ARCHAEOLOGICAL SURVEY
FOR AN
ABORIGINAL HERITAGE ASSESSMENT

UNIVERSITY OF SYDNEY, NSW

June 2004
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Report prepared for Capital Insight Pty Ltd
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INTRODUCTION

The University of Sydney proposes to undertake a series of works associated with the Campus 2010 + Building for the Future Program. These relate to the Public Domain (Eastern Avenue), the Maze Green and Associated Areas, the new Faculty of Law Building, the USYD Central Building and associated areas. The University of Sydney has engaged Capital Insight Pty Ltd as Project Director for the delivery of the Campus 2010 program. As part of that program they have called for an Aboriginal Archaeological Assessment to support a Development Application (DA) for the works. This is expected to be lodged in late 2004. It will also form the basis for any permit applications to the Department of Environment and Conservation (DEC, formerly the NSW National Parks and Wildlife Service). Jo McDonald Cultural Heritage Management was contracted through Casey & Lowe Pty Ltd to do the Aboriginal heritage assessment. This report details the Aboriginal heritage assessment of the land, in consultation with the Metropolitan Local Aboriginal Land Council (MLALC).

1.1 Project Description

As part of the Campus 2010 Program, a number of works are proposed across the central part of the University, including the following:

- The upgrading of the Eastern Avenue and Barff Road Integrated Domain.

  The upgrading of the public domain entails the redesign of the pedestrian precinct and will incorporate road works, paving, planting and other service matters typically associated with these works. The extent of works is from the Quadrangle to City Road, including a new footbridge across City Road. These works are to be integrated with the new Faculty of Law Building, located on the northern side of Eastern Avenue and adjacent to Victoria Park.

- Shepherd Street Entrance and Pedestrian Route to USYD Central.

  These works incorporate the retention of the old Darlington School and the incorporation and re-design of Maze Green, the central open space of the Darlington campus. They link through to the Shepherd Street entrance and incorporate the proposed USYD Central Building.

- City Road Improvements.

  These improvements relate to the upgrade of the public domain associated with City Road.

- Faculty of Law Building.

  A new building located to the north of Eastern Avenue which will provide a new facility, accommodating academic offices, the Law Library and a significant amount of teaching space.
Located adjacent to the existing Wentworth Building, this building will allow various student service organisations to be co-located to the centre of the University. The building will incorporate a Combined Sciences and Technologies Library. Supporting facilities include a new outdoor plaza and retail activity.

The study area incorporates these nominated areas and further associated zones as shown on Figure 2.1.

1.2 Objectives of this Study

The project brief is attached as Appendix 1. The heritage consultant was briefed to

1. determine the extent, nature and integrity of archaeological relics and potential archaeological deposits (PAD) in the development area;

2. assess the significance of any such relics and PADs;

3. assess potential development impacts to the relics and PADs;

4. recommend management options to mitigate impacts and ensure that development is undertaken in accordance with the NSW Heritage Act 1977 and the National Parks & Wildlife Act 1974.

It was also required that the assessments

- conform to the NSW Heritage Office 'Guidelines for Archaeological Assessments (1996)', and the NSW National Parks & Wildlife Service 'Guidelines for Archaeological Survey and Reporting (1997)';

- be prepared in accordance with The Burra Charter and Guidelines to the Burra Charter issued by Australia ICOMOS and the NSW Heritage Manual;

- comply with the statutory requirements of relevant legislation regarding the protection and management of cultural heritage in NSW, including the NSW National Parks & Wildlife Act 1974, the NSW Heritage Act 1977, Regional and/or Local Environment Plans, State Environmental Planning Policies and the Aboriginal & Torres Strait Islander Heritage Protection Act 1986;

- review previous reports, surveys and studies in the locality including NSW DEC databases, particularly the Aboriginal Sites Register (Aboriginal Heritage Information Management System, AHIMS) and relevant published and unpublished documents on Aboriginal sites and relics in the region and in relation to the project area;

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1 These have been replaced by the DEC Draft Guidelines for Aboriginal Heritage Impact Assessment.
in consultation with the MLALC identify sites and places within the study area that are culturally significant, including a site survey to identify whether any Aboriginal heritage values are applicable to, or potentially applicable to, the project areas and activities;

undertake an assessment of the degree of land disturbance and erosion in the study area to determine the likelihood of undisturbed sub-surface sites or objects in the study area;

undertake an assessment of the potential impacts of the development on the Aboriginal heritage values of the site: particular attention should be given to any potential impacts on cultural sites or relics;

prepare a report on findings, including discussion of methodology; data obtained and evaluation of findings; appropriate maps, figures and photos; options for mitigation and any recommendations. The reporting should be generally in accordance with the DEC Draft Guidelines for Aboriginal Heritage Impact Assessment.

1.3 Summary of Findings and Recommendations

Due to the nature and extent of land disturbance in the study area, there are no areas assessed as having high potential for intact archaeological deposit. While none of the areas included in this assessment are hence indicated as worthy of conservation, it is proposed that a number of impacted areas be investigated prior to impact so that we can have a better understanding of the Indigenous cultural heritage of this area. The recommendations are that:

1. There are no identified Aboriginal objects and/or landscapes within the study area assessed to be of high archaeological significance or potential. There are thus no design constraints on the development proposal.

2. The proposed development could impact a number of identified PAD (potential archaeological deposit) areas. Although these are assessed as having low-moderate potential to contain intact archaeological deposit, if in-situ material were found here this would be of high archaeological significance.

3. With respect the construction of the two new buildings: the law building and USYD Central, a program of archaeological testing should be undertaken at the time of removing the existing structures on these sites. The client should seek a section 87 Research Permit to undertake this work. Following the demolition of the building, the area should be inspected by an archaeologist. A series of hand excavated pits should be dug in the below-floor deposits, possibly in conjunction with machine trenches, and the material sieved to establish whether or not Aboriginal artefact material is present. If these processes reveal the presence of artefact material, a more intensive salvage program of hand-excavated test pits should be initiated. Selection of areas for sub-surface investigation should be made in consultation with the Metropolitan LALC and in accordance with DEC requirements. This will then require the lodgement of a Section 90 Consent Application to allow the destruction
of the remainder of the site. If no artefact material is found, a Section 90 Consent will not be required. However, the MLALC may wish to monitor any further earth-removal works.

4. If the new law building is to extend past the footprint of the existing structures, it would be expedient to undertake a preliminary program of testing within the areas of the surrounding land that is likely to be disturbed. This should follow the guidelines proposed in Recommendation 3 above. However, the results of this testing would not negate the need to test the subfloor area exposed at the time of the building's demolition.

5. The above recommendations 3 and 4 should be considered to have broader application to future works within the university that may involve building demolition.

6. Any development or landscaping proposal that may impact the currently clear land of Maze Green that is adjacent to (west of) the Old Darlington School building should be preceded by a sampling program of hand-excavated test pits. This should be confined to the area that was previously covered by the school playground. This investigation should seek to interpret the archaeological evidence across the study area initially through the excavation of test pits across a grid. Selection of areas for sub-surface investigation should be made in consultation with the Metropolitan LALC and in accordance with DEC requirements.

7. Applications for Section 87 Permits or Section 90 Consents can take up to eight weeks to be processed by DEC. Hence these should be lodged as soon as practicable prior to known works. Whether or not multiple works can be covered under one application will depend on the proposed timing of the works and this should be assessed at the time of application.

1.4 Report Authorship and Acknowledgments

This report was written by Jane Harrington, with input from Brent Levy. It was reviewed by Dr Jo McDonald. We would like to acknowledge the assistance of Dominic Steele with material that is currently in preparation.
2 ABORIGINAL COMMUNITY INVOLVEMENT

The study area falls within the boundaries of the Metropolitan LALC. Prior to visiting the study area the archaeologist consulted with Mr Allen Madden of the MLALC, and arranged to meet with him at the university on Thursday 6 May 2004. In attendance at this meeting were Jane Harrington (Project Manager / Archaeologist, Jo McDonald CHM), Brent Levy (Archaeologist, Jo McDonald CHM), Tony Lowe (Casey & Lowe Pty Ltd), and Allen Madden (Cultural & Educational Officer, MLALC). Mr Madden indicated his belief that the extensive nature of land alteration in the survey area diminished the likelihood that a foot survey could reveal any Aboriginal cultural material. Based on this, he indicated his support for the foot survey to be undertaken without him. He indicated that the concerns of the MLALC for the area of land under study relate more closely to the potential for subsurface cultural material. Mr Madden was provided with a draft copy of this report with a view to seeking his comment on the recommendations relating to works that may impact the study area. His report on behalf of the MLALC is enclosed as Appendix 2.
Figure 2.1: Study Area
3 THE STUDY AREA

As indicated in Figure 2.1, the study area incorporates parts of both the Darlington and Camperdown campuses of the University of Sydney (Figure 1.1). It consists of the land bounded by Parramatta Road, Victoria Park and Cleveland Street on the north, Shepherd Street and Lander Street to the east, and by Codrington Street, Butlin Avenue, Fisher Road and University Place on the western edge.

A number of studies have been undertaken that review the existing and past environment of the broader area (e.g. Attenbrow 2002; Benson & Howell 1995; City Plan Heritage 2004; Jo McDonald CHM 1998; Dominic Steele Consulting Archaeology 2001, 2002, Steele & Czastka in prep.). The following presents a summary of the relevant material. Particular reference is made to the University of Sydney Grounds Conservation Plan (Pearson et al. 2002).

3.1 Topography

The grounds of the University are located on the northern slope of the broad ridge forming the watershed between Sydney Harbour (Port Jackson) and Botany Bay. An arm of the ridge system juts north from the watershed to run down between Blackwattle and Rozelle bays. The ridgeline is between 30–40 metres above sea level at its highest point in this area. The study area includes the high land of the north-eastern extent of the University grounds. This was earlier known as Petersham Hill, and overlooked the lower reaches of Blackwattle Creek.

Before 1788, the landscape around Petersham Hill and its adjoining areas would have consisted of a series of low ridge lines associated with relatively open valley drainages flowing into the sandstone topography of Port Jackson (City Plan Heritage 2004). The headwaters of a number of creeks running into Port Jackson are on the watershed ridge between Botany Bay and Port Jackson. Most are today landscaped or modified to be less recognisable as creek lines. Blackwattle Creek originated in a swampy area that is today the site of Darlington School – it ran north-east across the area that is now the Engineering Faculty, in the direction of Victoria Park and Chippendale – an area of freshwater swamps – before running into the intertidal mudflats of Blackwattle Bay (now under Wentworth Park). The upper reaches of the watercourses running into Johnstons Creek were on what are now the western side of the University grounds. One of these was Orphan School Creek, which commenced at the site of what is today No. 1 and No. 2 Oval. In summary, although the grounds are on a ridgetop, freshwater swamps and sources were located either in or close to most areas of the grounds.

In addition, Darling Harbour and Blackwater and Rozelle bays lie just over 1 kilometre away. Botany Bay is around 7 kilometres away, together with Cooks River and Sheas Creek (now known as Alexandra Canal). The University grounds are hence relatively close to available estuarine resources, such as shellfish and fish (Pearson et al. 2002).
3.2 Geology

The ridge lines of the study area form part of a system of gently undulating rises capped with shales of the Wianamatta group. The Wianamatta Shales cover a large portion of Sydney’s inner western and southern suburbs (Benson & Howell 1995: 8). The Wianamatta shales are underlain by Hawkesbury Sandstone. The sandstone has been exposed in several areas, including the Port Jackson foreshores in the north, areas of the eastern coastline, and along a stretch of the Cooks River in the south-west. The University grounds are located completely on the Wianamatta shales, but with no outcropping sandstone. Buried silcrete bodies have been found less than 1 kilometre south-west of the University grounds, at Newtown; these are part of a Tertiary period paleochannel that is as yet unmapped but could possibly extend beneath the University grounds (Pearson et al. 2000: A8).

The Sydney region’s geological formations would have provided a range of resources for the local inhabitants. These broadly included sandstone, as well as rock types used to make stone tools, such as silcrete, chert, tuff, quartz, quartzite and basalt. The availability of such resources to various groups would have depended on the distribution of the geological formations, and the relationship between groups in terms of rights of access and use of certain lands (Attenbrow 2002: 43). The lack of outcropping sandstone in the study area, however, does indicate that the sorts of sites that usually accompanying this feature — such as overhangs and rockshelters, with accompanying engravings and rock paintings, and grinding grooves from ground-edged implements (hatchet heads, for example) — would not have been present.

3.3 Flora

The only historical reference to the nature and composition of the vegetation of the university grounds pre-European clearance comes from William Bradley, a Lieutenant on HMS Sirius, whose reminiscences of the period 1786–1792 note that the ‘Brown Bark’d Gum Tree ... grows in the Kangaroo Ground’ (Bradley 1969). Benson & Howell (1995) provide a review of early descriptions of the area around nearby Annandale and of the Turpentine-Ironbark Forest that characterised the inner western suburbs. Turpentine-Ironbark Forest grew on the lower rainfall Wianamatta Shale clay soils of the inner western area, replacing the Blue Gum High Forest on its northern edge. The trees would have formed an open-forest structure, with trees 20 to 30 metres high. The vegetation included Turpentine trees, *Syncarpia gloulifera*; White Stringybark, *Eucalyptus resinifera*, Grey Ironbark, *Eucalyptus paniculate*, Red Mahogany, *Eucalyptus resinifera*, and Blackbutt, *Eucalyptus pilularis*. Understory species that grew commonly were *Acacia falcata*, *Acacia parramattensis*, *Dodonaea triquetera*, *Pittosporum undulatum* and *Polyscias sambucifolia* (Benson & Howell 1995: 17–18, 61).

The nature of the swampy headwaters of Blackwater Creek suggest an original vegetation structure similar to that found at the headwaters of the Tank Stream: that is, it is likely to have included Scribbly Gums, *Eucalyptus racemosa*, ti-tree, *Leptospermum flavescens* (now *polygalifolium*), banksia, *Banksia spinulosa* and *Banksia oblongifolia*, bottlebrush, *Callistemon citrinus*, and Paperbarks, *Melaleuca decora* and *Melaleuca styphelioides* (Benson & Howell 1995: 42; Pearson et al. 2002: A9).
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Attenbrow (2002: 40-41) notes the identification of over 250 plants in the Sydney region that have edible berries, fruits, leaves, roots (or tubers or rhizomes), or nectars – or provide wood, timber, fibre or resin used to make tools and weapons. However, whether all the plants so identified were used or eaten by the local inhabitants remains unknown. Some of these may indeed have been utilised by the inhabitants of the study area (see Pearson et al. 2002: Table A1), but there is insufficient information to reconstruct local dietary habits or subsistence regimes.

With respect to original plant resources within the University of Sydney area, Pearson et al. (2002: A10) conclude:

There were thus both food and raw material plant resources that would have attracted people to the Turpentine-Ironbark Forests, though none of these plants are restricted in distribution to only this association. These forests do not appear to have been resource-rich (at least in terms of diversity of species, and possibly abundance) as the extensive heath and swamp communities of the sand-hills between Bondi and Botany Bay ... or the fringing communities that grew along the small sandstone gullies, such as the Tank Stream ... This perception, however, may be due to the lesser knowledge available about the plant communities of the Turpentine-Ironbark forests.

3.4 Fauna

The fauna of the pre-1788 Sydney region included bird and land animals that could be found throughout the area: kangaroos, wallabies, possums, gliders, wombats, bandicoots, quolls, fruit bats, echidnas, native mice and rats, water rats, emus, ducks, parrots and parakeets, tortoises, blue-tongue lizards, snakes and goannas (Attenbrow 2002: 42; Pearson et al. 2002: A11). Although these are likely to have been found in the study area, there are no existing accounts of the animal communities that inhabited the Turpentine-Ironbark forests or swamps and creeks found on the local Wianamatta shale. The University grounds are part of an area that used to be known as the 'Kangaroo ground' so at least we can be confident that these animals were present in the area. It is possible that the main focus for obtaining animal food was the adjacent estuary and its shorelines, replete with fish and shellfish (Pearson et al. 2002: A11).

3.5 Post-Contact Land-use History

This section summarises the information available, particularly relying on that detailed in the University of Sydney Grounds Conservation Plan (Pearson et al. 2002, Appendix A). It should be read in conjunction with Casey & Lowe Pty Ltd (2004).

Following the establishment of the first settlement in 1788, 'the Kangaroo Ground' – the area of land that stretched southwards from Parramatta Road towards Botany Bay and the Cook River – was seen to be one of the few areas suitable for cultivation between Botany and Broken bays (Collins 1798 and Tench 1793, cited in Pearson et al. 2002: A6). The decision by Governor Phillip to set aside the land surrounding Petersham Hill
Figure 3.1: Development of University Grounds, 1790s-1880, including original reserve and land grants, through to the construction of Darlington School. The schematic includes the location of Blackwattle Creek (Source: Pearson et al. 2002, Vol. 1)
for church, school and Crown purposes was formalised in August 1798 by the division of 1000 acres into relevant reserves. The first campus of the University was sited within the 400-acre Crown Reserve; the later Darlington campus is located within the original 200-acre School Reserve.

In 1792 Lt-Governor Francis Grose was granted a 14-year lease for 30 acres contained within the Crown Reserve: this was to become Grose Farm. Two additional leases were granted adjoining Grose Farm in the following 4 years (to Capt. Foveaux and Quartermaster Laycock. See Figure 3.1). Although the area around Petersham Hill was primarily subject to farming activity, part was also cleared to form a timber yard. A grant of 500 acres in the district of Petersham was given to the Female Orphan Institution that had been established in 1801. The Institution itself was located elsewhere (on the corner of George and Bridge streets) and the land was to be used for the Institution’s benefit. The grant encompassed the land to the south of Parramatta Road that had been formerly reserved for school and Crown purposes, and included Grose Farm. It is possible that the buildings associated with the later farming venture were extensions of the Grose Farm structures (Pearson et al. 2002: A15-A16).

Up until the time this land reverted to the Crown in 1823, it was subject to various improvements associated with agricultural pursuits, including additional farm buildings, convict lodgings, a series of tanks and a reservoir. Post-1823 the greater part of the area was fenced and used for pastoral purposes. During this period, the land to the south-east of the then Newtown Road (part of which is now Darlington Road) was granted to a number of individuals (Figure 3.1). William Hutchison used his land (‘Golden Grove’) to pasture cows for the Sydney Meat market; Thomas Shepherd, to Hutchison’s north, was a botanist and established the Darling Nursery on his land. It is believed that the name ‘Darlington’ came from this very successful nursery. Darlington as it grew was bounded to the south by the line of the Black Wattle Swamp Creek, rising out of the swampy grounds of what was to become the Darlington Public School at the corner of Golden Grove and Abercrombie streets (Casey & Lowe Assocs 1997: 9).

Between 1855 and 1856 the University of Sydney was granted approximately 126 acres to the north of City Road, encompassing the area of the former Grose Farm. The 1850s was a period of increasing residential development in the Darlington area, expanding dramatically in the 1880s following the establishment of the Eveleigh workshop. As well as residential, industrial and commercial development, this period also saw the construction of the Deaf, Dumb and Blind Institute Building (1872) and the Darlington Public School (1878), both of which were partly incorporated into the University campus when it expanded into the Darlington area, following the rezoning for University purposes in the late 1950s (Pearson et al. 2002: A19–21).

3.6 Existing Disturbance

It is obvious that during the period from 1854 to the present the University grounds – including the study area – have been subject to extensive clearing, construction, landscaping, terracing and planting activities. The result is that most of the ground surface has been either extensively disturbed, or buried under extensive landfill, and little if any original flora is likely to have been retained.
Aboriginal sites within the study area will have been affected by this land disturbance. For the purposes of understanding the likelihood of Aboriginal artefacts remaining within a landscape, three categories of land disturbance are usually identified. These are 'heavily disturbed', 'moderately disturbed' and 'lightly disturbed'.

Heavily disturbed areas are constructed land forms, buildings and constructed surfaces. 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 are natural landforms but with disturbed soils. 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 are natural landforms, which appear from the 2002 air photo to be original land surfaces. These areas include extensive stands of woodland adjacent to the study area. Artefacts may be present in fairly undisturbed physical condition, aside from natural bioturbation of soil. This zone includes areas that may have been cleared of timber, and areas that may have been ploughed or ripped only once.

None of the study area occurs as 'lightly disturbed' land. Ridges, hillslopes and creek flats have all been heavily disturbed. With the possible exception of the small area surrounding the Darlington School, which can be considered to be 'moderately disturbed', the landscape of the study area falls in the 'highly disturbed' category. While there is a limited probability that Aboriginal artefact material will remain in situ anywhere in the study area, previous archaeological investigations in the area mitigate against a conclusion that no artefact material will exist.

3.7 Development Impacts

As work plans for the development project are yet to be finalised it is not possible to address specific impacts. However it is broadly understood that the range of activities incorporated with the Public Domain Project will complement other projects within the Campus 2010 + Building for the Future Program (FMOP 2003) and will primarily involve:

- building demolition
- building construction (on either new sites or on the sites of previously demolished structures)
- landscaping.
4 ARCHAELOGICAL CONTEXT

4.1 Aboriginal Historical Background

There is only limited information available on the inhabitants of the study area, and this summary relies on the information provided in previous overviews (notably Attenbrow 2002; Pearson et al. 2002, Appendix A).

Most recent discussions of Aboriginal life in the Sydney region at the time of contact rely on historical descriptions written by either those who sailed with Captain James Cook in 1770 on the Endeavour, or those early colonists and naval officers who accompanied Captain Arthur Phillip and the First Fleet in 1788 (for example, David Collins, Watkin Tench, William Dawes, John White, GB Worgan, Ralph Clarke, William Bradley and Daniel Southwell). Attenbrow (2002: 22) notes that, while many of the earlier writers used the term 'tribes' to name groups, these are not 'tribes' in the modern-day anthropological understanding of the word. More commonly, the groups referred to in past references were more properly local descent groups, otherwise referred to as local clans or territorial clans.

Pearson et al. (2002: A6) suggest that some confusion remains as to whether the clan lands associated with what are now the grounds of the University of Sydney are the lands of the Cadigal or the Wanngal. This arises from conflicting information contained within two historical quotes:

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 Parramaata, 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])

These quotes set up a different common boundary: on the basis of King's description the University grounds lie within Cadi. Collins' borders imply that the grounds lie at the eastern end of Wanne (Pearson et al. 2002: A6-7).

The original inhabitants of the Sydney region relied on food gained through fishing and hunting, and gathering 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 (Attenbrow 2002: 37; see also Benson & Howell 1995; Kohen 1986). A variety of tools were used for obtaining food and raw materials, carrying small objects, and equipment-making. Weapons were required for either offensive or defensive purposes (Pearson et al. 2002: A7).

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 (2001: 3) suggests that the area occupied by the Cadigal (or Wanngal?), which included the study area, was reduced in number from approximately fifty individuals in 1788 to only three by 1790. This arose from the commonly felt impacts of dispossession, decimation through introduced
disease, loss of traditional lands and resources, inter-tribal conflict for reduced resources, starvation, and the breakdown of traditional cultural practices (City Plan Heritage 2004: 33).

4.2 Regional Context

The Aboriginal archaeology of the Sydney CBD and inner suburbs remains less well understood than other parts of the region, such as the Cumberland Plain of western Sydney (e.g. Kohen 1986, McDonald & Rich 1993; Rich & McDonald 1995; Smith 1989, Jo McDonald CHM 2001, in prep.) and areas of the Hawkesbury sandstone around the Sydney Basin (e.g. Attenbrow 1987; McDonald 1994). As this part of Sydney was subject to the earliest occupation by European settlers it has undergone intensive and often multi-layered development. Any relatively intact Aboriginal open site within this area will consequently be of significance due its rarity (Jo McDonald CHM 1998).

There have been only a limited number of archaeological investigations that can contribute to predictions relating to Aboriginal sites and their location in the landscape. Previous work has provided a relatively good overview of occupation patterns for the general area (e.g. Attenbrow 1987, 1992, 2003; McDonald 1992, 1994) and – as described above – there is a pool of ethnohistoric literature that gives an insight into the lives of Aboriginal people in the harbour region.

One of the more intensive studies relevant to the region has been the Port Jackson Archaeological Project, which recorded 335 middens and 34 deposits (Attenbrow 2003). These sites are made up of 126 open middens, 203 middens in rockshelters, 6 open middens associated with small rockshelters, 27 deposits in rockshelters, and 7 open deposits (open campsites or open scatters of artefacts). Most of these sites have been found on Hawkesbury sandstone and its overlaying Quaternary sediments. Only a very small number have located actually on the Wianamatta shales that characterise the grounds of the University (Pearson et al. 2002: 30).

Most of surviving archaeological sites in the broader area are rockshelters and hence these have attracted the greater degree of investigation (e.g. David & Ethridge 1889; Bowdler 1971; Attenbrow 1992). Open site contexts are scarce in comparison. The primary evidence for Aboriginal occupation of open sites comes from a number of earlier historical archaeological excavations and several more recent projects (discussed below). The earlier investigations include First Government House, Prince of Wales destitute children’s cemetery, the Sydney Conservatorium of Music, Angel Place at

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*Open camp site usually refers to a surface scatter of stone (and sometimes other artefacts such as bone and shell, and features, such as hearths and stone knapping floors). Types of raw materials often reflect proximity to sources. Knapping floors can reveal details about technology. An Isolated artefact refers to a single Aboriginal artefact made from stone, bone, shell or other material. Whether or not an artefact is culturally isolated from others depends on archaeological convention and context.
Wynyard, Paddy's Market, and from terrace houses along the route of the Eastern Distributor. Most of these did not encounter intact and/or extensive open occupation sites. Very few resulted in detailed descriptions of the Aboriginal stone tool assemblages (Jo McDonald CHM 1998: 18), although the work done at the Conservatorium of Music (Jo McDonald CHM 1998) did pursue this in more depth.

4.3 Local Context

A search of the Department of Environment and Conservation (DEC) Aboriginal Site Register (AHIMS, 14/04/04) confirmed that currently no Aboriginal sites are recorded within the study area (or within the grounds of the University). However, the close proximity of the University grounds to the limited number of sites that have been located and recorded in the Sydney LGA provides a valuable context. Two of the sites located earlier within the Sydney city area are that of Moore’s Wharf at Millers Point (Lampert 1984) and the site beneath the ANA Hotel in Cumberland Street at the Rocks (Attenbrow 1992). Both gave evidence of shell middens in relict topsoils, located during excavations for historical material, but no stone artefactual material was discovered (Jo McDonald CHM 1998: 17). Since then, several more sites have been recorded within the CBD. These include the Angel Place site (opposite Wynyard Station), the Conservatorium of Music, the Quadrant site (corner of Broadway and Mountain streets), and the KENS site (bounded by Kent, Erskine, Sussex and Napoleon streets). Two additional sites, but with very limited information, are registered with DEC: a rock engraving site at Dawes Point (The Rocks) and a burial/historic place at First Government House. Summary information on the main sites is detailed below, with reference to collated material available in a number of recent studies (e.g. City Plan Heritage 2004; Dominic Steele Consulting Archaeology 2001, 2002; Godden Mackay Heritage Consultants 1997; Jo McDonald CHM 1998; Steele & Czastka in prep.).

Only one Aboriginal site has been recorded within the area of the original Blackwater Creek Catchment, the Quadrant at Broadway, although a single find in Victoria Park was recorded in the 1890s. This was a stone axe (or hatchet) head that has subsequently been lost. The only additional stone artefacts found that are associated with the Sydney metropolitan region Wianamatta shales and the original cover of Turpentine-Ironbark Forest are one ground-head hatchet head from a cutting behind St Mary’s Cathedral (Australian Museum Reg. No. E.5161), and several silcrete artefacts reported as seen in the Camperdown cemetery (Pearson et al. 2002: 30).

4.3.1 Moore’s Wharf, Miller’s Point

Lampert and Truscott (1984) report on investigations in the 1980s at Moore’s Wharf, Millers Point that uncovered Aboriginal midden material. The deposit was located beneath the rubble floor of the Bond Store, truncated on both sides by wall trenches of the building, and consisted of 10 cm of shell midden within a light brown A-Horizon soil that covered approximately 30 cm of stone-artefact-rich grey sand. It lay within a natural depression in the sandstone bedrock.

No bone was found, but the shell remains included oyster (*Saccostrea* and *Ostrea*), whelk (*Pyrazus ebininus*), cockle (*Anadara trapezia*), and mussel (*Trichomya*). Of the
approximately 400 stone artefacts recovered, raw materials included silcrete, quartz, quartzite and chert, and were represented by an assemblage of cores, used flakes and fabricators, with indications of use of unusually small pebbles and bi-polar flaking. The authors note that the artefacts are typical of the post-Bondaian or most recent phase of Aboriginal culture in the area, and that there is evidence for continuation of Aboriginal use of the site well into the historic period.

4.3.2 Lilyvale Cottage

The salvage excavation of a small midden of shell and fish bone, adjacent to Lilyvale Cottage on Cumberland Street in the rocks, has been reported in Attenbrow (1991). The site has been dated to around 340 years prior to the European settlement of Sydney Cove. The deposit included rock oyster (*Saccostrea cucullata*), hairy mussel (*Trichomya hirsuta*), snapper bones (*Pagrus auratus*) and bream bones (*Acanthopagrus australis*).

4.3.3 Angel Place

The Angel Place area of investigation is located next to Wynyard Station, contained within the block bounded by Ash Street, Pitt Street and Angel Place. Results of the salvage excavation are reported in Godden Mackay Heritage Consultants (1997). The Angel Place Site (NPWS #45-6-2581) provided limited evidence of prehistoric Aboriginal use of the Tank Stream Valley – most of the archaeological resource having been destroyed by development. An assemblage of 54 flaked stone artefacts was recovered from an area of around 10 square metres, which included flakes, cores and flake fragments from a variety of raw materials (including silicified tuff, indurated mudstone, silcrete and quartz).

4.3.4 Sydney Conservatorium of Music

Archaeological test excavations for Aboriginal deposits were carried out in 1998, with the results reported in Jo McDonald CHM (1998). A total of 16 artefacts were recovered from five excavated pits, and it is concluded that they were brought to the location as part of fill material, introduced at an indeterminate date (post-1800). Most of the artefacts were of silcrete, however, there were also examples of quartz, quartzite and indurated mudstone artefacts. The majority were flakes, but the assemblage included one core and one microlith backing flake.

4.3.5 The Quadrant Site, Broadway

Prior to the development of the Quadrant site, the Aboriginal Archaeological Assessment (Steele 2001) recorded the Aboriginal archaeological potential as follows:

It is considered that along the original banks and within the adjacent sediments of the Blackwattle Creek situated within the vicinity of the eastern boundary of the site there exists the greatest potential for evidence relating to Aboriginal occupation of the study area to be encountered. Potential archaeological deposits and features that may be resident within the boundaries of the study area include the following:

Evidence relating to the former creekline's original topography, vegetation regime and nature of subsequent changes to the watercourse that may be revealed through archaeological investigation.

Jo McDonald Cultural Heritage Management Pty Ltd

June 2004
Evidence for pre-Contact Aboriginal visitation and use of the study area occurring in the form of flaked stone artefacts and midden deposits.

Evidence for Contact-period Aboriginal occupation of the site. Such evidence would most likely be identified in the form of European artefacts that had subsequently been modified to suit Aboriginal use. Examples (which have been recorded from other Contact situations) would most likely include re-worked (flaked) bottle glass and ceramics. Although generally considered to be less secure as a means of reflecting potential evidence for Aboriginal-European contact, the co-association of European and Aboriginal artefacts within certain excavation contexts may also be indicative of contemporary Aboriginal-European site-use.

It was considered that there was only a limited likelihood for the survival of substantial in situ evidence of past Aboriginal occupation of the site, but it was concluded that works including the construction of underground car park facilities, the alteration of existing ground surfaces and the installation of new services would have a substantial impact upon any potentially surviving Aboriginal archaeological features or deposits.

The two stages of the subsequent Aboriginal archaeological investigations on the Quadrant site were (Steele & Czastka 2003; Steele & Czastka in prep.):

- **Stage One (Sept-Nov 2001)**: excavation of the area comprising the land fringing Blackwattle Lane to the east of the site (south of Smail Lane) and an area contained within the central southeast of the site between Owen Street and Owen Lane.

- **Stage Two (Jan-Mar 2002)**: excavation of areas adjacent to Mountain Street and to the rear of the Phoenician Club.

The Stage One program involved the combination of both machine-assisted and controlled manual excavation. Following the removal of the overlying fill (up to 3 metres deep), the scope of subsequent controlled manual excavation assessed as necessary was found to be relatively limited as a consequence of accumulated impacts (including contamination) that had occurred during the European period of land use along this portion of Blackwattle Creek.

No Aboriginal sites, isolated artefacts or other evidence for past Aboriginal visitation and use of the site were identified during the Stage One investigations. It was concluded that any finds that may have occurred within the remaining untested areas of the site (towards Mountain Street and to the rear of the Phoenician Club in the Stage Two area) would most likely be low-density flaked stone items with provenance to disturbed recovery contexts.

The excavation of a series of European pits and post holes at the rear of the Phoenician Club in February 2002 identified a small and isolated remnant patch of sandy loam covering an area of approximately 5m x 10m, which revealed a small number of Aboriginal flaked stone artefacts. The site was registered (NPWS Site #45-6-2629) and excavated in the Stage 2 project.

Only 3 of 16 excavated pits revealed Aboriginal artefacts (a total of 14), and all were located within one isolated patch of remnant topsoil situated at the most elevated part of the site adjacent to Mountain Street. Raw materials were confined to quartz (7 items).
silcrete (6 items) and a single flake of unidentified stone. Of these, only quartz is locally sourced to the Hawkesbury Sandstone. Although one small-scale source of silcrete is known from Newtown, more extensive sources of archaeologically documented silcrete are found in areas that a greater distance away from the study site in the Cumberland Plain. Consequently, the source of the recovered silcrete artefacts remains unclear.

The low distribution of Aboriginal artefacts encountered at the site is probably a function of two factors:

- the area reflected infrequent Aboriginal visitation and use in the past and hence low density artefact accumulation
- the effects of post-1788 processes operated to remove the majority of previously deposited cultural material.

It is concluded that the recovered collection appears to represent a background distribution of isolated finds, salvaged from a disturbed (historical) landscape, possibly reflecting sporadic past Aboriginal visitation and use.

The final report (Steele & Czastka 2003) suggests that the absence of more substantial Aboriginal archaeological remains identified on the Quadrant site excavations may be partly due to the poorly-drained nature of the Blackwattle Creek landscape. Although Aboriginal people were likely to have exploited the available food and raw material resources of the creekline/swamp environments within and immediately adjacent to the study area, they are unlikely to have established long-term occupation sites on the lower-lying and poorly drained land. The report further concludes:

As evidenced by the discovery of the Aboriginal artefacts to the rear of the Phoenician Club, the portion of the local landscape likely to have contained more substantial evidence for past Aboriginal visitation and use of the locality would have been found along the higher site elevations overlooking Blackwattle Creek that were offered by the residual soil landscape of the Hawkesbury Sandstone adjacent to today's Mountain Street. As previously outlined, these areas however also coincided with intense historical settlement and construction activities which served to largely remove the A-horizon soil profiles originally resident in this locality, and these processes appear to have served therefore to destroy any further archaeological deposits that may have been present.

4.3.6 The KENS Site

An Aboriginal archaeological site has recently been excavated within the Sydney City block that is defined by Kent, Erskine, Napoleon and Sussex Streets – referred to as the 'KENS' site (Steele & Czastka in prep.). The material had been preserved beneath sheetwash deposits located under a terrace basement and backyard (City Plan Heritage 2004: 39). The excavation recovered upwards of 1000 artefacts, distributed in various densities across the site overlooking the original shoreline of Cockle Bay. Quartz and silcrete dominate, but a range of other raw materials are present. Although the full range of the reduction sequence appears to be present (with a number of formal tool types), the majority of items are small (cf. Angel Place) suggesting a culture of paucity as opposed to plenty: that is, raw materials may have been hard to get and/or were coming from some distance (Dominic Steele pers. comm.).
The topsoil was defined (and variously disturbed) by surrounding 19th and early 20th-century archaeological features including terrace footings, wells, cess pits and service lines.

The preliminary findings of work undertaken at the site indicate the following:

- Raw materials indicate the reduction of quartz and silcrete.
- At least two knapping events can be identified among a low to medium density lithic scatter.
- A colluvial component has been identified in the soils creating lenses that indicate it may be possible to separate the introduced material from the *in situ* artefacts.
- Two Geometric Microliths and a Bondi Point indicate a Bondaiian date.
- The use of both silcrete and quartz, in association with Microliths, suggests a mid to Late Bondaiian time period.

### 4.3.7 William Street

A recent program of Aboriginal and historical archaeological excavation has been undertaken by Neville Baker at 60-70 William Street, in advance of redevelopment of the block (Steele & Czastka in prep.). The investigation revealed a large quantity of Aboriginal flaked stone artefacts. Analysis of these finds is currently in progress and the following is a preliminary summary only:

- The bulk of the excavation contexts that produced the Aboriginal finds were located within approximately 5–10 metres of the (now channelled) alignment of Woolloomooloo Creek that crosses the site.
- The main soil profiles consist of indurated colluvial sand that overlay Waterloo Rock.
- Salvage excavation and wet screening of approximately 60 square metres of deposit (to varying depths) revealed upwards of 1000 flaked stone artefacts comprising items of quartz, silcrete, tuff, indurated mudstone and petrified wood.
- The principal component of the assemblages consists of a range of small quartz fragments (including bipolar knapping waste) although a smaller number of formal tool types such as backed blades are also present.

### 4.3.8 Smail and Mountain Street Site

A combined historical and Aboriginal archaeological excavation on the corner of Smail and Mountain Streets was recently completed under the direction of Mary Dallas. The report for this project is currently being finalised. To date, a range of 19th-century brick and stone terrace footings have been exposed, together with a number of additional features that appear to be related to adjacent slaughterhouses that formerly fringed Blackwattle Creek in this general locality.
In addition, a small number of Aboriginal flaked stone artefacts (no more than 3 or 4) have been recovered from re-deposited historical archaeological excavation contexts that include footing trench fills and introduced fill deposits.

Archaeological and geomorphological investigations that were complete up to the time of writing indicate that the site retains little or no potential to contain significant intact or *in situ* Aboriginal archaeological deposits beyond the finds previously identified. The following preliminary observations and conclusions have been prepared for the site (Steele & Czastka in prep.):

- Subsurface profiles consist of considerable depths of heavy black sandy clay loams that appear in the main to have been frequently inundated and/or largely waterlogged in the past as has previously been observed at the Quadrant site. These deposits in turn have been extensively disturbed by ongoing European occupation and development of the place as a result of creek modification, housing construction and deposition of fills associated with reclamation.

- The Aboriginal finds recovered to date more than certainly derive from either past Aboriginal casual loss/discard, have been transported onto the site as a result of fluvial action, or have provenance to the place as a component of reclamation fill dumped onto the site during the late nineteenth century.

4.4 Predictions for Sites in a Local Context

On the basis of our current archaeological knowledge it has been suggested that the Turpentine-Ironbark forests of the Wianamatta shales were inhabited and utilised infrequently. The environmental evidence, however, does indicate that the forests contained resources that the original inhabitants could have accessed (Pearson et al. 2002: 31). The limited findings of Aboriginal archaeological material to date is no doubt a factor of the extensive destruction and removal of sites during the early land clearance and development of the study area, followed by the considerable disturbance associated with the establishment and expansion of the University.

The University of Sydney Grounds Conservation Plan (Pearson et al. 2002) has identified four patches of open land within the grounds that were the most likely to have potential for Aboriginal deposits:

- St John's College sports ground
- The areas around University Ovals No. 1 and 2
- The areas adjacent to the boundary fence between the University grounds and Victoria Park
- The open areas around Old Darlington School.

The latter two are contained within the current study area. Both are locations that were near to original water sources, notably Blackwattle Creek, and hence are considered to have been focal areas for Aboriginal activities and campsites. The results of landscaping
have today removed any remaining evidence of these water sources, and in the case of the areas lying between the grounds and Victoria Park, have been subject to either considerable landscaping or infrastructure works that have caused extensive ground disturbance.

However, the land-use history of the small area of the Old Darlington School indicates a greater potential for undisturbed sub-surface Aboriginal archaeological deposits (see Plate 1). This has already been indicated in Pearson et al. (2002: 29), who note that 'there is a possibility that undisturbed buried stone artefacts or archaeological deposits occur in some parts, for example within the surviving foundations of demolished buildings' (emphasis in original). As undisturbed foundations of earlier buildings remain within the near vicinity of the school, it is possible that undisturbed subsurface deposits may be present. This is consistent with the evidence of archaeological deposits and finds of stone artefacts in similar contexts, for example see the discussion of Angel Place, Moore's Wharf, the Quadrant and the KENS site above.

Although there are possible impacts from earlier land use, such as Shepherd's Darling Nursery, the subsequent gazetting of the small area of the school grounds protected it from extensive development. Photographic evidence from 1971 (see Plate 2) indicate that the area adjacent the school building included a covered playground, which may indicate further potential for intact soil profiles and deposits underneath the playground area.

On the basis of local and regional studies, the following predictions can be made about site types and their likely locations in the study area:

1. Open camp sites (artefact scatters) and isolated artefacts are the most likely site types to be encountered.

2. Sites are most likely to occur in valleys and on well-drained, lower slopes, saddles and ridges adjacent to sources of freshwater.

3. Most sites are located within 100 m of (at least semi-permanent) water.
5 FIELDWORK & SURVEY RESULTS

Jane Harrington (Project Manager / Archaeologist, Jo McDonald CHM), Brent Levy (Archaeologist, Jo McDonald CHM), Tony Lowe (Casey & Lowe Pty Ltd), and Alien Madden (Cultural & Educational Officer, MLALC) met on site within the university grounds on Thursday 6 May 2004. Alien Madden, who has a long-established familiarity with the university environs, indicated that the likelihood of discovering any Aboriginal artefacts on the surface was too minimal to warrant a survey on foot. He supported that the intended review of the study area be undertaken without his presence.

The nature of the development of the study area is such that the type of foot survey that would be undertaken in a less developed area was not relevant. The intent in this instance was to review the general topography and landscape elements. Jane Harrington and Brent Levy, accompanied by Tony Lowe for the inspection of relevant areas of the Camperdown Campus, walked the study area, paying particular attention to those areas where disturbance was least likely to occur, notably the grounds immediately adjacent to the Old Darlington School building, particularly the land to the west of the building. As expected, there was no evidence of Aboriginal artefact material visible on the surface.

6 LEGISLATIVE CONTEXT

The management of Aboriginal heritage within the state of NSW is guided by the following state legislation:

- National Parks and Wildlife Act 1974 - provides statutory protection for all Aboriginal objects and places in NSW.
- Environmental Planning and Assessment Act 1979 - establishes the requirement for formal assessment of Aboriginal heritage values in land-use planning and development approval.
- Heritage Act 1977 - provides statutory protection for items listed on the State Heritage Register and allows for Interim Heritage Orders to protect items pending assessment of their heritage values.

In addition, there are two pieces of Commonwealth legislation that may be relevant in particular circumstances:

- Native Title Act 1993 - provides the framework for recognising native title rights that may exist on certain types of land.
- Aboriginal and Torres Strait Islander Heritage Protection Act 1984 - may be relevant in the event of an item of Aboriginal heritage significance to an Aboriginal community coming under threat and the state-based processes are unable to protect it.
Plate 1: View looking south-east to Old Darlington School, showing clear area to the west of the building that was previously covered by the school playground (6/05/04)

Plate 2: 1971 photo of Old Darlington School, showing covered area of playground in bottom right corner (Source: Sydney University Archives)
7 DISCUSSION

An important aspect of heritage management relates to the significance of the identified sites or items. Emphasis is usually placed on cultural significance to Aboriginal people (otherwise referred to as 'social value') and known (or potential) scientific importance to archaeologists. Heritage items may also have educational, historical or aesthetic values (NSW NPWS 2004: 4–5). All of these aspects are commonly interrelated, and the Australia ICOMOS Burra Charter reminds us that all values of a place and phases of its development should be considered when making heritage management decisions.

With respect to Aboriginal heritage, the Guidelines for Assessment (NSW NPWS 2004: 4) comment as follows:

Aboriginal heritage is dynamic. It includes tangible and intangible expressions of culture that link generations of Aboriginal people over time. For Aboriginal people, relationships with country, people, beliefs, knowledge, law, language, symbols, ways of living, sea, land and objects all arise from their spiritual and cultural practices and associations.

Aboriginal heritage includes landscapes and places that are important to Aboriginal people as part of their customary law, developing traditions, history and current practices. Aboriginal heritage landscapes, areas and places have associated heritage values which include spirituality, law, knowledge, practices, traditional resources or other beliefs and attachments.

Also of importance when considering heritage management outcomes is the extent of proposed development impact and the existing condition of the heritage resource. The current development proposal will result in a number of impacts across the study area, the extent of which is yet to be determined. However, it will range from small scale landscaping works to the demolition of established buildings, in contexts where the original surface areas have already been disturbed.

7.1 Aboriginal Significance

Aboriginal significance may relate to traditional, historic or more recent and contemporary importance. The Metropolitan Local Aboriginal Land Council is the appropriate body to make an assessment of Aboriginal significance in the present survey. The MLALC has provided an independent statement on cultural values within the study area (Appendix 2).

We note that the point has been made by Mr Allen Madden that while the MLALC finds no issue with development works proceeding – acknowledging the destructive results of previous impacts – they have a particular interest in any sub-surface Aboriginal artefact material that may be discovered in future development works. This is an important consideration in the context of their ongoing concern for and interest in the land included in the study area.
7.2 Archaeological Significance

The two important aspects of archaeological significance are research potential and representativeness. Research potential refers to whether important questions about the past can be answered. Representativeness refers to how common or rare a site or type of site is. Research potential of a site can be assessed by reference to the physical condition of the site, the relationship of the site to other cultural features, the potential to provide a chronology and the potential of the site to provide large samples of evidence which may have statistical viability.

As indicated above, at this time it is possible to give only an assessment of potential archaeological significance across the study area. This is because the nature and content of subsurface archaeology and its precise physical condition are unknown. Based on the existing land-use history and on the results of archaeological investigations and discoveries in the local context, certain contexts within the study area can be considered to have greater potential sensitivity than others. However, there are no areas assessed as having high potential for intact archaeological deposit. While none of the areas included in this assessment are hence indicated as worthy of conservation, it is proposed that a number of impacted areas be salvage investigated prior to impact so that we can have a better understanding of the Indigenous cultural heritage of this area. These are the small number of areas of potential sensitivity that are assessed as having low-moderate archaeological potential:

- Generally the areas within foundations and footings of buildings that will be subject to demolition
- Specifically the small area of land adjacent to (west of) the Old Darlington School building.

It is notable that no sub-surface investigations have previously been conducted within the university grounds, and there is only limited archaeological information available for the area more generally. Hence, the potential scientific significance of any in situ sub-surface Aboriginal archaeological discovery is high.

It is also relevant to note that there is a significant educational impetus associated with approaches to the Aboriginal heritage of the university grounds. Not only is the university a centre for learning, but it more specifically offers courses in Australian Aboriginal archaeology. This can be seen to impose a duty of care and best practice approach to the investigation and management of Aboriginal heritage within its own grounds.

To mitigate against the impact on cultural heritage values within the study area, it is proposed that a sub-surface excavation program be carried out to investigate the nature of the archaeological resource. This should be done initially under a Section 87 Research Permit. The aim is to ensure that a proper record of any archaeological discovery is obtained, and a sample of their assemblage(s) retained. The testing program would consist of two approaches:
1. Following the demolition of any building, the area should be inspected by an archaeologist. A series of hand excavated pits should be dug, possibly in conjunction with machine trenches and the material sieved to establish whether or not Aboriginal artefact material is present. If these processes reveal the presence of artefact material, a more intensive salvage program of hand-excavated test pits should be initiated.

2. Any development or landscaping proposal that may impact the land adjacent to the Old Darlington School building that previously lay underneath the playground should be preceded by a sampling program of hand-excavated test pits.

If these processes reveal the presence of artefact material, a more intensive salvage program of hand-excavated test pits should be initiated. Selection of areas for subsurface investigation should be made in consultation with the Metropolitan LALC and in accordance with DEC requirements. This will then require the lodgement of a Section 90 Consent Application to allow the destruction of the remainder of the site. If no artefact material is found, a Section 90 Consent will not be required. However, the MLALC may wish to monitor any further earth-removal works.
8 RECOMMENDATIONS

The following recommendations are made regarding the study area. These are made on the basis of the:

1. results of the field survey done within the study area
2. review of archaeological investigations in the local context
3. interests of the Metropolitan Local Aboriginal Land Council
4. likely impacts of the proposed development
5. requirements under existing legislation.

It is recommended that:

1. There are no identified surface Aboriginal objects/or landscapes within the study area assessed to be of high archaeological significance or potential. There are thus no design constraints on the development proposal.

2. The proposed development will impact a number of identified archaeological areas that although assessed as having low-moderate potential to contain intact archaeological deposit, have the likelihood of being of high archaeological significance.

3. With respect the construction of the two new buildings: the law building and USYD Central, a program of archaeological testing should be undertaken at the time of removing the existing structures on these sites. The client should seek a section 87 Research Permit to undertake this work. Following the demolition of the building, the area should be inspected by an archaeologist. A series of hand excavated pits should be dug in the below-floor deposits, possibly in conjunction with machine trenches, and the material sieved to establish whether or not Aboriginal artefact material is present.

4. If the new law building is to extend past the footprint of the existing structures, it would be expedient to undertake a preliminary program of testing within the areas of the surrounding land that is likely to be disturbed. This should follow the guidelines proposed in Recommendation 3 above. However, the results of this testing would not negate the need to test the subfloor area exposed at the time of the building’s demolition.

5. The above recommendations 3 and 4 should be considered to have broader application to future works within the university that may involve building demolition.

6. Any development or landscaping proposal that may impact the currently clear land of Maze Green that is adjacent to (west of) the Old Darlington School building should be preceded by a sampling program of hand-excavated test pits. This should be confined to the area that was previously covered by the school.
playground. This investigation should seek to interpret the archaeological evidence across the study area initially through the excavation of test pits across a grid. Selection of areas for sub-surface investigation should be made in consultation with the Metropolitan LALC and in accordance with DEC requirements.

7. Applications for Section 87 Permits or Section 90 Consents can take up to eight weeks to be processed by DEC. Hence these should be lodged as soon as practicable prior to known works. Whether or not multiple works can be covered under one application will depend on proposed timing of the works and this should be assessed at the time of application.

8. One copy of this report should be sent to:

   The Chair
   Metropolitan LALC
   PO Box 1103
   STRAWBERRY HILLS NSW 2012

9. Three copies of this report should be sent to:

   Dr Kathryn Przywolnik
   Archaeologist
   Central Aboriginal Heritage Unit
   Sydney Zone, DEC
   PO Box 1967
   HURSTVILLE NSW 2220
REFERENCES


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APPENDIX I

Project Brief
Consultant's Scope of Services Brief

For

Archaeological Assessment

and

Aboriginal Archaeological Assessment

for

The Public Domain and associated building works

comprising

Public Domain Eastern Avenue
Maze Green and Associated areas
New Faculty of Law Building
USYD Central Building
and associated areas

at

The University of Sydney

Capital Insight Pty Ltd

February 2004
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1.0 Introduction

On a recent project at the University of Sydney the issue of archaeological investigations has been imposed for the existence of both European and indigenous relics. The European archaeological matters relate to the possible presence of a past plant nursery that was associated with the site in 1820. The indigenous archaeological matters have arisen as a result of relics being found on the Quadrant site at Broadway and the KENS site in the city.

The imposition of these archaeological investigations was unexpected and is having an adverse effect on the program for that particular project. The University is engaged in the delivery of a number of major buildings as part of Campus 2010 + Building for the Future Program. It is imperative that archaeological issues do not delay the delivery of the remaining buildings in the Program. The management of the archaeological assessment and any associated investigations must be carried out in a timely and professional manner. This is the fundamental basis for this brief and the subsequent commission.

This is a brief for the preparation of both an Archaeological Assessment and an Aboriginal Archaeological Assessment for the works associated with the proposed Public Domain and new buildings for the University of Sydney. The aim of the Assessments is to provide guidelines for the proposed works that form part of the current “Campus 2010 and Building for the Future Program” (Campus 2010). The extent of the study area is described in Fig 1.

The University of Sydney is the client and is legislatively responsible for the conservation of places of recognised natural and cultural heritage value under its ownership, care and control. A high priority of The University of Sydney is to deliver standards of high quality in the planning, design and delivery of built projects within the University. Capital Insight Pty Ltd has been appointed by The University of Sydney as the Project Director for the delivery of the Campus 2010 program.
This archaeological assessment will be used for two purposes:

1. The assessment will form part of a Stage 1 Development Application to the City of Sydney Council. This particular application will only deal with master plan issues that are associated with other statutory authorities, such as, the NSW Roads and Traffic Authority, NSW Heritage Council, National Parks and Wildlife Service and the State Transit Authority.

2. The assessment will also form the basis for applications to NSW Heritage Council and National Parks and Wildlife Service relating to archaeological investigations.

2.0 Background

The history of the University has been well documented from its inception in 1850. There have been a number of recognised buildings and development phases in the evolution of the University being:

- The first University buildings (the Main building) between 1855 and 1862
- The Anderson Stuart Building and associated works around 1890 and the expansion of a number of faculties
- Between 1900 and World War I there was a period of consolidation with buildings such as the Fisher Library (now MacLaurin Hall) and further buildings being constructed along Science Road
- In the period following World War 1 the Professor of Architecture and University Architect, Leslie Wilkinson was responsible for the development of a master plan, much of which remains in place.
• The period following World War II saw a number of immediate "temporary buildings" erected and a general expansion of student numbers and services.

• In the late 1950s the University expanded across City Road into the Darlington Campus and a substantial building program was instigated both on the Camperdown campus and Darlington campus. The campus went through considerable consolidation and reorganization, focusing the hub of the University away from Science Road towards Eastern Avenue and the Darlington Campus.

• From the 1970s to the present, reduced Government Funding has marked a consolidation phase in the evolution of the University.

• The University has developed a Campus Planning Strategy that outlines the future development of the University.

• In line with this strategy the University has embarked on the Campus 2010 + Building For The Future Program.

3.0 Proposed Works

As part of the Campus 2010 Program, there is proposed a number of works across the central part of the University and includes the following:

• The upgrading of the Eastern Avenue and Barff Road Integrated Domain
  The upgrading of the public domain entails the re-design of the pedestrian precinct which incorporates road works, paving, planting and other service matters typically associated with these works. The extent of works is from the Quadrangle to City Road, including a new footbridge across City Road. These works are to be integrated with the new Faculty of Law Building, located on the northern side of Eastern Avenue and adjacent to Victoria Park.

• Shepherd Street Entrance and Pedestrian Route to USYD Central
  These works incorporate the retention of the old Darlington School and the incorporation and re-design of Maze Green, the central open space of the Darlington

These works link through to the Shepherd Street entrance and incorporate the proposed USYD Central Building.

- City Road Improvements
  These improvements relate to the upgrade of the public domain associated with City Road.
- Faculty of Law Building
  A new building located to the north of Eastern Avenue which will provide a new facility, accommodating academic offices, the Law Library and a significant amount of teaching space.
- USYD Central
  Located adjacent to the existing Wentworth Building, this building will allow various student service organizations to be co-located to the centre of the University. This building also will incorporate a Combined Sciences and Technologies Library. Supporting facilities include a new outdoor plaza and retail activity.

The study area incorporates these nominated areas and further associated zones as nominated on Fig 1.

To inform and guide the planning and design process for the building and public domain program, an Archaeological Assessment is required.

4.0 Heritage Significance

Much of the University is a recognised heritage precinct with further individual listings within the University regarding particular items and the place. The status of the listings includes Local Listing on both statutory and non statutory lists.

Briefly, the following outline of heritage significance of the grounds of The University is highlighted in the Executive Summary of the “The University of Sydney Grounds Conservation Plan” prepared by Heritage Management Consultants Pty Ltd and others. The University grounds are of heritage significance because amongst other values:
• They retain evidence of a continuous human occupation of the place from Aboriginal time, through the earliest period of European settlement of Australia, to the current day;
• The University is the oldest in Australia, and has a distinctive pattern of planned features that reflect its continuous use for over 150 years;
• There are a number of individual precincts, buildings and features that are significant in their own right;
• The Main Building Group, Anderson Stuart Building, Gate Lodges, and St Paul's, St Johns and St Andrews Colleges comprise what is arguably the most important group of Gothic and Tudor revival architecture in Australia;
• The layout and development of the Camperdown campus reflects directly changes in tertiary education, landscape design, institutional design, economic development and social attitudes over a 150 year period;
• The student union and sports facilities reflect the history, and changes in, recreational and social activities over a long period of time;
• Darlington campus retains important evidence reflecting the former residential suburb, and was the site of a major expansion of the University, reflecting major changes in tertiary education in Australia; and
• The University grounds are of social significance because of strong and special associations with particular communities and cultural groups.

5.0 Archaeological Assessment Aims & Objectives

The archaeological assessments will provide appropriate guidelines for planning of the nominated works and peripheral areas shown on Fig 1.

These include:

• Buildings to the east and west of Eastern Avenue;
• The Public Domain of Eastern Avenue;
• Victoria Park and the relationship with the proposed Law Faculty building; and
• Darlington Campus around Maze Green and through to Shepherd Street.

The preparation of historical and Aboriginal archaeological assessments will aim to ensure that proposed works are undertaken in accordance with the requirements of the NSW Heritage Act 1977 and the National Parks & Wildlife Act 1974 regarding the
protection of cultural heritage. The principal objectives of the archaeological assessments will be to:

1. Determine the extent, nature and integrity of archaeological relics and potential archaeological deposits (PAD) in the development area;
2. Assess the significance of any such relics and PAD;
3. Assess potential development impacts upon the relics and PAD; and
4. Recommend management options to mitigate impacts and ensure that development is undertaken in accordance with the NSW Heritage Act 1977 and the National Parks & Wildlife Act 1974;

The assessments must:

- Be prepared in accordance with The Burra Charter and Guidelines to the Burra Charter issued by Australia ICOMOS and the NSW Heritage Manual;
- Comply with the statutory requirements of relevant legislation regarding the protection and management of cultural heritage in NSW, including the NSW National Parks & Wildlife Act 1974, the NSW Heritage Act 1977, the Environmental Planning and Assessment Act 1979, Regional and/or Local Environment Plans, State Environmental Planning Policies and the Aboriginal & Torres Strait Islander Heritage Protection Act 1986.

6.0 Approach and Scope

The archaeological assessments must be undertaken in accordance the approach and scope of work set out below. The scope of work will include separate stand-alone reports for the Aboriginal and historical archaeological assessments.
7.0 Aboriginal Archaeological Assessment

7.1 Data Collection and Review
Previous reports, surveys and studies in the locality will be reviewed to determine the potential for archaeological sites within the study area. The National Parks and Wildlife Service (NPWS) Aboriginal Heritage Information Management System (AHIMS) will also be consulted regarding known archaeological sites in the surrounding area.

7.2 Aboriginal Community Consultation
The study will be undertaken in consultation with the local Aboriginal community to identify sites and places within the study area that are culturally significant. The study area falls within the boundary of the Metropolitan Local Aboriginal Land Council (MLALC), who will be invited to participate in-fieldwork. A written report shall be sought by the Consultant from the MLALC to document Aboriginal cultural significance of the study area.

7.3 Field Investigation
The areas of proposed development and landscaping works will be systematically surveyed on foot. The survey will specifically examine areas where potential impacts may result from proposed development works. Inspection of the study area will be undertaken in partnership with MLALC to identify and record Aboriginal archaeological sites.

The investigation will also assess the degree of land disturbance and erosion in the study area to determine the likelihood of undisturbed sub-surface sites or objects in the study area. Any sites and features located will be recorded in accordance with the requirements of Section 91 of the NPW Act, 1974. Site cards will be submitted to the NPWS for inclusion on the AHIMS.
7.4 Assessment and Report Preparation

The Aboriginal archaeological assessment report will include:

A summary of the environmental and archaeological context of the study area;

Predictive modelling based on the results of the AHIMS database search and previous archaeological investigations undertaken in the area;

An outline of the survey methodology and NPWS assessment requirements;

The analysis from field surveys (i.e. core drilling), historical information and the consultant's own research is of particular importance. Conclusions about what may be found should be supported from more than one of these activities and ideally all three. Any conclusions or assumptions must be backed up with documented arguments and research in order for the NPWS to accept them;

Description of the field survey results, including any sites or objects identified;

Assessment of areas and landforms of potential sub-surface archaeological potential based on the results of the survey, disturbance history of the study area and predictive modelling;

An assessment of the significance of sites and objects (if any) identified during the field survey. This assessment will be made in accordance with requirements of NPWS guidelines, and in consultation with MLALC to determine the cultural significance of the Park; and

Recommendations for the management of Aboriginal heritage, including any requirements for additional test excavation and/or mitigation measures. If there is a requirement for either section 87 or section 90 permits from the NPWS, this should be clearly set out.

The MLALC will be asked to provide a written statement or report on the Aboriginal significance of the area, which will be included as an appendix at the archaeology report. Aboriginal community views will also be incorporated in the report and reflected in management recommendations. The Consultant shall liaise and commission this report from the MLALC.
8.0 Historical Archaeological Assessment

The historical archaeological assessment will be designed to clarify and define:

The extent, integrity and significance of non-Indigenous archaeological relics (if any) within the subject area;
Whether or not proposed development works will impact upon any such relics; and
Recommendations for management of such relics identified within the development area.

The assessment report will conform to the NSW Heritage Office Guidelines for archaeological assessments. This will be achieved by completing the following tasks:

Definition of all statutory and non-statutory listings for the site that may have a bearing on completion of the development proposal;
Preparation of a detailed site history outlining the complete sequence of pre-European occupation and historical use of the development area. This will involve collation of all available data held by various State and Local Government archives, pertaining to site use and occupation between c1788 and the present day. The results of this work will then be used to assess the potential and significance of any extant or sub-surface remains identified at the site;
Site inspection to record any relics within the study area and determine the potential for sub-surface relics based on an assessment of current site configuration and site formation processes;
Assessment of the extent and integrity of potential historical archaeological deposits and features (relics) at the site using comparative information obtained from previously investigated sites in the area, relevant geo-technical data, and analysis of information gained by site inspection and research. Locations of potential historical archaeological deposits and relics should be clearly marked on current scaled plans of the development area;
Assessment of the significance of identified relics and PAD in accordance with standard assessment criteria; and
Preparation of recommendations for management of any archaeological deposits that will be affected by the proposal. If there is a requirement for excavation permits from the NSW Heritage Office, this should be clearly set out.

9.0 Report Contents

The report is to include and not be limited to the following;

Outline of report
- Executive Summary of recommendations
- Table of Contents
- Background
- Report objectives
- Methodology
- Report Structure
- Overall location plan and extent of works
- Authorship
- Documentary Sources
- Report Limitations
- Acknowledgements

10.0 Project Schedule and reporting

The key date in regard to this commission is that the Stage 1 Development Application documents are programmed for completion by 16 April 2004.

Taylor Cullity Lethlean is coordinating the Stage 1 Development Application. The consultant will be required to report to that organisation. The consultant's client will be the University of Sydney. The consultant will also be required to report to the Client's representative, Capital Insight Pty Ltd.

11.0 Copyright and intellectual property

The University retains all copyright in any material that comes into existence in connection with this consultancy.
12.0 Lodgment of submissions and enquiries

Tender submissions will be made at the Tender Box of the Facilities Management Office on Level 2, Services Building, Cnr Codrington and Abercrombie Sts Darlington 2006 by 2.00pm on 4 March 2004.
APPENDIX 2

Report from Metropolitan LALC
Dear Jane

**RE: ABORIGINAL HERITAGE ASSESSMENT - SYDNEY UNIVERSITY**

I have had an opportunity to review the above report and confirm my earlier verbal advice that we support the recommendations and have no objections to the proposed works.

As also noted previously we have an interest in Aboriginal cultural heritage material that may be found beneath the surface. Any such finds are of additional importance as they are rare in a landscape where ongoing development has disturbed most of the surface area. We will be available to participate in any archaeological testing that is undertaken.

Yours sincerely

Allen Madden
Cultural & Educational Officer