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ARCHAEOLOGY – HERITAGE – MEDIATION – ARBITRATION

WESTERN SYDNEY STADIUM SSDA16_8175

Aboriginal Cultural Heritage Assessment and Management Plan

PREPARED BY	JILLIAN COMBER
REPORT TO	LEND LEASE
LGA:	CITY OF PARRAMATTA
VERSION NO	C.2017
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INTEGRATED MANAGEMENT PLAN

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EXECUTIVE SUMMARY

This report supports a State Significant Development (SSD) Development Application (DA) submitted to the Minister for Planning pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The proposal relates to a detailed ('Stage 2') DA for the detailed design and construction of the stadium. This SSD 8175 DA seeks approval for detailed design and construction of the Western Sydney Stadium

As required by the SEARS, this report has been written to address Aboriginal Cultural Heritage in accordance with the Office of Environment & *Heritage's Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* and *Aboriginal cultural heritage consultation requirements for proponents 2010.* It assesses the impact of the proposal and provides recommendations to mitigate that impact.

Aboriginal community consultation was undertaken in accordance with OEH's Aboriginal cultural heritage consultation requirements for proponents 2010 The list of Registered Aboriginal Parties is contained in section 4 of this report.

This report demonstrates the potential for the study area to contain evidence of Aboriginal occupation in the form of stone tools and possibly hearths. Consultation with the Aboriginal community indicates the significance of such evidence. It is important that Aboriginal cultural information is protected and interpreted. Archaeological testing and salvage would allow for the long-term protection, curation and interpretation of Aboriginal archaeological deposits. The testing and salvage would allow for a chronology of occupation of the site to be developed and a lithics analyses would provide information to interpret onsite cultural activities. In addition, various sections of the site where bulk excavation is not required would allow for the *insitu* conservation of Aboriginal archaeological deposits.

This report makes the following recommendations:

1. Archaeological testing and salvage be undertaken in accordance with the methodology attached at Appendix B, which has been developed in accordance OEH's *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*. This should be undertaken prior to any earthworks including shallow grading or bulk excavation.

2. An interpretation plan should be developed which includes interpretation of the Aboriginal history and use of the site. This should be undertaken in consultation with the Registered Aboriginal Parties.

3. Any artefacts retrieved during the program of archaeological testing and salvage should be retained and displayed onsite and included in the interpretation plan.

4. Consultation should continue with the Registered Aboriginal Parties including full participation in the program of archaeological testing and salvage.

CONTENTS

1.0 INTRODUCTION

PURPOSE
OVERVIEW OF PROPOSED DEVELOPMENT
BACKGROUND
SITE DESCRIPTION
EXISTING LAND USES

1.0 INTRODUCTION

1.1 Purpose

This report supports a State Significant Development (SSD) Development Application (DA) submitted to the Minister for Planning pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The Application (referred to as SSDA16_8175) follows the approval of a Stage 1 SSD DA (SSDA16_7534) in December 2016. The Stage 1 SSDA sets out a Concept Proposal for the redevelopment of the Western Sydney Stadium and future supporting uses. In summary, the Stage 1 Consent includes the following components:

- **Concept Proposal** for the Western Sydney Stadium, including building envelopes, a new 30,000 seat stadium, 500 surface car parking spaces, access, ancillary infrastructure and landscaping; and
- **Detailed works** for staged demolition and removal of the existing stadium and associated infrastructure and the Parramatta Swimming Centre

As required by the SEARS, this report has been written to address Aboriginal Cultural Heritage in accordance with the Office of Environment & *Heritage's Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* and *Aboriginal cultural heritage consultation requirements for proponents 2010.* It assesses the impact of the proposal and provides recommendations to mitigate that impact.

1.2 Overview of Proposed Development

The proposal relates to a detailed ('Stage 2') DA for the detailed design and construction of the stadium. This SSD DA seeks approval for the following components of the development:

- Detailed design of the stadium, public domain and car parking spaces;
- Construction and use of the 30,000 seat stadium including:
  - General Admission Facilities including bars, food and drink stalls, amenities and viewing areas;
  - A function centre and kitchen facility;
  - Associated Stadium facilities including player and coaching facilities, media and press conference rooms, security and stadium managers facilities;
  - Waste storage and loading dock;
- Construction and embellishment of the public domain including;
  - Outdoor sporting and recreation facilities;
  - Public plazas and entertainment areas;
  - General landscaping works;
- Provision of up to 500 car parking spaces with vehicle access to the development from O'Connell Street and internal roads for vehicular circulation;
- Provision of signage zones, lighting and other ancillary stadium elements;
- Pedestrian access and footpath upgrades along O'Connell Street; and
- Extension and augmentation of physical infrastructure / utilities as required.

1.3 Background

Stadia Strategy

The renewal of the Stadium forms part of the NSW State Government's revitalisation of Sydney's key sporting stadia. The NSW Government has identified the redevelopment of the Western Sydney Stadium as a major urban renewal project and have committed $300 million to its renewal. The Stadium is to be redeveloped for increased capacity, greater activation and relationship with O'Connell Street as well as future ancillary uses to support the stadium.

Concept Proposal (SSDA 16_7534)

Infrastructure NSW (iNSW) on behalf of Venues NSW submitted a State Significant Development Application (SSDA) for the Stage 1 concept proposal and demolition of the existing stadium in July 2016. Consent for the Stage 1 SSDA was granted by the Minister for Planning on 7 December 2016 and includes:

- a maximum total GFA of approximately 60,000 m^2 (excluding the playing pitch) for the stadium development, including:
  - additional seating for approximately 10,000 more spectators in a seating bowl with 30,000 seats, including 27,000 general admission seats and 3,000 corporate seats;

- playing pitch;
- five levels of premium box/terrace, function/lounge offerings and a number of suite offerings;
- flood lighting, stadium video screens and other ancillary fittings;
- additional facilities for team, media, administration and amenity, including:
- police facility and security office;
- players changing rooms;
- ticket gates and ticket boxes;
- media interview rooms;
- green room;
- production suite and joint operation control room;
- event briefing rooms;
- hirers office and patron services offices;
- first aid facilities;
- loading docks for deliveries; and
- food, beverage and retail facilities.
- a maximum GFA of approximately 20,000 m^2 for future development of ancillary uses within the northern corner of the Site;
- transport, parking and accessibility;
- public domain elements; and
- landscaping elements throughout the Site.

Design Excellence and Project Tender Phase

Since receiving the development consent for Stage 1, Venues NSW have appointed Lendlease as the contractor for the Stage 2 detailed design and the demolition and construction of the stadium. The tender process also served as a competitive design process in accordance with the Director General's Design Excellence Guidelines and Clause 7.10 of the *Parramatta Local Environmental Plan 2011*.

Site Establishment works Modification

A modification application (MOD 1) was made to the Stage 1 DA pursuant to Section 96(2) of the EP&A Act in February 2017. The modification seeks to expand the approved range of site preparation works to include piling and remediation/earthworks, as outlined below:

- Remediation works comprising the excavation and storage of contaminated materials and bulk excavation. Contaminated materials will be stored on site and capped below ground in accordance with the recommendations outlined in the Remedial Action Plan.
- Piling works which will comprise the driving and drilling of concrete piles to establish foundations for the construction of a stadium located within the Stage 1 building envelope

The modification application is currently under assessment by the Department of Planning and Environment (DPE) and is awaiting determination.

1.4 Site Description

The Western Sydney Stadium is located at 11-13 O'Connell Street, within the Parramatta Park on the north-eastern edge of the Parramatta CBD. It is bound to the south and west by the Parramatta Park and the Parramatta River, the Parramatta Leagues Club to the north and O'Connell Street to the east. The Site is located within the City of Parramatta local government area (LGA).

A locational context plan is provided at Figure 1 below.

Figure 1 – Site context Plan

The site has an area of approximately 95,000m^2 and is owned by Venues NSW and The Parramatta Park Trust.

The site is irregular in shape and is illustrated in Figure 2 below.

Figure 2 – Site Aerial Plan

1.5 Existing Land uses

Land uses and facilities currently located within the study area include Parramatta Stadium, Parramatta Swimming Pool and associated infrastructure.

2.0 LEGISLATION

NATIONAL PARKS & WILDLIFE ACT 1972
ENVIRONMENTAL PLANNING & ASSESSMENT ACT 1979
NSW ABORIGINAL LAND RIGHTS ACT 1983
NATIVE TITLE ACT 1993

2.0 LEGISLATION

2.1 National Parks & Wildlife Act 1974

The *National Parks & Wildlife Act 1974* (NPW Act) provides statutory protection to all Aboriginal sites within New South Wales. The Office of Environment and Heritage (OEH) is the State Government agency responsible for the implementation and management of this Act.

Part 6 of the NPW Act provides provision for protection of all "Aboriginal objects" which are defined as:

> *Any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.*

In particular Part 6 of the Act states that it is an offence to harm or desecrate an Aboriginal object or Aboriginal place, without an Aboriginal Heritage Impact Permit (AHIP).

2.2 Environmental Planning & Assessment Act 1979

This project is being undertaken as a State Significant Development under Part 4, Division 4.1 of the *Environmental Planning & Assessment Act 1979* (EPA Act). Section 89J of the EPA Act (see below) does not require that a State significant development seek approval under the NPW Act.

Section 89J of the EPA Act states the following:

89J Approvals etc legislation that does not apply

The following authorisations are not required for State significant development that is authorised by a development consent granted after the commencement of this Division (and accordingly the provisions of any Act that prohibit an activity without such as authority do not apply):

(a) the concurrence under Part 3 of the *Coastal Protection Act 1979* of the Minister administering that Part of that Act,

(b) a permit under section 201, 205 or 219 of the Fisheries Management Act 1994

(c) an approval under Part 4, or an excavation permit under section 139, of the Heritage Act 1977

(d) an Aboriginal heritage impact permit under section 90 of the National Parks and Wildlife Act 1974

(e) an authorisation referred to in section 12 of the Native Vegetation Act 2003 (or under any Act repealed by that Act) to clear native vegetation or State protected land,

(f) a bush fire safety authority under section 100B of the Rural Fires Act 1997,

(g) a water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the *Water Management Act 2000*.

(2) Division 8 of Part 6 of the Heritage Act 1977 does not apply to prevent or interfere with the carrying out of State significant development that is authorised by a development consent granted after the commencement of this Division.

(3) A reference in this section to State significant development that is authorised by a development consent granted after the commencement of this Division includes a reference to any investigative or other activities that are required to be carried out for the purpose of complying with any environmental assessment requirements under this Part in connection with a development application for any such development.

The EPA Act is administered by the Department of Planning and Environment who will provide the consent for this project and for any impact on Aboriginal "objects". Section 89J(d) does not require the consent of the Office of Environment & Heritage.

2.3 NSW Aboriginal Land Rights Act 1983

The Aboriginal Land Rights Act 1983 was established to provide land rights to the Aboriginal people of New South Wales for the loss and dispossession of the land. The Act recognises that land is of spiritual, social, cultural and economic importance to Aboriginal people. It provides for the transfer of ownership of vacant Crown land not required for an essential purpose or for residential purposes to an Aboriginal Land Council. The study area is not the subject of a land claim under the *Aboriginal Land Rights Act.*

Section 52(4) of the Act also states that Local Aboriginal Land Councils are responsible for Aboriginal cultural heritage management within their boundaries. The study area falls within the boundaries of the Deerubbin Local Aboriginal Land Council (DLALC). In recognition of that role, consultation has been undertaken with the DLALC in respect of this project.

2.4 Native Title Act 1993

The Native Title Act 1993 is Commonwealth legislation which provides recognition by Australian law that some Aboriginal and Torres Strait Islander people have rights and interests to their land arising from their traditional laws and customs. The Federal Court of Australia mediates claims made by Aboriginal and Aboriginal and Torres Strait Islander people and makes Native Title determinations. The National Native Title Tribunal was established to administer Native Title claims and applies the registration test to all new native title claimant applications and undertakes "future act" mediation and arbitral functions. The Act also provides for Indigenous Land Use Agreements (ILUA) which is an agreement about land and sea management. An ILUA can be negotiated over areas where Native Title has or has not yet been determined.

A search of the National Native Title Register on 19/01/2017 indicated that the study area is not the subject of a Native Title Claim, application or ILUA.

3.0 METHODOLOGY

METHODOLOGY
EFFECTIVE SURVEY COVERAGE

3.0 METHODOLOGY

3.1 Methodology

This project was conducted in accordance with the Office of Environment and Heritage's *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales.*

The project was conducted in three stages, which were background research, site inspection and report production, as detailed below:

Stage 1: Background Research
Prior to the field component of this project, the Aboriginal Heritage Information Management System (AHIMS) of the Office of Environment and Heritage was consulted and the results of an extensive search were received on 19th January 2017 (Appendix A). Site data, associated documents and archaeological survey reports held in this database were reviewed. Environmental information relating to Aboriginal land use was also consulted. Such research facilitated the understanding of the potential nature of the sites and site patterning in the region, which enabled the predictive statement to be made. It also provided an archaeological and environmental context within which a significance assessment could be made of the study area.

Stage 2: Site Inspection
Three site inspections have been undertaken within the study area for different projects:

In 2014 the author undertook a site inspection of the Cumberland Precinct which included the current study area for the Parramatta North Urban Transformation Project. This was undertaken in association with:

- Steve Randall, Deerubbin Local Aboriginal Land Council
- John Reilly, Darug Tribal Aboriginal Corporation
- Justine Coplin, Darug Custodian Aboriginal Corporation
- Gordon Morton, Darug Cultural Heritage Assessment
- Parramatta City Counci's ATSI committee

In June 2016 Dr Andrew McLaren of AECOM undertook a site inspection when undertaking the Aboriginal consultation in accordance with OEH's *Aboriginal cultural heritage consultation guidelines for proponents 2010* for the staged redevelopment of the Western Sydney Stadium. This inspection was undertaken in consultation with the following Registered Aboriginal Parties (RAPs)

- Steve Randall, Deerubbin Local Aboriginal Land Council
- Justine Coplin, Darug Custodian Aboriginal Corporation
- Darug Aboriginal Cultural Heritage Assessments Tim Wells
- Darug Land Observations Jamie Workman
- Darug Aboriginal Land Care Inc Raymond Adams
- Kamilaroi-Yankuntjatjara Working Group Chris Jones
- Tocomwall Pty Ltd Jen Norfolk
- Darren Duncan, Duncan Suey & Associates

A site inspection was undertaken on Thursday 19th January 2017 by Jillian Comber and David Nutley of Comber Consultants for this report.

The aim of the above inspections was to locate and record any Aboriginal sites which may be visible within the study area and to determine the archaeological potential of the study area. No Aboriginal sites were recorded within the study area, although AECOM recorded two artefacts near the Old Kings Oval, just outside the study area.

Stage 3: Report Preparation
After completing the inspection, this report was compiled by Comber Consultants Pty Ltd provided to Lend Lease with a copy to each of the RAPs

3.2 Effective Survey Coverage

The study area contains landscaped and grassed open areas and playing fields and the swimming pool. As a result ground visibility was nil.

The visibility of some site types such as open artefact scatters is dependent upon ground visibility and exposure. The Office of Environment & Heritage's guidelines (2010) suggest that this information is to be presented in a table which quantifies and details the local detectability. However, as ground visibility was nil there is no need to use the recommended table.

4.0 ABORIGINAL CONSULTATION

4.0 ABORIGINAL CONSULTATION

Aboriginal culture is dynamic and continuous. It includes the tangible and intangible and links people over time to their community and land. It is important to recognise that Aboriginal people have the right to protect, preserve and promote their cultural heritage. In recognition of that right, the organisations detailed below were invited to take part in the project and participated fully in this archaeological assessment.

Aboriginal consultation was undertaken in accordance with OEH;s *Aboriginal cultural heritage consultation requirements for proponents 2010* in respect of the proposed redevelopment of the Western Sydney Stadium. An Aboriginal Cultural Heritage Assessment Report was prepared which details the consultation (AECOM 2016). Following are the Registered Aboriginal Parties:

Deerubbin Local Aboriginal Land Council
Darug Custodian Aboriginal Corporation
Darug Tribal Aboriginal Corporation
Darug Aboriginal Cultural Heritage Assessments
Darug Land Observations
Darug Aboriginal Land Care Inc
Gunjeewong Cultural Heritage Aboriginal Corporation
Corroboree Aboriginal Corporation
Kamilaroi-Yankuntjatjara Working Group
Tocomwall Pty Ltd
Aboriginal Archaeology Service
Walbunja
Murri Bidgee Mullangari Aboriginal Corporation
Wurrumay Consultant
Kawul Cultural Services
Gundungurra Tribal Technical Services
Didge Ngunawal Clan
Duncan Suey & Associates
Widescope Indigenous Corp
Muragadi Heritage Indigenous Corporation

The study area is highly significant to Aboriginal people due to the evidence of continued occupation within and surrounding the area. This occupation has resulted in an interrelated suite of tangible and intangible cultural sites, resources sites, flora and fauna forming a significant Aboriginal landscape. The study area is highly significant to Aboriginal people due to the connections to culture through sites, stories, boundaries, meeting places and the resources that were available for thousands of years in this area.

No sensitive or culturally restricted information was identified.

Consultation with the above Registered Aboriginal Parties (RAPs) has and will continue throughout this project.

5.0 ABORIGINAL HISTORY

5.0 ABORIGINAL HISTORY

5.1 Darug

The Darug people are the traditional owners of the main east-west ridge of the Blue Mountains, the northern Blue Mountains and the Cumberland Plain in which the study area is located (Tindale 1974; Attenbrow 2003).

Research by R.H. Mathews, a pioneer linguist and anthropologist, in the early twentieth-century revealed that the Darug (or 'Dharruk' people as he referred to them) inhabited an area adjoining the 'Thurawal' (Dharawal) to the south and Gundungurra and Wiradjuri to the west. Their territory extended along the coast to the Hawkesbury River and inland to Windsor, Penrith and Campbelltown; then from the mouth of the Hawkesbury River to Mount Victoria (Mathews 1901a: 140; Mathews 1901b:155;). Three distinct groups have been identified – the coastal, hinterland and mountain Darug (Attenbrow 2003:23). The study area is on the border between the coastal and hinterland groups.

5.2 The Burramatta

Aboriginal people have occupied the valley extending from Prospect to the coastline for at least twenty thousand years. One or possibly two clans occupied the land around the banks of the Parramatta River at the headwaters of Sydney Harbour (Kass, Liston & McClymont 1996:4). The surrounding area was reasonably fertile and, with the resources of the river, was able to support their living needs. Anthropological studies indicate that clan sizes varied widely, consisting of between thirty to sixty people who moved through their territory using seasonal routes to access food, shelter and other resources necessary for survival as well as ceremonial sites. Generally people camped, travelled, foraged, fished and hunted in smaller, extended family groups, coming together at times with the larger group for ceremonies and ritual combats (Attenbrow 2003:29).

The people living at the head of the Parramatta River were a clan of the Darug, known as the *Burramatta*, *Burramattagal* (sometimes written as *Boromedegal*) *or Burramattagalleon* clan. The word *burra* means eel whilst the word *matta* means creek or river and described the name of the country. The suffix "-gal" (man) or "-galleon" (woman) was added to describe a man or woman from Burramatta. (Phillip 13 Feb 1790 in HRA 1(1) cited in Attenbrow 2003; Attenbrow 2003:22-24; Kass et al. 1996:6).

Initially Parramatta was named Rose Hill, with the name "Parramatta" being formally adopted in 1792. It was a derivation of the Aboriginal name for *Burramatta* the clan, recorded as originally inhabiting this location (Attenbrow 2003:24; Phillip 13 Feb 1790 in HRA I (I): 155-61; Kass 1996:6). The Parramatta district is thought to be a linguistic and economic boundary between the coastal and inland Darug people. Although opinions differ, linguists believe that a dialect of the Darug coastal language was spoken from the Sydney peninsula as far west as Parramatta, while a hinterland dialect was spoken from Parramatta to the north, west and south (Arthur Capell 1970 cited in Attenbrow 2003: 33).

5.3 Other Sydney Clans

The earliest colonial records of the Aboriginal people encountered at Port Jackson generally refer to 'tribes'. In modern anthropological terms however it is more likely that many of the communities they referred to were local or territorial clans. Groups that they saw hunting, fishing or gathering together were not all from the same clan (though they might have been related by marriage) but were bands or communities sharing the same land (Attenbrow 2003: 22).

Late eighteenth-century observers recorded descriptions of groups of Port Jackson Aborigines at this time. In 1798 David Collins noted that:

> *...each family has a particular place of residence from which is derived its distinguishing name. This is formed by adding the monosyllable Gal to the name of the place: thus the southern shore of Botany Bay is called Gwea, and the people who inhabit style themselves Gweagal* (Collins 1798 cited in Attenbrow 2003: 22).

Governor Arthur Phillip was one of the earliest Europeans to see what is now known as the Parramatta district and wrote that:

> *...the south side of the harbour from the above side of the cove to Rose Hill, which the natives call Parramatta, the district is call Wann, and the tribe Wangal* (Phillip 1790 cited in Attenbrow 2003: 22).

Watkin Tench also recorded the name 'Parramàtta' linking it to the place at the head of today's Parramatta River (Tench 1793 cited in Attenbrow 2003: 22). The township established in the vicinity of Rose Hill was based on its traditional name,

'Parramatta'. The name was also generally applied to the surrounding district.

Governor Phillip Gidley King made observations about the extent of Aboriginal territories to the west of Port Jackson, noting Aboriginal place names. He wrote that:

> *...the tribe of Cadi inhabit the south side, extending from the south head to Long Cove; at which place the district of Wanne, and the tribe of Wangal, commences, extending as far as Par-ra-mata, or Rose Hill... I have already observed that the space between Rose-Hill and Prospect-Hill is distinguished by eight different names, although the distance is only four miles* (King 1793 cited in Attenbrow 2003: 22).

Places linked to the Rose Hill/Parramatta area were Wau-maille/Warmul, Malgray-matta/Mal-gra-mattar, Era-worong/A-rar-woo-rung, Carra-matta/Car-rar-mattar, Bool-bane-matta/Bul-barn-mattar, Carro-wotong/Kar-rar-wotong, Mar-ron/Mararong and Arrowanelly (alternative spellings were given). It is thought that the name Mararong was associated with the Prospect Hill area; the word War-mul referred to the place inhabited by the Cannemegal; and Arrowanelly is linked to a place named 'Island at the Flats' associated with the Bediagal (Attenbrow 2003: 22). The name Warmul is shown as Weymaly in nineteenth-century Blanket Returns. As a result of the displacement resulting from European colonisation and settlement it is likely that Aboriginal people from these locations were forced into neighbouring areas. The general location of some of these communities, as well as the language and clan groups around Port Jackson, is shown in Figure 6 below. The Burramatta lived in the vicinity of Rose Hill and present day Parramatta, including the PNUT study area.

Documentary sources provide little detailed information about the boundaries of the traditional 'country' with which Sydney Aboriginal clans identified. Due to variances in spelling used by the authors of the various records, it is difficult to ascertain the number of clans. It is quite likely that some were not recorded (Attenbrow 2003: 28-29).

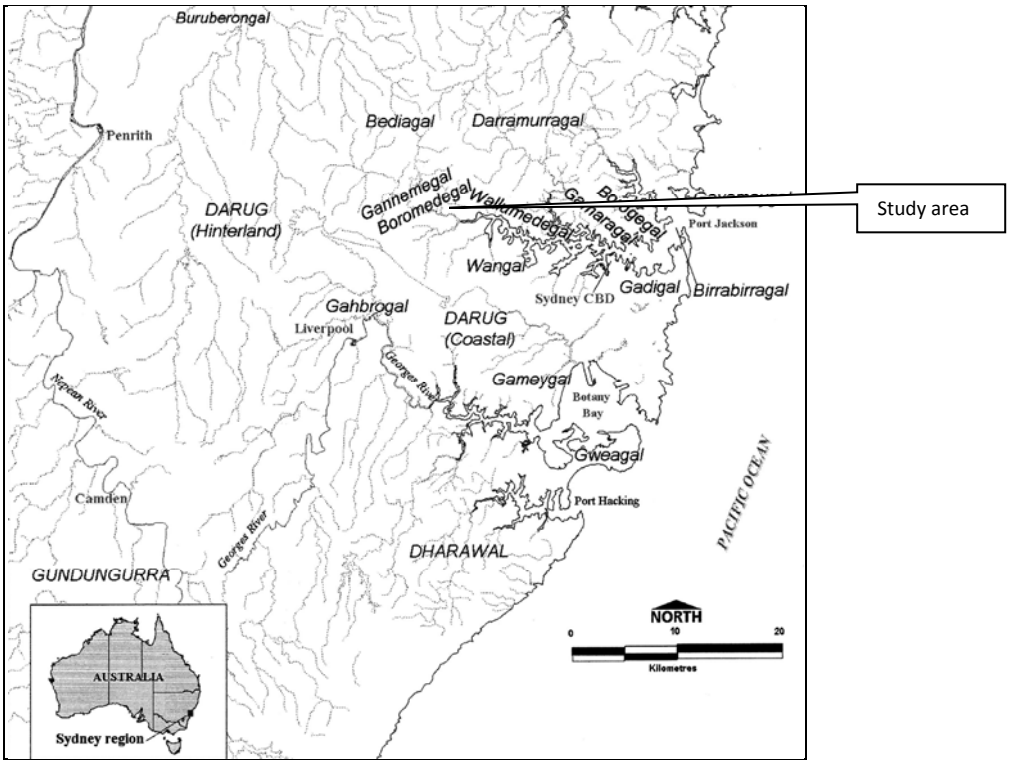

Figure 3: Map showing the territory associated with the Darug people. Parramatta is thought to be the western extremity of the territory of the Coastal Darug and the traditional land of the Burramatta (or Boromedegal) clan of the Darug. The boundary between the adjacent language groups or dialects is not able to be identified precisely (Attenbrow 2003: 23)

5.4 Language and Dialects

Although attempts were made by British colonists to learn and record local languages and dialects and where they were spoken, methods were not systematic and some went unrecorded. British colonists observed variations in the Darug language on the Cumberland Plain but the variants were not systematically recorded. Watkin Tench (c.1758-1833), a naval officer noted that people spoke 'different dialects of the same language; many of the most common and necessary words, used in life, bearing no similitude, and others being slightly different'. It was observed that although individuals from the coast and from the Hawkesbury were using different dialects to converse, they understood each other without difficulty (Tench 1793: 122 in Fitzhardinge 1979: 230). Tench was bemused by the variance in the languages considering the geographical proximity of the places, noting that 'these diversities arise from want of intercourse with the people on the coast, can hardly be imagined, as distance inland is but thirty-eight miles; and from Rose Hill not more than twenty, where the dialect of the sea coast is spoken' (Tench 1793: 122 in Fitzhardinge 1979: 231).

William Dawes (1762-1836), David Collins (1756-1810) and Governor Phillip Gidley King (1758-1808) made lists of words spoken by the coastal people (Attenbrow 2003:31). Dawes, a naval officer and scientist recorded details about pronunciation, verb tenses and sentence construction. A significant characteristic of the Aboriginal language recorded in eighteenth-century colonial records is the use of the suffix '-gal' (man) or '-galleon' (woman). In some areas the suffix was added to a word descriptive of the country in which the community lived. (Phillip 13 Feb 1790 in Attenbrow 2003:22). For example, Burramattagal describes a man from Burramatta or Burramatagalleon describes a woman from Burramatta. The names of some groups of the Sydney region are associated with a local animal food source. For example the word *Burramatta* (linked with the Parramatta district) is derived from *burra* meaning eel, *matta* meaning river (Attenbrow 2003: 28).

It was not until the late nineteenth and early twentieth-century that more methodical attempts to record Aboriginal languages were made by individuals such as R.H. Mathews, an anthropologist and linguist. By this time however there were few fluent speakers of the languages and dialects spoken in Sydney (Attenbrow 2003: 31-32). Despite the small number of informants available Mathews mapped new boundary alignments based on his research concluding that:

> *...a dialect of the Darug language, which was spoken on the Cumberland Plain and to the west of the Lane Cove River, was spoken on the "Sydney Peninsula" – an area he described as "extending between the south shore of Port Jackson and the north shore of Botany Bay and as far inland as Rosehill (Parramatta district)"* (Attenbrow 2003: 33).

Since the 1970s anthropologists and archaeologists have presented new theories about the boundaries of linguistic and tribal groups in and around the Sydney Basin, and debate on the subject continues. The extent of the Darug languages and dialects spoken in the Sydney region as summarised by Attenbrow in *Sydney's Aboriginal Past* is shown below (2003:34).

Language/dialect	Boundaries
Darug, coastal dialect/s	The Sydney Peninsula (north of Botany Bay, south of Port Jackson, west to **Parramatta**), as well as the country to the north of Port Jackson, possibly as far as Broken Bay
Darug, hinterland dialect	The Cumberland Plain from Appin in the south to the Hawkesbury River in the north; west of the Georges River, **Parramatta**, the Lane Cove River and Berowra Creek

Table 1: Map showing the extent of the Darug language in the Sydney Region (Attenbrow 2003: 34)

It is essential to emphasise that due to the dearth of historical documentation and the imprecise nature of boundaries between language groups, any language or dialect boundaries mapped today are only indicative (Attenbrow 2003: 35). Further information on the Darug language including word lists and places names can be found in Val Attenbrow's *Sydney's Aboriginal Past: investigating the archaeological and historical records* (2003) and in J.L. Kohen's *Daruganora: Darug Country - the place and people* (Revised Edition) (2009).

5.5 Food and Subsistence

The land around the head of the river provided the Burramatta clan with diverse plant and animal resources. The saltwater river and fresh water streams provided a rich environment where fish, turtles, crays, shellfish and molluscs could be caught or collected. Like other clans living along the river, the Burramatta people made canoes from which to fish or for transport (Kass *et al* 1996: 6). The shallow-draught, water craft made of bark and two to three metres in length were skilfully manoeuvred around the river. Bangalay (*Eucalyptus botryoides*) and species of Stringybark (*Eucalyptus agglomerata*) are thought to have been used for canoe construction (Turbet 1989:50). Colonial observers noted that coastal Aboriginal people obtained bark for canoes during excursions to Parramatta (Collins 1798: Vol 1 App 6). The large River Oak or *C. cunninghamiana* growing on the freshwater reaches of the rivers might have been used on both the coast and inland (Attenbrow 2003:112).

The ample fresh water sources attracted native animals which were hunted or trapped. The hunting of tree-dwellers such as possums and gliders is thought to have been a common activity. Kangaroo and wallaby were hunted less often and most likely when several clans came together for ceremonies (Brook & Kohen 1991:3-4). Aboriginal people of the district used traps and snares to catch animals to eat. In 1789 on a journey between Rose Hill and the Nepean, observations were made that traps were used to catch ducks which were plentiful and snares were used to catch "opossums" and other tree and small ground dwelling animals (Bradley c.1802, SLNSW Manuscripts, Electronic transcript, p.166).

Other food resources included bull ants and the eggs and larvae of the longicorn beetle or witchetty grub (Kass *et al* 1996:6). Seasonal plant foods including fruits, tubers, shoots, flowers, berries, seeds and nectar of local trees, and grasses were also prominent in the diet. Food collection required a detailed knowledge of each plant's properties as well as of the local environment, seasonal variations and preparation methods. Macrozamia for example is poisonous unless prepared in a particular way. Plants also provided ingredients for medicinal preparations (Brook & Kohen 1991:5). Observations made by Francis Barrallier (1773-1853) during exploration in 1802 revealed that the Parramatta people's customs relating to food and hunting were similar to those of those practised between Nattai and the lower Wollondilly. The local environment was also the source of raw materials for tool and weapon-making, clothing and shelter (Attenbrow 2003:71).

Aboriginal people relied on an extensive knowledge of their land and its resources and the acquisition of diverse skills essential to their survival in an environment that could be unpredictable. By 1814 it was increasingly difficult for Aboriginal people to catch or procure food using traditional methods. Similarly food-gathering patterns were altered by the lack of access to their traditional lands, which were now farmed by the new settlers. Limited opportunities were offered by Europeans willing to barter spirits and tobacco, and even food, for fish (Barratt 1981:71-2).

A report in the *Sydney Gazette* published after the first Aboriginal Conference (see below for details of the "Aboriginal Conference") held at Parramatta and the proposed establishment of a "Native Institution" outlined the problems facing Aboriginal communities who tried to maintain a traditional way-of life in the face of rapidly expanding settlements.

> *... when the weather is cold, the woods afford them little or no food, and they become a prey to many loathsome diseases which poverty entails upon the human frame. The kangaroo has almost disappeared about the Settlements; the opossum, long substituted as their chief dependence, has at length become as scarce; the roots of the earth are by nature too sparingly administered to constitute anything like a dependence to them; and the tribes of each district dare not incroach (sic) upon any other, In the summer those of the coast subsist by fishing; but in the winter, only for the occasional aid they derive from us, their situation would be equally miserable: -And whence have those evils originated, but in the clearing of the immense forests which formerly abounded in the wild animals they lived upon? This admission certainly gives them a claim upon the consideration of the British Settler; and we cannot imagine for a moment, that any one who bears that character will withhold any means that may fall within his power of forwarding the benevolent views of the Native Institution* (*Sydney Gazette* 31 Dec 1814: 2).

5.6 European Occupation

After British settlement Aboriginal communities were dislocated with experiences varying widely. It was not long after settlement at Port Jackson in January 1788 that Governor Phillip began to search for arable land. An expedition led by Governor Phillip set out on 22 April 1788 venturing up the harbour to Duck River. They then continued on foot following the upper part of the Parramatta River on its south bank. On the 24 April the party continued along the river through land that was 'fine open country, having very little timber, and being perfectly free from underwood' (Kass *et al* 1996: 11-12; HRA I (I):74, 97). The party reached a point at which the 'tide ceased to flow' and where they were 'stopped by large broad stones over which a fresh water stream ran'. A little to the west they reached a billabong skirted by a raised area of land that Phillip named "The

Crescent" (within Parramatta Park). From this vantage point thousands of acres of what appeared to be arable land could be seen. The party continued on to Prospect Hill or Bellevue as Phillip named it. They did not encounter Aboriginal people, however traces of Aboriginal campsites, hearths and traps were observed and their presence in the surrounding bush was felt (Kass *et al* 1996: 11-12).

Surveys of the area by the explorers revealed little about the Burramatta clan who possibly chose to observe the intruders more closely until their intentions were known. In investigating the land around the head of the river Lieutenant William Bradley recorded in his journal that his party:

> *... went up the Harbour to the lake or creek~~ing~~ running to the NW above the flats, we went about 3 Miles up; to a very fine run of water, the Country on both sides pleasant & the ground apparently fit for opening with far less trouble than any in the other parts of the Harbour & the Soil good; a little above the part where the fresh water meets the tide is the place supposed would produce slate, but had been found on examination not fit for working: We tried it as Coal without success: found a great number of Cranes & other Birds about & above the flats, all very shy* (Bradley c.1802: 106).

It is thought that Bradley and his party reached a location between present day Lennox Bridge and the wharf without reporting any encounters with the land's traditional owners who might have hoped that these strangers would not return (Campbell 1927: 354).

Plans for a new settlement at the head of the river were made and, as recorded by Watkin Tench, 'named by the Governor Rose Hill, 16 miles inland, (it) was established on the 3d November (1788), the soil here being judged better than that around Sydney'. Fears of retaliation from the Aboriginal inhabitants were expressed and "a small redoubt was thrown up, and a captain's detachment posted in it (in the area now known as "Parramatta Park") to protect the convicts who were employed to cultivate the ground" (Tench cited in Flannery 1996:92). However, attacks did not occur.

The settlement's establishment is well-documented and focuses mainly on what must have appeared to the traditional owners as the reckless destruction of their homeland, history and, most critically, their means of survival. In February 1790 Despatches record that the Captain's guard at Rose Hill was reduced and that 'there is nothing to be apprehended from the natives' (HRA I/I: 143). The clearing and development of the area was swift and by 16 November 1790, Tench estimated that 200 acres (80.94 ha) had been cleared and some cultivated. Seeing the landscape through European eyes he described the gently rolling 'hill and dale' as 'grand and capacious' (Tench 1793 in Fitzhardinge 1979:193, 195) and the field nearby was soon to be the location of a planned township for the agricultural settlement. By March of the following year the area of land cleared had doubled and whatever was not cultivated was thinned of trees to be used for grazing (Bradley c.1802:232; Collins 1798:Vol 1, Ch 15).

Watkin Tench is one of few diarists who recorded the reaction of the Burramatta clan to the colonist's occupation of their territory. On the 14 September 1790 while travelling in Port Jackson or on the Parramatta River he reported meeting 'two Indians' in a boat. After discussing the wounding of the Governor 'they said they are inhabitants of Rose Hill, and expressed great dissatisfaction at the number of white men who had settled in their former territories. In consequence of which declaration, the detachment at that post was reinforced on the following day' (Tench 1793: Ch 8 cited in Flannery 1996:140).

Specific information about the Burramatta clan or impact of settlement does not appear to have been recorded by the settlers. It is not known why there is little record of the Burramatta at or around Rose Hill at this time. They might have avoided the immediate area to avoid confrontation until they knew more about the intentions of the intruders. Clearly within a short period of time much of their country was changed beyond recognition. Except for the river and its resources, the environment at Rose Hill and the plant and animal resources it once supported was substantially altered. In order to survive, the Burramatta clan had little option but to move further afield to places where they could sustain themselves, providing adequate food and shelter. It is likely that they had contact with the settlers at Rose Hill but, attracting little attention to themselves, are not readily identifiable in the historical record by their clan name. In contrast Darug from the coastal parts of Sydney often accompanied exploration parties acting as interpreters and guides and who do appear in the record, often by name. However, records reflect that Aboriginal people from various clans were coming and going through Parramatta at this time.

On 2 June 1791 by order of the Governor the settlement at Rose Hill was named 'Par-ra-màt-ta' after the name used by the traditional owners (Tench 1793:132 in Fitzhardinge 1979:239). At this time Aboriginal communities living at the 'head of the harbour' were encouraged to supply the surplus from their fishing expeditions to the Parramatta settlement. A number of contemporary observers including David Collins and John Hunter recounted (although somewhat differently) an incident

involving members of the Burramatta clan and convicts at this time. Collins' account suggested a generally friendly and mutually beneficial relationship existed with the traditional owners at this time (Collins 1798: Vol 1 Ch 13).

> *Since the establishment of that familiar intercourse which now subsisted between us and the natives, several of them had found it their interest to sell or exchange fish among the people at Parramatta; they being contented to receive a small quantity of either bread or salt meat in barter for mullet, bream, and other fish. To the officers who resided there this proved a great convenience, and they encouraged the natives to visit them as often as they could bring the fish. There were, however, among the convicts some who were so unthinking, or so depraved, as wantonly to destroy a canoe belonging to a fine young man, a native, who had left it at some little distance from the settlement, and as he hoped out of the way of observation, while he went with some fish to the huts. His rage at finding his canoe destroyed was inconceivable; and he threatened to take his own revenge, and in his own way, upon all white people. Three of the six people who had done him the injury, however, were so well described by some one who had seen them, that, being closely followed, they were taken and punished, as were the remainder in a few days after.*
>
> *The instant effect of all this was, that the natives discontinued to bring up fish; and Bal-loo-der-ry, whose canoe had been destroyed, although he had been taught to believe that one of the six convicts had been hanged for the offence, meeting a few days afterwards with a poor wretch who had strayed from Parramatta as far as the Flats, he wounded him in two places with a spear. This act of Ballooderry's was followed by the governor's strictly forbidding him to appear again at any of the settlements; the other natives, his friends, being alarmed, Parramatta was seldom visited by any of them, and all commerce with them was destroyed. How much greater claim to the appellation of savages had the wretches who were the cause of this, than the native who was the sufferer?* (Collins 1798: Vol 1 Ch 13).

Although Aboriginal law was not accepted under British law, it was observed by colonists that revenge for an injustice was permitted under Aboriginal law (Collins 1798: Vol 1 Ch 13), generally in the form of a non-fatal spearing. This was only one instance where the differences between European and Aboriginal cultures were viewed with incredulity. Problems arose between colonists and Aboriginal people when resolutions could not be reached resulting in offence or to physical conflict. What seemed an equitable solution to one party was not necessarily considered fair or reasonable to the other, ultimately leading to the escalation of conflict and acts of retribution.

5.7 Aboriginal Resistance and Conflict with Settlers

There are numerous accounts of conflict between settlers and Aboriginal people on the Cumberland Plain in the nineteenth-century. As the subject of this report is Parramatta this history will focus on events that had an impact on Aboriginal communities in the vicinity.

By the close of 1791 large parts of the Parramatta district had been cleared as had 300 acres (121.4 ha) at Toongabbie six miles (9.6km) distant, leaving only small pockets of uncleared land between (Tench 1793 in Campbell 1927:360-1). The colonisation process put pressure on the resources available to local Aboriginal communities, blocking access to traditional pathways, camping places and hunting grounds. Relations deteriorated with increasing attacks from both sides, causing injury and sometimes death. The fatal spearing of Governor Phillip's gamekeeper, John McIntyre in retribution by Pemulwuy (c.1750-1802), a warrior, was the catalyst for the 'first (but unsuccessful) punitive expedition' against Aboriginal people on the Cumberland Plain (Attenbrow 2003: 14). This was by no means Pemulwuy's last act of resistance or retaliation against the depredations that colonisation forced on them. Pemulwuy is thought to be from the Botany Bay area, north of the Georges River or the Bediagal or 'woods tribe'. With the support of other members of his community, he courageously waged armed warfare against the intruders whose settlements were spreading across the Sydney basin resulting in theft of their land and destruction of their traditional way of life (Kohen 2005:318-9).

The colony grew rapidly during the 1790s and the land surrounding Parramatta and other settlements no longer provided a 'viable subsistence base' for the traditional owners, forcing them to rely on settlements and settlers for food and other resources. Some people maintained peaceful associations with colonists providing opportunities for the latter to learn about Aboriginal culture and the environment. Rites and ceremonies continued to be held outside of the settlements and although the 'events' were observed by colonists, their significance was generally concealed (Attenbrow 2003: 15).

Conflict between Aborigines and settlers increased in 1793 and 1794 with a number reported around the Parramatta district, in particular along the routes to Prospect Hill and Toongabbie. At the same time the government, explorers and some settlers

maintained friendly relations with individual Aboriginal men, who they relied on as guides and interpreters, as well as their communities who were given freedom to come and go from settlements (Collins 1798: Vol 1 Ch 24, 26). By 1797 relations between colonists and Aborigines had deteriorated. The European population and the area of land settled had expanded to the north and south of Parramatta. Reacting to the untenable situation, bands of Aboriginal people began a guerrilla war, attacking settlers who stole and occupied their land, prevented access to their homeland and who were exploiting their precious resources. Conflict was 'waged in earnest between 1797 and 1805 during which time the farms in the Parramatta-Toongabbie area and the Hawkesbury and Georges River districts were raided' in retaliation against 'random killings and massacres by white colonists' and dispossession from traditional lands. Retaliatory attacks were made on colonists who ventured out of the settlements, away from their farms, or into the bush (Attenbrow 2003: 14, 15).

In 1797 a raid of the government farm at Toongabbie by a desperate group of Aboriginal people and the theft of grain and musket balls led to an armed pursuit by a large group of settlers. A confrontation between the armed settlers and one hundred Aboriginal warriors led by Pemulwuy erupted on the outskirts of Parramatta. Reports suggest that in attempting to capture the resistance leader, muskets were fired and spears were thrown. The resistance leader was severely injured and five Aboriginal men were killed. Receiving buck shot to his head and body Pemulwuy was taken to hospital from where he soon escaped (Collins 1798 Vol 2 Ch 3; Kohen 2005:318-9).

Governor Hunter was not ignorant of the cause of much of the conflict between settlers and Aboriginal people. He placed blame for some incidents squarely with the settlers, also acknowledging that the forces of law and order rarely took this into account. He expressed in despatches that,

> *Much of the hostile disposition which has occasionally appear'd in those people has been but too often provoked by the treatment which many of them have received from the white inhabitants, and which have scarsely (sic) been heard of by those who have the power bestowing punishment* (Hunter in HRNSW Vol 4: 1 cited in Brook & Kohen 1991:15).

Subsequent Governors such as King were less sympathetic to the double-standards that were being imposed (Brook and Kohen 1991:16). Pemulwuy continued active resistance and further instances of conflict were reported in despatches to Britain, describing the conduct of the Aboriginal warriors led by the 'active daring leader named Pemulwye' around settlements such as Parramatta and Toongabbie (HRNSW King to Hobart 30/10/1802 HRNSW Vol 4:867). Pemulwuy evaded capture and continued his campaign of resistance to British settlement until 1802 when he was shot and killed by an armed patrol (Kass et al 1996: 49).

5.8 The Native Institution and Aboriginal Conferences at Parramatta

The orders made by the Governor leading up to the 1814 conference help in understanding some historical documents linked to this period in colonial history. It cannot be assumed that names used to identify Aboriginal communities after this date reflect pre-settlement names identifying clan or language group affiliations. Given the effect of dispossession, dislocation and dispersal from traditional land it is likely that new family groups or mixed communities formed taking up residence in remnant pockets of bushland on the outskirts of settlements and homesteads. Forced movement of people resulted in the loss of many aspects of Aboriginal culture and the emergence of new groups incorporating people from diverse areas. Reorganisation ensured the preservation of some of the core cultural practices and knowledge in Aboriginal communities (Hinkson 2001: xxiv-xxv).

Some individuals or families began living within settlements, adopting aspects of European culture. There were still intermittent outbreaks of hostilities as the Cumberland Plain became more densely settled and expanded westward. An outbreak of hostility in 1816 led to the imposition of new and tighter restrictions on the movement of Aboriginal people in and around settlements such as Parramatta. Despite expressions of sympathy with their plight, Governor Macquarie ordered the mobilisation of military detachments to 'drive away these hostile Tribes from the British Settlements'. As 'a counter balance for the restrictions', natives were offered land on which to establish themselves as settlers, as well as the necessary tools and stores for six months. As attacks on settlers were reported at the Nepean, Grose Valley, Hawkesbury and South Creek, restrictions were also imposed on Aboriginal people between Sydney and Parramatta. General Orders were that those found in the vicinity were to be detained (*Sydney Gazette* 11 May 1816:1; HRA I/9:139-145, 365; Brook & Kohen 1991: 21, 23, 32). At the same time Land Grants previously given to Aboriginal people were rescinded.

The establishment of the Native Institution, a school for Aboriginal children in Parramatta, in 1814-15 had a significant impact on the lives of some Aboriginal children and their families. The history of the Institution together with the Annual Native

Conference held in the Market Place will be discussed here as both drew Aboriginal people to the area in the first half of the nineteenth-century. Although only once a year, the conference and the feast held afterwards brought together large groups of local and distant Aboriginal clans who camped in the vicinity of Parramatta for the period surrounding the event.

The establishment of a school for the education and training of Aboriginal children was central to an assimilation policy instituted by Governor Lachlan Macquarie (1762-1824) in 1814. Although consistent with Macquarie's humanitarian interests, the idea of a 'Native Institution' was instigated by William Shelley (1774-1815), a trader and former missionary who had recently settled in Parramatta (Brook & Kohen 1991:54-5). Shelley claimed to have spoken to a 'number of tribes and individuals' who showed interest in their children attending school and on 20 August 1814 Macquarie instructed him to draw-up a proposal. Shelley began teaching four Aboriginal children to read and write from his home in Parramatta prior to the school's establishment and by December of that year rules and regulations for an institution were gazetted (Brook & Kohen 1991: 57; SRNSW Reel 6038 Frames 0295-0297). The live-in school run by Shelley was to cater for six boys and six girls for a two-year trial period. Reading and writing, as well as domestic, trade and agricultural skills were to be taught within a general framework of Christian morals and values. Land set-aside for the school's use is shown in the map reproduced below.

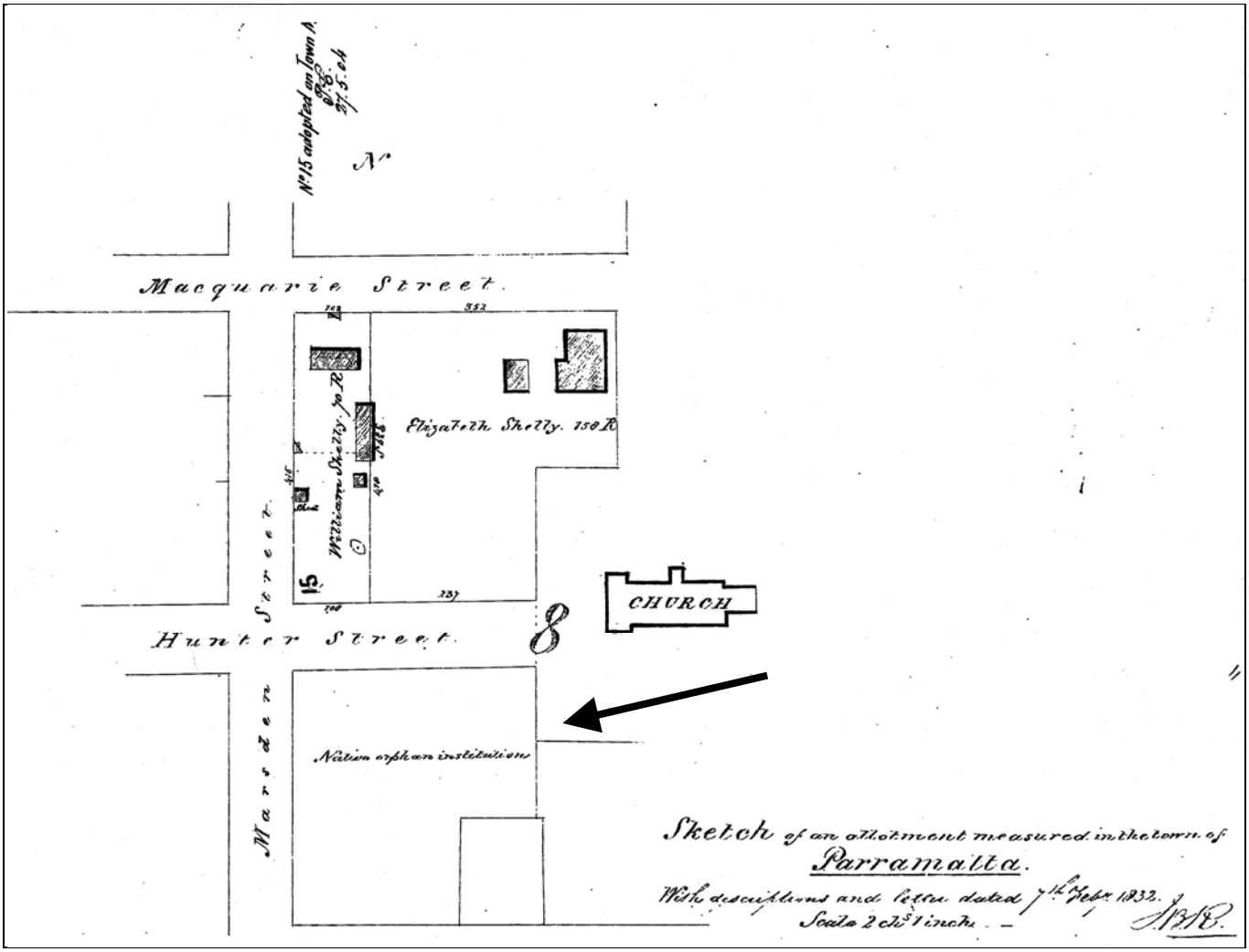

Figure 4: Site of the Native Institution shown in a plan of William and Elizabeth's Shelley's allotment to the north (SRNSW SR No 4815)

The school occupied a large site 'near the Church of Parramatta' (bounded by today's Macquarie, Marsden and Hunter Streets), in addition to a block to the south bounded by Hunter St (to the north) and Marsden St (to the west). A building at the rear of the site was built, leased or owned by the Government (Brook & Kohen 1991: 64; Kass *et al* 1996: 81). The site of the former Native Institution lies to the west of the study area

To attract students to the school Macquarie announced a meeting or conference with Aboriginal tribes to be held on 28 December 1814 at the Market Place in Parramatta. A 'feast' was planned and a committee was instructed to speak to Aboriginal people about the aims of the Institution and its administration. The conference also had another purpose. It was to be announced that Aborigines would be divided into 'District Tribes' based on their place of usual 'resort'. Tribes would then elect a Chief who the Governor would 'distinguish with an 'honorary Badge'. The nominated Chief would be responsible for resolving problems that arose within the tribe and was accountable to the Governor for their conduct. Aboriginal people wishing to become settlers would be considered for the allocation of land. The conference was to be an annual event when the parents of children attending the Institution could see them (ML Manuscripts ADD 340 27 Dec 1814 cited in Brooks & Kohen 1991:65-6). *The Sydney Gazette* recorded many of the annual conferences held at Parramatta, noting the number who attended and the names of individuals who received copper chest plates in acknowledgement of their status as chiefs or for services to the colony. The Market Place where they congregated was located in Section 26 to the west of Allotment 6 and south of the present site of the Town Hall. The site and the Native Institution nearby are indicated on the plan below.

Figure 5: The site of Market Place at Parramatta where the Annual Conference and Feast instituted by Lachlan Macquarie were held from 1814 until 1835
(Plan of the Township of Parramatta in NSW, 1 Oct 1814, LM, ML M2 811.1301/1814/1)

About sixty Aboriginal people of all ages, male and female, attended the first meeting at Parramatta with the report in the Sydney Gazette speculating that others had not come, doubting the colonists' motives or fearing that their children would be forcibly taken away. Ultimately four children were 'yielded up to the benevolent purposes of the Institution' in addition to three children already being tutored by Shelley (*Sydney Gazette* 31 Dec 1814: 2). The Native Institution officially opened on 18 January 1815, operating at Parramatta until 1824 when it was closed (Turbet 1989: 12).

Children enrolled in 1815 were identified as being from Richmond, Prospect, Caddie (Cattai Creek), Portland Head and South Creek ranging from four to eight years of age. It is not known if the places reflect the areas in which their families settled, or was the traditional land with which their clan or band identified. Children enrolled in later years came from the Hawkesbury, Cowpastures, Botany Bay, Newcastle and Kissing Point. Lists do not identify any children from the Parramatta district or *Burramatta* people, providing evidence of the extent of disruption and dislocation that they endured due to colonisation. Aboriginal parents were reticent to relinquish their children to the school and numbers remained low. Some children were surreptitiously taken back by their parents who, it could be assumed, did not want to abandon them to a system that rejected their cultural traditions and isolated them from their family and community (Brook & Kohen 1991: 68-70, 78; SLNSW ML Manuscripts DLADD 85 Digitised). Enrolment at the school varied from year to year, with the number increasing to 23 in 1820 (Misc Papers ML DLADD 85: 8). The children's achievements were displayed to their parents at the Annual Meeting held in the Parramatta Market Place (HRA I/10: 95). A few students are recorded as having become ill and died while in the school's care (*Sydney Gazette* 29 Dec 1821). Among the diseases introduced by the settlers, smallpox had a devastating impact on the Aboriginal population with adults and children dying in significant numbers (Bellingshausen in Barratt 1981: 43). A more comprehensive account of the Native Institution can be found in J. Brook and J.L. Kohen's *The Parramatta Native Institution and the Black Town*: *A History* (1991).

Following the inaugural Aboriginal Conference in December 1814 they were held annually. Macquarie and a few subsequent Governors used the event as an opportunity to diffuse tensions between Aborigines and settlers, to promote the Native Institution as well as to distribute clothes and blankets. With the exception of 1815, they were held annually until 1835 (Turbet 1989:12). In Despatches Macquarie reported that natives 'from different parts of the colony up to 100 miles distant' attended the Native Meeting in the Parramatta Market Place and clothing and blankets were distributed to each Aboriginal man, woman and child (HRA I/10: 95). In 1821 a record number of some 340 Aboriginal people attended the Conference to farewell Lachlan Macquarie, one of few Governors who had made a sincere effort 'to understand and gain their trust and confidence' (Kass *et al* 1996: 81).

Reminiscences of local settlers and their families record that leading up to the Annual Conference people would set-up camp on the outskirts of Parramatta where their fires would be seen through the night. Aboriginal people from the west set up camp at Clay Cliff Creek to the south-east of the town centre; those from the south camped at the head of A'Beckett's Creek (near the junction of Woodville Road and Union St, Granville); while others would congregate on the Western Road near the toll house. In the 1830s camps were set-up 'out of Parramatta, towards Prospect'. The creeks mentioned above and the main routes into Parramatta are shown in the map below. Following the feast and blanket distribution Aboriginal people would gather on the site of the Native Institution at the corner of Macquarie and Marsden Streets (to the east of the Study Area) for a corroboree (John Taylor cited in Kass *et al* 1996: 105; Hassall 1902: 17).

The *Sydney Gazette* and later the *Sydney Herald* reported on attendance at the Annual Aboriginal Conference, presentations made by the children of the Native Institution and any other activities that took place. Although 287 Aborigines attended in January 1832 the government's interest in its continuation declined (*Sydney Gazette* 12 Jan 1832). In May 1833 a dinner was arranged by the Committee of the Female Factory and although the Conference was held, Governor Bourke did not want Aboriginal people to be encouraged to attend (Brook & Kohen 1991: 102). It was now held in May so that the distribution of clothes and blankets would coincide with winter (Kass *et al* 1996: 105). The genuine interest in the future of the Aboriginal community expressed by Governor Macquarie was not shared by Bourke and the event was now little more than a hollow goodwill gesture when blankets could be conveniently distributed (Brook & Kohen 1991: 102). The Annual Conference at Parramatta was discontinued in 1835 (Turbet 1989: 12).

Figure 6: Map of the Parish of St John showing Clay Cliff Creek, A'Becketts Creek, Duck Creek and Duck River and the main routes into the town of Parramatta. Not dated
(Parish of St John, PMapMN05, Id 14063601, AO Map 277)

A notable student of the Native Institution was Maria Lock born at Richmond Bottoms on the eastern floodplain of the Hawkesbury River c1805. She was the daughter of Yarramundi, "Chief of the Richmond Tribes". Her family belonged to the Boorooberongal clan of the Darug people. Maria was an exceptional student and won first prize in an 1819 school examination ahead of 20 fellow students of the Native Institution and almost 100 non-Aboriginal students. In 1824 Maria married an illiterate convict carpenter, the first officially sanction union of a convict and an Aboriginal woman. They initially settled on a small farm at Black Town (Blacktown) and were employed by Rev. Robert Cartwright at Liverpool. In 1831 she petitioned for the Blacktown area deceased estate of her brother Coley (Colebee). Although opposed by Rev Cartwright, she was granted 40 acres (16.2 ha) of her own choosing near her residence (granted in her convict husband's name on her behalf). She received another 40 acres at Liverpool (again through Robert's name) in 1833 and finally also received Colebee's 30 acre (12.1 ha) Blacktown grant in 1843 ([Brooks & Kohen 1991: 256, Parry 2005)

In 1844 a further 30 acres were acquired at Blacktown. Before her death in 1854 Maria and Robert had 10 children. Upon her death in 1878 her lands were divided equally among her children and their descendants. However, in 1920, the Aboriginal Protection Board deemed her freehold land to be an Aboriginal Reserve (Plumpton) and their title was revoked.

5.9 Population Numbers

In the years following settlement there was no systematic or comprehensive documentation of the extent of the Aboriginal population, their language group or clan or the extent of traditional land with which they identified. Census and musters often linked to blanket distribution in Parramatta provide some record of families and individuals and the areas in which they were living. It is likely that they do not accurately reflect all Aboriginal people living in the district for a variety of reasons including fear of retribution for conflict with settlers, loss of their children to the Native Institution, or loss of their freedom and independence. Colonial records document many of the names of 'native guides and friendly natives' who were given rewards for their services to the colony although they are not always identified by their clan name (Misc Papers ML SLNSW DLADD 85 Digitised). The records of the Native Institution include the names of the children who attended the school, although usually only their European names and also the geographical area where their families were living. Sometimes diaries, letters and other records kept by European settlers and visitors to the colony make reference to Aboriginal communities and specific families living in and on the periphery of settlements.

Census or muster documents reflect the different ways that Aboriginal people were identified by colonial administrators. Records show that some individuals continued to identify themselves by what appear to be traditional community or clan names as well as the European names. The 1828 census recorded 49 members of the "Parramatta Tribe" including 21 men, 13 women and fifteen children who were recorded by the local Magistrate. On the Governor's recommendation they were to be given 'Blankets and Slops' on the 23rd April 1828 in commemoration of 'His Majesty's Birthday' (Sainty & Johnson 1985: 15).

Returns for Aborigines for 1834 provide a little more detail than previous records, and in some respects were consistent with musters of the European population at that time. The Return lists the Aboriginal and European names of individuals, estimated age, 'Designation Tribe', and 'Place or District of Usual Resort'. It appears that only the adult males (14) are named on the list and wives (9) and male and female children (11) are numbered. Of a total of 34 individuals listed, twenty were from Prospect and two from Duck River, both locations close to Parramatta. Others were from Kissing Point (Ryde) and Breakfast Creek (Quaker's Hill). Only *Mosquito* known as Will Will from Duck River gave the name of his 'tribe' which was *Watergoro* (Col Sec, Special Bundles, SRNSW Reel 3706). There is some inconsistency between the spelling and use of names from year to year making it difficult to trace individuals.

In 1837 both adult males and females and a few children were named on the Parramatta return with the named individuals totalling 30. The record shows the *Watergoro* from Duck River and the *Weymaly* from Prospect both in close proximity to Parramatta (Col Sec,

Special Bundles, SRNSW Reel 3706). The relationship between the *Burramatta* people noted in early settlement records and the *Watergoro* and *Weymaly* shown in Blanket Returns is not known (Col Sec, Special Bundles, SRNSW Reel 3706).

The 1840 Blanket Return taken at Parramatta recorded eight men and 12 women, 18 of whom were listed by name. Twenty children were noted however no Duck River people are recorded. Five adults and children are shown as *Weymaly* although only a few are shown as living at Prospect while others are at 'Bungarrabbee' further west (Bungarribee, Blacktown) (Col Sec, SRNSW Reel 1927). L.E. Threlkeld compiled Returns for Aboriginal men, women and children in 1839 and 1840 showing the population taken at Parramatta as 61 and 40 respectively. The population had dropped markedly not only in Parramatta but in other districts where returns were recorded (Col Sec, Special Bundles, SRNSW Reel 3706).

The Duck River or *Watergoro* people do not appear in any Parramatta Returns after 1837. From 1840 until 1843 Returns continue to include the *Weymaly* people of Prospect, as well as people from other districts who travelled considerable distances to receive blankets. By 1845 official records suggest that there were no longer any of Parramatta's Aboriginal inhabitants resident in the locality. Darug people continued to live on the Cumberland Plain however 'their presence did not always attract written comment from the authorities or observers' (Kass *et al* 1996: 106).

It is clear that the lives of people who had lived according to traditional ways in this area were catastrophically altered by European occupation and settlement over a century. Through perseverance and showing great resilience Aboriginal Australians retained some of their core traditions, customs and beliefs, passing them onto future generations despite the significant changes imposed on their lives. In 2006 Indigenous people represented 0.9% of a population of 154,158 in the Parramatta Local Government Area (2006 Census Stats www.abs.gov.au).

5.10 Study Area

Kohen et al (1999) have detailed the extensive interaction between Aboriginal people, Government House and Parramatta Park (the former Governor's Domain). The study area was once part of Parramatta Park and its history is intricately linked with Parramatta Park. Parramatta Park became the site of important contact between Aboriginal people and the colonists. Maugoran a Burramatta elder advised Governor Phillip that his was not happy about the number of white settlers at Rose Hill. Other Aboriginal people who visited Rose Hill with Governor Phillip included Bennelong and Colebee on an expedition from Sydney in 1793 whilst Arrabannu and Bennelong became regular visitors to Rose Hill (Koehn et al 1999:21). Bigon visited Governor Phillip at his hut in Parramatta in 1791. Boorong the daughter of Maugoran and her brother Ballooderry continued to visit and played an important role in cross-cultural relations in the Sydney-Parramatta area (Kohen et al 1999:25). Even Pemulwuy, a Bediagal warrior visited Parramatta Park during Governor Phillips period of residence. (Kohen et al 1999:34-35). Dissatisfied with the theft of land and resources Pemulwuy fought a guerrilla warfare in and around Parramatta. He was eventually shot by two white settlers, decapitated and his head sent to London.

George Caley who resided in a hut near The Crescent in Parramatta Park befriended members of the Burramatta clan to obtain information about plant species. Caley also established a Botanic Gardens on the site of the Government Farm on the northern side of Parramatta River. Moowattin a Burramatta man became closely associated with George Caley and travelled on

expeditions to Tasmania and Norfolk Island with Caley (Koehn 1999 47-48). Moowattin eventually travelled to London with Caley in 1810, returning to Sydney in 1811. His friendship and help was rewarded by being taken to the gallows for the supposed rape and murder of a young woman - a charge he consistently denied (Koehn 1999 59-60).

During King and Macquarie's period of governorship further attempts were made to engage in friendly relations with the Burramatta clan, with varying degrees of success. Trading was encouraged with Aboriginal people trading fresh fish caught in the Parramatta River until convicts stove in Ballooderry's canoe. Male convicts were reported as living with Aboriginal women (Kohen 1999:76). Macquarie maintained friendly relations with the Burramatta clan by dealing primarily with high profile people like Bennelong and Bungaree (although neither were Burramatta) (Kohen et al 1999:79). Macquarie's attempts included establishment of the Native Institute at Parramatta and the Native Feasts. Various policies for the control of Aboriginal people were delivered from Government House at Parramatta.

Prior to European occupation of Parramatta (including North Parramatta) the Burramatta clan had a system of laws and religious beliefs and a well established system of land tenure which was understood by everyone. They had developed a system of technologies, land management strategies and trading networks. Each person had rights and responsibilities which were determined by his or her family affiliations. However, after 10 years of European occupation, their population had declined due to disease, massacres and displacement.

Attempts at friendly relationships had been made without success. The aggressive nature of colonisation, the superior strength of numbers, guns and horses eventually dispossessed all Aboriginal people including those at Parramatta. Government House and the cultural landscape of Parramatta Park including the Western Sydney Stadium land remain as evidence of Aboriginal occupation and significant early contact between Aboriginal and non-Aboriginal settlers.

It is clear from the research undertaken to date that the study area has a long history with the Burramatta clan of the Darug. The area's precontract, contact and post-contact history is complex relating to a range of themes and people. Archaeological testing may uncover evidence of Aboriginal occupation including contact artefacts providing additional information about the period of Aboriginal and non-Aboriginal initial contact.

6.0 ENVIRONMENTAL CONTEXT

TOPOGRAPHY
STREAM ORDER MODELLING
PARRAMATTA SAND TERRACE AND SOILS
GEOLOGY
VEGETATION
CURRENT LAND USE AND DISTURBANCE

6.0 ENVIRONMENTAL CONTEXT

6.1 Topography

The study area is within the Cumberland Plain which is characterised by low gently undulating slopes. The Cumberland Plain covers approximately 600 square kilometres. It is bordered on the west by the Blue Mountains and on the east by the Georges River and headwaters of the Parramatta Rivers. To the north is the Hornsby Plateau and to the south is the Woronora Plateau (Smith 1989a:8).

The study area is on the eastern bank of the Parramatta River within the confluence of Toongabbie and Domain Creeks. It consists of level to gently sloping alluvial floodplains sloping down towards the River. The River has incised a deep channel through the alluvial floodplain down to the sandstone bedrock. The resources provided by the Parramatta River, Toongabbie and Domain Creeks and other creeks within the area would have contributed to a rich and varied eco-system providing sustenance and shelter for Aboriginal people. As well as providing excellent water resources and ecological diversity, particularly in the drier months, the well watered valleys and drainage basins within and surrounding Parramatta would have facilitated inter and intra-territory movement, for the local and visiting Aboriginal groups.

The study area is on the northern edge of the Parramatta CBD. It comprises the stadium, Parramatta Swimming Pool and associated infrastructure

6.2 Stream Order Modelling

Stream order can be used to predict Aboriginal landuse patterns. Toongabbie Creek would be classified as a third order stream whilst Domain Creek would be a first order stream.

A first order stream is the smallest and is a small tributary that flows into and feeds larger streams but does not normally have any water flowing into it. The joining of two first order streams creates a second order stream and when two second order streams join they form a third order stream. In addition, first and second order streams generally form on steep slopes and flow quickly until they slow down and meet the next order waterway. First order streams are intermittent.

Modelling undertaken by McDonald and Mitchell (1994) on the Cumberland Plain indicates that stream order can be used to predict areas of archaeological potential. The model hypothesis is that in any particular climate and landscape, a threshold catchment area is necessary to allow permanent stream flow or the establishment of waterholes with extended longevity (i.e. months to years). The critical point where these conditions are met appears to be at the junction of two second or third order streams. Such a location is likely to contain more complex sites with a high density of artefacts, whilst second and third order streams are also likely to contain large sites within 100 metres of the watercourse.

Therefore, the landscape in the vicinity of the confluence of a first (Domain Creek) and third order stream (Toongabbie Creek) with the Parramatta River could be predicted to contain high archaeological potential.

6.3 Parramatta Terrace Sand and Soils

A fluvial sand terrace (Parramatta Terrace Sand) has been recorded along the banks of the Parramatta River and throughout much of Parramatta, as shown in Figure 10 (Mitchell 2008; Casey & Lowe 2009). Culturally, this terrace sand would have been a valuable environmental asset for Aboriginal people. Mitchell (2008:16) suggests that the Parramatta terrace sand would have contained a number of important resources for Aboriginal people to utilise. These resources would have included waterholes with fresh fish, areas for shelter, fuel, food and shell resources. Sandy soils are also suitable for burials and provide a good location for campsites. Excavations in the sand terrace (McDonald 2005 & Comber 2010a; 2010b), have confirmed the importance of the terrace sand to the Darug people. Stratified deposits including artefacts and other evidence of occupation have been recorded with dates indicating possible Pleistocene occupation (McDonald 2005 & Comber 2010b).

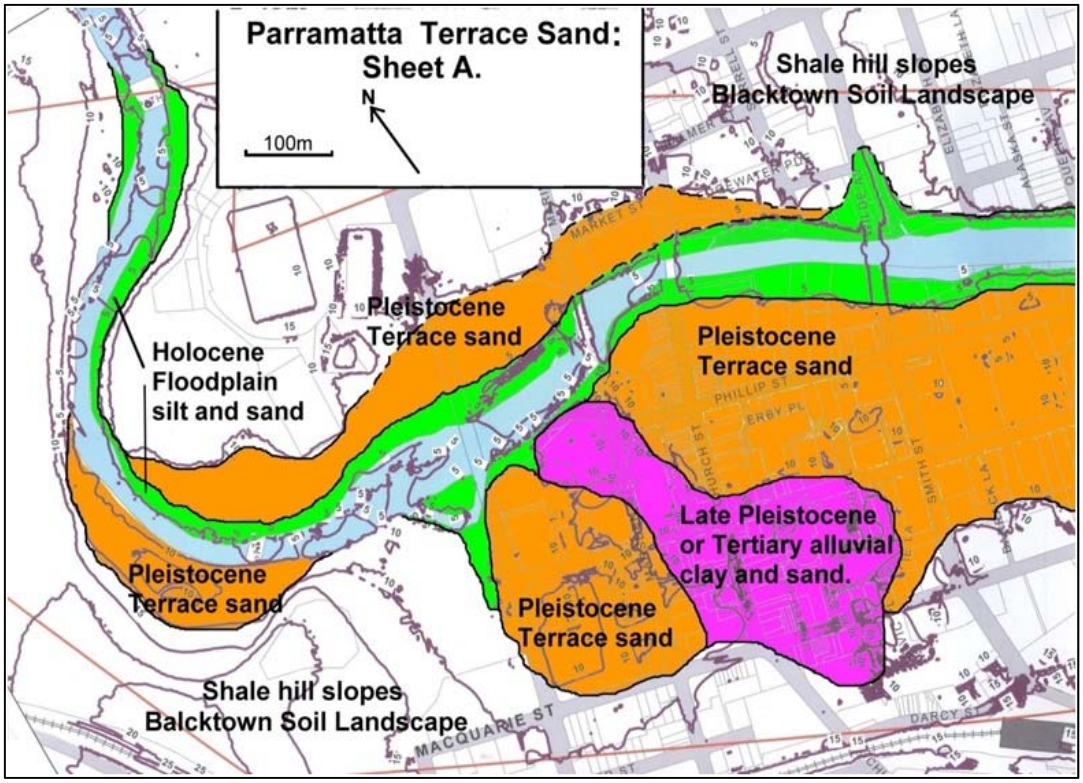

Figure 7: Showing the Indicative distribution of the Parramatta Terrace Sand at the time of European settlement. Study area indicated by arrow. Boundary edged in black (Mitchell 2008)

Mitchell's (2008) mapping concentrated on the Parramatta CBD with only a brief assessment of the area containing the study area. His brief mapping of North Parramatta reveals a Holocene floodplain and not the Parramatta Terrace Sand. However, more detailed mapping is required to confirm whether the Parramatta Terrace Sand extends into North Parramatta. Casey & Lowe (2014) monitored excavation for subsurface cable installation for Endeavour Energy at the Cumberland Hospital. They recorded fill to depths of 1200mm which overlay possible alluvial deposits, but not the Parramatta Terrace Sand. However, whether the sands were Holocene floodplain or Pleistocene Terrace Sands would not have been important to Aboriginal people. Sandy soils providing resources located near a water source would have been important to Darug resource procurement strategies.

Archaeological testing currently being undertaken at the Cumberland Hospital site for the North Parramatta Urban Transformation Project (Comber) and at the Parramatta Leagues Club (GML 2016), both just to the north of the current study area, have indicate the presence of the Parramatta Terrance Sand within both locations

6.4 Geology

The Cumberland Plain overlies the Wianamatta Group of Shales. Within the study area the Wiamanatta Group of shales overlies Hawkesbury Sandstone (sandstone with some quartz). Hawkesbury Sandstone provides materials suitable for the manufacture of ground edge axes and weathers to provide rockshelter suitable for habitation or surfaces for art.

Surrounding the study area is the Liverpool Sub-group which includes Bringelly Shales, Ashfield Shales and Minchinbury Sandstone (Sydney 1:250,000 Geological Map). This sub-group is comprised of shales, carbonaceous claystones, claystones laminate, fine to medium grained lithic sandstone and some coal (Smith 1989a:8).

Several locations on the Cumberland Plain within the vicinity of the study area contain suitable material for stone tool manufacture, such as silcrete, Silcrete outcrops are located at Luddenham approximately 15kms to the southwest, Plumpton approximately 25kms to the north-west , St Clair approximately 15km to the north-west and Erskine Park approximately 10km to the north-west. Other material used in the manufacture of stone tools on the Cumberland Plain, includes chert, tuff, quartz, basalt and quartzite, which are located within the Rickabys Creek Formation, 25kms north-west of the survey area (Clarke &

Jones 1988, Smith 1989a:9-11 & 1989:6-7). It is also likely that volcanic materials were obtained from the dolerite quarry just east of Propsect Reservoir.

Lithic materials such as quartz and tuff are suitable for small tool manufacture whilst sandstone is suitable for axes. The sandstone also provides shelter and a suitable surface for sharpening axes.

6.5 Vegetation

The vegetation of the Cumberland Plain was mapped by Benson (1979) and the NSW National Parks & Wildlife Service (2002). Historically, the undulating slopes of Western Sydney would have supported a tall open-forest of Cumberland Plain Woodland.

The area was mapped by Benson (1981) as being woodland of *Eucalyptus moluccana* (Grey Box) in association with *Eucalyptus tereticornis* (Forest Red Gum). The understorey included *Acacia parramattensis*, *Acacia floribunda* and other acacia sp., *Casuarina cunninghamiana* (River Oak), *Bursaria spinosa* (Sweet Bursaria, Blackthorn) and *Hardenbergia violocea* (False Sarsparilla) with grasses of *Themeda australis* (Kangaroo Grass) and *Lomandra longifolia*.

Such a vegetation community would have provided a variety of edible plant species and plants suitable for artefact manufacture. For example, the tall Grey Box and Red Gum's would have provided bark to make coolamons, shields or canoes, whilst the long Lomandra leaves would have been used for basket weaving (Baker et al 1986:136). Acacia gum was a sweet nutritious food source and the acacia seeds were a valuable source of protein. The dried seeds were ground between stones and baked as a bread/damper and the green seeds eaten like peas (Low 1992:86). In addition Cumberland Plain vegetation provided habitat for a variety of marsupials and birds whilst the Parramatta River and associated creeks would have provided fish, eels, crustaceans, waterfowl etc.

Current vegetation within the study area consists of landscaped gardens and sporting fields with introduced lawn, grasses, exotic vegetation and some native regrowth.

6.6 Current land use and disturbance

Settlement within Parramatta occurred very soon after the settlement of Sydney was established. In September 1788 Governor Phillip established a settlement at "The Crescent" which is now located within Parramatta Park. Settlement soon extended beyond The Crescent with the Town of Parramatta being established, whilst The Crescent formed the nucleus of the Government Domain. Parramatta Park was gazetted in 1858 after subdivision of The Government Domain. Portions of Parramatta Park and the former Government Domain are located within the study area whilst The Crescent is immediately to the west of the study area on the opposite side of the River.

The study area has undergone major changes commencing with the Government Farm in 1788. In 1847 the Cumberland Turf Club formed a racecourse which eventually became Cumberland Oval. The Parramatta Stadium which opened in 1986, and is currently being demolished will be replaced by the Western Sydney Stadium, was built on the site of the Cumberland Oval. The Parramatta Swimming Pool and parking lot are located within the study area.

7.0 ARCHAEOLOGICAL CONTEXT

SYDNEY REGION
PARRAMATTA
PARRAMATTA PARK

7.0 ARCHAEOLOGICAL CONTEXT

7.1 Sydney Region

Many surveys have been undertaken in the Sydney region which indicate the richness of the archaeological resources and which provide information about Aboriginal occupation within the region. In particular, Attenbrow (2003) has excavated a range of sites within the Sydney Basin. The aim of her study was to identify local geographic variation and temporal changes in the subsistence patterns and material culture of the people of this area. She excavated sites at Balmoral Beach, Cammeray, Castle Cove, Sugarloaf Point (Lane Cove River), Darling Mills State Forest, Winston Hills, Vaucluse and Cumberland Street in the Rocks. Dates for initial occupation range from approximately 10,000 years BP at Darling Mills to approximately 450 years BP at Cumberland Street, the Rocks.

One of the oldest dated occupations for the Sydney region is 15,000 years BP from the Shaws Creek K2 rockshelter on the Nepean River (Kohen 1984; Nanson et al. 1987). The dates obtained by Kohen (1984) and Attenbrow (2003) must be considered in association with environmental data related to sea level rises. The Sydney region that we know today was vastly different to the landscape of 15,000 years ago.

The period of maximum glaciation was 15,000 – 18,000 years BP. Therefore the date of the K2 rockshelter and Attenbrow's Darling Mills site indicate that Aboriginal people lived throughout a period of extreme environmental change. During this period, sea levels were up to 130m below current sea levels (Nutley 2006: 1). About 10,000 years ago, as temperatures began rising at the end of the last ice age, the polar ice started melting and sea levels rose. The rising sea levels forced people to abandon coastal sites and move inland, with the result that the oldest coastal sites were inundated.

By about 6,000 years ago, rising water levels had flooded the coastal plain forming the Sydney landscape that we know today. The vast majority of sites in the Sydney region date to around 5,000 years BP, after sea levels had stabilised. Whilst research into submerged indigenous sites is now being undertaken (Nutley 2006), there are few sites in the Sydney area that are known to date beyond 10,000 years BP. Therefore research undertaken to date has focused on subsistence patterns and cultural change, e.g. Attenbrow (2003).

Many archaeological surveys have been conducted within the Sydney region, particularly on the Cumberland Plain, in relation to Environmental Impact Statements. As a result of those studies, which were occasioned by the burgeoning urban expansion extending into the Cumberland Plain, the NPWS recognised the need for a coherent study of the area to fully assess the impact of urbanisation on the natural and cultural heritage of the Cumberland Plain. Smith (1989a) was commissioned by the NPWS to undertake an Aboriginal Site Planning Study to be utilised in the management of Aboriginal sites on the Cumberland Plain. Prior to her study, 307 sites had been recorded on the Cumberland Plain, mainly open artefact scatters (297) with four scarred trees, one carved tree, four axe-grinding grooves and a Mission site (the Blacktown Institute). Smith (1989a:2) added 79 open sites and 29 isolated finds from field surveys related to her study.

Smith's (1989a:3) analysis indicated that site location and site densities were influenced by the availability of water and raw materials. She concluded that other factors such as topography, natural vegetation and soil types did not influence site location.

She also identified that the majority of sites recorded have been in the northern sector of the Cumberland Plain, during site surveys of areas threatened by development (Smith 1989a:21). Her field studies (1989a & 1989b:10) confirmed that site densities in the southern Cumberland Plain appear to be lower overall to site densities on the northern Plain.

Since Smith's study, there has been a dramatic increase in development in Western Sydney, resulting in a great deal more archaeological survey and excavation (Comber 1990, 1991, 2006; McDonald 1997, 2002 & 2005a). This further work has indicated the complexity in the archaeological record of the area that was not previously recognised. For example, sites on permanent water are more complex than sites on ephemeral drainage lines with major confluences being prime site locations. However, McDonald (2005a) reports that archaeological sites are found in a range of landscapes and that their condition is dependent on the amount of impact from European land practices.

McDonald's 2005a report demonstrates the dynamic nature of stone tool technologies on the Cumberland Plain. She reviewed previous work within a theoretical framework to identify intra and inter-regional variation. She not only identified change over time in the stone tool technology, but the manner in which "stone technologies were organised in relation to landscape" (McDonald 2005a: np). Her report provides a framework to tentatively date sites through technological analyses and to

identify cultural changes.

Her study also indicated that the surface representation of a site on the Cumberland Plain does not necessarily reflect the actuality of that site. Of the excavations conducted by her, sub-surface deposits were present even when there was no surface indication of a site. According to McDonald (2005a:5), "despite artefacts being rare or completely absent on the surface at each of the sites investigated, all six sites were found to contain intact archaeological deposit. Almost 500 square metres were excavated during this Project and almost 35,000 artefacts retrieved." McDonald (2005) also considers that Aboriginal occupation was focussed on the major river systems and characterised by mobility between a small number of sites. As a result of her various studies and applying stream order modelling she (2005) further predicts that the density and complexity of archaeological sites will vary according to stream order, as follows:

- Fourth-Fifth order creeks (or rivers): Archaeological evidence will be more complex and possibly stratified, reflecting more permanent and repeated occupation on major creeks.
- Third order creeks: Evidence of more frequent occupation such as knapping floors or higher artefact densities will be found in the lower reaches of tributary creeks.
- Second order creeks: Sparse archaeological evidence will be found which indicates occasional use and/or occupation.
- First order creeks: Due to the intermittent nature of water flow only very sparse evidence would be found in the headwaters of upper tributaries such as background artefact scatter.

Kohen's studies at Penrith confirmed the importance of fifth order creeks and rivers. He recorded over 50 sites in the Penrith area which included open artefact scatters, axe grinding grooves and rock shelters. Kohen (1997:7) indicates that sites occurring throughout the Penrith area "are particularly likely to occur adjacent to the rivers and creeks. The distribution of raw materials associated with the manufacture of stone tools suggests that chert and basalt were carried or traded east from the river gravels and that silcrete was traded or carried from sources near South Creek and Eastern Creek, west towards the Nepean flood plain".

Comber (2010d&e) also recorded open artefact scatters and scarred trees within the Cumberland Plain. She undertook excavation at two sites at Penrith Lakes known as Camenzulis (2010e) and PL9 (2010d). At PL9 she retrieved more than 1,500 artefacts, including backed blades and an edge ground axe. Her work confirms McDonald's (2005) and Kohen's predictive model that sites are more likely to occur adjacent to the rivers and high order creeks. These excavations (Comber 2010d&e) at Penrith Lakes further indicates the possibility that sub-surface archaeological deposits will remain despite disturbance by non-Aboriginal activities and the complexity of such sites. Surveys (2006c & d) undertaken prior to the excavations recorded the areas as being disturbed by agricultural activities. They had been grazed, ploughed, planted with crops and a dam constructed. Only a small number of artefacts were recorded on the surface but over 2,500 artefacts retrieved during excavation.

A survey undertaken by Comber (2008) and subsequent excavations undertaken by Stening (2011) at Doonside demonstrated that although no surface artefacts were recorded (Comber 2008) substantial subsurface deposits did exist on the site with over 1,000 artefacts being recovered from a highly disturbed context (Stening 2011). This site was located beside Eastern Creek an important 4th or 5th order creek. It is an important watershed with extensive evidence of Aboriginal occupation

7.2 Parramatta

In the broader Parramatta region the previously oldest dated site is a rock shelter on Toongabbie Creek, which has been dated to around 5,500 years BP (Attenbrow 1992:4 – 5). Other sites within a 10km radius of the Parramatta LGA date to within 10,000 years BP with the majority within the last 3-5,000 years (Dallas 2003:27). Following is a summary of excavations within Parramatta.

Parramatta Children's Court Site: Cnr Macquarie and George Streets

Excavations undertaken at Parramatta by Haglund (2005) indicate that Aboriginal artefacts can still be located despite the impact of later development. At the Parramatta Children's Court site, on the corner of Macquarie and George Streets (approximately 450m to the north west of the present study area), artefacts were located in a disturbed context. A total of 157 items over 10mm in length were excavated, along with a large number of smaller pieces of core and flake fragments, along with knapping debitage.

Artefact types included pebble/cobble tools, cores/core fragments, complete flakes, flake fragments and flaked pieces. Complete flakes made up the majority of the analysed assemblage, with n=78, followed by 59 flake fragments. Raw materials included silicified tuff, silcrete, quartz, quartzite and sedimentary/metamorphic rock, with a ratio of around 3:1 for silicified tuff

to silcrete. Most of the silicified tuff flakes were short and broad, with a tendency to hinge terminations, and only four of the 60 silicified tuff flakes were longer than 30mm. In comparison, the silcrete flakes tended to be longer with parallel margins. Flake platforms were generally part of a single larger scar and most were broad rather than focal. The cobble/pebble tools identified suggested broken and/or worn items were recycled for reuse in a different manner. Haglund (2005:16-17) suggested that people camped or moved across the Parramatta area in small family groups, with no evidence of extensive or repeated visits.

Parramatta Old Hospital Site: George and Marsden Streets

Haglund (2006 & 2007) also undertook testing at the Parramatta Old Hospital Site bound by George and Marsden Streets, approximately 350m from the present study area. Artefacts recovered were attributed to one of four groups according to the area in which they were excavated, as these groups/areas were considered to vary depending on environmental conditions and later colonial land use patterns. In total, 870 items were collected, although this was considered to be a sample of the cultural material which may have been present in the area. Items recovered included complete flakes, flake fragments, cores/core fragments and retouched pieces. Flake fragments were the most common artefact type collected, followed by complete flakes. A total of 23 cores were recovered along with a further 8 core fragments, and 15 pieces exhibiting modification by retouch were identified. Silcrete was the dominant raw material type, although it was closely followed by silicified tuff. Chalcedony, fine grained siliceous, quartz, quartzite and igneous items were also identified. Artefacts were considered to have been widely although sparsely distributed across the pre-colonial landscape (Haglund 2007:50). The Parramatta terrace sand was not identified at this site.

Haglund (2006) concluded that this area was a more preferred site to the Children's Court site and that there may have been some difference in activities. However she concludes that this area was never a major campsite, but was visited sporadically by groups who manufactured artefacts at this site (Haglund 2007:37).

CG1: Cnr George and Charles Streets

McDonald undertook excavations on the north-eastern corner of George and Charles Streets, Parramatta (2005b) at site name CG1. This was considered to be the first systematically collected artefact assemblage recovered from the Parramatta terrace sand adjoining the Parramatta River (McDonald 2005b:i). Aboriginal artefacts were initially uncovered during historical archaeological investigations. Subsequent excavations for evidence of Aboriginal occupation uncovered numerous stone artefacts within the alluvial sand deposits at the site, with a total of 6,763 artefacts identified, along with an additional 680+ non-flaked lithic items which were considered to be manuports to the site. The highest density of artefacts was identified in one 1x1m test pit, which contained 393 artefacts.

The CG1 site (McDonald 2005b) revealed a subsurface artefact density of 24 artefacts per m^2. Substantial variation in raw material types was seen at CG1, and included silcrete, silicified tuff, quartz, silicified wood, igneous stones, ironstone and other. Silcrete was predominant in the upper 20cm of the deposit, whilst silicified tuff was more frequent below 20cm depth and particularly below 40cm (McDonald 2005b:64. It was considered that the relative proportions of sildrete and silicified tuff indicated a stratified site (McDonald 2005b:30). Artefacts identified include possible anvils and hammers, backed artefacts, tools/possible tools, cores/core-tools, retouched artefacts, debitage, complete flakes and flaked pieces. The CG1 (McDonald 2005b) assemblage generally comprised plain (or single) platforms comprising 56.5% of the total, with other platform types including cortex, ridged, scarred, faceted, focal and bipolar.

The site was considered to be stratified and showed spatial patterning of artefacts, including horizontal and vertical distribution of artefacts. Artefacts formed on different raw material types varied in frequency according to the depth at which they were identified. Both local and distant raw material types were represented in the assemblage. It was considered that much of the silcrete present at the site originated from the silcrete source at the Olympic Village site.

McDonald's (2005b) CG1 site appears to have been occupied from the Pre-Bondaian or early Holocene, approximately 6 – 10, 000 years ago. The size of artefacts at CG1 (McDonald 2005b) exhibited an increase with depth, indicating the change with depth from Bondaian occupation to the older Pre-Bondaian assemblage.McDonald (2005b: 91) states that the presence of "dentate retouched tools" described by McCarthy (1976) as Capertian "saws", a preference for silicified tuff and unifacial flaking resulting in wide flakes with "plain" platforms are all indicative of early occupation, along with the low frequency of backed artefacts.

CG3: 101A-105 George Street

McDonald (2005c) excavated another area opposite CG1, known as CG3, located at 101A-105 George Street, Parramatta. This site was located within the Parramatta terrace sand, although this was considered to be on the margins. The historical

development of the site had truncated the top of the deposits, resulting in the removal of much of the A horizon and leaving an approximate 20-40cm of deposit in which Aboriginal cultural material was identified (McDonald 2005c:49). A total of 510 artefacts were recovered during the archaeological excavations, comprising cores, retouched artefacts, tools/possible tools, proximal debitage, and other debitage. Raw materials included silicified tuff, silcrete, quartz, silicified wood, quartzite and unidentified materials, with silicified tuff comprising the majority of the assemblage at around 80%. Artefact densities across the site were low at around 2-6 artefacts per m^2 (McDonald 2005c:53).

Analysis of the artefacts recovered from CG3 (McDonald 2006) indicates that the assemblage is Pre-Bondaian in age, however the more recent assemblages are missing from this site, most likely as a result of soil stripping and modern development. The artefacts from CG3 (McDonald 2006) are large, indicative of the Pre-Bondaian occupation at this site. The project identified the potential for intact deposits within the Parramatta terrace sands with potential for addressing archaeological issues (McDonald 2005c:87).

RTA site G1: 109-113 George Street

McDonald (2005d) also excavated an area beside CG3, located at 109-113 George Street, known as the RTA site G1 (McDonald 2005d). The RTA site G1 provided a sequence of occupation dating from the late Pleistocene through to the mid-Holocene. The RTA site is located at the corner of George Street and Argus Lane and bound by Union Street to the south. Although the site had been heavily impacted by development, the sub-surface deposits revealed an "accumulation of evidence from multiple occupation episodes, no doubt occurring at many different times" (McDonald 2005d:147). Radiocarbon dating provided a range of dates indicating continuous occupation of the site. The most important date showed that the alluvial sand terrace, on which this site was located, was possibly first occupied during the late Pleistocene period, about 30,000 years BP and then showed various phases of occupation (McDonald 2006:107). The earliest date obtained from this site, 30,000 years BP, provides the oldest date for the Sydney Basin (McDonald 2006:4)

Artefact types recovered include hatchets, anvils, serrated tools, retouched tools, usewear artefacts, backed artefacts, cores, flakes and debitage. Raw material types included silicified tuff, silcrete, quartz, silicified wood, quartzite and unidentified materials, with silcrete comprising the majority of the assemblage. The average lithic density across the site was 38 artefacts per m^2. The assemblage described by McDonald (2005a: 88-101) contains 29 silcrete artefacts larger than 5cm, although only one of these was excavated from the upper 20cm of the deposit.

The results of McDonald's (2005a) RTA-G1 excavation indicate that the site was occupied from the Late Pleistocene with repeated occupation through the terminal Pleistocene and throughout the Holocene with the most recent radiocarbon date from the site being around 3,000 years old. The evidence demonstrates that the upper 20cm of the deposit represents the Bondaian phase of the Eastern Regional Sequence with a prevalence of glossy, heat treated silcrete dating to the last 5,000 years. The deposit below 20cm represents the Pre-Bondaian, dominated by silicified tuff, representing occupation from approximately 30,000 years ago (McDonald 2005a: 147).

95-101 George Street

In 2005 Austral Archaeology undertook an assessment of 95-101 George Street, Parramatta and identified the potential for subsurface deposits to exist at that location. Austral Archaeology (2007) subsequently undertook salvage excavation of the site. A total of 601 whole and broken flakes were recovered. The investigation proposed that the raw materials for the artefacts had been sourced both locally and from other regions. It was suggested that the prime local source would have been the gravel load of the Parramatta River. Other sources included the Olympic Village site, about 5km to the east, sandstone bodies to the north and west and the Nepean River, about 25km away (Austral Archaeology 2007:ii). This investigation also concluded that much of the artefact production had occurred *in situ*. Importantly, the study found that historic ground disturbance had left much of the archaeological deposit intact and the artefacts were found within the sandy matrix of the sand terrace that lay below the phases of historic occupation. The report also concluded that this is the same alluvial sand terrace identified by McDonald (2005b & d) and that the assemblage from 95-101 George Street is probably part of the site identified by McDonald to encompass both CG1 and RTA-G1 (McDonald 2005b & d). Another finding from this study was the conclusion that sites closer to the Parramatta River represented occupational sites that were regularly used. Sites further from the river appeared to be more 'opportunistic or casual use knapping events' (Austral Archaeology 2007:iv).

While the excavations at 95-101 George Street (Austral 2007) did not provide any suitable samples for radiocarbon dating, the range of tool types, depth of deposit and raw materials were used to establish a relative date rage for occupation of the site. The upper layers of the deposit indicate late Holocene or Bondaian occupation of the site, while the deeper material which exhibits a preference for silicified material, suggests occupation prior to 5,000 years BP. Tuff was the dominant raw material collected in this assemblage, comprising 45% of the total assemblage, while FGS was the second most common material with

23.2% of the total, and silcrete with 16.3% of the total. The assemblage collected at 101 George Street (Austral 2007) shows that overall artefact size is small with the maximum artefact length being 39cm. The assemblage collected at 95-101 George Street (Austral 2007) was dominated by conchoidal initiations with this type representing 97.3% of the total number of flakes, 1.6% bending initiation and 1.1% bipolar initiations. The assemblage was dominated by single (flat) platforms which comprised 65.6% of the total flaked artefacts, and cortical platforms represented 5.4% of the total number of flaked artefacts. The analysis (Austral 2007: 117) states that the larger artefacts are indicative of the Pre-Bondaian occupation of the site, and that Bondaian artefacts are generally significantly smaller in size.

Sydney Water Monitoring

In 2009 monitoring of excavations in Macquarie Street by AHMS (2009) on behalf of Sydney Water were conducted opposite Civic Place and at the intersection with Charles Street. The Sydney Water excavations, which were between 1.3m and 2m in depth (AHMS 2009:18, 23) were subjected to archaeological monitoring but no Aboriginal objects were found (AHMS 2009:39). The Parramatta terrace sand had been considered to extend into this area, although no evidence of the sand sheet was identified during the monitoring works. The soil profile in the trenched directly opposite Civic Place was shown to contain road base and levelling fill overlying an orange/mottled heavy Tertiary clay, although it was noted that this area had been impacted through the installation of an historic drain trench within a former creek channel.

Sydney Water Headquarters: 1 Smith Street

McDonald (2004a) undertook excavations in the south eastern corner of Parramatta Square (Civic Place) development site at 1 Smith Street, which was to become the Sydney Water Headquarters, uncovering Aboriginal artefacts. This site had been identified as a PAD and registered as AHIMS site 45-6-2678 SSP1. A total of 198 lithic items were excavated at the site. The majority of the assemblage (n=118, 59.6%) comprised quartz, followed by silcrete, silicified tuff and silicified wood. A range of artefact types were identified, including a number of bipolar cores and bipolar debitage. The majority of the assemblage comprised debitage.

This investigation concluded that although the site had been subjected to more than 100 years of development, approximately 40% of the site remained "undisturbed or only superficially impacted" (McDonald 2004a: 34). Artefact density across the site was considered to be very low at 2-3 artefacts per m^2, although one trench yielded 25 artefacts (McDonald 2004a: 19). The site was considered to have been occupied in a transient, non-residential manner, due to its distance from water (McDonald 2004a:30). McDonald states that similar locations in the Parramatta CBD are likely to contain "intact artefact bearing deposits" (McDonald 2004a: 34). The assemblage at the Sydney Water Headquarters was considered to be more recent than those dominated by silicified tuff, based on the fact that quartz was the dominant raw material type present (McDonald 2004a:32). The excavation at the Sydney Water headquarters allowed an understanding of the way the areas away from the Parramatta River were utilised by Aboriginal people before colonial settlement occurred.

15 Macquarie Street

Comber (2010a) undertook archaeological excavations at 15 Macquarie Street, Parramatta which had been highly disturbed throughout its history of use since 1804. At the time of excavation it was a sealed car park. This excavation retrieved 350 artefacts and the analysis identified that intact archaeological deposits were present on this site. The subsurface artefact density at 15 Macquarie Street Parramatta (Comber 2010a) was 2.3 artefacts per m2. The results of lithic analysis at 15 Macquarie Street Parramatta (Comber 2010a) indicate that the assemblage collected contained 15 microliths and an edge ground axe. The presence of microliths, indicative of the Australian small tool tradition and Bondaian phase of the Eastern Regional Sequence, and an edge ground axe, demonstrating the Eloueran phase in the assemblage, demonstrate that typologically this assemblage belongs to the Australian small tool tradition and the Bondaian and Eloueran phases of the Eastern Regional Sequence. There was a distinct preference for silcrete which comprised 59.39% of the total assemblage, while quartzite only comprised 2.03% of the total.

The results of lithic analysis at 15 Macquarie Street Parramatta (Comber 2010a) indicate that the assemblage collected contained 15 microliths and an edge ground axe. The presence of microliths, indicative of the Australian small tool tradition and Bondaian phase of the Eastern Regional Sequence, and an edge ground axe, demonstrating the Eloueran phase in the assemblage, demonstrate that typologically this assemblage belongs to the Australian small tool tradition and the Bondaian and Eloueran phases of the Eastern Regional Sequence. There was a distinct preference for silcrete which comprised 59.39% of the total assemblage, while quartzite only comprised 2.03% of the total. The assemblage retrieved from 15 Macquarie Street (Comber 2010a) contained 195 flaked artefacts with 98.5% of these being conchoidal initiation types and 1.5% being represented by bending initiations.

The excavations at 15 Macquarie Street (Comber 2011a) revealed an assemblage that was dominated by single platforms which

contributed 64.6% of the total number of flaked artefacts, while cortical platforms were present on 7% of the flaked artefacts and focussed platforms comprised 15.8% of the total.

Evidence of the Parramatta Terrace Sand was not found at this site.

Cumberland Press Site: 142-154 Macquarie Street, Parramatta
Work undertaken by Haglund (2008) and Comber (2011b) at 142-154 Macquarie Street, Parramatta (the Cumberland Press site) revealed that subsurface artefacts were present on this very disturbed site. The Parramatta terrace sand was identified at this site. The site had previously been subjected to multiple uses including a Colonial hotel and residences. Prior to excavation this site was a sealed car park at the rear of the Cumberland Press building. The excavation of the Cumberland Press site by Haglund produced an overall average artefact density of 10 artefacts per m^2 (Haglund 2008: Appendix C 13), while the Comber Consultants Cumberland Press excavation produced a sub surface artefact density of 3.5 artefacts per m^2 (Comber 2011b). Haglund (2008) identified that the area tested was too small to allow conclusions to be made regarding spatial patterning of group sizes and frequencies of site use.

The assemblage recovered during Haglund's (2008) and Comber Consultants' (Comber 2011b) Cumberland Press excavations were dominated by silcrete with silicified tuff being the next most common raw material. The lithic analysis and the results of the excavations lead to the conclusion that the Cumberland Press site was missing the deeper Pre-Bondaian deposit present below 20cm at the RTA-G1 site. Silcrete was the predominant material in both Cumberland Press excavations with Haglund's (2008) assemblage with silicified tuff being the next most common raw material. Comber's (2011b) assemblage was also dominated by silcrete, which comprised 90.48% of the total assemblage, while quartzite was not represented in this collection.

The size of the artefacts collected by Comber (2011b) at Cumberland Press was small, with only four (19.05% of the total assemblage) artefacts having a measurement greater than 20mm. The previous Cumberland Press excavation by Haglund (2008) produced a total of 26 out of 104 artefacts measuring greater than 20mm, comprising 25% of the total assemblage (2008: Appendix C 9). Information on initiation types is not provided in the lithic analyses. The Cumberland Press excavations by Haglund (2008) revealed that the most commonly occurring platform type was plain, comprising 39.29% of the total. Information on platform types was not available for the Comber (2011b) Cumberland Press excavation.

Evidence of the Parramatta Terrace Sand was found at this site.

140 Macquarie Street
Excavations undertaken by Comber (2010b) at 140 Macquarie Street for Endeavour Energy on a previously disturbed site uncovered intact *in situ* archaeological deposits and approximately 60 artefacts. The excavation at 140 Macquarie Street Parramatta (Stening 2011) revealed an artefact density of 3.5 artefacts per m^2. These results confirm that intact sub-surface archaeological deposits may still exist despite later disturbance. Again, this site contained a sealed car park and buildings.

The assemblage collected from 140 Macquarie Street (Stening 2011) was comprised of 63 flakes without retouch, three retouched flakes and one anvil/hammer stone. The most commonly occurring artefact type was the flake without retouch making up 94.03% of the total assemblage. Retouched flakes made up the second most commonly occurring artefact type with 4.48% of the total, and the anvil/hammer stone comprising 1.49% of the assemblage. Of the three retouched flakes, one is a broken backed artefact and another is probably the proximal portion of the original flake used to make the backed artefact. This was retouched after the original flake broke with a transverse snap, possibly during production of the backed artefact. The distal portion of the third retouched flake exhibited clear evidence of use wear. All three retouched flakes measure less than 30mm in length and are can be classified as microliths, according to Gould's (1969: 235) description, therefore dating the assemblage to the Bondaian and Eloueran phases of the Eastern Regional Sequence.

The assemblage collected at 140 Macquarie Street (Stening 2011) showed that the artefacts were generally small with only 3.17% of all flakes having a dimension greater than 30mm. At 140 Macquarie Street (Stening 2011) conchoidal flakes were the most commonly occurring initiation type with conchoidal flakes representing 92.42% of the total and bipolar flakes representing 7.58% of the total. At 140 Macquarie St (Stening 2011) single platform dominated the assemblage, comprising 48.48% of the total.

Evidence of the Parramatta Terrace Sand was found at this site.

Harris Street Footpath
Comber (2015) undertook an excavation along Harris Street, Parramatta, in advance of the installation of new cabling and

ducting for Endeavour Energy. The excavated area was covered by a concrete footpath. A total of 59 artefacts were recovered during the excavation. The artefact density for the site was 6.55 artefacts per m2. The assemblage was comprised of one core, six flakes without retouch, three retouched flakes and 49 flaked pieces. The prevalence of quartz (42.37% of the total) artefacts in this assemblage, suggested that a local source of quartz was available for the production of small artefacts. Silcrete was the second most commonly occurring raw material representing 27.11% of the total; glass comprised 20.34% of the total; chert comprised 8.47% of the total; and quartzite 1.7% of the total. Artefacts were recovered from a depth of up to 45cm.

Typologically the assemblage excavated from the Harris Street footpath belongs to the Australian small tool tradition and the Bondaian phase of the Eastern Regional Sequence, which is dated to no later than 7,000BP. An examination of the reduction intensity of this assemblage, which was undertaken in terms of flake and flaked piece size, the amount of cortex present on artefacts and cores, and the ratio of flakes to cores, generally demonstrates that there is a high reduction intensity within this assemblage. The core to flake ratio, however, suggests a lower reduction intensity, suggesting that the site was occupied for short periods of time by more mobile people.

Evidence of the Parramatta Terrace Sands was identified at this site.

The studies undertaken within Parramatta to date indicate the archaeological importance of the Parramatta Terrace Sand and the possibility for artefacts and subsurface *in situ* deposits to remain despite later urban development.

Parramatta Square (PS): Macquarie Street, Parramatta
Comber (in prep) undertook excavations at PS3 and is currently excavating PS5&6. At PS3 over 300 artefacts were uncovered in a highly disturbed landscape. Evidence of the Parramatta Terrace Sand was not found.

At PS5&6 Aboriginal hearths and artefacts have been uncovered. Although this site was not located on the Parramatta Terrace Sand a creek (which was channelized and is known as the "Town Drain") formerly crossed the site. Sandy deposits were located beside this creek.

Old Kings School, Parramatta
An Aboriginal Heritage Impact Assessment Report was prepared by AHMS (2016) in respect of the proposed redevelopment and upgrade of facilities within the site. This report demonstrated the archaeological significance of the area and that the site contained the Parramatta Terrace Sand. Archaeological testing revealed an artefact assemblage "*characteristic of a small hunting camp and deposited during the Pleistocence* (AHMS:iii). The site has been designated Old Kings School AS1. Given the site's archaeological significance the report recommended archaeological salvage prior to redevelopment. This site is on the eastern side of O'Connell Street and the Western Sydney Stadium site.

Parramatta Leagues Club
GML (2016) undertook monitoring of geotechnical investigations within the carpark of the Parramatta Leagues Club. They sieved the deposits retrieved during the geotechnical testing. Aboriginal objects were not uncovered due to the stripping of the site to create the carpark and installation of services. Evidence of the Parramatta Terrace Sand was uncovered in the northern portion of the site. They concluded "*Outside of the area test excavated by the current work it should be assumed that PSS (Parramatta Sand Sheet) deposits retain a level of potential for Aboriginal and historical archaeological deposits*" (GML 2016:ix). The Parramatta Leagues Club is located directly to the north of the current study area.

North Parramatta
A number of sites have been recorded to the north and north west of the study area. Site Cards were requested from AHIMS for the following sites but to date not all site cards had been received and therefore full details about each site cannot be provided at this stage:

Three sites in Toongabbie recorded by Jo McDonald (45-5-2295, 45-5-2296, 45-5-2297) are located approximately 1.5 km to the north west of the study area.

Four axe grinding grooves were recorded by Guider on a rock outcrop in Toongabbie Creek, approximately 600 metres to the north west of the study area (AHIMS 45-5-1110). However Dallas and Irish (45-5-1110 AHIMS Site Card) later inspected these axe grinding grooves and determined that they were not Aboriginal grinding grooves.

Toongabbie Cave (AHIMS 45-5-0835) is a rock shelter with deposit recorded by Guider approximately 1.5km to the north of the study area. Guider recorded axe grinding grooves along Toongabbie Creek at Winston Hills (AHIMS 45-5-0841). These are

located approximately 1.5km to the west of the study area. Guider also recorded further Aboriginal grinding grooves (AHIMS 45-5-0843) on Finlayson's Creek approximately 1.7km to the north west of the study area. These grooves were confirmed to be Aboriginal grinding grooves by Dallas and Irish (45-5-0843 Site Card).

A Potential Archaeological Deposit (AHIMS 45-5-3349) was recorded by McDonald approximately 500m to the northwest of the study area. Another Potential Archaeological Deposit (AHIMS 45-5-2971) was recorded by Dallas approximately 1.5km to the north west of the study area.

AHMS (2013) prepared a preliminary assessment of the Cumberland Precinct and recorded 29 sites within 1km of the Cumberland Precinct. The majority of these sites were close to the Parramatta River and comprised the full range of site types including artefact scatters, rock shelters, grinding grooves and scarred trees (AHMS 2013:18-19).

The author is presently excavating at the Parramatta North Urban Transformation site (Cumberland Hospital) and has uncovered evidence of occupation in the form of stone and glass artefacts. The site is large and the soils vary and include alluvial deposits.

7.3 Parramatta Park

As indicated in Figure 3 a portion of Parramatta Park is located within the Sports and Leisure Precinct. One known site, which has been removed since it was first recorded, was located within the portion of Parramatta Park within the Sports & Leisure Precinct. A scarred tree (AHIMS 45-5-0277) was initially recorded by Cook in 1981. It was recorded as being located 60m north of the grandstand on the western side at Cumberland Oval, within (or just outside) the North Precinct. Attenbrow (1994; 1996a) was unable to locate the scarred tree and very few details are recorded. Attenbrow records this as Location A (Attenbrow 1996b:3). The site inspection for the present project also failed to locate the tree. It appears that it may have been removed during construction of the Parramatta Stadium (Attenbrown 1996b:3).

Other sites recorded within Parramatta Park demonstrate the richness of the archaeological record for the area and the possibility that the study area was once an important area for the Darug. Figure 11 below shows the location of sites recorded within Parramatta Park.

Attenbrow (1996a; 1996b: 4; AHIMS 45-5-762) also recorded an artefact scatter with two scarred trees located on the ridge overlooking the Crescent, within the Domain Precinct. The scatter consisted of 25 artefacts exposed in eroded areas and located approximately 120m to the north of the Boer War Memorial. The artefacts include bondi points, flakes, cores and flaked pieces. The two scarred trees are located to the west of the artefact scatter (1994: 8). This is recorded by Attenbrow as Location B (1996b: 4) on Figure 11 below.

A single stone artefact was located in the underfloor deposit within the Dairy Cottage at a depth of approximately 30cm during historical excavations. No further information is recorded. Attenbrow (1996b: 8) records this as Location C. There does not appear to be a registered AHIMS site associated with this find.

A single flaked stone artefact was recorded by Varman in 1993 in an area of exposed ground on the ridge overlooking The Crescent (Attenbrow 1994:9) in the Domain Precinct. It is recorded as being to the north of the road and to the west of the wooden fence surrounding Government House and associated buildings. No further information is recorded and there does not appear to be a registered AHIMS site associated with this find. Attenbrow (1996b: 9) records this as Location D.

A single silcrete flaked piece was recorded by Attenbrow (1994: 10) on the ridge overlooking The Crescent. It was located approximately 47m west of the corner of the "cream building in the Government House complex" (Attenbrow 1996b: 10), in the Domain Precinct. There does not appear to be a registered AHIMS site associated with this find. Attenbrow (1996b: 10) records this as Location E.

Attenbrow and Kondek (1996b: 12) recorded two silcrete flaked pieces on exposed ground approximately 40cm from the base of a eucalyptus tree. The artefacts were located between the road and railway adjacent to the car park north of the Macquarie Street gate (1996b: 12), within the Domain Precinct. There does not appear to be a registered AHIMS site associated with this find. Attenbrow (1996b: 12) records this as Location G.

Guider (AHIMS 45-5-1065) further identified an artefact scatter comprising silcrete, "indurated mudstone" (sic) and quartz with rock oyster (Saccostrea commercialis) shell. The site was located on an area of exposed ground overlooking the south bank of

the Parramatta River near the flat stones (near the weir between Parramatta Park and the Parramatta Leagues Club), within the River Front Precinct.

Attenbrow (1996b: 11) recorded a silcrete flaked piece on the eastern bank of Domain Creek, approximately 5m from the creek bank and approximately 200m west if Parramatta River. There does not appear to be a registered AHIMS site associated with this find. Attenbrow (1996b: 11) records this as Location F.

Attenbrow and Kondek (1996b: 13) also recorded a single silcrete flaked piece in an area of exposed ground in the centre of a grassed playing field on the western side of Domain Creek. The site is located approximately 60m to the west of Domain Creek and approximately 320m to the west of Parramatta River. There does not appear to be a registered AHIMS site associated with this find. Attenbrow (1996b: 13) records this as Location H.

Attenbrow and Kondek (1996b:14) located a further site comprising a silcrete core and a chert flake. The artefacts were recorded in two separate areas of exposed ground approximately 7m apart in the grassed playing field to the west of Domain Creek. The site is located approximately 60m to the west of Domain Creek and approximately 320m to the west of Parramatta River. There does not appear to be a registered AHIMS site associated with this find. Attenbrow (1996b: 14) records this as Location I.

A further Aboriginal site was recorded by Attenbrow and Kondek (1996b: 15). The site comprised three silcrete flakes and flaked pieces located in a large area of exposed ground to the north east of the toilet block adjacent to Jessie Street and south west of Coleman Oval. The site is located approximately 60m to the west of Domain Creek and approximately 400m to the west of Parramatta River. There does not appear to be a registered AHIMS site associated with this find. Attenbrow (1996b: 15) records this as Location J.

An artefact scatter comprising four flaked silcrete artefacts were located in an area of exposed ground within 30cm of the base of a Melaleuca tree. The location is given as “Far northwestern corner of Park” (Attenbrow 1996b: 16), approximately 50m west of Domain Creek and approximately 130m west of Parramatta River. From the plan provided by Attenbrow (1996b: 2), it appears that this site is located to the north of Coleman Oval. There does not appear to be a registered AHIMS site associated with this find. Attenbrow (1996b: 16) records this as Location K.

A quartzite core was located by Attenbrow and Kondek (1996b: 17) on an informal foot track which runs parallel to Domain Creek, on the eastern side of the creek at the northern end of the park. The site is located approximately 4m east of Domain Creek and approximately 240m west of Parramatta River. There does not appear to be a registered AHIMS site associated with this find. Attenbrow (1996b: 17) records this as Location L.

A single silcrete flake was recorded by Attenbrow and Kondek in an area of exposed ground at the “northern end of the Park, eastern side of road near road junction” (1996b: 18) and approximately 140m east of Domain Creek and approximately 160m west of the Parramatta River. From the plan provided by Attenbrow (1996b: 2), it appears that this site is located just outside the Dairy Precinct, in the Paddocks Precinct. There does not appear to be a registered AHIMS site associated with this find. Attenbrow (1996b: 18) records this as Location M.

Attenbrow and Kondek recorded an artefact scatter comprising two silcrete flakes, one silicified wood flake and an “indurated mudstone” (sic) core (1996b: 19). The scatter was located in an area of exposed ground within the road embankment on the eastern side of the western arm of Bynes Avenue (1996b: 19). It is approximately 100m to the east of Domain Creek and approximately 120m to the west of Parramatta River. There does not appear to be a registered AHIMS site associated with this find. Attenbrow (1996b: 19) records this as Location N.

A chert core was recorded by Attenbrow and Kondek (1996b: 20) in an area of exposed ground on the western side of the eastern arm of Bynes Avenue. It is located approximately 50m to the west of Parramatta River and approximately 150m to the east of Domain Creek. There does not appear to be a registered AHIMS site associated with this find. Attenbrow (1996b: 20) records this as Location O.

Steele (1999: 26; AHIMS 45-5-2463) recorded a single red silcrete flake which was located within a small area of exposed ground on the eastern side of Domain Creek, opposite Coleman Oval. The site is located approximately 10m to the east of Domain Creek and approximately 250m to the west of Parramatta River. This find was situated approximately 35m south of an isolated find recorded by Attenbrow (Location L). Steele records this as Location R.

A further isolated find comprising a silcrete flaked piece was recorded by Steele (1999: 27; AHIMS 45-5-2464) in sediment excavated for a picnic shelter posthole. The artefact was located on the western side of Domain Creek, south of Coleman Oval and adjacent to the children's playground. The site is located approximately 15m to the west of Domain Creek and approximately 300m to the west of Parramatta River. The artefact was recorded approximately 150m south of Attenbrow's Location J. Steele records this as Location Q.

While undertaking monitoring within the Parramatta Golf Course, Steele (2001) identified a silcrete core on the surface of "introduced red clay" that most likely comes from excavations associated with adjacent residential construction (2001: 22). This site is located within the Mays Hill Precinct., approximately 50m south west of Domain Creek. Whilst Steele's report (2001: 22) states that an AHIMS site card was submitted for this site, it does not appear on the AHIMS Search dated 03/05/2013. Steele records this site as Location S.

In 2011 Smith undertook monitoring of the excavation of a trench extending from the Parramatta Golf Club service pole in a northerly direction towards Park Parade (2011: 1). While he reports that no Aboriginal objects were located during the works, he notes that natural soils were present underneath fill from a depth of approximately 250mm (2011: 1).

In 2015, Comber Consultants undertook archaeological test excavations within Parramatta Park within the Paddocks and the Crescent Precincts. Over 500 artefacts were recovered from the Paddocks Precinct and the Crescent (Comber 2016). Neither site is located on the Parramatta Terrace Sand.

The archaeological evidence indicates that Parramatta Park is a significant cultural landscape containing evidence of occupation in the form of artefact scatters, scarred trees, resources and sub-surface archaeological deposits. It provides fresh water, a wide range of resources for sustenance and tool making, a ridgeline for travel and vantage points.

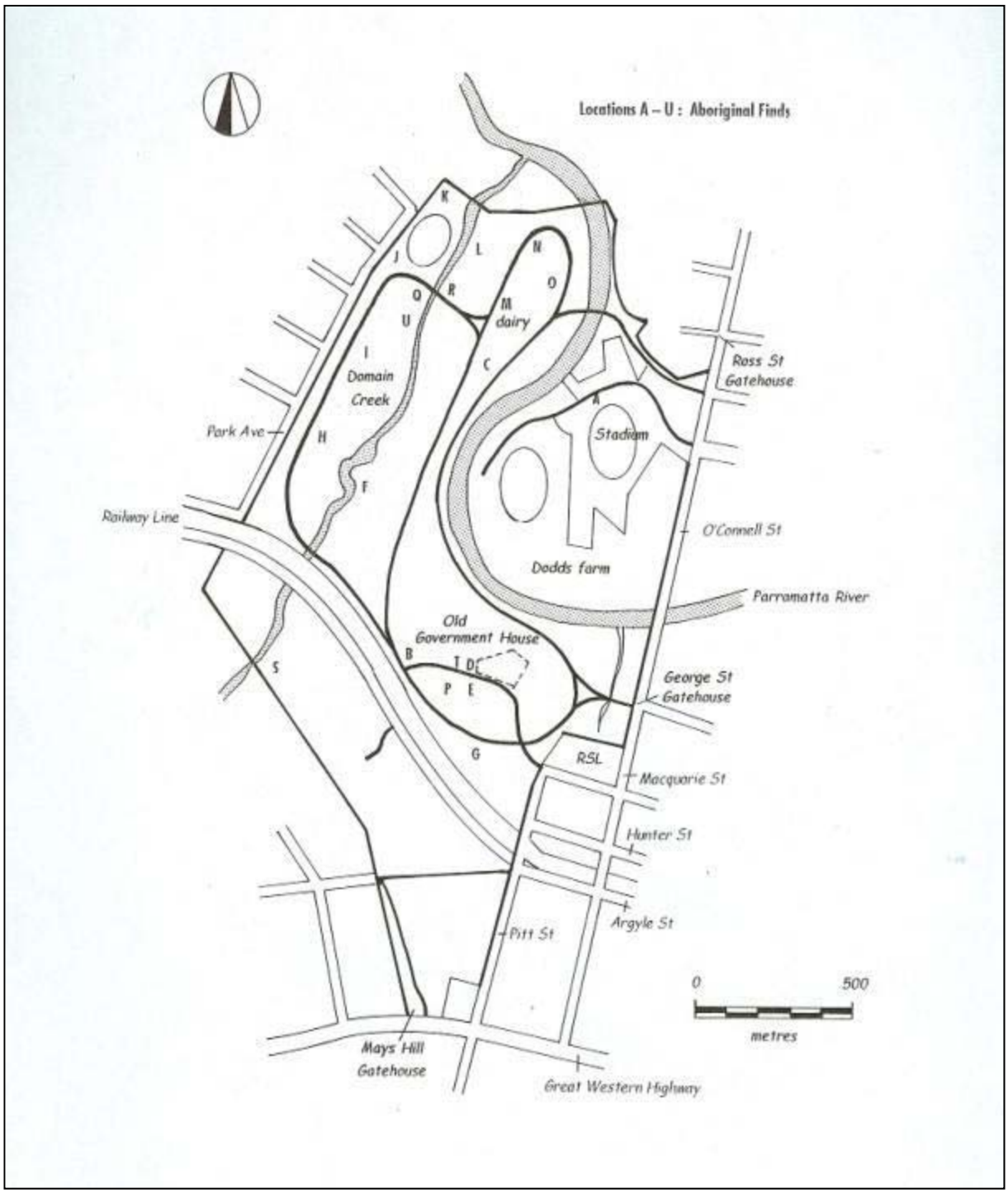

Figure 8: Showing Attenbrow and Steele's site locations (Locations A - O)
(from Steele 2013: 46)

7.4 Study Area

No known sites are recorded within the study area.

A scarred tree (AHIMS 45-5-0277) was initially recorded by Cook in 1981. It was recorded as being located 60m north of the grandstand on the western side at Cumberland Oval (now Parramatta Stadium). Attenbrow (1994; 1996a) was unable to locate the scarred tree and very few details are recorded. Therefore, it appears that it was removed sometime between 1981 and 1994. Attenbrow (1994) states that it may have been removed during construction of the Parramatta Stadium. The site inspection for the present project also failed to locate the tree.

Dr Andrew McLaren of AECOM undertook an assessment and site inspection of the study area in association with the RAPs in respect of preparation of the EIS for the staged redevelopment of the study area. No sites were recorded within the study area. Site 45-6-3222 "Old Kings Oval Artefact Scatter 1" was recorded by AECOM on an unsealed track to the east of Old Kings Oval. It consists of a silcrete flake and flaked piece located approximately nine metres apart. This site is just outside the current study area.

7.5 Discussion

The archaeological evidence detailed above clearly indicates the potential for Aboriginal archaeological deposits to remain within the study area. Aboriginal objects have been uncovered in areas surrounding the current study area and within disturbed contexts. In particular Aboriginal objects have been located to the south east of the Stadium near Kings Oval; to the north within the Cumberland Hospital site and to the east at the Old Kings School. The evidence also suggests that the study area is located on the Parramatta Terrace Sand, a culturally significant landscape.

8.0 SIGNIFICANCE ASSESSMENT

PREAMBLE
ASSESSMENT

8.0 SIGNIFICANCE ASSESSMENT/ABORIGINAL VALUES

8.1 Preamble

Significance assessment is the process whereby sites or landscapes are assessed to determine their value or importance to the community.

A range of criteria have been developed for assessing the significance which embody the values contained in the Burra Charter. The Burra Charter provides principles and guidelines for the conservation and management of cultural heritage places within Australia.

Following are the criteria which will be used to assess the study area:

Social Value (sometimes termed "Aboriginal" value) which refers to the spiritual, traditional, historical or contemporary associations and attachments which the place or area has for the present day Aboriginal community.

Historic Value refers to the associations of a place with a person, event, phase or activity of importance to the history of an Aboriginal community.

Scientific Value refers to the importance of a landscape, area, place or object because of its archaeological and/or other technical aspects.

Aesthetic Value refers to the sensory, scenic, architectural and creative aspects of the place.

Representativeness refers to whether the site demonstrates the principal characteristics of that site and is a good representative example of that site type.

Rarity refers to the degree to which such a site is known elsewhere and whether the site is uncommon, rare or endangered.

8.2 Assessment

Social Values
Consultation with representatives of the Aboriginal community indicates that the study area is of importance to the local and broader Aboriginal community. The study area has the potential to contain evidence of Aboriginal occupation which provide a continuing cultural link to their past. The site provides evidence of tangible and intangible links with the lifestyle and values of their ancestors.

Historic Values
The study area contains contemporary significance related to the history of the participation of Aboriginal people in sport and the history of individuals who have played football at the Parramatta Stadium. The site has the potential through archaeological excavation to provide the physical evidence of Aboriginal occupation contributing to the historic values of the site.

Scientific Values
The study area has the potential to contain subsurface Aboriginal archaeological deposits which demonstrate the history of Aboriginal land use patterns, resource use and subsistence activities.

Aesthetic Values
The study area includes open spaces that evoke the open landscape created through Aboriginal land management techniques such as "firestick farming".

Representative Values
The study area has the potential to provide a good representative example of an Aboriginal site, however, this will be confirmed once the testing has been completed.

Rarity Values
Until further research has been completed it is not known if the study area contains rarity values.

8.3 Statement of Significance

Consultation with representatives of the Aboriginal community indicates that the study area is of importance to the local and broader Aboriginal community. The study area has the potential to contain evidence of Aboriginal occupation which provides a continuing cultural link to their past. The site provides evidence of tangible and intangible links with the lifestyle and values of their ancestors. The study area contains contemporary significance related to the history of the participation of Aboriginal people in sport and the history of individuals who have played football at the Parramatta Stadium. The site has the potential through archaeological excavation to provide the physical evidence of Aboriginal occupation contributing to the historic values of the site. The study area has the potential to contain subsurface Aboriginal archaeological deposits which demonstrate the history of Aboriginal land use patterns, resource use and subsistence activities. The study area includes open spaces that evoke the open landscape created through Aboriginal land management techniques such as “firestick farming”. It has the potential to provide a good representative example of an Aboriginal site, however, this will be confirmed once the testing has been completed.

Once the testing has been completed this significance assessment will be revised depending on the results of the testing.

9.0 PREDICTIVE MODEL

9.0 PREDICTIVE MODEL

On the basis of the above environmental and archaeological information, predictions can be made about where sites might occur and what site types would be expected. From the available information, it can be extrapolated that the following landforms are culturally sensitive:

- The Parramatta Terrace Sand. Detailed mapping of the Parramatta Terrace Sand has not occurred within the study area. It is highly likely that alluvial sands are located within the study area close to the Parramatta River. However, the evidence indicates that the area has been filled to raise it above the flood plain prior to construction of existing buildings. The landscape has been modified with introduced topsoil and landscaping to create the playing fields and open recreational area. It is possible that alluvial sands could exist at least 1m under the present ground level. Mitchell (2008) has demonstrated that the Terrace Sand can extend beyond 300m from the riverbank.
- Areas of floodplain (whether alluvial or clay) beyond the Terrace Sand but close to the Parramatta River may contain more intensively utilised occupation sites. Using Mitchell's modelling, this would be beyond 300m of the riverbank.
- Areas of the floodplain further from the Parramatta River may be characterised by more temporary occupation sites, i.e. opportunistic or casual use knapping events.

All of the landforms detailed above can be found within the study area indicating that it is highly likely that the whole of the study area may contain Aboriginal archaeological deposits. Such evidence could include the following site types:

- *Open camp sites or artefact scatters*
  These sites are characterised by surface or subsurface scatters of stone artefacts or artefacts embedded in deposits.

- *Isolated finds*
  Single artefacts which may be the result of tool loss, abandonment or maintenance may be found. These may also be indicators of otherwise buried sites or the only remains of heavily disturbed sites.

It should be noted that the level of disturbance within the study area does not preclude the possibility that subsurface evidence of Aboriginal occupation remains within the study area. The introduction of fill and topsoil may have covered and protected the original ground surface and evidence of Aboriginal occupation. Footings or foundations for buildings which extend beyond the fill may have disturbed deposits, but not necessarily removed them. However, areas of the sporting complex which contain basements have mostly likely removed evidence of occupation Any areas which have been levelled or excavated prior to development, such as the Parramatta Swimming Pool will not contain evidence of archaeological occupation.

10.0 IMPACT

10.0 IMPACT

The predictive model indicates that evidence of Aboriginal occupation in the form of arefact scatters may exist across the site. It is expected that the area nearer to the river may contain a higher density.

Following are areas that will be excavated for the proposal and such excavation has the potential to impact to impact upon Aboriginal objects:

- Figure 9 below shows the areas where it is proposed to reduce current ground levels. Areas shaded yellow, orange and red are proposed to be cut to level the site for construction of the western stadium which will include a basement. The shading represents the following cut depths:

  Yellow – from 0.00 to 0.60cm
  Mustard – from 0.60 to 1.20m
  Brown – from 1.20 to 2.00m
  Red – from 2.00m to 2.60+

- Bulk excavation is required on the western side for the basement underneath the western stand. The geotechnical report indicates that this area contains a brown silty sand topsoil with clayey fine sand beneath 40cm (Douglas & Partners 2016). This soil profile is typical of the alluvial soils in which Aboriginal objects may be located. The bulk excavation will remove these two soil profiles and any Aboriginal objects within.

- Bulk excavation is required for the southern stand. The geotechnical report indicates that this section of the site contains clayey sand (Douglas & Partners 2016). This soil profile is typical of the alluvial soils in which Aboriginal objects may be located. The bulk excavation will remove these two soil profiles and any Aboriginal objects within.

- Excavation from a depth of .20cm to .80cm is required within the centre oval. The geotechnical report (Douglas & Partners 2016) indicates that the first 40cm to .70cm contains an introduced topsoil of with crushed dolerite. As the excavation for this portion of the site is within fill, it is highly unlikely that Aboriginal objects will be impacted upon.

- Bulk excavation is required on the southern playing field, however, this excavation may only be within existing fill. If such excavation goes below the level of fill it has the potential to impact upon Aboriginal objects.

- Excavation is required for the eastern stand. The geotechnical report (Douglas & Partners 2016) indicates that this section of the site contains an introduced topsoil to about a depth of 10cm with silty fine grained sand underneath. The fine grained sand may represent an alluvial deposit within which Aboriginal object could be located. Bulk excavation is required in this section and will remove this sand and any Aboriginal objects within it.

- Piling to support the stadium as indicated on Figure 10. Such piling will impact upon Aboriginal archaeological deposits.

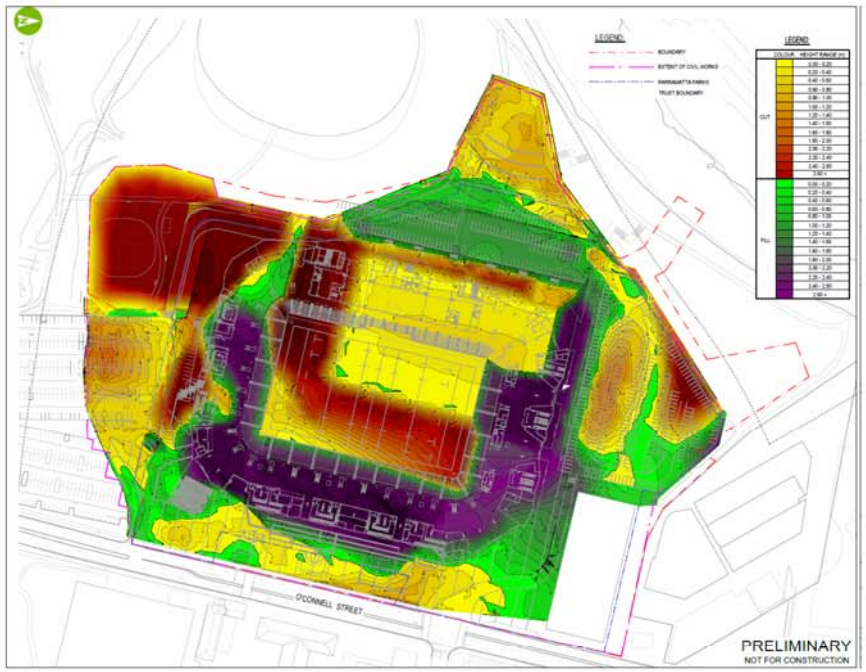

Figure 9: Showing proposed areas of cut and fill. Yellow, orange and red indicate cut (courtesy Lend Lease

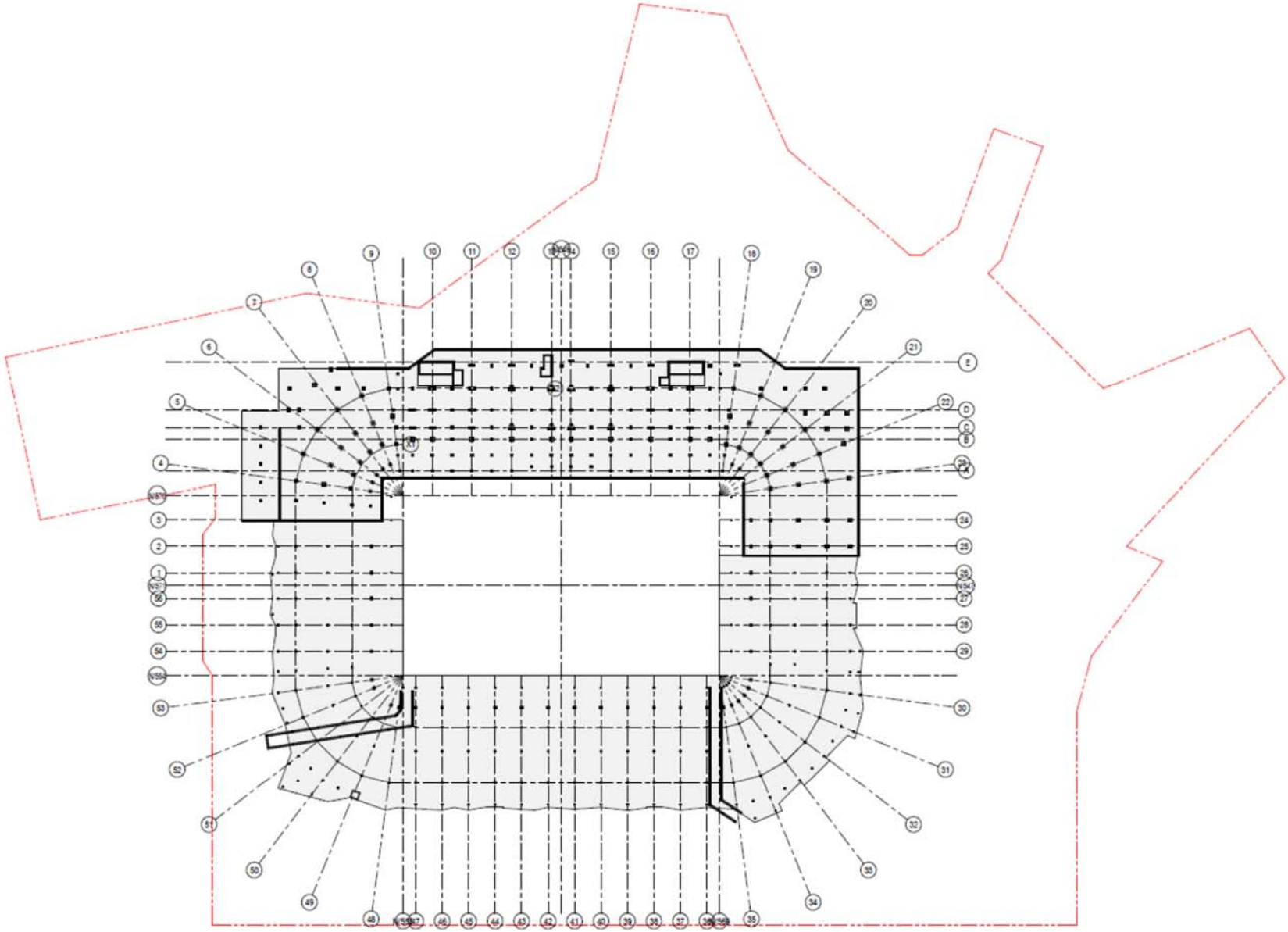

Figure 10: Piling Plan (courtesy Lend Lease)

11.0 MINIMISING HARM, MITIGATION AND MANAGEMENT

MINIMISING HARM
MITIGATION
MANAGEMENT

11.0 MINIMISING HARM, MITIGATION & MANAGEMENT

11.1 Minimising Harm

The Parramatta Stadium has reached the end of its life, is too small and no longer serves the needs of the people of New South Wales. The aim is to utilise the existing site to provide a world class sporting facility. The new design allows for *insitu* conservation of Aboriginal objects plus archaeological salvage.

It is important that Aboriginal cultural information is protected and interpreted. At the site of the Western Sydney Stadium archaeological testing and salvage would allow for the long-term protection, curation and interpretation of Aboriginal archaeological deposits. The testing and salvage would allow for a chronology of occupation of the site to be developed and a lithics analyses would provide information to interpret onsite cultural activities. In addition, various sections of the site where bulk excavation is not required would allow for the *insitu* conservation of Aboriginal archaeological deposits.

In respect of the principles of Environmentally Sustainable Development (ESD) there are two appropriate outcomes:

- Insitu conservation of a portion of the site for future generations
- The information gained from the program of testing will contribute to our knowledge and understanding of Aboriginal occupation within the Parramatta area. This knowledge can then be passed down to future generations through education programs and interpretation.

11.2 Mitigation

It is proposed to undertake archaeological salvage of the sections of the site that will be impacted by bulk excavation as detailed in section 10 of this report. This will ensure that the maximum amount of information about Aboriginal occupation and activities on the site will be gained. The archaeological information will be analysed and compared with other sites within Parramatta to contribute to an understanding of the archaeology of Parramatta and to add to the body of knowledge gained from previous archaeological excavations. Obtaining this information will protect Aboriginal cultural heritage values by allowing dissemination of that information to the Aboriginal and broader community.

It is proposed that a two stage testing and salvage program be undertaken, as detailed below. The aim of undertaking a two stage excavation program is to first undertake small test excavations in certain locations to determine if Aboriginal archaeological evidence is present. If it is, then that trench would be extended until no further evidence is uncovered. If there is no evidence in the test trench work would cease in that trench. This would provide a more targeted approach and reduce the time required.

Stage 1:
The purpose of Stage 1 is to establish whether:

- Archaeological evidence is present
- If archaeological evidence is present to determine its integrity and significance
- To determine if sufficient triggers are present to extend the testing to determine the nature and extent of the deposit.

Stage 2:

The purpose of the Stage 2 is to extend the trench excavated during stage 1 to determine the nature and extent of the deposit uncovered during Stage 1.

This work would be undertaken in association with the Registered Aboriginal Parties.

11.3 Management

The above program of archaeological testing and salvage would be managed in accordance with the Office of Environment &

Heritage's *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* and in association with the Registered Aboriginal Parties (RAPs). The methodology for the testing and salvage is attached at Appendix A.

Once the excavations have been completed and artefacts retrieved further discussions will be held with the RAPs in respect of management of those artefacts. The RAPs have advised that their preferred options are in preferential order:

1. That the artefacts be included in an on-site interpretation display
2. That the artefacts be deposited with the Parramatta Heritage/Discovery Centre
3. That the artefacts be deposited with the Australian Museum

12.0 SUMMARY & RECOMMENDATIONS

12.0 SUMMARY AND RECOMMENDATIONS

12.1 Summary

This report demonstrates the potential for the study area to contain evidence of Aboriginal occupation in the form of stone tools and possibly hearths. The new stadium design allows for *insitu* conservation and archaeological salvage. Consultation with the Aboriginal community indicates the significance of such evidence.

It is important that Aboriginal cultural information is protected and interpreted. At the site of the Western Sydney Stadium archaeological testing and salvage would allow for the long-term protection, curation and interpretation of Aboriginal archaeological deposits. The testing and salvage would allow for a chronology of occupation of the site to be developed and a lithics analyses would provide information to interpret onsite cultural activities. In addition, various sections of the site where bulk excavation is not required would allow for the *insitu* conservation of Aboriginal archaeological deposits.

Recommendations for the ongoing management of the Aboriginal cultural heritage of the Stadium site are detailed below.

12.2 Recommendations

1. Archaeological testing and salvage be undertaken in accordance with the methodology attached at Appendix B, which has been developed in accordance OEH's *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*. This should be undertaken prior to any earthworks including shallow grading or bulk excavation.

2. An interpretation plan should be developed which includes interpretation of the Aboriginal history and use of the site. This should be undertaken in consultation with the Registered Aboriginal Parties.

3. Any artefacts retrieved during the program of archaeological testing and salvage should be retained and displayed onsite and included in the interpretation plan.

4. Consultation should continue with the Registered Aboriginal Parties including full participation in the program of archaeological testing and salvage.

REFERENCES

REFERENCES

AECOM 2016 Environmental Impact Statement, Western Sydney Stadium

AECOM 2016 Western Sydney Stadium Aboriginal Technical Working Paper which includes consultation in accordance with OEH's *Aboriginal cultural heritage consultation requirements for proponents 2010*. Appendix H to EIS

AHMS 2016 Old Kings School, Parramatta, Aboriginal Heritage Impact Assessment Report. Report to Tonkin Zulaikha Greer Architects on behalf of the NSW Department of Educations.

Attenbrow V 2003 *Investigating Sydney's Aboriginal Past.* Australian Museum.

Attenbrow V 1996 Parramatta Park. Plan of Management Intepretation Program. Aboriginal Sites – Stage 2. Report to Parramatta Park Trust for AMBS Consulting.

Baker M, Corringham R, Dark Jill 1986 *Native Plants of the Sydney Region,* Three Sisters Productions Pty Ltd, Winmalee, NSW

Benson D H 1979 Map – Vegetation of the Cumberland Plain. A reconstruction of the original vegetation of Sydney excluding Hawkesbury Sandstone area. Royal Botanic Gardens, Sydney.

Benson D H 1981 *Explanatory Notes for the Penrith 1:100,000 Vegetation Map Sheet*. Royal Botanic Gardens, Sydney

Britton, Geoffrey & Morris, Colleen 1999 North Parramatta Government Sites Landscape Conservation Plan. Unpublished report to Heritage Group, NSW Department of Public Works & Services.

Casey & Lowe 2014 Archaeological Monitoring, Cumberland Hospital, North Parramatta. Unpublished report to Endeavour Energy.

Clark N R & Jones D C 1988 Penrith Penrith *1:100,000 Geological Sheet 9030*. NSW Survey, Sydney, Department Mineral Resources, Sydney

Comber J 1990 Prospect Reservoir Bypass Stage II Archaeological Survey. Unpublished report to NSW Water Board.

Comber J 1991 Prospect Tunnel Project Archaeological Survey. Unpublished report to NSW Water Board.

Comber J 2006 Archaeological and Cultural Heritage Assessment Camenzuli Site 1, Penrith Lakes Scheme. Unpublished report to the Penrith Lakes Development Corporation.

Comber J & Fisher C 2006 Historical Archaeological Assessment,15 Macquarie St, Parramatta.Unpublished Report to Integral Energy.

Comber J 2008 Aboriginal Cultural Heritage Assessment: Doonside Zone Substation and 132kV Transmission Line Upgrade. Unpublished report to Endeavour Energy.

Comber J. 2010(a) Excavation Report AHIP No. 1117090, Cumberland Newspaper Site, 142-145 Macquarie Street, Parramatta. Unpublished report to the EGO Group on behalf of News Limited.

Comber J. 2010(b) Preliminary Excavation Report, 140 Macquarie Street, Parramatta. Unpublished report to Endeavour Energy.

Comber J. 2010(c) Interim Report. Aboriginal Archaeological Excavation Report. s87 Permit 1099230. 15 Macquarie Street, Parramatta. Unpublished report to Endeavour Energy.

Comber J 2010(d) Report Containing Datum from Archaeological Salvage of the area surrounding and including PL9 at Penrith Lakes. s87/90 Permit No. 2595. Unpublished report to PLDC.

Comber J**.** 2010(e) Excavation Report s90 Consent 2420 Camenzulis Site 1 (AHIMS 45-5-3071). Unpublished report to PLDC.

Comber J**.** 2013 Excavation report, Harris Street, Parramatta. Unpublished report to Endeavour Energy.

Cook, Wayne 1981 Proposed Redevelopment of Cumberland Oval, Parramatta. Unpublished report to NPWS.

Dallas M 2003 Parramatta City Council Aboriginal Heritage Study. Unpublished report to Parramatta City Council.

DPWS Heritage Design Services 2001 Parramatta Hospital Site Archaeological Test Excavations (Stages 1 & 2) Final Report. Unpublished report to DPWS Major Developments.

GML Heritage 2016 Archaeological Test Excavation Report. Report to APP on behalf of the Parramatta Leagues Club.

Haglund L 2005a The Parramatta Children's Court Site: Final report on testing for Aboriginal Heritage.

Haglund L 2005b Aboriginal Heritage along Parramatta River, north bank, Marsden Street Weir to O'Connell Street, Parramatta, NSW. Research Design for proposed testing under a s87 permit.

Haglund L 2007 Parramatta Health Services Area, Parramatta Justice Precinct, Aboriginal Heritage Aspects.

Kohen J 1984 Shaw's Creek KII Rockshelter: a prehistoric occupation site in the Blue Mountains piedmont, eastern New South Wales. In *Archaeology in Oceania* 19 (2):57-73.

Lawrie R. 2007 Report on Soil Properties Parramatta Hospital Archaeological Site in Haglund L Parramatta Health Services Area Aboriginal Heritage Aspects Final Report (Appendix C).

Low Tim 1992 *Bush Tucker. Australia's Wild Food Harvest,* Angus & Robertson,

McDonald Jo CHM PTY LTD 1989 Archaeological survey at the western end of the ADI Site, St Marys, NSW. Report to ADI & LLD

McDonald Jo CHM PTY LT**D** 2002 Survey for Aboriginal Sites Lots 1 and 2 Owen Street, Glendenning, NSW

McDonald Jo CHM PTY LTD 2005a *Salvage Excavation of Six Sites along Caddies, Second Ponds, Smalls and Cattai Creeks in the Rouse Hill Development Area*. Australian Archaeological Consultancy Monograph Series. Volume 1.

McDonald Jo CHM PTY LTD 2005b Archaeological Salvage Excavation of Site CG1 (NPWS 45-5-2648) at the corner of Charles & George Streets Parramatta. Unpublished report to Meriton Apartments Pty Ltd.

McDonald Jo CHM PTY LTD 2005c Archaeological Salvage Excavation of Site RTA-G1, 109-113 George Street, Parramatta. Report to Landcom.

McDonald Jo CHM PTY LTD 2006 Archaeological Salvage Excavation of Site CG3, 101A-105 George Street, Parramatta. Unpublished report to Rahi Developments Pty Ltd.

McDonald, J. & Mitchell, P 1994 An assessment of the archaeological context, landuse history and management requirements for Aboriginal archaeology in the Australian Defence Industries Site, St Marys, NSW. Report to ADI Ltd, NSW Property Group.

McDonald, J. & Mitchell, P. 1994 An assessment of the archaeological context, landuse history and management requirements for Aboriginal archaeology in the Australian Defence Industries Site, St Marys, NSW. Report to ADI Ltd, NSW property Group.

Mitchell P 2008 Nature and Distribution of the Parramatta Terrace Sand. Unpublished report to Parramatta City Council.

Nanson G C, Young, R W & Stockton E 1987 Chronology and palaeoenvironment of the Cranebrook Terrace (near Sydney) containing artefacts more than 40,000 years old. In *Archaeology in Oceania 22(2):72-8*.

NSW NPWS 2002 Native Vegetation Maps of the Cumberland Plain. Western Sydney. Final Edition. ww.nationalparks.nsw.gov.au

Nutley N 2006 *The Last Global Warming? Archaeological Surival in Australian Waters.* Flinders University Maritime Archaeology Monograph Series, No. 10.

Office Of Environment & Heritage (FORMERLY DECCW) 2010 *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales.*

Planisphere 2012 *Development in Parramatta City and the Impact on Old Government House and Domain's World and National Heritage Listed Values.*

Smith L J 1989a Archaeological Site Survey and Analyses of Sites on the Northern Cumberland Plain. Report to the NSW National Parks and Wildlife Service.

Smith L J 1989b Prospect Reservoir Proposed Water Channel 2: Archaeological Survey for Aboriginal Sites. Report to the NSW Water Board.

Stedinger Associates 2003 A Heritage Study of Four Weirs along the Parramatta River.Unpublished report to Parramatta Council.

Stening T 2011 Archaeological Excavations Consent No. 1114096 Doonside Zone Substation and underground 132kV feeders. Unpublished report to Endeavour Energy.

APPENDIX A

AHIMS SEARCH

APPENDIX A: AHIMS SEARCH

Office of Environment & Heritage

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : WSS

Client Service ID : 263220

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-3222	Old Kings School AS1	GDA	56	315026	6257139	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Extent Heritage Pty Ltd ,Ms Ngaire Richards					**Permits**		
45-5-0277	Cumberland Oval; Parramatta;	AGD	56	314588	6257260	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	223,260,1018,102142,102196
	Contact	**Recorders**	Cook					**Permits**		

Report generated by AHIMS Web Service on 19/01/2017 for Jillian Comber for the following area at Datum : GDA, Zone : 56, Eastings : 314694 - 315043, Northings : 6257094 - 6257422 with a Buffer of 50 meters. Additional Info : Archaeological Assessment. Number of Aboriginal sites and Aboriginal objects found is 2

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

Page 1 of 1

APPENDIX B

METHODOLOGY

METHODOLOGY

WESTERN SYDNEY STADIUM

ABORIGINAL ARCHAEOLOGICAL TESTING AND SALVAGE

The test excavation will be undertaken in two stages as follows:

Stage 1:
The purpose of Stage 1 is to establish whether:

- Archaeological evidence is present
- If archaeological evidence is present to determine its integrity and significance
- To determine if sufficient triggers are present to extend the testing to determine the nature and extent of the deposit.

Prior to the archaeological excavation the fill will be removed by an excavator. Once that has been undertaken, to maintain scientific control a grid will be laid over the site. The grid will divide the site into 1m x 1m squares located approximately 10m apart. The location of the trenches will be dependent upon site conditions such as the location of underground services, footings, basements and the location of significant historical archaeological features. However, if the trenches cannot be located exactly 10m apart because of unforeseen factors attempts will be made to place the trenches as close to each other as possible. Each square will be numbered. Trenches will initially be excavated to establish:

- Evidence of artefacts
- Evidence of the Parramatta Terrace Sand described by Mitchell (2008) and Casey (2009)
- Evidence of hearths
- Evidence of midden material or other cultural deposits

These trenches will be dug by hand in 5cm spits or appropriate stratigraphy and the following will be undertaken:

- The soil will be tested for its Ph level.
- An assessment of the geomorphological context of the site and each spit will be undertaken by a suitably qualified geomorphologist. That assessment will guide the analyses of each spit.
- The location of any artefacts or other cultural deposits found during excavation will be recorded and the artefacts bagged and catalogued.
- The soil removed during the excavation will be wet sieved and any artefacts found in the sieved layer bagged and catalogued, clearly noting that they were found within the sieved soil, not *in situ.*

If any of the following information (or triggers) are uncovered the relevant trench will be extended to determine the nature and extent of the deposit:

- Evidence of the Parramatta Terrace Sand described by Mitchell (2008) and Casey (2009).
- Higher relative artefact densities.
- Rare or unusual artefact types, such as backed blades or axe heads.
- Unusual raw material types.
- Archaeological features such as hearths, organic material, midden material or other cultural features eg knapping floors, debitage, contact artefacts, manuports or any evidence that indicates human activity.
- Material with potential for scientific dating.
- Evidence of contact archaeology (for example, flaked glass or flaked insulators).
- Evidence that relates to environmental or geomorphological site formation processes.
- Geormorphological evidence that may answer the questions guiding the program of archaeological excavation detailed in section 4 of this research design.
- Any other cultural feature identified by the Excavation Director or Aboriginal community representatives as worthy of further investigation.

Excavation will cease in each individual pit once excavated to at least two spits below the base of the identified Aboriginal object-bearing units, stratigraphic feature or triggers detailed above so as to investigate fully the extent of that occurrence/feature or as limited by the impact; or they will be excavated to at least the base of the identified Aboriginal object

bearing units and must continue to confirm the soils below are culturally sterile (eg basal clay), depending on the nature of the soils and geomorphological information.

Stage 2:
The purpose of the Stage 2 is to determine the nature and extent of the deposit uncovered during Stage 1.

The Stage 2 excavation and recovery will be undertaken in the following manner:

- Excavation will be by hand.
- Excavation will be in 1m x 1m pits.
- Excavation will be in stratigraphic layers and/or in 5cm spits, Where necessary stratigraphic layers (when specific environmental features which address the research questions are encountered) will be followed rather than spits.
- Soil samples will be taken. This will assist in analyses now and in the future, in the interpretation of the landscape and will include samples for palynological analyses.
- If dateable charcoal is uncovered, samples for all cultural features which contain reliable charcoal will be recovered for dating.
- At least one sample will be taken for thermoluminesence (TL) and/or optically stimulated luminescence (OSL) dating. Consideration will be given to taking a number of samples. The number of samples taken will depend on the stratigraphic differences over the site and the nature and integrity of the archaeological deposits.
- If hearths are uncovered, Dr Andy Herries (University of NSW) will be consulted. Dr Herries has pioneered the integration of archaeomagnetic and palaeomagnetic techniques to date and obtained cultural data from hearths. If possible, attempts will be made to obtain dates from the hearths.
- An assessment of the geomorphological context of the site and each spit will be undertaken by a suitably qualified geomorphologist. This will assist in obtaining relevant environmental and geomorphological information to assist in the understanding of site formation processes.
- Plotting of artefact concentrations will be undertaken.
- Conjoin analysis of artefacts from a concentration of artefacts throughout the profile will be undertaken.
- Plotting of all other features such as hearths, heat treatment locations, ovens, etc., will be undertaken to precisely locate each within their exact stratigraphic context.
- Plotting and mapping of all manuports (i.e. non-artefactual, ochre, cobbles that have not been reduced, etc.) and other cultural features will be undertaken.
- All natural features (such as tree roots) which are not identified as culturally produced features will be plotted.
- Plotting and mapping of all unusual artefacts and large artefacts to locate them in their exact spatial context within the excavated deposit will be undertaken.
- The soil will be wet sieved through 3mm mesh. Sandy deposits may not need wet sieving, and so may be dry sieved. If artefacts smaller than 3mm are identified, the sieve size will be reduced to 1mm to ensure that micro debitage is retrieved.
- Cessation of Stage 2 excavation expansion will be guided by the individual feature or trigger in question so as to investigate the extent of that occurrence or feature.

3.1 Burials

It should be noted that in the unlikely event that a burial is uncovered during such testing and/or salvage, all work will cease in the vicinity of that burial whilst further advice is being sought from the Police, OEH and the Aboriginal community.

3.2 Historical Archaeology

The study area may contain historical archaeology which will be managed by Casey & Lowe. Casey & Lowe will be testing to determine if evidence of historic features remain and if so, their nature and extent, and whether that evidence is of State significance. Comber Consultants will not undertake any testing or salvage in areas of historical archaeological potential unless Casey & Lowe agree.

3.3 Artefact Management

The final deposition for the artefacts has not yet been decided. The Aboriginal community would prefer that they remain in Parramatta. Their preferred option would be to include them in onsite interpretation.

If the above is not possible, as a result of consultation with Aboriginal the next preferred option would be that the artefacts are deposited with the Parramatta Heritage Centre.

Alternatively, if the Parramatta Heritage Centre is not able to manage the artefacts they will be deposited with the Australian Museum in accordance with the Museum's Archaeological Deposition Collection Policy. The artefacts that will be retrieved from the Parramatta terrace sand are highly significant to the Aboriginal and broader community. They will contain research and educational values. According to the Museum's Collection Policy artefacts will be accepted by the Museum if they contain:

1. Social or cultural value to the community.
2. Public Program and educational value to the Australian Museum.
3. Capacity to enhance the geographic, temporal and/or thematic coverage of the Australian Museum archaeology collections.
4. Research potential.

It is considered that any artefacts retrieved will meet these criteria and so will be lodged with the Australian Museum.

3.4 Artefact Recording and Cataloguing

The artefacts retrieved will be recorded and analysed by Tory Stening, BA, MA, of Comber Consultants. All artefacts retrieved during the testing will be measured and examined for a variety of diagnostic criteria, which are listed below:

- Raw Material, e.g. silcrete, chert, tuff, quartz, etc.
- Length (mm)
- Width (mm)
- Thickness (mm)
- Artefact type: i.e. core, flake, flaked piece, etc
- Bulb: yes or no?
- Retouch: yes or no? If yes, then a description of the retouch and an estimate of the percentage of the edge of the artefact containing retouch will be undertaken.
- **Cortex**: does the artefact have any cortex on it? If so, an estimate of the cortical coverage of the artefact will be recorded.
- **Eraillure scar**: is there one or more eraillure scars present?
- **Snap**: is the artefact snapped? If so, is it a transverse or a longitudinal snap?
- Is it an old break or a new one?
- **End**: is the artefact the proximal or distal end of the original artefact?
- **Heat treatment**: has the raw material been subjected to intentional heating?
- **Platform type**: cortical, flat, complex or abraded.
- **Initiation type**: bending flake, bipolar flake or conchoidal flake.
- **Termination type**: feather, step, hinged or outré passé.
- These measurements and diagnostic criteria will be entered into an Access database and analysed to develop a tentative typology.

3.5 Personnel

The following Comber Consultants' senior archaeologists will be employed on this project. Additional archaeologists will be engaged as required.

Jillian Comber, BA, Litt B.
Project Director
Jillian Comber, the Director of Comber Consultants Pty Ltd, has over 20 years experience as an Archaeologist and Cultural Heritage Manager. She is experienced in all aspects of Aboriginal Cultural Heritage Management and has directed a broad range of archaeological testing and salvage programs throughout NSW.

Tory Stening, BA, MA
Project Co-Director and Artefact Specialist
Tory Stening has an undergraduate degree in Indigenous Archaeology from Macquarie University and a Masters Degree from the University of New England. Her Masters Degree was a functional and distributional analyses of stone tools excavated from a site at Cowra. Tory has a detailed understanding of the process of stone tool manufacture and is experienced in the cataloguing and analyses of Aboriginal stone tools. Tory has supervised excavations at Wollongong and Parramatta.

David Nutley, Grad Dip (Maritime Archaeology), MA (Built Environment), MA (Maritime Archaeology)
Senior Archaeologist/Supervisor
David Nutley is an archaeologist and cultural heritage manager with over 20 years experience. He is experienced in land and sea Indigenous Archaeology. He was previously employed by the NSW Heritage Branch and SA Department of Environment and Heritage as a Senior Heritage Officer. David has specialised in the study of underwater Indigenous sites and has specific experience in the excavation of land sites within the Sydney CBD and Parramatta.

3.6 Report

A test excavation report as detailed in Requirement 11 of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* will be prepared detailing the above aims, methodology, results, significance assessment and management recommendations.

COMBER
CONSULTANTS

ARCHAEOLOGY - HERITAGE - MEDIATION - ARBITRATION

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