial clans. Some confusion remains as to which clan is associated with what are now the grounds of the University of Sydney, arising from conflicting information contained within two historical quotes:²¹

The tribe of Cadi inhabit the south side, extending from the sought head to Long-Cove; at which place the district of Wanne, and the tribe of Wangal, commences, extending as far as Parra-mata, or Rose-Hill. (King in Hunter [1968: 412]).

From the entrance of the harbour, along the south shore, to the cove adjoining this settlement the district is called Cadi, and the tribe Cadigal; the women, Cadigalleon. The south side of the harbour from the above-mentioned cove to Rose Hill, which the natives call Parramatta, the district is called Wann, and the tribe Wanngal. (Phillip 13 Feb 1790 [1892: 309])

The original inhabitants of the Sydney region relied on food gained through fishing and hunting, and the gathering of plants and small animals. The land and its rivers and estuaries were the source of a range of plant and animals for food, medicines; and raw materials for tools, weapons, shelters and body decoration.^{22 23 24} Inhabitants of the current study area would have exploited both freshwater fauna and flora from the Blackwattle Swamp, as well as marine resources from the nearby Blackwattle Bay and associated mudflats (now covered by Wentworth Park). A variety of technology was used for obtaining food and raw materials, carrying small objects, and equipment making. Weapons were required for either offensive or defensive purposes.²⁵

Ultimately, the process of colonisation was one which saw the inhabitants of the study area dispossessed of their lands and of the food and plant resources that the lands provided very early in the establishment of Sydney. Steele suggests that the Aboriginal population of the area occupied by the Cadigal/Wan(n)gal, which included the study area, was reduced in number from approximately fifty individuals in 1788 to only three by 1790.^{26 27} The decimation arose from impacts of dispossession, introduced disease, loss of access to traditional lands and resources, inter-tribal conflict, starvation, and the breakdown of traditional cultural practices.²⁸

2.4 Synopsis of the AHIMS Search and Landscape Context

Based upon the AHIMS search, it can be stated that the current study area does contain two recorded Aboriginal sites, with one falling within the City Road Precinct (#45-6-2822) and the other outside of any of the proposed development precincts (#45-6-2745). See Figure 2.1.

The assessment of the environmental context in which the study area is located suggests that Aboriginal sites and/or places were likely to have been located within the University campuses. Given the proximity of the study area to permanent freshwater resources at the former Blackwattle Creek and Swamp, the former Orphan School Creek, marine resources at Blackwattle Bay and silcrete outcrops in nearby Newtown; it is highly likely that Aboriginal inhabitants of the Sydney area regularly visited the study area. This area would have provided a wide range of valuable faunal, floral and lithic resources which are likely to have been exploited by Aboriginal people in the past.

However, extensive earth disturbing land use including farming, grazing, landscaping, filling, residential housing and multi-storey building development across the study area over the last 200 years has significantly reduced the potential for the preservation of surface sites and/or subsurface archaeological deposits within the relatively shallow Blacktown soil landscape.²⁹

Overall, it may be stated that the study area does contain previously recorded Aboriginal sites (#45-6-2745 and #45-6-2822). While it is possible that some remnant soil profiles with the potential to

contain Aboriginal objects may be preserved in small pockets across the study area, it is likely the historical land use has removed or redeposited and damaged most, if not all Aboriginal sites and/or objects from their original contexts, thereby reducing the research potential of such sites. Therefore, the environment and historical context of the University indicates that the study area has low potential for the preservation of Aboriginal objects and/or undisturbed archaeological deposits below the current surface level.



Figure 2.1 Map of the known Aboriginal sites in the study area and surrounds, showing the course of the former Blackwattle and Orphan School Creeks based on historical documents. (Source: <www.nearmap.com> with GML additions)

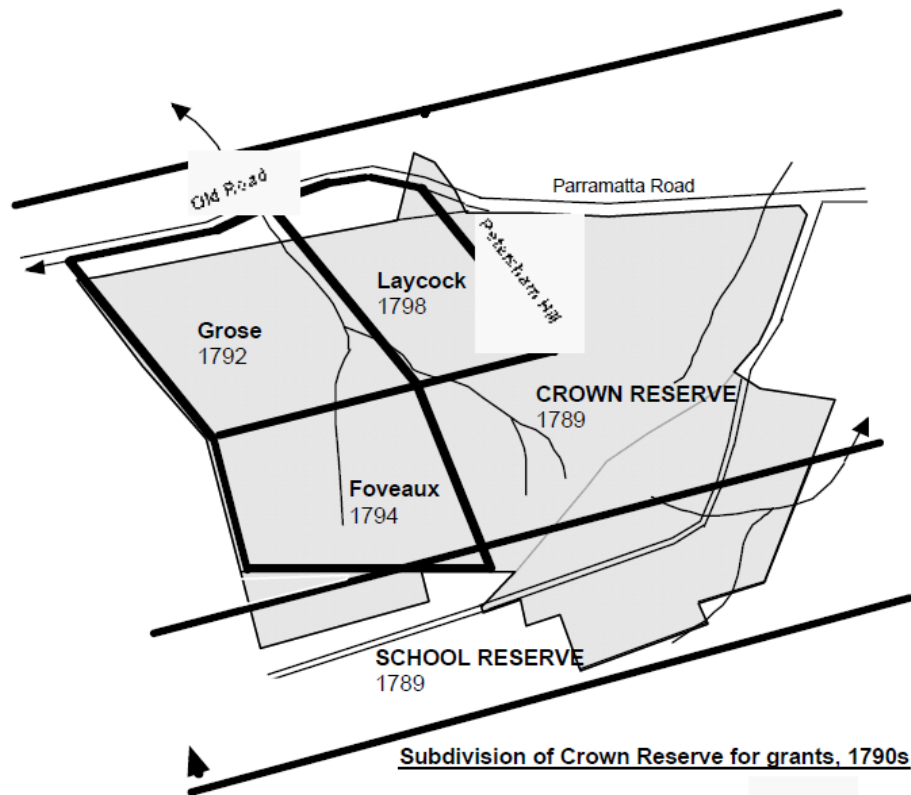


Figure 2.2 Plan of the original 1790s subdivision of the 'Kangaroo Grounds'. (Source: University of Sydney Grounds Conservation Plan—Chapter 2).

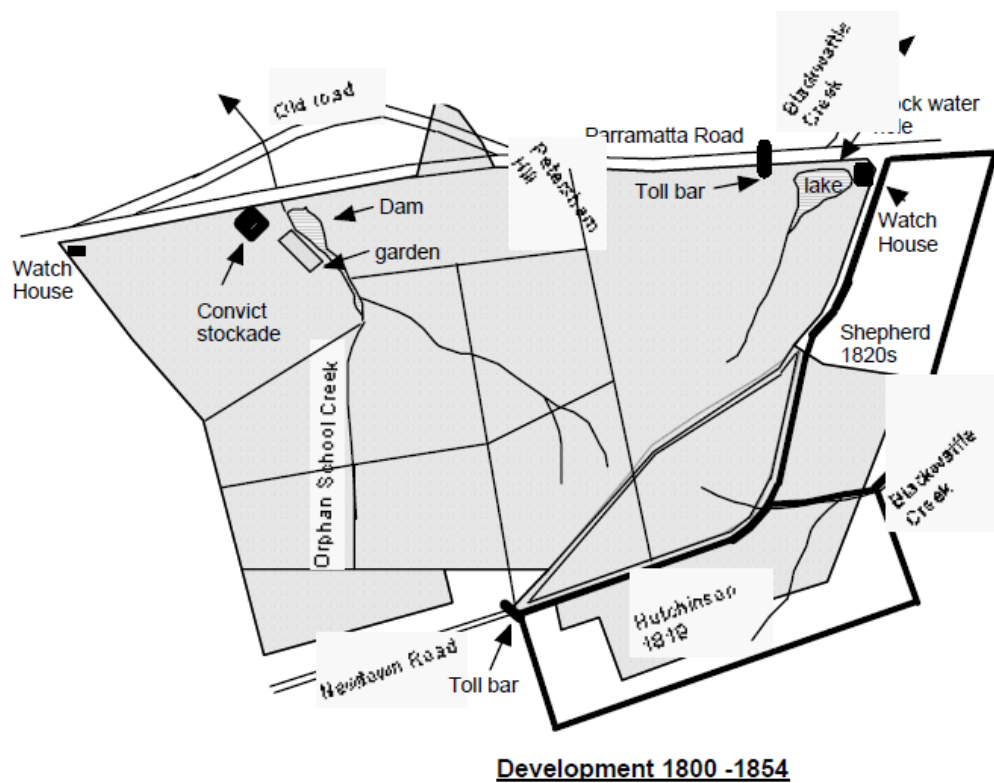
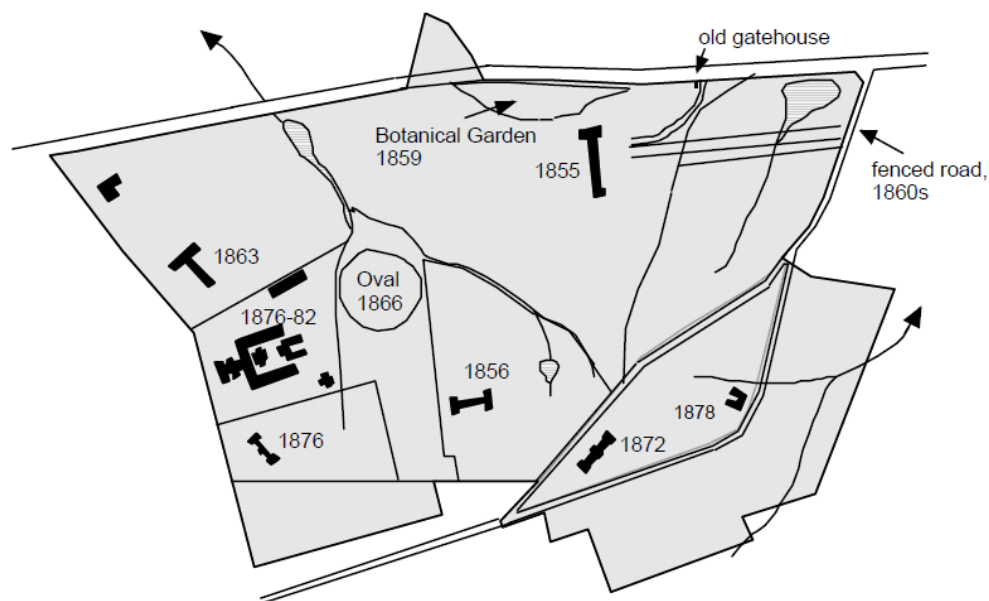


Figure 2.3 Plan showing development of the study area prior to land being granted to the university, 1800–1854. (Source: University of Sydney Grounds Conservation Plan—Chapter 2)



Development of University 1854-1880

Figure 2.4 Plan showing initial development of the study area after land is granted to the university, 1854–1880. (Source: University of Sydney Grounds Conservation Plan—Chapter 2)

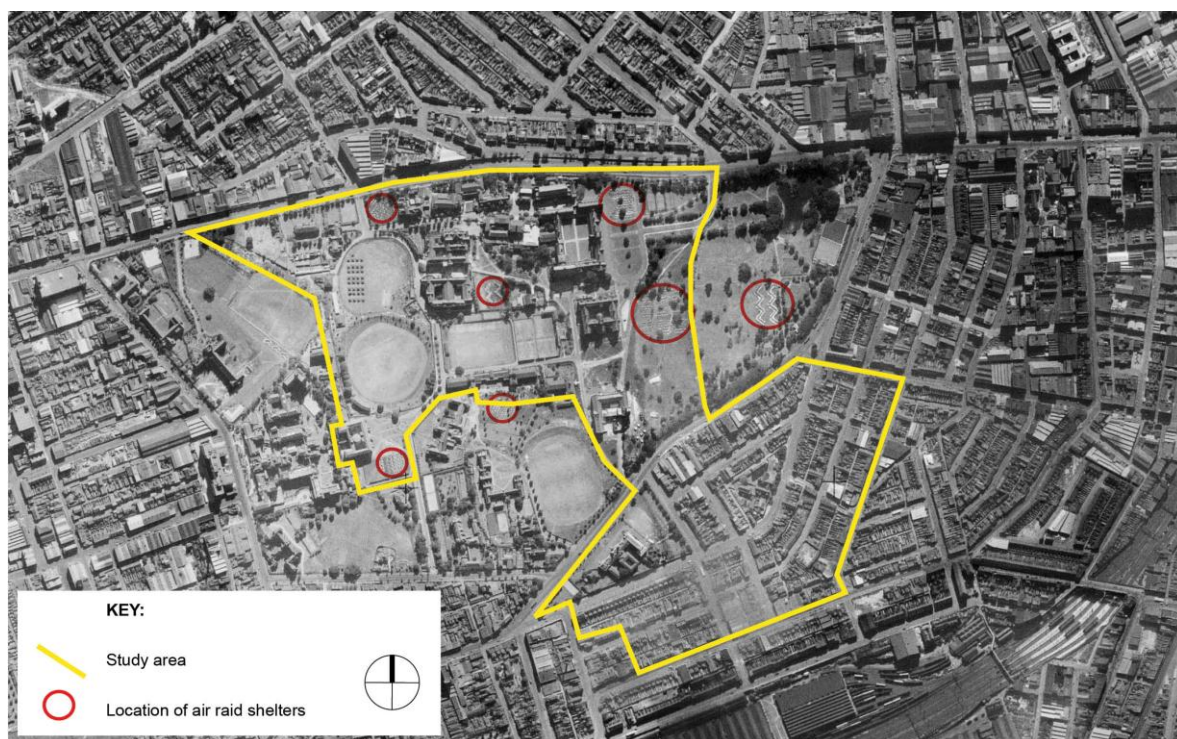


Figure 2.5 1943 aerial photograph of the study area showing the extent of development in the vicinity and air raid shelters. (Source: Six Maps with GML additions)

3.0 Aboriginal Heritage Desktop Assessment and Visual Inspection

3.1 Relevant Local Literature

A number of archaeological studies have been prepared that include the study area and immediate surrounds. Those works and reports of direct relevance to this due diligence assessment are detailed below.

University of Sydney Grounds Conservation Plan 2002

The University of Sydney Grounds Conservation Plan was developed in 2002 to define the heritage significance of the grounds of the University's Camperdown and Darlington campuses, and propose management policies for the conservation of that significance. Due to the degree and nature of development on the site over the past 200 years, undisturbed Aboriginal archaeological sites were deemed highly unlikely to be preserved within the University grounds.

The Conservation Plan identified four areas of open land which were assessed as most likely to preserve PADs;

- St John's College Sports Ground in association with the now filled Orphan School Creek;
- areas around University Ovals No. 1 and No. 2;
- areas adjacent to the boundary fence between the University grounds and Victoria Park; and
- within open areas around the Old Darlington School.

Subsequent archaeological investigations of St John's College Sports Ground, the University ovals and the areas around the Old Darlington School have demonstrated that no potential archaeological deposits have been preserved in these locations or, where remnant soil horizons are preserved, they are highly disturbed and of low archaeological potential (see overviews of JMcDCHM 2004 to 2009 below).

Dominic Steele 2002—The Quadrant Site, Broadway

The Quadrant site, 500m from the current study area on the corner of Broadway and Mountain Street, was the subject of archaeological testing by Dominic Steele Consulting Archaeology in 2001 and 2002. Blackwattle Creek originally passed through the Quadrant site, which was also a natural swamp.

Excavation revealed that in a portion of the site natural soil profiles had been preserved beneath a capping of introduced fill, although these were truncated and disturbed. The soil profiles present at this site comprised of a deep alluvial deposit, with the upper layers consisting of a Blacktown soil landscape.

Excavations during 2001 and 2002 uncovered a small remnant patch of sandy loam covering an area of approximately 5m x 10m, which contained 14 Aboriginal flaked stone artefacts from three of the 16 trenches excavated. This site was registered in AHIMS as site #45-6-2629 (Figure 2.1). Consent to destroy the site was granted with the requirement for monitoring works; however, no further artefacts were located.

The artefact scatter was interpreted as a background distribution of stone artefacts in a landscape only sporadically visited by Aboriginal people. Steele concluded that the limited Aboriginal archaeological evidence encountered at the Quadrant site was the product of two factors. The first was the significant disturbance across the site in the historical period. The second was the way past Aboriginal people were likely to have utilised the natural environment:

The poorly-drained nature of the landscape at the Quadrant site is one possible explanation for the absence of more substantial Aboriginal archaeological remains identified during the investigation program. It is reasonable to assume that Aboriginal people in the past may have exploited the various resources available within these environments, but it is unlikely people established long-term occupation sites on them. (Steele 2003: 56)

The report identifies that beyond the creek line and swamp, more elevated portions of the site located on Hawkesbury Sandstone would have been more favourable for Aboriginal occupation with a less ephemeral archaeological signature. Steele notes that these locations have generally experienced such a degree of historical development that the natural A horizon soils capable of bearing artefacts and archaeological deposits have been removed or heavily disturbed.

JMcDCHM 2004, 2005 & 2006—Reports Prepared for the Campus 2010 Project

Jo McDonald Cultural Heritage Management (JMcDCHM) undertook an Aboriginal heritage assessment of a portion of the University of Sydney's Camperdown and Darlington campus as part of upgrades and construction undertaken during the Campus 2010 project. This study area is shown in Figure 1.2. A survey was conducted across the study area in 2004. No Aboriginal objects and/or landscapes were identified or assessed to be of high archaeological significance or potential. Four areas of PAD were recorded as having low–moderate potential to contain intact archaeological deposits, and if in situ material was found it would be of high archaeological significance due to its rarity within the general location of the study area.

A program of archaeological testing was implemented at two of these PADs in 2005. The first was located at the former Geology Lawns (now the site of the Law Building); the second was at Maze Green, adjacent to the Old Darlington School (Figure 1.2).

Testing at the Geology Lawn revealed between 75cm and 160cm of fill had been introduced above the A horizon soils. The A horizon was a sandy clay loam between 30cm and 50cm thick, and moderately disturbed as indicated by the presence of historical materials. One piece of flaked silcrete debitage was the only artefact retrieved from eight test trenches at the Geology Lawn.

At Maze Green, test excavations revealed that a fill layer between 15cm and 110cm deep had been introduced above the A horizon soils. Natural soil profiles consisted of a 15cm–25cm deep fine sandy clay loam A horizon grading to a yellowish brown clay B horizon. The soil profiles were significantly disturbed by historical activity. One test pit, close to the Old Darlington School, revealed sediments that appeared to represent a still, shallow freshwater pond and may be associated with early European occupation of the area prior to significant modification of the Blackwattle Swamp. One silcrete artefact was retrieved from disturbed overburden during testing; no artefacts were recovered from natural soil profiles.

JMcDCHM 2007 & 2009—Centre for Obesity, Diabetics and Cardiovascular Research (CODCD) Project

In 2007 JMcDCHM undertook an Indigenous Archaeological Assessment of the proposed ARC Medical Building development (see Figure 1.2) to determine the nature, extent and integrity of Aboriginal relics and PADs within the study area. Due to the extensive land disturbance which had

previously occurred in this study area, no sites or surface artefacts were identified and no areas were assessed as having high potential for intact archaeological deposits. Geotechnical investigation indicated that the original swampy stream line of the Orphan School Creek may be represented in organic deposits beneath fill between 3m to 5m deep.

Ground truthing downgraded the archaeological potential of two areas of PAD identified in the *University of Sydney Grounds Conservation Plan* along the northeastern margin of St John's Oval and within Oval 2. These areas were reassessed as having low archaeological potential.

Further investigation was recommended should the RMC Gunn Building, Veterinary Science Building and the HK Ward Gymnasium Building be demolished as their demolition may reveal intact archaeological deposit. The HK Ward Gymnasium Building has since been demolished to make way for the Charles Perkins Centre which is currently under construction at the time of writing this report.

Godden Mackay Logan + JMcDCHM 2012—Abercrombie Street Precinct

In 2012 GML + JMcDCHM was engaged to prepare a Preliminary Aboriginal Archaeology Assessment Report for the redevelopment of the Abercrombie Street Precinct within the Darlington campus of the University of Sydney (Figure 1.2). No landscape features associated with Aboriginal archaeological objects or potential Aboriginal archaeological objects were identified within the study area. Due to extensive twentieth-century construction and landscaping within the precinct, the potential for subsurface archaeological deposits was assessed as low.

Biosis Pty Ltd 2012—Wattle Street PAD

In 2012 Biosis Pty Ltd was engaged to undertake an Aboriginal Cultural Heritage Assessment at 445–473 Wattle Street, Ultimo, to determine the archaeological potential of the project area. The study area was bounded to the east by Blackwattle Lane which roughly follows the original line of Blackwattle Creek. Geotechnical investigation determined that historical fill layers extended to a depth of 2.5m below the current ground surface. This fill was found to be capping intact alluvial soils extending to a depth of at least 7m despite being located within the area of disturbed terrain mapped by Chapman and Murphy.³⁰

The considerable depth of these alluvial soils indicates that they may be preserved across the extent of the 2012 study area and potentially further afield. The alluvial sediments were interpreted as potential natural topsoils in association with the Blackwattle Creek banks. This association with a permanent freshwater resource (Blackwattle Creek) is significant as current modelling for Aboriginal sites predicts that the density and complexity of sites will increase with stream order. The area was registered on AHIMS as site #45-6-3064 as a PAD with high to moderate potential to contain Aboriginal sites and/or objects, with the recommendation for testing and monitoring should works impact on the alluvial soil deposit (Figure 2.1). No artefacts were recovered during the geotechnical testing of these sediments.

Mary Dallas Consulting Archaeologists 2013—St Paul's College

In 2013, Mary Dallas Consulting Archaeologists (MDCA) undertook a Preliminary Due Diligence Aboriginal Heritage Assessment for St Paul's College for the area covering the St Paul's Oval and college buildings (Figure 1.2). St Paul's Oval was constructed in the 1920s by levelling and filling using the same spoil from construction of the city railway as was used to fill the Orphan School Creek flats.³¹ Land use history in this study area was found to have significantly modified and filled

original land surfaces as well as caused significant ground disturbance due to several phases of college building development. Therefore, the potential for subsurface archaeological deposits to be preserved in situ was assessed as low across the majority of the study area.

An area was identified to the north of the study area in which remnants of the Orphan School Creek course and banks may have been preserved below the current ground surface, therefore presenting the potential for preserving archaeological deposits associated with the watercourse.

3.2 Visual Inspection of the Study Area

A visual inspection of the six development precincts was undertaken by Erin Mein and Diana Cowie, GML Archaeologists, on 15 October 2013. The development precincts were inspected for visible archaeological remains, evidence of ground disturbance and the nature and extent of the extant built environment.

The site inspection was informed by site plans, aerial photographs, previous heritage investigations and an understanding of the area's environmental and archaeological context. During the inspection various aspects of the development precincts were recorded, including topography, areas of exposed soil, age and fabric of built environment and the presence of subsurface services. The following observations were made:

Merewether Precinct

- The precinct is located midway down the natural slope of Petersham Hill, with the land falling away to the southeast.
- Subsurface services including stormwater drains, electrical and communications services are evident across the site.
- The precinct is occupied by a range of multi-storey buildings, bituminised roads, car parks and landscaped open areas.
- With the exception of the Darlington Road Terraces and the Institute, the majority of the buildings in the Merewether Precinct had been constructed in the last half of the twentieth century.
- The Merewether Building is four-storeys high which would have required significant footings to ensure its structural integrity—this would have involved significant cutting and levelling across the footprint.
- The Institute Building (former Deaf, Dumb and Blind Institute), constructed in 1872, has been terraced into the natural slope of the ground surface.
- The Darlington Road Terrace houses have also been terraced into the natural slope of the ground surface.
- A small substation is located on the corner of Butlin Avenue and Darlington Road.

City Road Precinct

- The natural topography of the land in this precinct falls away to the northeast towards Victoria Park as well as immediately to the southeast towards Cadigal Green.

- Subsurface services including stormwater drains, electrical and communications services are evident across the site.
- The precinct is dominated by three large multi-storey buildings between five and seven storeys high, the Wentworth Building, the Jane Foss Russell Building and the Wilkinson Building; all of which were constructed between 1960 and 1975.
- The remaining area within the precinct is either paved, bituminised or landscaped.

Engineering Precinct

- The land in this precinct falls away to the northeast towards Ultimo following the original line of the Blackwattle Creek.
- The precinct is predominately composed of multi-storey buildings between three and twelve storeys high, constructed in the mid-1960s with 1970s and 1990s additions.
- Basements have also been excavated in some of the engineering buildings such as the Civil and Mining Engineering Building (Figure 3.4).
- Subsurface services including stormwater drains, electrical and communications services are evident across the site.
- Open areas have either been paved, bituminised or landscaped.

Health Precinct (Blackburn Bosch)

- This precinct is situated on a gradual slope which rises between the University Oval No. 1 and Cadigal Lane.
- No evidence of original Blacktown soil profiles were evident in the banks surrounding University Oval No. 1 to the immediate north of the precinct (Figure 3.6). Instead these banks appeared to be constructed of relatively clean sandy fill with some shale and gravel inclusions.
- The buildings within this precinct were between two and six storeys high and, with the exception of the Blackburn Building in 1933, were constructed during the late 1950s to 1960s, suggesting that significant foundation trenches would have been excavated into the subsurface soils during their construction.
- The main open area within Blackburn Circuit had been bituminised and landscaped.
- Subsurface services including stormwater drains, electrical and communications services are evident across the site.

Life Sciences Precinct

- This large precinct is relatively flat with a slight slope up to the east following the line of Science Road.
- The area to the east of the Ross Street gate was occupied by several demountable buildings on top of a bituminised surface with subsurface drainage and services.

- The area immediately to the west of the Ross Street gate was occupied by the Veterinary School buildings. The majority of these buildings were constructed between the end of World War II and the late 1980s—the exceptions being the Gatekeepers Lodge (1898), the JD Stewart Building (1910), and the McMaster Building (1931).
- The area has extensive landscaping with bituminised roads and established gardens, particularly around the JD Stewart Building.
- Subsurface services including stormwater drains, electrical and communications services are evident across the site.
- The Charles Perkins Centre which was under construction at the time of the site visit borders on the Life Sciences Precinct. This new construction has involved significant earthworks including levelling and filling of the ground surface. Figure 3.10 shows the extent of the fill to the east of the centre.

Cultural Precinct (Macleay & Edgeworth David)

- This precinct is situated on the top of Petersham Hill overlooking the original Blackwattle Creek catchment to the north.
- The land on the top of Petersham Hill has been terraced to accommodate structures including the Quad and the Macleay Building and associated lawns and roads (Figure 3.12).
- The precinct is bounded to the north by Parramatta Road which has been cut through the original ridge line. A possible remnant Blacktown soil was identified on a northern exposure overlooking Parramatta Road. Figures 3.15 and 3.16 show a rubble filled overburden layer overlying a more compacted sedimentary profile. This correlates with excavation reports for the northwest region of the Camperdown campus in which an introduced fill between 0.75m to 1.6m overlies remnant, disturbed A soil horizons.³²
- The three-storey Macleay Building is constructed of sandstone masonry—dating to 1887, it is one of the earliest extant structures on the University campuses.
- The Botany Lawn shows evidence of having been levelled as part of the terracing activity, and subsurface services including stormwater drains and electrical services have been installed within and immediately adjacent to it.
- The three-storey Edgeworth David Building is a rendered building constructed in the postwar period.
- The remaining area within this precinct was paved and/or bituminised.

3.3 Synopsis of the Archaeological Context

The desktop assessment and visual inspection indicates that there is low potential for in situ Aboriginal objects within three of the development precincts; and low to moderate potential within the remaining three development precincts. The Merewether, Life Sciences and Cultural Precincts can be assessed as having low to moderate potential to preserve intact subsurface archaeological deposits below building foundations and in open areas. The City Road, Engineering and Health

Precincts can be assessed as having low to no potential to preserve intact subsurface archaeological deposits.

Results of the AHIMS search demonstrated that current known material evidence of Aboriginal occupation in the general vicinity of the University is limited. While four PADs are identified on the AHIMS register, only two are registered as being known to contain artefacts and only three stone artefact scatters are registered within 2km of the current study area. This is partly due to the very high degree of earth disturbing development which has occurred in this inner city area over the last 200 years which has resulted in poor preservation of subsurface archaeological deposits. However, 2012 geotechnical investigations have revealed that deep alluvial deposits associated with Blackwattle Creek are still in existence below historical fill and modern development.³³ In addition, organic deposits interpreted as the former Orphan School Creek have also been located below a deep capping of historical fill.³⁴ This indicates that some subsurface archaeological deposits may be preserved in areas associated with the Blackwattle Creek and Swamp and Orphan School Creek.

It has been suggested by Steele that low artefact densities in the vicinity of the University may also reflect the nature of past landscape use by Aboriginal people.³⁵ Synthesis of archaeological investigations across the wider Sydney region demonstrates that campsites, where Aboriginal people stopped to cook, make tools, talk and participate in ceremony and other social activities, are generally located close to freshwater resources as well as estuaries and marine shorelines. The most important freshwater resource for the current study area would have been Blackwattle Creek which was also surrounded by a swampy, poorly drained landscape unsuitable for long-term habitation. It has therefore been suggested that parts of the study area in Darlington, which are associated with the former Blackwattle Swamp, are unlikely to have been a favourable location for camping but rather would have been visited occasionally by Aboriginal people collecting plant material, gathering freshwater fauna and hunting.³⁶ These activities are ephemeral and would have left little archaeological signature, thereby accounting for the low density of Aboriginal cultural material found within and around the current study area.

Further away from the formerly swampy areas in Darlington, Petersham Hill may have provided a more favourable location for habitation by Aboriginal people. While still within 400m of the freshwater resources of Blackwattle Creek, this low rise would have provided dry habitation sites with potential views over the swamp. Test excavations by JMcDCHM on the ridge line of Petersham Hill have demonstrated that some disturbed remnant A soil horizons do exist below layers of historical fill; however, the density of Aboriginal artefacts is so low that their potential to reveal information about past Aboriginal inhabitants is limited. Further to the west, geotechnical investigations indicate that the historical fill is significantly deeper around the former Orphan School Creek than on top of Petersham Hill. This suggests that Aboriginal archaeological deposits may have been preserved by the capping of the natural ground surface in the 1920s.

The following provides a synopsis of potential for archaeological deposits within each of the six development precincts:

Merewether Precinct

This precinct has been heavily disturbed and has low potential to preserve subsurface Aboriginal archaeological deposits below the foundations of the Darlington Road Terraces and the Institute Building. Previous archaeological investigations in the vicinity have indicated that historical fill was introduced to terrace and level the Blackwattle Creek catchment area in Darlington. Depending on

the depth of the foundations of the terrace houses and Institute Building, there exists some potential for natural soil profiles to be preserved. However, it is likely that these profiles would be highly disturbed and discontinuous; and that any Aboriginal objects would not likely be found in situ. The archaeological significance of any Aboriginal objects out of context would be very low.

City Road Precinct

This precinct has been heavily disturbed and has low to no potential to preserve subsurface Aboriginal archaeological deposits. Having already been investigated by JMcDCHM in 2005, this area has been revealed as heavily disturbed with very low archaeological significance.³⁷ It is highly unlikely that any in situ soil profiles would remain below the Wentworth, Jane Foss Russell or Wilkinson buildings due to the extensive foundations required by modern building engineering for structures of this height. Some Aboriginal objects may be contained within these disturbed deposits; however, the archaeological significance of any such objects would be very low.

Engineering Precinct

This precinct has been heavily disturbed and has low to no potential to preserve subsurface Aboriginal archaeological deposits. As with the neighbouring City Road Precinct, extensive multi-storey, modern construction has occurred across the entire precinct, including the installation of basements. This is likely to have removed any remnant natural soil profiles along with any Aboriginal objects they may have contained.

Health Precinct (Blackburn Bosch)

This precinct has been heavily disturbed and has low to no potential to preserve subsurface Aboriginal archaeological deposits. While the precinct is located in close proximity to the headwaters of the former Orphan School Creek and may have been constructed on top of deep historical fill, previous archaeological research in the study area and wider Sydney Basin suggests that the density and complexity of sites near such first order streams would be low to nil.^{38 39} In addition, the nature and extent of twentieth-century development within the precinct would have further reduced the potential for subsurface archaeological deposits to be preserved.

Life Sciences Precinct

This precinct has been moderately disturbed and has low to moderate potential to preserve subsurface Aboriginal archaeological deposits. According to historical documents, this precinct overlies the line of the second order tributaries of the Orphan School Creek (Figure 2.1). Geotechnical investigations indicate that creek line deposits are preserved below three to five metres of fill introduced during the 1920s. This indicates that Aboriginal objects may be contained within natural soil profiles associated with the creek.

As outlined by JMcDCHM in 2007 and 2009, archaeological deposits containing Aboriginal objects may be preserved beneath the foundations of structures within this precinct.⁴⁰ This includes the JD Stewart Building (Veterinary Science Building), RMC Gunn Building, McMaster Building and the Gatekeepers Lodge.

Cultural Precinct (Macleay & Edgeworth David)

This precinct has been heavily disturbed, however, retains low to moderate potential to preserve subsurface Aboriginal archaeological deposits within some areas. Previous investigations along the Petersham Hill ridge line indicate that some remnant A soil horizons are preserved below 0.75m to

1.6m of historical fill. It is likely that the foundations required for the Macleay and Edgeworth David Buildings would have either completely removed or significantly disturbed any remaining natural soil profiles. However, historical mapping of the development of the University grounds, as well as 1943 aerial photographs, indicate that no construction has occurred on the Botany Lawn in the eastern section of the precinct. Botanical gardens were developed in this location during the late nineteenth century. Visual inspection of the lawn indicated that the lawn had been filled and levelled with subsurface electrical services installed. If the fill used to level the lawn area follows the depths identified nearby by JMcDCHM, natural soil profiles with the potential to contain Aboriginal objects may still be preserved with minimal impact from the installation of subsurface services.

Conclusions and recommendations for Aboriginal Heritage Management for each development precinct based on the potential for subsurface archaeological deposits to be preserved are discussed in Section 5.0.



Figure 3.1 Darlington Road Terraces, Merewether Precinct. (Source: GML 2013)



Figure 3.2 Cadigal Green, showing interpretation of the former Blackwattle Swamp. (Source: GML 2013)



Figure 3.3 Cadigal Green, showing interpretation of the former Blackwattle Swamp. (Source: GML 2013)



Figure 3.4 Basement of the Civil and Mining Engineering Building, Engineering Precinct. (Source: GML 2013)



Figure 3.5 Civil Engineering Workshop, Engineering Precinct. (Source: GML 2013)



Figure 3.6 Filled bank of University Oval No. 1 immediately north of the Victor Coppleston Building, Health Precinct. (Source: GML 2013)



Figure 3.7 Built up land surface against the north wall of the Victor Coppleston Building, Health Precinct. (Source: GML 2013)



Figure 3.8 Life Sciences Precinct, showing filled and levelled land to the southwest with rising Science Road in the foreground. (Source: GML 2013)



Figure 3.9 Science Road looking east showing the rising natural topography. (Source: GML 2013)



Figure 3.10 Charles Perkins Centre showing construction fill. (Source: GML 2013)

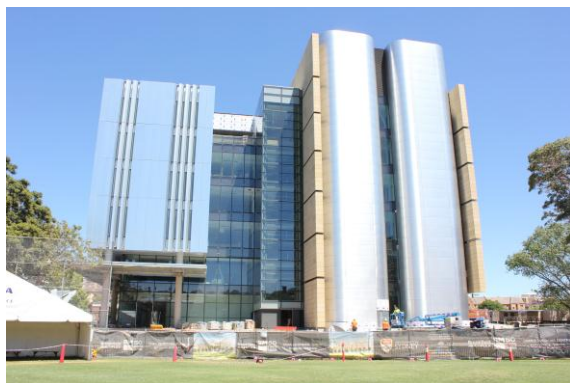


Figure 3.11 Charles Perkins Centre, under construction. (Source: GML 2013)



Figure 3.12 Terracing of natural hillside to the east of the Cultural Precinct. (Source: GML 2013)



Figure 3.13 Levelled Botany Lawn looking back towards Macleay Building, Cultural Precinct. (Source: GML 2013)

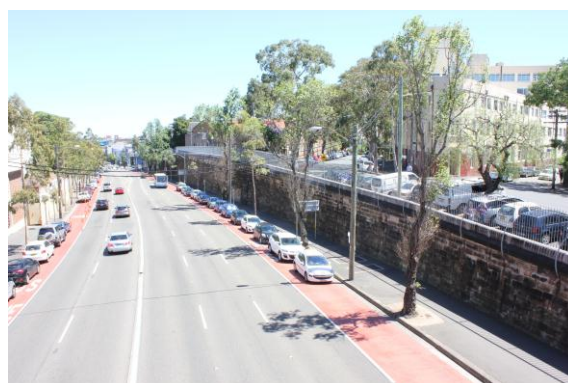


Figure 3.14 Parramatta Road to the north of the Cultural Precinct, showing cut into natural topography. (Source: GML 2013)



Figure 3.15 Soil exposure overlooking Parramatta Road, showing potential remnant Blacktown soil A horizon under rubble filled overburden. (Source: GML 2013)



Figure 3.16 Soil exposure overlooking Parramatta Road, showing potential remnant Blacktown soil A horizon under rubble filled overburden. (Source: GML 2013)

4.0 The Proposed Works and Potential Impacts

The SSD Approval to be lodged with the Department of Planning is seeking approval of a Concept Plan, i.e. building footprints, massing and volume within the development precincts identified in the CIP (Figure 1.3). As the proposed works are yet to be finalised it is not possible to address specific impacts to Aboriginal archaeology within the study area. However, it is understood that the general construction work proposed under the CIP will involve the following ground disturbing activities:

- demolition of existing structures;
- construction of new buildings and possible basement levels;
- landscaping and/or road paving; and
- installation of subsurface services and infrastructure.

The depth of excavations required to construct new buildings within the CIP would need to be considered in relation to the varying depths of fill which have been introduced to different locations across the study area. In particular those locations which have been identified in this report as having low to moderate potential to preserve Aboriginal archaeological deposits will need to be considered once impacts have been identified as part of the design process.

5.0 Conclusions and Recommendations

5.1 Conclusions

The following conclusions can be drawn regarding the Aboriginal archaeology of the study area:

- Past Aboriginal inhabitants are likely to have used the study area for the collection of resources rather than more permanent campsites, in particular the area consisting of the Darlington campus which is associated with the former Blackwattle Swamp. This type of past landscape use would have been ephemeral and unlikely to leave a strong archaeological signature.
- Extensive earth disturbing development has occurred continuously for over 200 years since European settlement of Sydney town. This includes forest clearance, farming, grazing, construction of gardens, roads and buildings, the introduction of fill to level and terrace the natural topography of the land, as well as the landscaping and paving of ground surfaces.
- Since 1950, extensive multi-storey development has occurred across five of the six development precincts identified in the CIP. Given the nature of modern engineering and construction methods, the excavation of strip footings and foundations required for large multi-storey buildings is likely to remove any in situ subsurface archaeological deposits.
- No areas within the current study area can be categorised as lightly disturbed.
- Previous archaeological investigations have revealed extremely low artefact densities are contained within archaeological deposits in the general vicinity of the current study area.
- As the quantity of in situ artefacts from the vicinity of the University is extremely low, any in situ artefacts or sites found within the University would be extremely rare and would therefore have high archaeological significance.
- Several areas of deep alluvial sediments with the potential to contain Aboriginal objects have been identified in association with Blackwattle Creek and Swamp in close proximity to the current study area.
- Previous archaeological investigations within the current study area have shown that some remnant natural soil horizons are present below historical fill layers on Petersham Hill and within the Darlington campus. However, the historical land use has disturbed the A soil horizons to such an extent that any Aboriginal objects are unlikely to be in situ, therefore reducing their archaeological significance to very low.
- Geotechnical investigations have indicated that natural soil horizons may be preserved below 3m–5m of historical fill in the area associated with the former Orphan School Creek.

5.2 Recommendations

The purpose of this report is to identify whether the study area possesses or has the potential to possess Aboriginal heritage sites, places and/or objects. The potential for Aboriginal archaeology to exist within the current study area relies on a balance between the nature of past landscape use, and the extent and nature of historical disturbance.

In some locations, such as the Life Sciences Precinct, historical land use may have inadvertently resulted in the preservation of natural soil profiles containing Aboriginal artefacts via a capping of historical fill. However, the current state of knowledge about the nature of past Aboriginal landscape use in the study area suggests that only few traces of these past inhabitants may be visible in the archaeological record. This result is a low potential for the preservation of in situ Aboriginal archaeological deposits within the study area; however, if found these deposits would be of high archaeological significance due to their rarity.

The following recommendations are made as part of the Aboriginal heritage management requirements for each development precinct within the CIP:

Merewether Precinct

- Heavily disturbed with low potential to preserve intact subsurface Aboriginal archaeological deposit.
- Proceed with caution.
- Should Aboriginal objects be located during the course of any future development within this precinct, work should cease immediately and an archaeologist should be contacted to document and assess these finds. The objects must be reported to the OEH under Section 90 of the NPW Act.

City Road Precinct

- Heavily disturbed with low to nil potential to preserve intact subsurface Aboriginal archaeological deposits.
- Encompasses registered PAD #45-6-2822 which has since been destroyed under a Section 90 consent to destroy after further archaeological investigation downgraded the original site assessment.⁴¹
- Proceed with caution.
- Should Aboriginal objects be located during the course of any future development within this precinct, work should cease immediately and an archaeologist should be contacted to document and assess these finds. The objects must be reported to the OEH under Section 90 of the NPW Act.

Engineering Precinct

- Heavily disturbed with low potential to preserve intact subsurface Aboriginal archaeological deposits.
- Proceed with caution.
- Should Aboriginal objects be located during the course of any future development within this precinct, work should cease immediately and an archaeologist should be contacted to document and assess these finds. The objects must be reported to the OEH under Section 90 of the NPW Act.

Health Precinct (Blackburn Bosch)

- Heavily disturbed with low potential to preserve intact subsurface Aboriginal archaeological deposits.
- Proceed with caution.
- Should Aboriginal objects be located during the course of any future development within this precinct, work should cease immediately and an archaeologist should be contacted to document and assess these finds. The objects must be reported to the OEH under Section 90 of the NPW Act.

Life Sciences Precinct

- Moderately disturbed with low to moderate potential to preserve intact subsurface Aboriginal archaeological deposits.
- Due to the possible depth of historical fill in this precinct, potentially intact archaeological deposits may be preserved. Therefore, it is recommended that archaeological monitoring should be undertaken on the areas under the foundations of any buildings within this precinct that are proposed to be demolished.
- If the proposed work in this precinct includes excavation to a depth greater than 3m, it is recommended that a program of archaeological test excavation be carried out prior to the commencement of works, followed by archaeological monitoring of the proposed excavation.
- If any Aboriginal objects are located during the course of archaeological monitoring and/or test excavations these objects should be documented and recorded by an archaeologist and reported to the OEH under Section 90 of the NPW Act.

Cultural Precinct (Macleay & Edgeworth David)

- Predominantly heavily disturbed with low potential to preserve intact subsurface Aboriginal archaeological deposits.
- If the proposed work will impact on the Botany Lawn, it is recommended that archaeological monitoring be undertaken during this work.
- In all other areas within this precinct, proceed with caution. However should Aboriginal objects be located during the course of any future development in these areas, work should cease immediately and an archaeologist should be contacted to document and assess these finds. The objects must be reported to the OEH under Section 90 of the NPW Act.

6.0 Endnotes

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- ² Ibid.
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- ⁵ Ibid, p 13.
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- ⁸ Ibid, p. 6.
- ⁹ Casey and Lowe 2012, *Archaeological Assessment & Impact Statement: University Accommodation, St Paul's College, The University of Sydney*, prepared for Citta Property Group, p. 11.
- ¹⁰ White, RE 2010, *Principles and Practices of Soil Science*, Blackwell Publishing, Malden, p 97.
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- ¹⁵ Pearson, M., Marshall, D., Ellsmore, D., Attenbrow, V., Rosen, S., Kerr, R. and Betteridge, C. 2002 *University of Sydney Grounds Conservation Plan*, Vol. 2, prepared for Facilities Management Office, University of Sydney.
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- ¹⁹ Ibid, p. 12.
- ²⁰ Jo McDonald Cultural Heritage Management 2005, *Sydney University Campus 2010: Test Excavations at the Law Building Site, Camperdown Campus and at Maze Green, the Old Darlington School. Darlington Campus*, prepared for Capital Insight Pty Ltd.
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7.0 Appendices

Appendix A

AHIMS Search

Appendix A

AHIMS Search

Godden Mackay Logan Heritage Consultants

Date: 08 October 2013

78 George Street
Redfern New South Wales 2016

Attention: Erin Mein

Email: erinm@gml.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lat, Long From : -33.8956, 151.1765 - Lat, Long To : -33.8786, 151.2035 with a Buffer of 50 meters, conducted by Erin Mein on 08 October 2013.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



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

12	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 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.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref Number : 3
Client Service ID : 113503

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-2597	Wynyard St Midden	AGD	56	333469	6247920	Open site	Valid	Shell : -, Artefact : -	Midden	102494,10276 3,102765
	<u>Contact</u>	<u>Recorders</u>	Mr.D Coe					<u>Permits</u>		
45-6-2629	Broadway 1	AGD	56	333060	6249100	Open site	Valid	Artefact : -		102494,10276 3,102765
	<u>Contact</u>	<u>Recorders</u>	Dominic Steele Archaeological Consulting					<u>Permits</u>	1299	
45-6-2666	Wattle Street PAD 1	AGD	56	333150	6249450	Open site	Valid	Potential Archaeological Deposit (PAD) : -		102494,10276 3,102765
	<u>Contact</u>	<u>Recorders</u>	Dominic Steele Archaeological Consulting					<u>Permits</u>	1738	
45-6-2663	Mountain Street Ultimo	AGD	56	333300	6249400	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		102494,10276 3,102765
	<u>Contact</u>	<u>Recorders</u>	Mary Dallas Consulting Archaeologists					<u>Permits</u>	1719	
45-6-2680	Broadway Picture Theatre PAD 1	AGD	56	333150	6249000	Open site	Valid	Potential Archaeological Deposit (PAD) : -		102142,10249 4,102763,1027 65
	<u>Contact</u>	<u>Recorders</u>	Jim Wheeler					<u>Permits</u>	1854	
45-6-2745	University of Sydney Law Building PAD	AGD	56	332350	6248740	Open site	Valid	Potential Archaeological Deposit (PAD) : -		102201,10249 4,102763,1027 65
	<u>Contact</u>	<u>Recorders</u>	Doctor.Jo McDonald					<u>Permits</u>	2153,2320,2443	
45-6-2767	Tent Embassy	AGD	56	332680	6248680	Open site	Valid	Aboriginal Resource and Gathering : 1		102494,10276 3,102765
	<u>Contact</u> T Russell	<u>Recorders</u>	Bill Lord					<u>Permits</u>		
45-6-2822	USYD: Central	AGD	56	332750	6248550	Open site	Valid	Artefact : -		100302,10249 4,102763,1027 65
	<u>Contact</u>	<u>Recorders</u>	Jo McDonald Cultural Heritage Management					<u>Permits</u>	2554	
45-6-2979	UTS PAD 1 14-28 Ultimo Rd Syd	GDA	56	333650	6249590	Open site	Valid	Potential Archaeological Deposit (PAD) : -		102494,10276 3,102765
	<u>Contact</u>	<u>Recorders</u>	Dominic Steele Archaeological Consulting,Mr.Dominic Steele					<u>Permits</u>	3458	
45-6-3071	445-473 Wattle Street PAD	GDA	56	333285	6249412	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>	Biosis Research Pty Ltd Sydney Office					<u>Permits</u>		
45-6-2987	Poultry Market 1	GDA	56	333746	6249575	Open site	Valid	Artefact : 1		102494,10276 3
	<u>Contact</u>	<u>Recorders</u>	Ms.Samantha Higgs,Biosis Research Canberra Office					<u>Permits</u>	3506	

Report generated by AHIMS Web Service on 08/10/2013 for Erin Mein for the following area at Lat, Long From : -33.8956, 151.1765 - Lat, Long To : -33.8786, 151.2035 with a Buffer of 50 meters. Additional Info : Due Diligence Report. Number of Aboriginal sites and Aboriginal objects found is 12

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref Number : 3
Client Service ID : 113503

<u>SiteID</u>	<u>SiteName</u>	<u>Datum</u>	<u>Zone</u>	<u>Easting</u>	<u>Northing</u>	<u>Context</u>	<u>Site Status</u>	<u>SiteFeatures</u>	<u>SiteTypes</u>	<u>Reports</u>
45-6-3064	445-473 WATTLE ST PAD	GDA	56	333285	6249412	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		102763
	<u>Contact</u>	<u>Recorders</u>	Biosis Research Pty Ltd Sydney Office							<u>Permits</u>

Report generated by AHIMS Web Service on 08/10/2013 for Erin Mein for the following area at Lat, Long From : -33.8956, 151.1765 - Lat, Long To : -33.8786, 151.2035 with a Buffer of 50 meters. Additional Info : Due Diligence Report. Number of Aboriginal sites and Aboriginal objects found is 12

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