

Showground Station Precinct

Aboriginal Heritage Assessment

Report prepared for Department of Planning and Environment

August 2015



Sydney Office 78 George Street Redfern NSW Australia 2016 T +61 2 9319 4811

Canberra Office 2A Mugga Way Red Hill ACT Australia 2603 T +61 2 6273 7540

GML Heritage Pty Ltd ABN 60 001 179 362

www.gml.com.au

Report Register


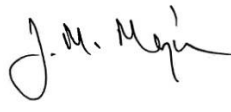
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The report has been reviewed and approved for issue in accordance with the GML quality assurance policy and procedures.

Project Manager:	Julia Dowling	Project Director & Reviewer:	Janine Major
Issue No.	5	Issue No.	5
Signature		Signature	
Position:	Associate	Position:	Manager, Archaeology
Date:	21 August 2015	Date:	21 August 2015

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Executive Summary

GML Heritage (GML) has been engaged by SJB Planning on behalf of the NSW Department of Planning and Environment to prepare an Aboriginal Heritage Assessment report (Aboriginal HA) for the proposed Showground Station Precinct (the Precinct).

This report is a stand-alone document that provides the Department of Planning and Environment with advice to inform rezoning of the Precinct. A separate Heritage Assessment has been prepared by GML for non-Aboriginal heritage.

The report has identified that the Precinct contains one known Aboriginal site and another on the Precinct boundary. Eighteen Aboriginal sites are registered within 1km of the study area. Based on previous investigations including a search of the NSW Aboriginal Heritage Information Management System (AHIMS) and analysis of the local environment, it has been determined that the Precinct has the potential to contain as yet unrecorded Aboriginal heritage sites. It is most likely that such sites will be open camp sites or artefact concentrations, and/or isolated finds. These may be found anywhere within the Precinct as part of the typical Aboriginal archaeological signature present on the Cumberland Plain, or in concentrations which are often found on slightly sloping to level ground, usually within 100 to 200m of a watercourse.

All Aboriginal cultural material receives automatic statutory protection under the NSW *National Parks and Wildlife Act 1974* (NPW Act) and must be managed appropriately in accordance with the NPW Act and relevant Office of Environment and Heritage (OEH) guidelines including the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* and *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Code of Practice). Going forward, this would entail engaging in consultation with the Aboriginal community, undertaking an impact assessment of proposed activities in relation to potential Aboriginal archaeology and mitigation of any unavoidable impacts through the mechanisms of full Aboriginal Cultural Heritage Assessment and an Aboriginal Heritage Impact Permit (AHIP).

Abbreviations

ACHAR	Aboriginal Cultural Heritage Assessment Report
AHIMS	Aboriginal Heritage Information Management System
AHIP	Aboriginal Heritage Impact Permit
Burra Charter	<i>The Burra Charter: Australia ICOMOS Charter for Places of Cultural Significance</i> —a best practice heritage reference that provides guidance for the conservation and management of places of cultural significance (cultural heritage places).
CBD	Central Business District
Code of Practice	DECCW Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (24 September 2010);
DACHA	Darug Aboriginal Cultural Heritage Assessments
DALCI	Darug Aboriginal Land Care Inc.
DCAC	Darug Custodial Aboriginal Corporation
DCP	Development Control Plan
DEC	Department of Environment and Conservation
DECC	Department of Environment and Climate Change (now OEH)
DECCW	Department of Environment, Climate Change and Water (now OEH)
DG	Director General
DLALC	Deerubbin Local Aboriginal Land Council
DLO	Darug Land Observations
DTAC	Darug Tribal Aboriginal Corporation
EIS	Environmental Impact Statement
EPA Act	<i>Environmental Planning and Assessment Act, 1979</i>
EPis	Environmental Planning Instruments
ESD	Ecologically Sustainable Development
GML	GML Heritage Pty Ltd
HA	Heritage Assessment
HCA	Heritage Conservation Area
ICOMOS	International Council on Monuments and Sites
LEP	Local Environmental Plan
LGA	Local Government Area

MLALC	Metropolitan Local Aboriginal Land Council
NPW Act	<i>NSW National Parks and Wildlife Act 1974</i>
NWRL	North West Rail Link (now the Sydney Metro Northwest)
NWRL Corridor Strategy	NWRL Corridor Strategy
OEH	Office of Environment and Heritage
PAD	Potential Archaeological Deposit
RAP	Registered Aboriginal Party
RPS	RPS Group (International Environmental Consultancy Company)
the Council	The Hills Shire Council
the Department	The Department of Planning and Environment
the Precinct	Showground Station Precinct
the Structure Plan	Showground Station Precinct Structure Plan
The Hills DCP 2012	The Hills Development Control Plan 2012
The Hills LEP 2012	The Hills Local Environmental Plan 2012
The Hills LGA	The Hills Local Government Area

1.0 Introduction

1.1 Background

This report has been prepared by GML Heritage (GML) and provides an assessment of Aboriginal heritage relating to the proposed rezoning of the Showground Station Precinct.

The Showground Station Precinct was announced by the NSW Government in August 2014. The precinct is one of number of Priority Precincts which aim to provide for more homes, jobs and improved public spaces close to transport and services. One of the key goals for Priority Precincts is to increase housing choice and affordability by delivering increased housing supply in an environmentally, socially and economically sustainable manner.

The Showground Station Precinct is located in The Hills Shire Local Government Area and covers approximately 271 hectares. The boundary of the precinct is generally based on the road boundary within a radius of 800 metres from the proposed Showground Station, which is normally considered to reflect a 10 minute walk. The boundary also takes into account predominant land uses, built form and natural features.

The vision for the Showground Station Precinct is for a vibrant, mixed use centre comprising a mixture of offices, shops, community facilities, recreational, cultural and leisure activities, education, and a mix of housing types within walking distance of the new station.

The Showground Station Precinct is a long term project that will be delivered over the next 25 years.

1.2 Site Location

The Precinct is located in the suburb of Castle Hill, in The Hills Local Government Area (LGA), approximately 26 km northwest of Sydney CBD. The Precinct is defined by Showground Road to the north and east and Windsor Road to the west. It is bisected by Carrington Road and Victoria Avenue. A plan of the precinct is shown as Figure 1.1.

1.3 Heritage Statutory Context

Aboriginal objects, sites and places are principally protected and managed in NSW under the *National Parks and Wildlife Act 1974* (NPW Act). Aboriginal heritage in the Precinct is also protected and managed under the *Environmental Planning and Assessment Act 1979* (NSW) (EPA Act) through *The Hills Local Environmental Plan 2012* (LEP 2012) and *The Hills Development Control Plan 2012* (DCP 2012) instruments.

1.4 Methodology and Terminology

In preparing this Aboriginal HA, GML has reviewed the NSW Aboriginal Heritage Information Management System (AHIMS) records including site registration data, site cards and existing relevant studies to identify known Aboriginal heritage sites, places and objects including archaeological sites within and in the vicinity of the Precinct. Other registers that have also been searched include the LEP 2012 and DCP 2012 records, the State Heritage Inventory and the National Trust Register to capture any other sites of Aboriginal heritage significance which may be within or adjacent to the Precinct.

Limited research has been undertaken to inform the preliminary archaeological assessment. This research has included review of readily available historical aerial photographs, as well as soil,

topography, hydrological and geological information to assess the current condition and potential of the Precinct to contain as yet unidentified Aboriginal archaeological sites and/or objects.

Consultation was undertaken with NWRL Registered Aboriginal Parties in relation to the rezoning of the Precinct and this heritage assessment. The draft Aboriginal HA was provided to those who registered, for their review and to facilitate their contribution in terms of cultural heritage values. Details of the consultation are included in Section 3.3 of this report.

This Aboriginal HA has been prepared with regard to the following current best practice guidelines:

- Department of Environment, Climate Change and Water (DECCW) *Aboriginal cultural heritage consultation requirements for proponents 2010. Part 6 National Parks and Wildlife Act 1974 (April 2010)*;
- DECCW *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (13 September 2010)* (the Code of Practice);
- DECCW *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (24 September 2010)*;
- Office of Environment and Heritage NSW (OEH) *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (April 2011)*;
- OEH *Applying for an Aboriginal Heritage Impact Permit: Guide for applicants*; and
- *The Burra Charter: Australia ICOMOS Charter for Places of Cultural Significance 2013* (the Burra Charter).

1.5 Limitations

This report identifies and assesses known Aboriginal heritage items only and the potential for the Precinct to contain as yet unrecorded Aboriginal objects or sites.

1.6 Authors and Acknowledgements

This Aboriginal HA has been prepared by Diana Cowie, Senior Consultant, and Shezani Nasoordeen, Consultant, GML. It has been reviewed by Janine Major, Associate and Manager, Archaeology.



Figure 1.1 The Precinct aerial, showing the precinct boundary. (Source: Transport for NSW and NSW Department of Planning, Showground Road Station Structure Plan, with GML overlay)

2.0 Aboriginal Heritage Context

The purpose of this section is to synthesise available information from previous environmental and archaeological studies to provide a context for what is known about Aboriginal cultural heritage in the Precinct. A review of the landscape context and regional character of the area in which the Precinct is situated is included. Following this, what can be determined about archaeological sites in the surrounding area is summarised and previous predictive models are evaluated in light of the archaeological data. A revised Aboriginal heritage predictive model assessing the potential for further as yet unregistered Aboriginal objects, places and values to exist within the Precinct is developed.

2.1 The Precinct

The Precinct comprises the area bounded by Showground Road in the north, Parsonage Road and Fishburn Crescent in the east and Windsor Road in the south and west, in the suburb of Castle Hill (Figure 2.1), approximately 30km northwest of the Sydney CBD.

The Precinct lies within the territory of the Darug or Dharug linguistic group¹ which consisted of smaller dialect groups, including:

- Bidjigal or Bediagal, ‘woods tribes’ or bediagal-tugagal-tugara—to the north west of Parramatta, between Parramatta and the Hawkesbury River, probably centred around the Castle Hill area²; and
- Buruberongal—to the northwest of Parramatta, approximately two hours walk from the Hawkesbury River.³

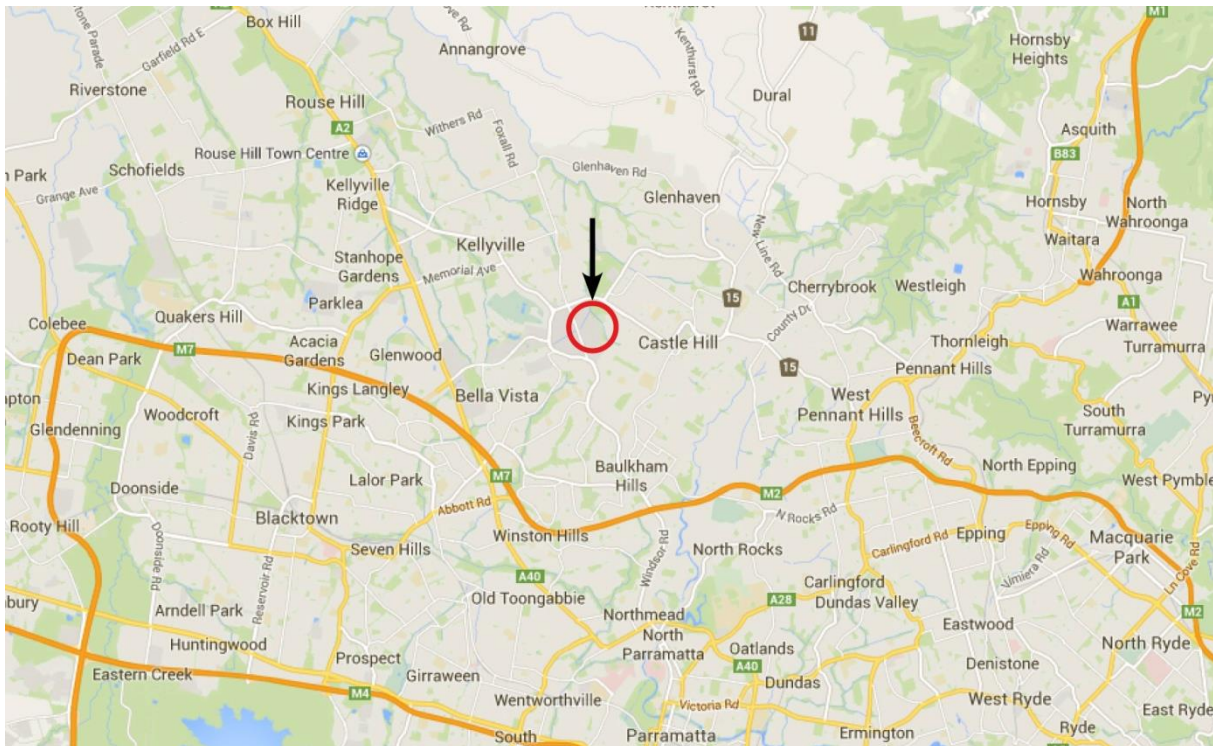


Figure 2.1 The Precinct in its context. (Source: Google Earth Pro with GML additions 2014)

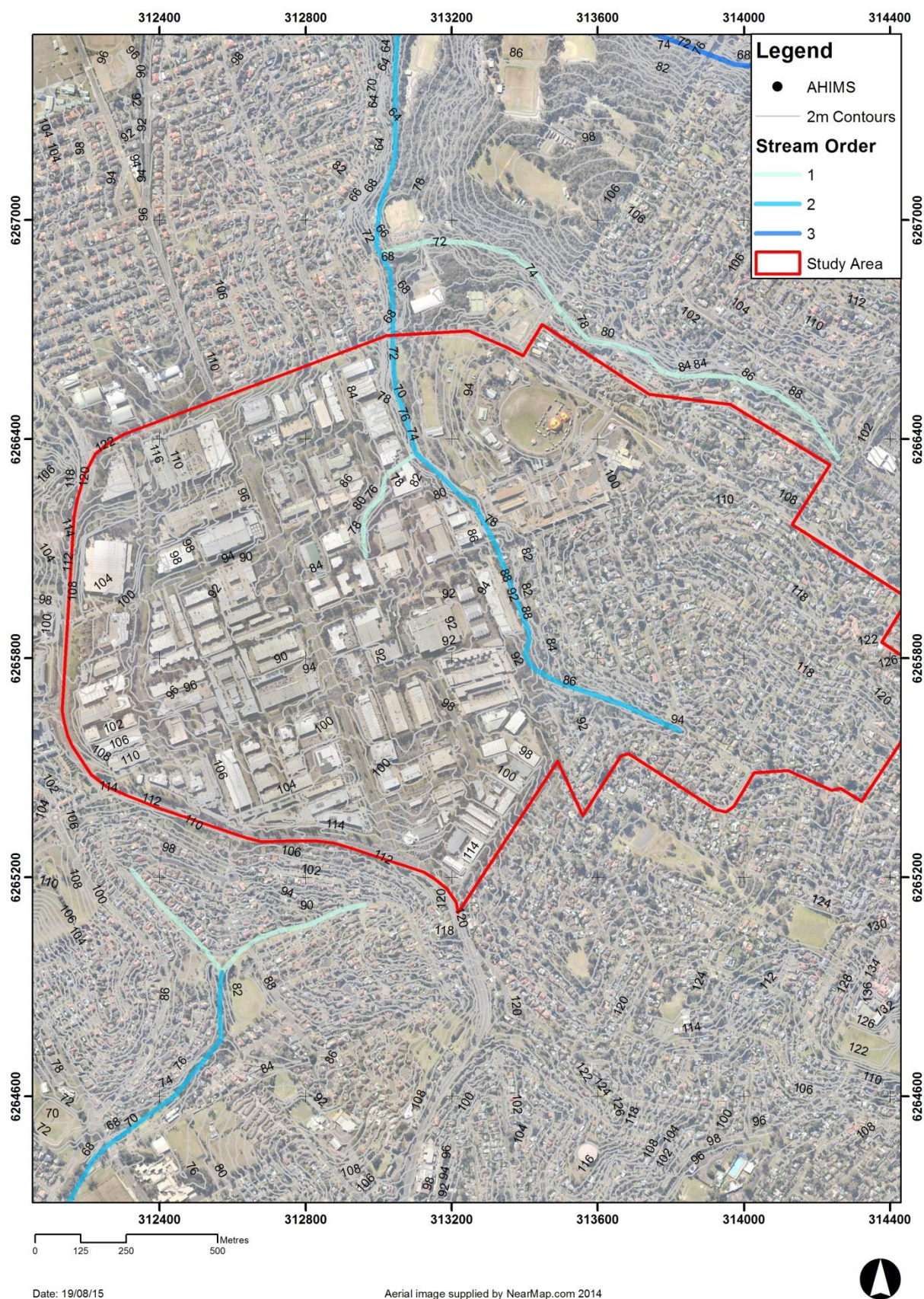


Figure 2.2 The Precinct in detail. (Source: GML 2015)

2.2 Local Landscape Context

This section provides relevant contextual information used in developing a predictive model relating to Aboriginal occupation and use of the Precinct. Interactions between people and their surroundings are of integral importance to the initial formation and the subsequent preservation of the archaeological record. The nature and availability of resources including water, flora, fauna and suitable raw materials for the manufacture of stone tools and other items had (and continues to have) a significant influence over the way in which people utilise the landscape.

JMcDCHM 2006 identified the following resources which would have attracted Aboriginal occupation and use of the Precinct prior to European colonisation:

- reliable freshwater;
- freshwater plants and animals;
- hinterland resources—tall open forest, woodland, and sheltered gully plants and animals;
- timber/bark for fuel, shelter, material culture;
- where present, sandstone overhangs for shelter and/or art;
- where present, sandstone platforms for axe grinding; and
- local stone for tool making, e.g. quartz.⁴

Modification and change to the natural environment may impact upon cultural materials that may have been deposited. Vegetation and erosional regimes, as well as buildings constructed on slabs with minimal foundations, affect the visibility and detectability of Aboriginal sites and objects. For these reasons, it is essential to consider the environmental context as a component of any heritage assessment.

2.2.1 Landforms and Landscape Features

The Precinct contains ridge top and hill slope topography adjacent to creeks. The following topographic categories are used to define landscape parameters and assess archaeological sensitivity.

Creek bank	<50m to water, flat land
Flood plain	>50m to water, flat land to slightly sloping
Hill slope/creek bank	<50m to water, sloping land
Hill slope	>50m to water, site on slope
Plain	>500m to water
Creek bank/low ridge	Rocky cliff or elevated area next to/ near water
Low ridge	<200m to water, <10m elevation above creek
Low ridge top	>200m from water, <10m elevation above creek
Ridge top	>200m from water, >10m elevation above creek

These landscape elements are mapped across the study in Figure 2.2. In general, flat, elevated landforms such as ridge tops and terraces on hill slopes, adjacent to and overlooking creeks may have preserved an Aboriginal archaeological signature. Areas prone to regular flooding or fluvial water activity are less likely to have been intensively inhabited and any objects from activities within these zones may either be capped by later deposition of alluvium or have been washed downstream.

2.2.2 Geology and Geomorphic Activity

The Precinct lies on Wianamatta Group (Liverpool Sub-group) shales which extend from Rouse Hill to Castle Hill.

The primary modes of geomorphological activity within the Precinct are gradational erosion or aggrading—objects are likely to be concealed just below the ground surface in aggrading landscapes and visible in some exposures where there is erosion. However, within smaller landscape contexts such as a district or even single properties within the Hills Shire, the mode of geomorphological activity varies and any site within the Precinct could have gradational erosion or aggrading geomorphological activity. Mountains, ridges, hills, rises and certain types of plains are predominately eroded. Aggrading activity tends to be on alluvial plains, flood plains, alluvial fans, bar plains, and various other types of plains and tidal flats. Anti-gradational activity would be human induced.⁵

Of the common rock types used for Aboriginal stone tool manufacture, the closest rock sources to the Precinct are silcrete beds in the St Marys Formation at Plumpton Ridge, Marsden Park, St Marys, the Rickabys Creek Gravels and at Homebush Bay. There may be other as yet unknown sources within or in closer proximity to the Precinct.

2.2.3 Soils

Soil information was accessed from The Australia Soil Resource Information System produced and managed by CSIRO. The Soil Archive and National Soil Grid information describes the soil through The Hills Shire as light to medium clay increasing in density to medium to medium heavy around Castle Hill. Soils recorded on NSW Soil and Land Information System logs within the Precinct range in depths with the A1 being between 3 to 8cm in depth and the A2 being between 10cm and 19cm in depth. The B1 clays vary more drastically from 10cm to 46cm in depth above the shale or sandstone-quartz lithology. The A1 is characterised as loam or loamy sand while the A2 is generally sand, clay loam or clayey sand. Hill slope loam or sand based topsoils are very erosional in this landscape whereas clay based soils or soils with a high percentage of clay in them are more stable. Soil profiles associated with the Precinct suggest that archaeological deposits are, in general, not likely to be deeper than 25cm.

2.2.4 Hydrology

The availability of water has significant implications for the range of resources available and the suitability of an area for human occupation. The Cumberland Plain predictive model, as summarised in Section 2.5.1, states that sites increase in occurrence, density and complexity with ascending stream order.⁶ The creek within the Precinct which has been the most significant based on past archaeological investigations is Cattai Creek. Within the Precinct, the Castle Hill Showground itself sits between a first and second order tributary of Cattai Creek and the Precinct in general is at the headwaters of a large catchment, with first order streams joining extensive stream networks to the north west, south, east and west (Figure 2.2). Thus, the Precinct is well located within a reliable freshwater supply which could have supported a small Aboriginal population all year round. In

addition, the creeks would have also provided an array of aquatic fauna and attracted terrestrial fauna which could be used for food.

2.2.5 Fauna and Flora

Native flora and vegetation communities around the Precinct range from woodland with a grass understorey to the west, dry sclerophyll forest within the Precinct and woodland with shrub understorey to the east. However, it has been estimated that as little as 20% of the vegetation within the NWRL corridor is remnant or regrowth native vegetation.⁷ The remainder is highly modified or introduced. Some forest areas would have included Blue Gum and Blackbutt while other forest would have comprised Turpentine, White Stringybark, Red Mahogany and Grey Ironbark. The woodlands to the west would have been characterised by Grey Box and Forest Red Gum. Vegetation on the watercourse flats could have included Cabbage Gum and Rough-barked Apple.⁸

Numerous land mammals would have inhabited the Precinct, including kangaroo, wallaby, possum, echidna, bandicoot and smaller mammals. Birds, reptiles such as lizards, freshwater fish and shellfish would have provided faunal resources nearby the Precinct for Aboriginal use.⁹ The number of species, individuals and their habitat is much decreased.

The Darug people's subsistence was based on fishing, hunting possums and digging for yams. This diet was supplemented with foods such as kangaroo, wallabies, other small animals, creek and swamp resources such as eels, edible flowers and plant roots, honey from native bees, berries and fruits—making the Castle Hill area, being rich in all these resources, a desirable place to inhabit. Many different types of plants available in the Castle Hill area were also used for containers, carriers and as medicines.¹⁰

2.2.6 Land Use History

The Precinct has been subject to a number of land uses since European colonisation of Sydney. These land uses are likely to have resulted in a substantial impact to Aboriginal heritage places and sites.

In keeping with previous studies (JMcDCHM 1997, 1999, 2002a, 2006), the following definitions are used in classifying levels of site disturbance:

- High disturbance—severe disturbance to the soil. Buildings, houses, suburbs, roads, market gardens, poultry farms, BMX tracks, rubbish tips, formed tracks, dams, drains and other excavations.
- Moderate disturbance—cleared of trees at some time, cultivated or extensive soil disturbance probably caused by machinery or extended periods of trampling and buildings constructed on slabs with minimal foundations.
- Low disturbance—partly cleared and grazed at some time, but apparently never subject to extreme soil disturbance.

Rural-residential development has characterised much of the land-use history of the NWRL alignment, with areas around Castle Hill and Rouse Hill also being known for market gardening. Much of the Precinct has been used historically for small agricultural pursuits such as orchards or improved pastures prior to residential and industrial development. Such development has now completely covered and impacted the majority of the Precinct land to varying degrees. Industrial estates are adjacent to the suburban centres near the Precinct and residential development has and continues to

become increasingly dense. A number of major roadways intersecting the Precinct are also associated with a high level of disturbance. Landscapes heavily disturbed by previous activities have little potential to contain intact Aboriginal archaeological deposits. Areas of archaeological sensitivity are identified as those areas of least disturbance, and thus the soil may contain intact archaeological deposits. Areas of low disturbance, and thus archaeological sensitivity, are the remaining undeveloped or minimally disturbed areas along waterways and in highly vegetated lands.

Erosion

Considering the soil typology and the land use history, the following forms of erosion have occurred within the Precinct:

- active erosion;
- stabilised and partly stabilised;
- water; and
- gully stream bank.

Erosion disturbs intact Aboriginal archaeological sites and often relocates material from sites, thus affecting the integrity and archaeological significance of sites and material found within them. Eroded areas are less likely to have substantial intact archaeological deposits in comparison to non-eroded areas.

While erosion and land use history has meant that much of the Precinct is disturbed and there is low chance for as yet undetected intact Aboriginal archaeological sites to be found, there is still potential for isolated Aboriginal objects or small concentrations of Aboriginal objects to occur within the Precinct, including within disturbed contexts. Though they are less likely to be of scientific significance than intact Aboriginal archaeological evidence, all of these Aboriginal objects are also afforded statutory protection under the NPW Act.



Figure 2.3 1930 Aerial overlaid on the current aerial with the Precinct indicated in red. This image shows the rural residential character of Castle Hill at the time, with small farming activities being undertaken but the waterways still having a buffer of bushland surrounding them. (Source: Department of Lands and GML 2015)

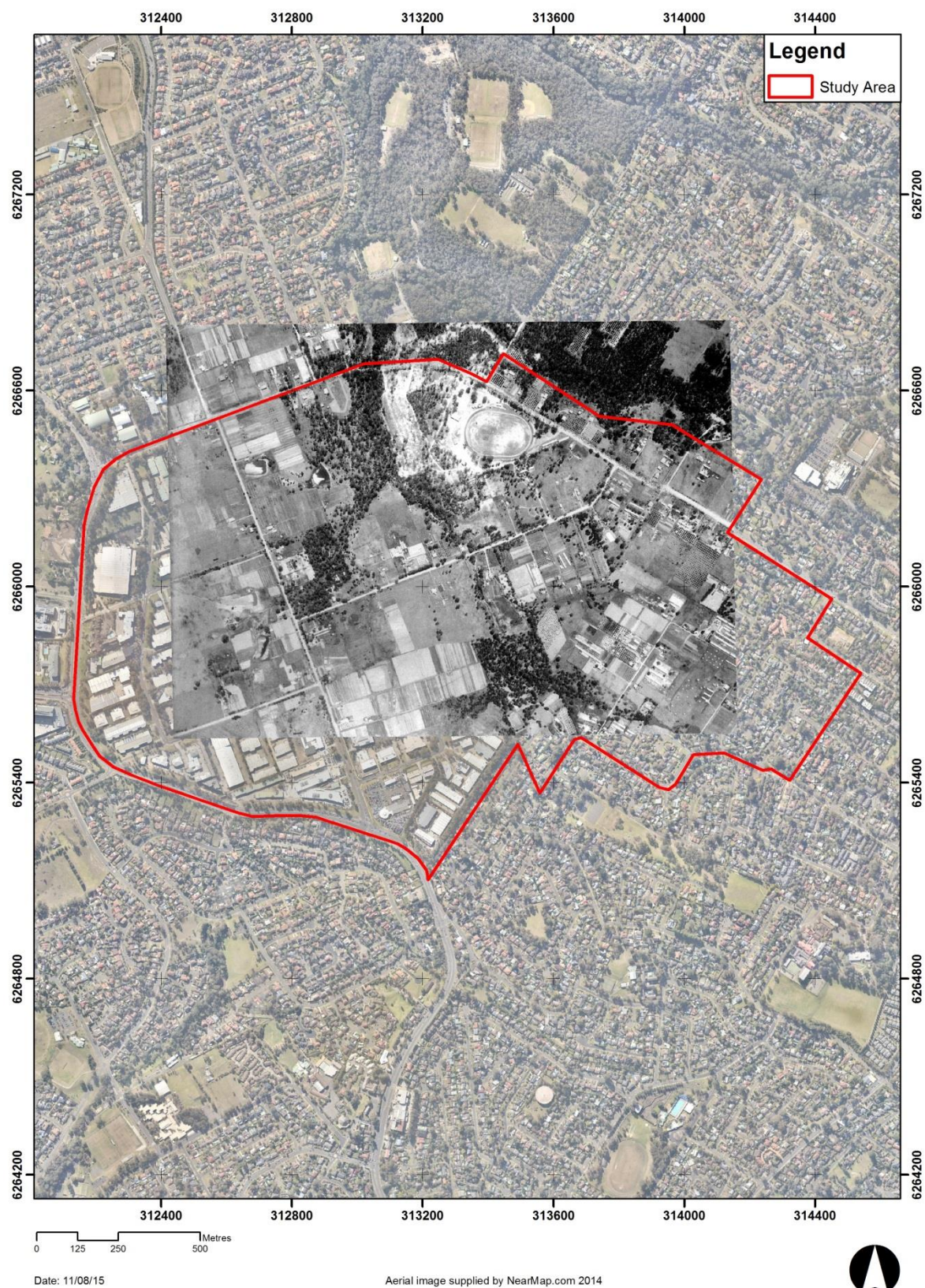


Figure 2.4 1956 Aerial overlaid on the current aerial with the Precinct indicated in red. This image shows the increase in market gardening and orcharding activities at Castle Hill at the time, with the waterways bushland buffer being reduced in size and density. (Source: Department of Lands and GML 2014)



Figure 2.5 1978 Aerial overlaid on the current aerial with the Precinct indicated in red. This image shows the transition from market gardening/rural residential lots to suburban residential housing and the development of industrial complexes at Castle Hill. (Source: Department of Lands and GML 2014)

2.2.7 Aboriginal Heritage Information Management System Search

A search of the AHIMS database managed by the OEH, for the Precinct was undertaken on 8 October 2014. The search with a 1km buffer surrounding the Precinct revealed 18 known Aboriginal sites within and around the Precinct (Table 2.1 and Figures 2.6–2.7). One site ‘Spurway Potential Archaeological Deposit’ (PAD) (AHIMS #45-5-3391) was listed on AHIMS with the status ‘not a site’ presumably after archaeological investigations by Jim Wheeler in 2006, bringing the total to 17 known sites.

Table 2.1 Aboriginal Sites Within and Around the Precinct on the AHIMS Database.

Predominant site feature	Frequency	Percentage (%)
Open artefact site	9	53
PAD ¹	2	11.5
Axe grinding grooves	2	11.5
Isolated artefact	1	6
Shelter with art and/or occupation	1	6
Artefact and PAD	1	6
Aboriginal Resource and Gathering	1	6
TOTAL	17	100

The most commonly recorded sites are open artefact sites including stone artefact scatters, concentrations and sites entitled ‘open camp sites’. General patterning of the AHIMS data indicates that artefact scatters, PADs and isolated finds are ubiquitous within the landscape and can be found in any location, on any landform (Figure 2.6). Previously recorded Aboriginal sites within the region have been located on ridge lines or crests and on alluvial flats but appear to become denser towards the margins of the creeks and near the confluences of the water courses. The density of Aboriginal stone objects within these stone artefact sites can vary greatly from isolated scatters to dense excavated deposits of 22–30,000 lithic artefacts. Those sites in proximity to streams, and particularly first and second order streams may also be associated with grinding grooves (Figure 2.6).

2.2.8 Other Register Searches

Other registers that have also been searched include the LEP and DCP 2012 records, the State Heritage Inventory and the National Trust Register to capture any other sites of Aboriginal heritage significance which may be within or adjacent to the Precinct. None of these registers contained any heritage sites within the suburb of Castle Hill that have Aboriginal heritage values as part of their listings.

2.2.9 Summary

Aboriginal archaeological sites are likely to have originally occurred on any landform but more commonly towards the margins of creeks and creek confluences. Aboriginal archaeological sites may still be visible in creek banks and eroded areas of hill tops and slopes, but have also undergone

¹ A Potential Archaeological Deposit (PAD) is an area where sub-surface stone artefacts and/or other cultural materials are likely to occur. PADs can be allocated on their own (eg NWRL PAD 1) or as a component of another Aboriginal site (eg Site X with PAD). If identified without visible evidence for Aboriginal cultural materials, PAD locations are treated by AHIMS as Aboriginal sites. Therefore this report treats all PAD locations as Aboriginal sites.

extensive cumulative impact and destruction since the Precinct has been developed, thus reducing the quantity and extent of intact Aboriginal archaeological sites.

Nevertheless, there is still the potential for as yet unidentified, investigated and recorded sites and objects to exist within the Precinct, as demonstrated in the research summarised below. It is important to note that all Aboriginal objects are protected under the NPW Act regardless of the context in which they are found.

Data from both previous archaeological reports and the AHIMS searches identify a current lack of comprehensive landscape based research within The Hills Shire Council LGA. What is currently known about Aboriginal archaeology at Castle Hill has been the result of investigations prompted by individual development proposals. Thus, additional research and investigation of Aboriginal archaeology within the Castle Hill area may highlight other landforms, or help to define particular landforms as areas that may yield higher concentrations of, or greater diversity in, Aboriginal sites and occupation evidence.

2.3 Previous Archaeological Work

A literature review of the NSW AHIMS library (and additional reports held by GML + JMcDCHM) was undertaken to understand what is known of the broader region's archaeological patterning. This review was targeted to those reports relevant to the Castle Hill district and the Precinct. Previous Aboriginal archaeological investigations have largely concentrated at the western end of the NWRL alignment due to the highly urbanised nature of the other eastern sections. Map area searches were used to find reports for the Castle Hill locality in AHIMS.

A large quantity of archaeological investigations have been undertaken in the wider area and yielded information used to characterise the archaeology of the area and the Cumberland Plain. Previous reports covering the wider regional context are addressed first to provide a regional background to archaeological site distribution, particularly in the Rouse Hill and Kellyville area. Summaries of other reports on investigations carried out within or adjacent to the Precinct are then presented, to describe the immediate context and what is known of Aboriginal archaeological sites within it. Where sufficient data was available in the archaeological reports, the previous study areas have been mapped in relation to the Precinct and the AHIMS data and are shown in Figure 2.7.

2.3.1 Previous Reports in the Region

Area 20 Precinct, Second Ponds Creek (Kelleher Nightingale 2010¹¹)

Kelleher and Nightingale undertook an Aboriginal Heritage Assessment to inform the Department of Planning on the opportunities and constraints for land and delivery of infrastructure in the Area 20 Precinct. The Area 20 Precinct is situated west of Windsor Road and north of Schofields Road with Second Ponds Creek running through the middle and incorporating part of the Riverstone East precinct. An AHIMS search for the Area 20 Precinct returned 118 sites in the vicinity of the Showground Station Precinct. They comprised: 85 isolated artefact sites; 17 PADs; three shelters with art; three sites with art and an archaeological deposit; two sites with Aboriginal artefacts and grinding grooves; two with just only grinding grooves; two scarred trees; and four other sites of various types. Of these sites, 16 'open camp sites', some with PADs, were located within the Area 20 Precinct boundary.

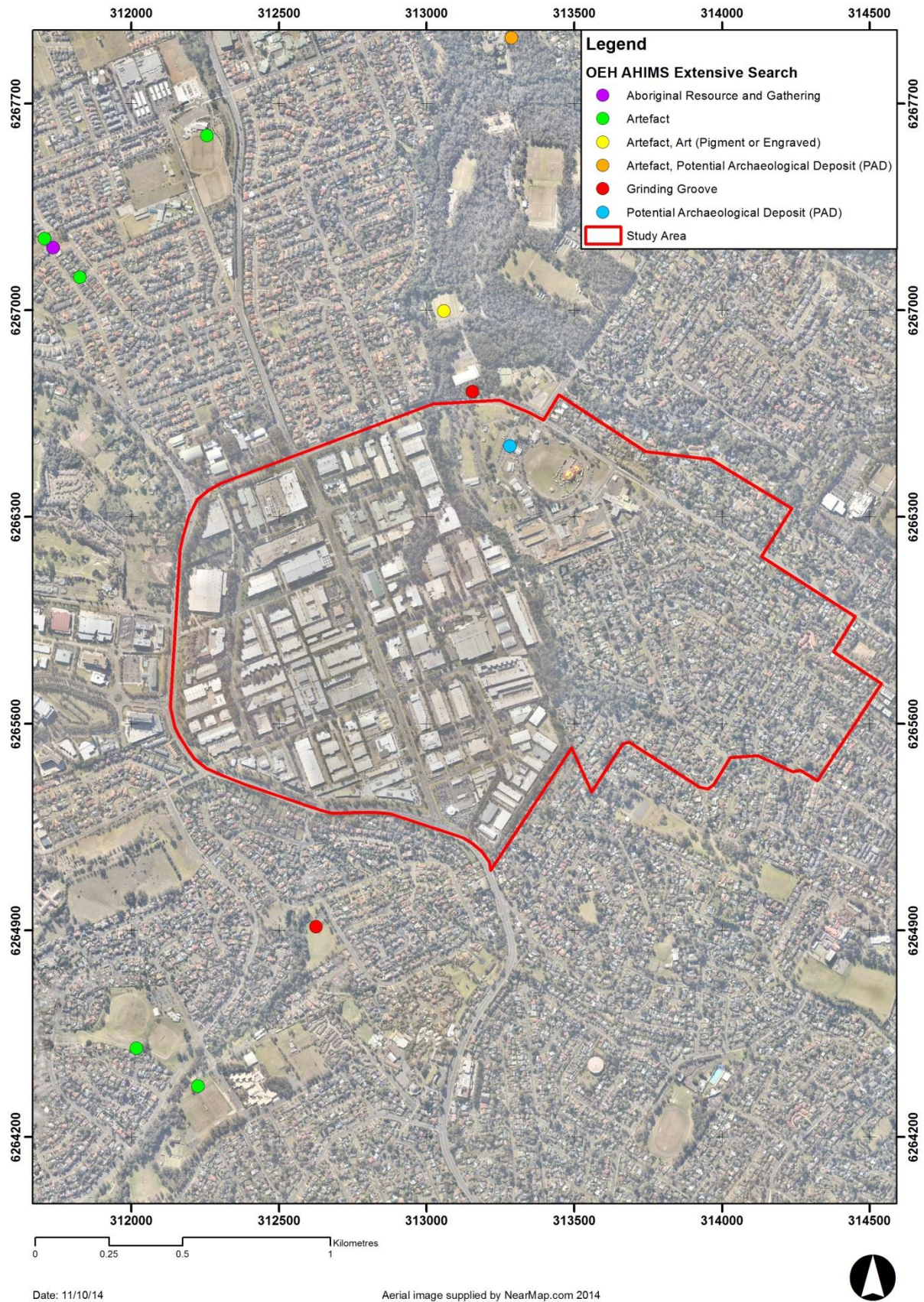


Figure 2.6 AHIMS results in relation to the Precinct. (Source: GML Heritage 2014 with data from AHIMS)

Kelleher and Nightingale undertook a field survey of the majority of the Area 20 Precinct lots. The survey recorded 19 new Aboriginal archaeological sites and eight new PADs, in addition to redefining the boundaries and condition of some previously recorded sites and PADs. Nine newly identified sites were located on the lower slopes, five of which were artefact scatters and four of which were isolated finds. The lower slope landform possessed a total of 29 surface artefacts, most of them made of silcrete. The mid slopes contained five isolated silcrete artefact sites. The ridge crest contained two scatters and one isolated find—in total seven silcrete artefacts—while the creek flat had a scatter of five silcrete artefacts and one isolated quartz artefact. Therefore, the surfaces of the lower slopes presented with a greater site and artefact density.

A summary of the PADs identified included:

- RH/A20P PAD 1—located on a gently sloping spur crest which extended from a main ridge line. It was located 480m from Second Ponds Creek and 400m from Killarney Chain of Ponds;
- RH/A20P PAD 2—recorded on the crest of a low-lying ridgeline. This PAD was 400m from Second Ponds Creek and 200m from Killarney Chain of Ponds;
- PAD 3—located on a flat to very gently sloping part of a ridge crest;
- PAD 4—on a saddle in the main ridgeline on the western boundary of Area 20;
- PAD 5—on an upper to mid slope;
- PAD 6—on a well-drained raised area of a mid-slope close to Second Ponds Creek;
- PAD 7—on the gently sloping northern flats of Second Ponds Creek; and
- PAD 41 (previously recorded by JMcDCHM 2002)—on the Second Ponds Creek flats. Parts of it were found to have been significantly impacted since initial recording.

Kelleher and Nightingale recommended that Aboriginal sites 01, 09, 10, 18 and all PADs newly recorded, were of moderate significance, in relatively good condition and should be conserved where possible to retain the Aboriginal cultural heritage of the Area 20 Precinct. The other sites identified (2–8, 11–17, 19) were of some significance due to low level disturbance and it was considered that any further disturbance to these was unlikely to diminish Aboriginal cultural heritage values associated with the Area 20 Precinct.

Mungerie Park Town Centre (AMBS 1999; AMBS 2000)¹²

As a part of the Mungerie Park Town Centre Project, salvage works were undertaken within the Rouse Hill Development Area between Windsor Road and Caddies Creek, including parts of registered Aboriginal sites RH/CD6 and RH/CD10. This investigation area was renamed Mungerie Park 1 (MP1).

Excavations at MP1 revealed an extremely high density and diverse range of Aboriginal stone tools across the site. Average artefact densities were highest within 100m of Caddies Creek and decreased significantly further upslope from the creek. Beyond 100m from the creek, higher densities of artefacts were generally found in clusters associated with discrete knapping floors amidst a much lower density background scatter. No artefacts were recovered at more than 220m distance from the creek. The assemblage demonstrated a continuous archaeological deposit between sites previously identified as

RH/CD6 and RH/CD10. The MP1 data also suggested a distinction between the apparent stone tool manufacturing foci closer to the creek and activities being conducted further away from the creek.

Caddies Creek Precinct (JMcDCHM Pty Ltd 2007)¹³

Four archaeological landscapes within Caddies Creek Precinct were excavated in 2006. The study area for the excavation ran along Caddies Creek to the 1:100 year flood line. The salvage excavation was undertaken to mitigate impacts to previously identified sites and areas of high archaeological sensitivity from the installation of trunk drainage and transport infrastructure. 22,000 stone objects (lithics) were recovered from the excavation of 145 dispersed 1m² test pits and 400m² of open area excavation. 18,000 of these lithics had technical attributes denoting them as artefacts. Grinding grooves were previously recorded on two of the landforms. JMcDCHM compared the findings of the Caddies Creek Precinct and Mungerie Park study (AMBS 2000) and found that site and artefact density varied with stream order and proximity to stone sources. The preferred landscape for sites in the Caddies Creek Precinct, based on the highest densities of artefacts and sites, was lower and mid slopes about 200m from the creek with northerly and north-easterly aspect. Artefact density declined with distances over 200m from the creek and all low lying areas adjacent to the creek had low average artefact densities. Silcrete was the most common lithic source. A number of occupation and landscape use trends were identified across the landscapes in the Caddies Creek Precinct, with RH/CC2 having stratification and both Bondaian (c8,000–1,000BP) and Pre-Bondaian (c30,000–8,000BP) assemblages, while RH/CD7 was significant as its stratified deposit showed evidence of substantial lithic change over time.

Rouse Hill Sports Complex (JMcDCHM Pty Ltd 2003)¹⁴

A site survey was undertaken in 2003 by JMcDCHM on an area of land at the corner of Commercial Road and Withers Road for the Rouse Hill Sports Complex. Caddies Creek runs to the north and west of this study area. The area has been heavily impacted by various activities meaning there is little potential for undisturbed archaeological deposit. Nevertheless, a 3km² AHIMS search area centred over the study area revealed 27 previously recorded Aboriginal sites including open sites, sandstone rock shelters and grinding grooves. Many of these sites have been tested or salvaged through the Rouse Hill Infrastructure Project with the Rouse Hill Development Area now having destroyed or impacted at least part of all of these sites, according to JMcDCHM 2003. No sites were identified during survey of the Rouse Hill Sports Complex study area and it was recommended that the development could proceed unconstrained by archaeology.

Schofields Road. Archaeological Test Excavation (GML+JMCHM 2011)¹⁵

ISF SCR/UPG2 (recently registered with AHIMS, number not yet known) was subject to archaeological test excavation under the Code of Practice in April 2011. The excavation of eight one metre square test units yielded one Aboriginal object. The site was to be subject to an AHIP application by the Roads and Maritime Services (RMS) for future road widening of Schofields Road.

Rouse Hill Development Area Reports (JMcDCHM 1993, 2000, 2001, 2002, 2005 and McDonald and White 1993; McDonald, White and Barton 2004; White and McDonald 2010)¹⁶

The Rouse Hill Infrastructure Project (RHIP) was undertaken within the Rouse Hill Development Area (RHDA) between Cattai Creek and Second Ponds Creek. There were three stages of the infrastructure project and various archaeological assessments done for each of these stages. Some of these previous assessments examined land included in the NWRL corridor and in proximity to the

current Showground Precinct. The surface surveys and subsurface test excavations during all stages of the RHIP identified and recorded a total of 80 Aboriginal sites, comprising a mixture of open artefact sites, PADs and isolated artefacts.

Stage 1

In 1993 and 2002 JMcDCHM undertook surveys of the RHDA for the RHIP. The survey covered land along Windsor and Old Windsor Roads, along Caddies Creek and the area between the roads and the creek, as well as Second Ponds Creek and Cattai Creeks. Some identified PADs were test excavated during 1993 for the RHIP Stage 1 works.

Stage 2

The Windsor Road to Caddies Creek land was investigated again under RHIP Stage 2. Salvage excavations took place during this stage, with a total of 482m² being excavated resulting in the recovery of 33,337 lithic objects. Three of the six salvaged sites showed evidence of casual or short-term use and one of these sites had evidence of stratification, indicating occupation in a transient manner throughout its usage. One of the sites showed evidence of more specialised utilisation and this site along with two others, was occupied on a short-term residential basis. All of the sites showed evidence for a variety of activities and as a result of these excavations, it can be demonstrated that there was occupation in this region from Pre-Bondaian (c30,000–8,000BP) to the Late Bondaian (c1,000BP–European Contact).

Closer to the current Precinct, JMcDCHM also undertook salvage excavation of site RH/CC2 (formerly PAD 31) at Wrights Road, Castle Hill in 2001 as part of Stage 2 of the RHIP.¹⁷ RH/CC2 is on a terrace about three metres above the stream line of Cattai Creek. This salvage excavation uncovered two temporally discrete assemblages of artefacts indicating long term use of the site by Aboriginal people. The total number of artefacts salvaged was 7,790, 58% of these being silcrete, 34% silicified tuff, 6% quartz and the remaining 1.4% a variety of other materials.

Stage 3

The 2002 survey for Stage 3 works covered land between Windsor Road, Rouse Road, Cudgegong Road and Schofields Road. RHIP Stage 3 works also involved the excavation of eight sites in the Second Ponds Creek Valley (JMcDCHM 2005c).

More than 1,310m² was excavated across a range of landforms with over 32,987 lithics recovered. The most intact sites with greatest scientific value due to their integrity were in aggrading and stable landscapes. Ploughing had occurred across most of the sites; however, it only affected generally the top 30cm of soil. Again, the excavations provided evidence of occupation from the Pre-Bondaian to the Late Bondaian.

Summary

Salvage excavations have been completed for all three RHIP stages and in summary; all salvage excavations found subsurface archaeological deposits, even in areas where no surface artefacts were found. Although a much larger area was salvaged in total during the RHIP Stage 3 works, the similarity of numbers of recovered artefacts between Stage 3 and Stage 2 is explained by the inclusion of the Stage 3 excavations of landscapes located on hill slopes, on the top of slopes and at varying distances from water sources in which were predicted to contain lower numbers of artefacts.

These RHIP excavations demonstrated that there was important variation in the scale and nature of procurement strategies in the upper Second Ponds Creek Valley. Evidence of occupation across the landscape from pre-Bondaian to Late Bondaian was evident, though the majority of the landscapes investigated were used in the Bondaian (ie the last 5000 years).

Rouse Hill Electrical Substation-Switch Building (Vanessa Hardy 2007, 2008)¹⁸

This report on investigations of AHIMS site #45-5-3392 was previously requested from AHIMS, but was not provided. The summary from the AHIMS site card states that archaeological test excavation was undertaken for eight 1m by 1m test trenches, associated with the location of a proposed impact. The outcome was the identification of an intact soil profile, albeit with a low density of objects at the locations excavated. However, the area was designated with a level of high archaeological potential and salvage excavation was recommended. It is not known whether salvage excavation was ever undertaken, as the project was approved under Part 3A of the EPA Act and thus a Section 90 permit for this site was not required.

2.3.2 Previous Studies Within or Adjacent to The Showground Precinct

The Balmoral Road Release Area (JMcDCHM Pty Ltd 2002)¹⁹

The 2002 JMcDCHM report presents the findings of a site survey for revised proposed infrastructure items in the Balmoral Road Release Area (BRRA), located west of the current Precinct. These items included potable water mains between Kellyville Reservoir and President Road, and Parklea Reservoir and Fairway Drive, corner of Windsor Road. The Balmoral Road Release Area has incorporated land between Windsor Road and Old Windsor Road, south of Samantha Riley Drive and north of Brighton Drive). This work followed previous surveys of the BRRA conducted by PPK in 2001 and JMcDCHM in 2001.

One open camp site, three isolated finds and a PAD were recorded in the previous studies. The latter, recorded by JMcDCHM 2001, was considered to have moderate to high archaeological potential. Steve Randall (Deerubbin Local Aboriginal Land Council) also located artefacts on Elizabeth Macarthur Creek, adjacent to Samantha Riley Drive.²⁰ The 2002 survey did not identify any additional Aboriginal archaeological sites or places.

The JMcDCHM 2002 study found that most of the proposed infrastructure ran along existing road verges or utility easements which are heavily impacted and concluded that the likelihood of previously unknown sites being disturbed by the proposed works was extremely low.

Norwest Business Park (Brayshaw and Haglund 1997)

In July 1997, an archaeological site inspection was carried on at Norwest Business Park, Windsor Road, Bella Vista (directly to the west of the current Precinct) to more accurately locate previously identified sites. Seven Aboriginal sites were relocated, including a number of small artefact scatters interpreted as open campsites. Artefacts within these scatters were made of mudstone, silcrete and quartz.

Artefact densities and absolute numbers were low, with each location showing evidence of disturbance. However, the distribution of landforms on which these disturbed sites were found included ridge-tops, saddles, slopes and creek side, which indicated that the presence of evidence of occupation, though sparse was likely to be continuous across the landscape. In this regard the combined significance of the sites was deemed to be greater than what the relatively low artefacts densities present at each location might suggest.

Proposed NWRL alignment, JMcDCHM Pty Ltd, 2006²¹

After the initial assessment of the NWRL 2002 proposed alignment (Mills 2003), JMcDCHM undertook a detailed Aboriginal heritage assessment of the proposed alignment of the NWRL to inform the Environmental Assessment prepared by GHD. The study included:

- identification of 14 Aboriginal heritage sites (stone artefact sites and PADs), three of which were previously unrecorded, and some of which have moderate to high archaeological potential;
- community consultation;
- a significance assessment; and
- management recommendations.

The Rouse Hill area in particular was found, through research and community consultation, to have a high density of artefacts. Despite the significant disturbance activities that have occurred in the area, any undisturbed deposits or deposits with low levels of disturbance are likely to retain evidence of Aboriginal occupation.

One identified site was located on Carrington Road, Castle Hill, on the west bank of Cattai Creek. The site is described as a low density stone artefact scatter and associated PAD on the eroding creek bank. Raw materials of artefacts within this scatter were tuff and silcrete.

It was found that the identified sites, PADs and cultural values associated with these may be impacted by NWRL works. The report recommended avoidance of identified Aboriginal sites and PADs where possible and that management planning for heritage sites should consider the broader archaeological landscape including the potential for further, as yet unidentified sites to be present in the study area.

NWRL EIS1 Aboriginal Archaeological Technical Report (GML + JMCHM 2012a)

In March 2012 GML + JMCHM prepared assessments of perceived impacts on Aboriginal and European heritage of the proposed NWRL to support the Environmental Impact Statement (EIS) for the Major Civil Construction Works component of the NWRL project.²² These reports identified heritage items within and close to the NWRL corridor, assessed their significance (where possible), and assessed the potential impacts that could result from works associated with construction of the NWRL.

No physical Aboriginal heritage sites were identified at the Showground's Station, although an area with Potential Archaeological Deposit (PAD) was allocated. The description of the Showground's Station and determination of the PAD was:

Prior development impacts associated with Construction Site 6 differ from the east to west (Figure 5.6). The eastern portion of this proposed construction site has been heavily impacted by building and construction, parkland development, terracing and landscaping, construction of gardens and the showground ring. Terracing has involved deep cutting and soil removal (approximately two metres of soil has been removed) to create the works depot and level the showground near the creek. Thus the eastern areas of Construction Site 6 have no archaeological potential.

The western areas of Construction Site 6 were assessed by JMcD CHM 2006 [reference should be made to GML + JMCHM 2012a: Section 3.2.1 for a review of this report]. The 2006 study identified an Aboriginal site (located outside the Construction Site) and an area of archaeological potential adjacent to Cattai Creek. The current survey identified remnant soil horizons across the area previously designated with archaeological potential (named NWRL PAD 3), and concurs with the 2006 assessment of a moderate level of archaeological potential for further Aboriginal objects to be

located within a subsurface context. Ground surface visibility was approximately 20% across this area, with no exposure. Development of Construction Site 6 will impact NWRL PAD 3.

The designed extent of NWRL PAD 3 in GML + JMCHM 2012a followed that from JMCHM 2006.²³ The assessment of NWRL PAD 3 defined that the PAD has a moderate level of archaeological potential²⁴ and until initial archaeological testing, an unknown level of Aboriginal heritage significance.²⁵ The consequence of impact to Aboriginal heritage, resultant of NWRL construction, was determined to be direct and partial, as not all of NWRL PAD 3 would be impacted by NWRL construction.²⁶ Aboriginal heritage management recommended a 'detailed Phase 1 archaeological excavation in the areas of impact, with possible Phase 2 archaeological excavation, which was to be determined based on the results of Phase 1.'²⁷

Details of the two phase excavation are defined in the report thus:

A two-phase investigation should be undertaken for each of the 25 Aboriginal heritage sites/PADs. Phase 1 should undertake determination of the extent, content, condition and integrity of each site/PAD (in line with Requirements 15 and 16 of The Code). For sites/PADs assessed to have a low to moderate level of potential (Table 5.5), a basic grid of test units should be sampled to determine whether the site contains a deposit worthy of more detailed investigation. Sites/PADs with a moderate or high level of archaeological potential should be subject to a more detailed initial stage of investigation. Subject to an assessment of the results from Phase 1 (by the archaeologist and Aboriginal representatives), excavation may move into Phase 2—an open area excavation of any significant deposits present. The need for and/or extent of Phase 2 cannot be determined for any site/PAD until Phase 1 has been completed.

Following Phases 1 and 2, an excavation report should be prepared for the sites (combining the results of all excavation together in one report) in accordance with the requirements of The Code. This report should be provided to the RAPs and OEH for public record. Post-impact AHIMS cards must be completed for all sites subject to archaeological excavation; these must be submitted to the OEH AHIMS registrar.²⁸

NWRL Post-Excavation Reports 2012 to present

As part of the NWRL Early Works program, a series of Aboriginal archaeological excavations have been undertaken within the Precinct. Post-excavation reports outlining the methodology, sample areas and findings of these excavations are not all currently available; however, reports prepared by RPS²⁹ following test excavation of a limited area within the southern portion of NWRL PAD 3 (AHIMS Site No. 45-5-4265) in the central northern area the Precinct, state that 'no discernible stratigraphy was observed' in this area and the soils below the surface were highly disturbed to a minimum depth of 20cm. It is believed from previous geotechnical reports and field inspections (GML + JMCHM 2012a) that the PAD is capped by fill and this is supported by the finding of disturbed soils and the Aboriginal community members noting that the RPS investigation area had previously been used as a rubbish dump. However, natural soil horizons remaining beneath this fill deposit may contain Aboriginal archaeological deposits in good condition.

RPS note from their pedestrian survey and test excavation of the most south eastern extent, that the site has no potential for intact archaeological deposits. However, as the test excavation only covered a small area and did not penetrate deposits below the fill, the RPS assessment does not eliminate the possibility that the site contains an archaeological deposit, or at least remnant background artefact scatter below the fill and in other areas of the PAD. Cattai Creek and its banks, including the area of PAD are likely to be susceptible to flooding in periods of heavy rain, whether any such flooding events have disturbed or removed potential Aboriginal archaeological deposits is not clear.

Further test excavation across the whole PAD is required to determine the presence/ absence of an Aboriginal archaeological deposit and its potential significance to complete an assessment of the whole PAD.

Summary of Key Investigations

Numerous archaeological surveys have been undertaken surrounding and including portions of the Precinct. The intensity of archaeological survey has resulted in the recording of many Aboriginal sites and an understanding of site patterning data from the AHIMS database. In addition, a number of archaeological excavations have been undertaken, all of which have recovered subsurface Aboriginal stone artefacts. Many of the sites have contained extremely high stone artefact densities and a wide range of stone artefact types of varying materials based on activities undertaken there.

The earliest occupation of the Cumberland Plain predates the Bondaian phase of stone artefact technology, dating to 30,000 years Before Present (BP). Previous research and excavations in the vicinity of the NWRL corridor (eg at RH/SP7 and SP9—JMcDCHM 2001; 2006) suggest that occupation in some places could date to this much earlier period. Technological change and variation in stone tools corresponds with phases of continuing occupation across the Cumberland Plain and are represented in a number of sites in the wider Hills area (McDonald 2008; White and McDonald 2010). Research themes and general patterning arising from the prior reports is discussed in Section 2.4.3 below.

2.4 Aboriginal Heritage Predictive Model

Through a process of landscape characterisation and the assessment of known site distribution, an archaeologist is able to infer those locations most frequently visited and used by Aboriginal people. Such assessment may be used to interpret long term subsistence and habitation patterns. Predictive Models provide a research context in which to ask questions of sites and landscapes, as well as frameworks for understanding known and potential Aboriginal archaeology. Previously proposed and utilised models for the Cumberland Plain, in which the current Precinct is located, are summarised below, followed by broad predictive models. The Cumberland Plain provides some basic elements for predicting the location and extent of as yet unidentified Aboriginal archaeological sites; however, predictive models require regular testing and revision as new information comes to light. Specific predictive models should be developed to guide investigations on a project by project basis. Following the summary of broad Cumberland Plain predictive models, models previously suggested for understanding the Castle Hill area are described and evaluated against the currently available information, and a revised Aboriginal Heritage Predictive Model is provided for the Precinct.

2.4.1 Aboriginal Chronology in the Sydney Region

Thousands of occupation sites have been documented for the Sydney region and the available radiocarbon ages are thus only indicative of the rates of occupation for each millennium. Most of the determinations date to the second millennium (1ka–2ka BP) with around 50% of the dates falling within the last 2000 years. Recent archaeological excavations have revealed a number of older open site deposits in the region with Pre-Bondaian assemblages, but not all of these have been dated. It is likely, therefore, that the available determinations underestimate the number of assemblages more than 5000 years old.

Development pressures in Western Sydney over the last few decades have seen a large number of archaeological investigations take place across the Cumberland Plain. Assisted by these

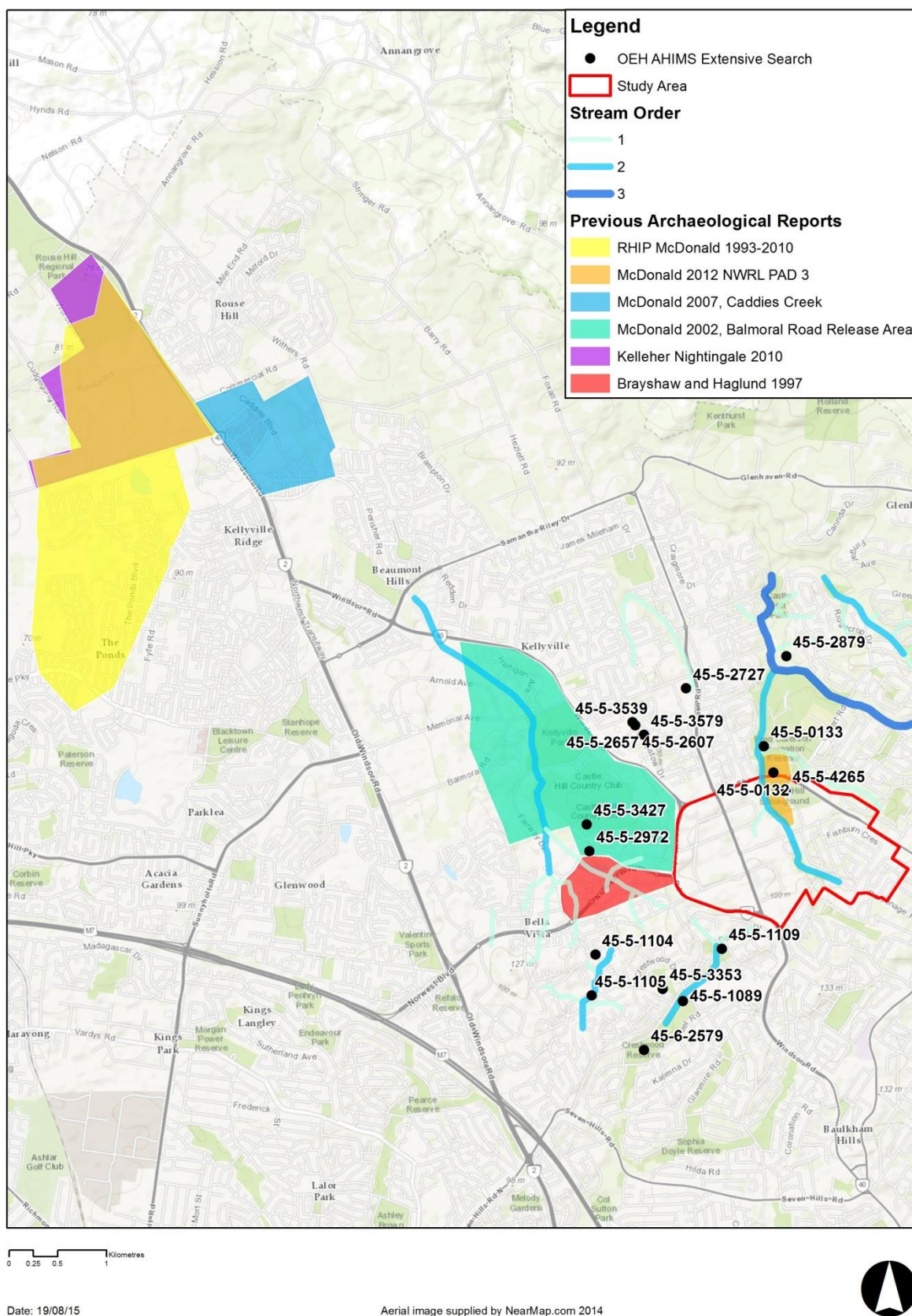


Figure 2.7 AHIMS results including previous archaeological study areas where boundaries are known. (Source: GML 2014).

investigations, the period of the highest intensity of occupation across the Cumberland Plain has been shown to be from the mid to late Holocene, that is, the past 3000 years.³⁰⁻³¹

The Eastern Regional Sequence (ERS) is a framework, developed by McCarthy from the 1940s–1960s, for chronologically understanding changes in lithic technologies in southeastern Australia, particularly in the Sydney region. The ERS has further been defined by subsequent archaeological work in the Sydney region (Attenbrow 2002;³² Hiscock and Attenbrow 2005³³; JMcDCHM 2008³⁴). This sequence provides a context into which lithic artefacts and technologies excavated from the Sydney region can be placed, in order to contribute to our understanding of occupation patterns, resource use, and temporal change in Aboriginal archaeological landscapes. A summary of the ERS is provided in Table 2.2.

Table 2.2 Eastern Regional Sequence

Period	Age	Description
Pre Bondaian	c30,000–8000BP	Preferential use of silicified tuff in assemblages. Cores and tools vary widely in size. No backed artefacts, elouera or ground stone. Predominant technique is unifacial flaking. Bipolar flakes are rare.
Early Bondaian	c8000–3000BP	Decline in use of silicified tuff. Shift in rare material usage. Appearance of backed artefacts. Wide use of bipolar flaking.
Middle Bondaian	c3000–1000BP	Main phase of backed artefacts. Introduction of asymmetric alternating flaking. Smaller tools and cores. Increase in bipolar flaking.
Late Bondaian	c1000BP–European Contact	Backed artefacts become rare or absent from most sites.

2.4.2 Cumberland Plain Predictive Model

The Cumberland Plain is one of Australia's most archaeologically excavated landscapes, where the past 20 years has seen hundreds of excavations across many locations and landforms. A number of key Aboriginal heritage archaeological excavations have been undertaken that have informed the archaeological record and provided the basis for predictive modelling on the Cumberland Plain (JMcDCHM 1999, 2002, 2005a, 2005b; McDonald and Rich 1993; White and McDonald 2010).

On the basis of relevant archaeological research, a predictive model has been developed that suggests how the likely nature of sites across the Cumberland Plain can vary in terms of landforms and landscape. Stream order is the base for this model of Aboriginal site location, and assumes that people would have preferentially selected places where the water supply was more permanent and predictable for usual camping locations (McDonald and Mitchell 1994; White and McDonald 2010). It is predicted that the size (density and complexity) and nature of archaeological features will vary according to the permanence of water (ie ascending stream order), landscape unit and proximity to lithic resources in the following ways:

- in any landscape location there is a chance that a 'background scatter' of Aboriginal objects exists—that is, objects deposited as a consequence of one-off manufacture and/or use, where no correlation would be associated with a landform or a more permanent activity area. Such areas are unlikely to contain a subsurface archaeological deposit;
- assessment of archaeological subsurface potential solely through surface manifestation of artefacts during surface survey is inadequate to accurately identify and assess the presence of

subsurface deposits as soils are largely aggrading across the Cumberland Plain, and therefore most artefacts are buried;

- in the headwaters of upper tributaries (that is, first order creeks), archaeological evidence will be sparse and represent little more than a background scatter; and where distant from stone sources, it would demonstrate the use of stone rationing strategies;
- in the middle reaches of minor tributaries (second order creeks) there will be archaeological evidence for sparse but focused activity (for example one-off camp locations, single episode knapping floors);
- in the lower reaches of tributary creeks (third order creeks) there will be archaeological evidence for more frequent occupation. This will include repeated occupation by small groups, knapping floors (perhaps used and reused), and evidence of more concentrated activities;
- on major creek lines (fourth order) there will be archaeological evidence for more permanent or repeated occupation. Sites will be complex and may even be stratified. Artefacts will show less use of rationing strategies as people may have been less mobile during their use of tools, and remained in the same location for several days, or even weeks;
- creek junctions may provide foci for site activity; the size of the confluence (in terms of stream ranking nodes) could be expected to influence the size of the site;
- ridge top locations between drainage lines will usually contain limited archaeological evidence although isolated knapping floors or other forms of one-off occupation may be in evidence in such a location;
- elevated terraces and flats, overlooking higher order watercourses may contain archaeological evidence for more permanent or repeated occupation; and
- naturally outcropping silcrete will have been exploited and evidence for extraction activities (decortication, testing and limited knapping) would be found in such locations.

It has also been hypothesized that stone artefact based sites in close proximity to an identified stone source would cover a range of size and cortex characteristics. With distance away from the resource, the general size of artefacts in the assemblage should decrease, as should the percentage of cortex and rate of artefact discard (distance–decay model). The increasing number of new silcrete sources has made the testing of the distance decay model (Dallas & Witter 1983) more difficult, and suggests that this model is a risky mechanism for explaining raw material preferences around the Cumberland Plain.

2.4.3 Predictive Models in Previous Castle Hill Area Studies

From the studies undertaken of the Caddies Creek landscape the following trends have emerged in terms of Aboriginal archaeological site locations and densities in this landscape:

- Average artefact densities are highest within 100m of the creek.
- Between 100m and 200m from the creek, higher artefact densities are generally found in clusters associated with discreet knapping floors (stone tool manufacture sites), amidst much lower density background artefact scatter.

- Grinding grooves can be found on landforms associated with the creek.
- Based on highest artefact and site densities, lower to mid slope landforms approximately 200m from the creek with a northerly and northeasterly aspect were preferred occupation locations for Aboriginal people.
- Artefact densities decline with distances over 200m from the creek and in all low lying areas adjacent to the creek there is generally only low average artefact densities.
- Most stone artefacts are made from silcrete.
- Sites may have evidence for the frequency and nature of Aboriginal usage, for example, three sites in the Caddies landscape showed evidence of casual or short-term use and one of these sites had stratified evidence which indicated repeat occupation and use over time.
- Some sites can show specialisation and variety in activities undertaken between adjacent sites is apparent.

Some similarities between the Caddies Creek landscape and the Cattai Creek landscape emerge from the findings of the previous archaeological work including:

- temporally discrete artefact assemblages can be found in both landscapes, indicating repeated use of one location or area over a long period of time; and
- silcrete is the predominate stone artefact raw material.

From the results of field surveys and test excavations in these previous study areas, it is also apparent that along existing road verges or utility easements, the likelihood of previously unknown sites being disturbed by proposed works is extremely low. This would be due to the nature and extent of these disturbances in the topsoil levels. Locations which have been disturbed through ground excavation works are also unlikely to have any intact Aboriginal archaeological deposits within them. Nevertheless, the presence of artefacts within all of the aforementioned study areas, even if only a single artefact indicates the presence of Aboriginal occupation, though sparse, is continuous across landscapes in the Hills district. The combined significance of remaining sites is deemed to be greater than might be suggested by the relatively low densities or seemingly isolated artefacts at each location.

2.4.4 Evaluation

In this section, the findings of the previous studies in the Castle Hill area are compared with the Cumberland Plain Predictive Model (CPPM). It should be noted that both the Cumberland Plain Predictive Model and Castle Hill models rely solely on stone artefact concentrations and do not address other evidence of Aboriginal occupation (eg hearths or other ground features which may potentially be present within the Hills district). This has limited the ability to determine how the Castle Hill sites fit with the Aboriginal chronology in the Sydney Region.

In terms of where the creek systems discussed above conforms or varies from the CPPM, each of the sites in proximity to the second order reaches of Caddies/ Seconds Ponds (Area 20 Precinct) were similar to the CPPM in that artefacts were found across all landscapes on all landforms. There was a greater density of artefacts on the slopes and artefact densities decrease with distance from the creek.

The Mungerie Park Town Centre area between Windsor Road and Caddies Creek, did not fit the CPPM unless it is considered in the context of its position between two second order creeks within 1–2km of each other. If the 2km distance to another second order creek is significant, then this site would fit the CPPM; however, generally the CPPM only considers sites within 200-300m of a stream. Mungerie Park Town Centre does not fit the CPPM pattern because it has high artefact densities near a 2nd order stream, where evidence would be predicted to be sparse and if present, located in discrete areas. Discreet knapping floors exhibiting focus and specialisation in activities were identified at the Mungerie Park site, amongst the high artefact densities and thus this site is more akin to the CPPM description for third order tributaries rather than a site 1–2km from a second order stream. Similarly, the Caddies Creek landscape itself (second order creek) had high densities of artefacts and stratification which all point to the description associated with third order streams in the CPPM.

These sites have been larger and have provided more information that would have been expected following the CPPM. By contrast, the findings of the Norwest Business Park study across a number of landforms located at the confluence of two creeks, which would have been expected to yield large artefacts sites with focused site activities, only revealed a sparse distribution of artefacts across the precinct which would be typical of Cumberland Plain background artefact scatter.

2.4.5 A Revised Aboriginal Heritage Predictive Model for the Showground Precinct

Based upon the landscape context, land use history, and emerging regional and local archaeological patterns, it is possible to provide a predictive statement for the likely occurrence of Aboriginal sites within the Precinct. However, these predictions are more indicative of the locations where artefacts may be found and are less reliable in terms of predicting the size, nature and extent of sites, as demonstrated in the evaluation of previous studies against the CPPM. The Precinct contains one known Aboriginal site and another on the Precinct boundary. Eighteen Aboriginal sites have been registered within 1km of the Precinct.

Based on previous investigations, the AHIMS search findings and analysis of the local environment, the most likely site types to be found within the Precinct are open camp sites or artefact concentrations, and isolated finds. Artefact concentrations are often found on slightly sloping to level ground, usually within 100 to 200m of a watercourse. Artefact sites and artefact densities may be expected to increase in quantity and size nearer to major creek confluences but this may not always be the case. Archaeological deposits may be evident with artefacts in a surface erosion scour but can also be expected in subsurface contexts where undisturbed soil horizons exist, including where fill has capped natural soil horizons. Isolated finds may be found anywhere as part of the background scatter across the landscape. The majority of artefacts within the Precinct are predicted to be made from silcrete and should a site be identified intact, such sites may contain evidence for the frequency and nature of Aboriginal usage, for example, casual or short-term use and repeat occupation and use over time. If a complex of sites is found, comparison of these sites may show diversity in activities undertaken and the allocation of discreet locations for different activities.

Axe-grinding grooves, the next most frequent site types, are usually found along creek lines and tributaries. This depends on the occurrence of suitable sandstone platforms, preferably with rock pools and flowing water to facilitate grinding. Elsewhere in the Sydney region, these have often been identified as part of site complexes, sometimes near engraving sites and rock shelters. A number of grinding grooves occur along Caddies Creek. It is possible that grinding grooves could occur along the tributaries of Cattai Creek which are within the Precinct, but this needs to be investigated further. Grinding grooves are often highly worn by water action and may be difficult to detect.

An overview of the types of Aboriginal sites and/or places and their potential location within the Precinct is provided in Table 2.3.

Table 2.3 Types of Aboriginal Sites that may be Located within the Precinct.

Feature	Description and potential location
Stone artefacts	<p>Stone artefact concentrations are collections of stone, frequently brought from other areas, which demonstrate evidence for Aboriginal working, use and/or discard of the stone at a single location. Stone artefact concentrations may be associated with any of the below site types.</p> <p>Where such sites are buried by sediment they may not be noticeable unless exposed by erosion or disturbed by modern activities.</p> <p>These sites may be found within 200m of creek lines, on lower slopes and ridge tops where there is dry, flat land with good views or close to resource zones.</p>
Isolated finds	<p>Sites consisting of a single stone artefact, isolated from any other artefacts or archaeological evidence. They are generally indicative of sporadic past Aboriginal use of a location.</p> <p>A distinction should be drawn between isolated finds which are a component of the background distribution of objects and specialised objects such as axes, hammer stones, grinding dishes, etc., which would have been used repeatedly and may have been carried from place to place.</p> <p>These sites are more likely to be found within 200m of creek lines, on lower slopes and ridge tops but can be on any landform in any landscape due to the nature of discard.</p>
Potential Archaeological Deposits (PADs)	<p>A PAD is an area where sub-surface stone artefacts and/or other cultural materials are likely to occur. Allocation of PADs should be accompanied by a level of potential—high, moderate or low. The designation is made on the basis of an assessment of the soil's condition and integrity, contrasted against the likelihood of finding buried evidence at the location.</p>
Grinding grooves	<p>Grooves resulting from the grinding of stone axes or other implements are found on flat areas of suitable sandstone. They are often located near waterholes or creek beds as water is necessary in the sharpening process. In areas where suitable outcrops of rock were not available, transportable pieces of sandstone were used.</p> <p>These sites may be found near creeks within the Precinct.</p>
Art sites	<p>Aboriginal paintings, drawings and stencils are commonly found where suitable surfaces occur in sandstone shelters and overhangs. These sites are often referred to as rock shelters with painted art and are not likely to be found within the current Precinct; however, rock engravings, carvings or peckings are also found on sandstone surfaces but can be found both in the open and in shelters. These are referred to as rock engraving sites and may be present within the Precinct, particularly near rivers and at the top of hills though might be covered by foliage or grass.</p>

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3.0 Known Aboriginal Heritage

3.1 Preamble

This section summarises what is currently known about identified Aboriginal heritage sites and objects within the Precinct and considers whether the sites fit the pre-established predictive models or if the models require further revision.

3.2 Known Aboriginal Sites, Objects and Places

Prior archaeological studies have identified that the Precinct contains two known Aboriginal sites within or close to the boundary of the Precinct—NWRL PAD 3 (AHIMS Site No. 45-5-4265) and 'Castle Hill' Axe Grinding Grooves (AHIMS Site No. 45-5-0132) (Figure 3.1). There are no known Aboriginal Places within or near to the Precinct. According to AHIMS, the site card for NWRL PAD 3 (AHIMS Site No. 45-5-4265) has been the subject of a number of research designs and was subject to limited test excavation by RPS in 2013 as part of the NWRL Early Works phase.

This information is based on data registered on the AHIMS. Newly recorded sites as a result of field survey or other work done not registered on AHIMS, or data that has been registered since the date of the AHIMS search undertaken by this study are not accounted for in this report.

Table 3.1 Summary of What is Known for Aboriginal Sites Within or Near the Boundary of the Precinct.

Site	Location	Condition	Status	Significance
NWRL PAD 3 (AHIMS Site No. 45-5-4265)	313177E, 6266348N The site is located within the Precinct on a raised flat above a stream bank in the showground complex.	The site is capped by fill. ¹ Natural soil horizons beneath this may contain Aboriginal archaeological deposits in good condition.	RPS test excavated a limited area within the southern portion of the PAD. 'No discernible stratigraphy was observed' and the soils below the surface were highly disturbed to a minimum depth of 20cm. Further test excavation is required to complete an assessment of the whole PAD.	RPS deem from their pedestrian survey and test excavation of the most south eastern extent, that the site has no potential for intact archaeological deposits. However, as the test excavation undertaken only covered a small area and did not penetrate deposits below the fill, it does not eliminate the possibility the site contains an archaeological deposit or at least remnant background artefact scatter below the fill and in other areas of the PAD. Additional test excavation would be required to determine the presence/absence of a deposit and its potential significance.
'Castle Hill' Axe Grinding Grooves (AHIMS Site No. 45-5-0132)	Grid reference c 3982 8334, 9819 3349 which has been translated to AGD 313050E, 6266532N in the AHIMS database.	The condition of the site is currently unknown—a field survey would be required to relocate this site in order to confirm its status.	There are no permits for impact issued for this site. However, a field survey would be required to relocate this site in order to confirm its status.	A significance assessment for the site is required following field survey to relocate the site, as there is no further information on the site card and no reports associated with the site have been lodged with AHIMS.

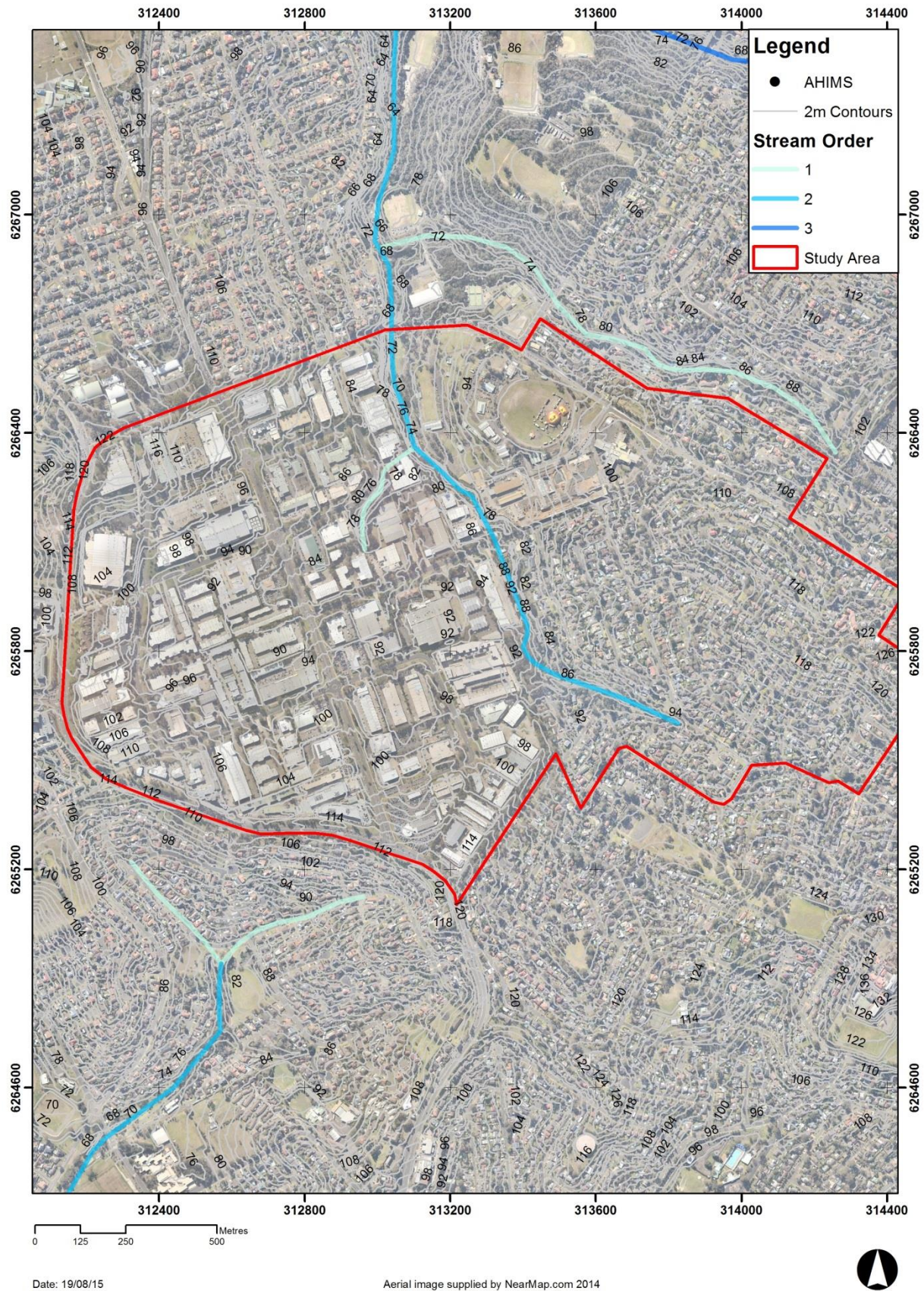


Figure 3.1 Known Aboriginal archaeological sites registered on AHIMS within and immediately adjacent to the Precinct. (Source: GML 2014)

3.3 Aboriginal Cultural Heritage Values

Aboriginal community consultation is a vital component of Aboriginal heritage values assessment; especially non-physical values that may include memories, stories and associations between the Aboriginal people and their traditional lands, or Country. Aboriginal people frequently express an enduring connection to their Country, a connection that transcends generations, both past and present. This connection is expressed as a sense of belonging which may manifest through physical objects or place; alternatively it may be presented as an intangible value, where an appreciation of an unseen quality or non-material value connects a place in the landscape, tradition, observance, custom, lore, belief and/or history to the person or group describing the item, event or value. The notion of intangible, social, or community values is essential to Aboriginal people as 'the effective protection and conservation of this heritage is important in maintaining the identity, health and wellbeing of Aboriginal people'.²

Aboriginal community consultation has been undertaken for the NWRL project and in general, Aboriginal community consultation has followed the principles of the following policy documents:

- DECCW 2010, *Aboriginal cultural heritage consultation requirements for proponents*
- DEC 2005, *Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation*

3.3.1 Aboriginal Groups Consulted and Consultation Method Used

The following table (Table 3.2) lists the known Aboriginal Parties who originally registered to be involved in community consultation for the NWRL. These Registered Aboriginal Parties (RAPs) were identified through a formal process in late 2011. The process undertaken to identify and invite Aboriginal representatives to register their interest and be involved in the community consultation for the NWRL project is detailed in Chapter 2 of the North West Rail Link: EIS 1—Major Civil Construction Works—Indigenous Heritage, March 2012 report. These groups and individuals were engaged during the initial field survey for the NWRL, have inputted into and commented on the Aboriginal heritage report and participated in subsequent fieldwork. The parties listed in Table 3.2 are those known to GML from the first NWRL EIS phase—currently GML does not have information on whether there are additional parties which have been registered since and included in the NWRL project or any parties whose interest has changed.

Table 3.2 Registered Aboriginal Parties (RAPs).

Aboriginal Organisation/Person	Contact	Date Registration Received and Comments	Reference
Metropolitan Local Aboriginal Land Council	Nathan Moran, CEO	14 November 2011	Email registration
Deerubbin Local Aboriginal Land Council	Steven Randall	15 November 2011	Email registration
Parramatta Council Aboriginal and Torres Strait Islander Advisory Committee	Ms Maggie Kyle; Bruce Gale, Chairperson of Council's Aboriginal and Torres Strait Islander Advisory Committee	26 October 2011—Email registration 15 November 2011—GML received telephone call from Gill Saunders who said he is a traditional owner/elder and is a member of the committee and wishes to be involved with the project but registered as part of the committee.	Email registration

Aboriginal Organisation/Person	Contact	Date Registration Received and Comments	Reference
Mr Tony Williams (Individual)	Mr Tony Williams	27 October 2011—Email from Mr Williams. He is a registered traditional owner and a community elder and wishes to register for the NWRL project. He has lived in the Hills Shire for over 65 years and has a cultural interest in the project as his great grandfather is buried on the creek bed near when he lives.	Received email from Mr Tony Williams
Darug Custodial Aboriginal Corporation (DCAC)	Ms Leanne Watson	30 October 2011—Registration of interest	Email registration
Darug Aboriginal Cultural Heritage Assessments (DACHA)	Mr Gordon Morton and Ms Celestine Everingham	1 November 2011—Registration of interest	Fax registration
Darug Aboriginal Land Care Inc (DALCI)	Mr Des Dyer	14 November 2011—Registration of interest	Email registration
Darug Land Observations (DLO)	Mr Gordon Workman	15 November 2011—Registration of interest	Email registration
Yarrawalk/Tocumwall	Mr Scott Franks	15 November 2011—Registration of interest	Email registration
Darug Tribal Aboriginal Corporation (DTAC)	Mr John Reilly	16 November 2011—DTAC wishes to register as primary registrants	Email registration
Gunjeewong Cultural Heritage Aboriginal Corporation	Ms Cherie Carroll Turrise	16 November 2011—Registration of interest	Phone registration

In order to allow the Aboriginal community to input into and comment on the Precinct, the draft Aboriginal HA was provided to those who registered above for their review and to facilitate their contribution in terms of cultural heritage values. The comments for the draft Aboriginal HA closed 8 May 2015. Only one response was received, and is summarised below.

3.3.2 Registered Aboriginal Party Submissions/Input

Kamilaroi-Yankuntjatjara Working Group was not nominated as a RAP by the Department of Planning and Environment. Their response to the draft Aboriginal HA report provided by the Department of Planning and Environment on 21 April 2015 reiterated the group's registration of interest and wish to be consulted on the project, including attending meetings and participating in any fieldwork. The group's response notes they do not have a problem with the report. No other comments on cultural heritage values in the precinct were provided by Kamilaroi-Yankuntjatjara Working Group or from any other groups.

3.4 Endnotes

- ¹ Coffey Geotechnics in EMM 2013, *Archaeological assessment and research design Showground Station—North West Rail Link*. Report prepared for Baulderstone Pty Ltd, p 37.
- ² DECCW 2010 (April) *Aboriginal cultural heritage consultation requirements for proponents 2010*, DECCW, Sydney.

4.0 Recommendations

4.1 Management

The EP&A Act provides a statutory framework for the determination of development proposals. It provides for the identification, protection and management of heritage items and requires that appropriate measures are taken for the management of any potential archaeological resource by means consistent with practices and standards adopted to meet the requirements of the NPW Act. All Aboriginal cultural material receives statutory protection under the NPW Act.

New offences relating to the harm to, or desecration of, an Aboriginal object or declared Aboriginal Place were introduced with the *NPW Amendment (Aboriginal Objects and Places) Regulation 2010* on 1 October 2010. The definition of 'harm' now includes to destroy, deface, damage or move an Aboriginal object or declared Aboriginal Place. The OEH has stated:

The most significant change is the introduction of tiered offences and penalties. Offences committed with knowledge, in aggravating circumstances or in relation to an Aboriginal Place will attract higher penalties than previously. There is a new strict liability offence of harming Aboriginal objects and of harming or desecrating Aboriginal Places.¹

There are two known Aboriginal heritage sites within or on the boundary of the Precinct. Any impact on Aboriginal heritage objects and sites in the Precinct will add to the cumulative impact on sites across the Cumberland Plain. Rezoning of the Precinct will not cause harm to Aboriginal heritage objects or sites; however, subsequent development of land within the Precinct may.

The strict liability offence of harming Aboriginal objects has a number of defences. The two defences relevant to this project are the statutory defence of due diligence—through compliance with an adopted industry code of practice (see due diligence below)—and compliance with the conditions of an AHIP.

In order to manage the Precinct this heritage assessment establishes a series of heritage principles which are in accordance with best practice guidelines, such as the Burra Charter, and should form the basis for future cultural heritage management in the Precinct. The 11 principles set out below form the basis for recommended management actions.

4.1.1 Appropriate Aboriginal Heritage Management

The following principles provide a guide to best practice Aboriginal heritage management and are informed by the principles of the Burra Charter.

- Aboriginal heritage sites, places and values should be identified, protected, conserved, presented and transmitted to all generations.
- Use best available knowledge, skills and standards as supported by ongoing technical and community input to decisions and actions that may have a significant impact on their Aboriginal heritage values.
- Respect all significant heritage values of the site/place.
- Manage Aboriginal cultural heritage in accordance with the NPW Act and other legislation as relevant to the significance of the values.
- Ensure that the use and presentation of the Precinct is consistent with the conservation of Aboriginal heritage objects and values.

- Recognise that Aboriginal people are the primary determinants regarding the value of their heritage. Encourage active participation of Aboriginal people in identification, assessment and management to ensure effective protection of Aboriginal heritage values.
- Management of Aboriginal heritage places should make timely and appropriate provisions for community involvement, especially by people who: a) have a particular interest in, associations with, the place; and b) may be affected by the management of the place.

4.2 Recommendations for Aboriginal Heritage Management

The following management and mitigation statements are made in light of the findings of this desktop assessment, relevant NSW legislation protecting Aboriginal heritage and the OEH *Aboriginal Cultural Heritage Assessment Guidelines*. The following management and mitigation statements are based on consideration of:

- legislative requirements pertaining to Aboriginal objects and places under the NPW Act, as amended;
- the assessment of the known and/or potential Aboriginal archaeological sites, objects and areas;
- the nature and extent of the Precinct and remaining areas with archaeological sensitivity within the study area; and
- the likely short and long-term impacts posed by the Precinct proposal.

4.2.1 The Rezoning Phase

This Aboriginal Heritage Assessment has identified and assessed the scientific significance of Aboriginal heritage site, objects and archaeological potential within the Precinct for the rezoning phase. In light of Aboriginal heritage management requirements and recommendations relating to future development works (as presented in Section 4.2.2 below), Section 4.4 outlines recommended DCP Controls for inclusion in the Precinct DCP as part of the rezoning phase.

4.2.2 Future Development Work

The following management recommendations should be implemented if identified objects and/or sites are to be impacted by development work subsequent to the rezoning. These management recommendations should be considered in the broader planning process for the project.

Exclusion Zones/Avoidance for Known Sites

Avoidance of impacts to all known registered AHIMS sites and objects should be practiced where possible, including penetration into the soil above and surrounding the site. It is recognised that it may not always be possible to avoid impacts to some AHIMS sites and objects nor are all areas of Aboriginal archaeological sites, objects or Aboriginal heritage values known.

In areas where avoidance cannot be practiced, there may still be potential for Aboriginal objects, sites, places, scientific values and social values to be present and impacted. Furthermore, as yet unrecorded Aboriginal objects and heritage values may also exist within the study area and these should be accounted for in the planning stages of a development proposal so that they can be managed appropriately without project delays.

Due Diligence for Unknown Sites

The NPW Act 'provides that a person who exercises due diligence in determining that their actions will not harm Aboriginal objects has a defence against prosecution for the strict liability offence if they later unknowingly harm an object without an AHIP'.²

The OEH has issued a code of practice guideline in September 2013 that defines a 'due diligence' approach to Aboriginal heritage: *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW*. The guideline is a best practice management tool for potential Aboriginal heritage objects, place and values which could be associated with a project. It is designed to assist individuals and organisations to exercise due diligence when carrying out activities that may harm Aboriginal objects, and/or Aboriginal Places, and to determine whether they should apply for consent in the form of an AHIP.

The *Due Diligence Code of Practice* sets out the reasonable and practicable steps which individuals and organisations need to take in order to determine:

- whether or not Aboriginal objects are, or are likely to be, present in an area;
- whether or not their activities are likely to harm Aboriginal objects (if present); and
- whether an AHIP application (or other permit such as that of the Director-General of the Department of Planning in the case of State Significant Infrastructure or Development projects) is required.

The OEH has defined due diligence thus:

Due diligence is a legal concept describing a standard of care. Exercising due diligence means turning your mind to the likely risks of your proposed course of action. It is not enough to perform activities carefully. Due diligence requires consideration of your obligations under, in this case, the NPW Act, and the consideration and adoption of a course of action that is directed towards preventing a breach of the Act.

*In the context of protecting Aboriginal cultural heritage, due diligence involves taking reasonable and practicable measures to determine whether your actions will harm an Aboriginal object and if so avoiding that harm.*³

The steps that are required to follow the due diligence process are:

- Step 1—determine if the proposed activity will disturb the ground surface or any culturally modified trees or rock platforms;
- Step 2a—undertake an Aboriginal Heritage Information Management System (AHIMS) database search;
- Step 2b—identify landscape features that indicate the presence of Aboriginal objects;
- Step 3—undertake discussion with respect to the extent of the development footprint;
- Step 4—conduct a desktop assessment and visual inspection⁴;
- Step 5—undertake impact assessment and development of strategies to avoid, manage and/or mitigate harm to Aboriginal objects.

If Aboriginal cultural material is identified during a study, the NSW National Parks and Wildlife Service (NPWS) must be informed under Section 89A of the NPW Act. If during the course of a due diligence

assessment, it is determined that the proposed development activity will not disturb the ground surface or any Aboriginal objects, places, sites or values, then the activity can proceed with caution without applying for an AHIP.

Mitigation of Unavoidable Impacts—Full Aboriginal Cultural Heritage Assessment and AHIP

When harm to known and/or potential Aboriginal objects, places, values is anticipated to occur and cannot be avoided, the *OEH Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW 2011* must be followed. Impact to Aboriginal heritage sites, places, objects and/or values requires either a Section 90 AHIP under the NPW Act, or, for State Significant Infrastructure or State Significant Development Projects, the approval of the Director General of the Department of Planning. The process to be followed when harm cannot be avoided and a permit to harm Aboriginal objects is required is summarised in the flow chart below (Figure 4.1).

Community consultation would be required for such an investigation and should be undertaken in accordance with the *OEH Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*. The consultation process set out in this guideline is lengthy and has a number of statutory review periods which must be complied with if a Section 90 AHIP application will be made for impact to sites. The requirements of the consultation process are set out in Section 4.3 below.

4.3 Requirements for Future RAP Consultation

Any future work relating to planning of the Precinct and Aboriginal Heritage management within the Precinct should include consultation with the RAPs. The *OEH Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* outlines the stages of the consultation process includes:

- Stage 1—Notification of project proposal and registration of interest.
- Stage 2—Presentation of the information about the proposed project.
- Stage 3—Gathering information about cultural significance.
- Stage 4—Review of draft cultural heritage assessment report.

The guidelines specify timeframes for each stage of the consultation process. Further details of the consultation stages are described below.

Stage 1: Notification of Project

The aim of Stage 1 is to 'identify, notify and register Aboriginal people who hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects and/or places in the area of the proposed project'.

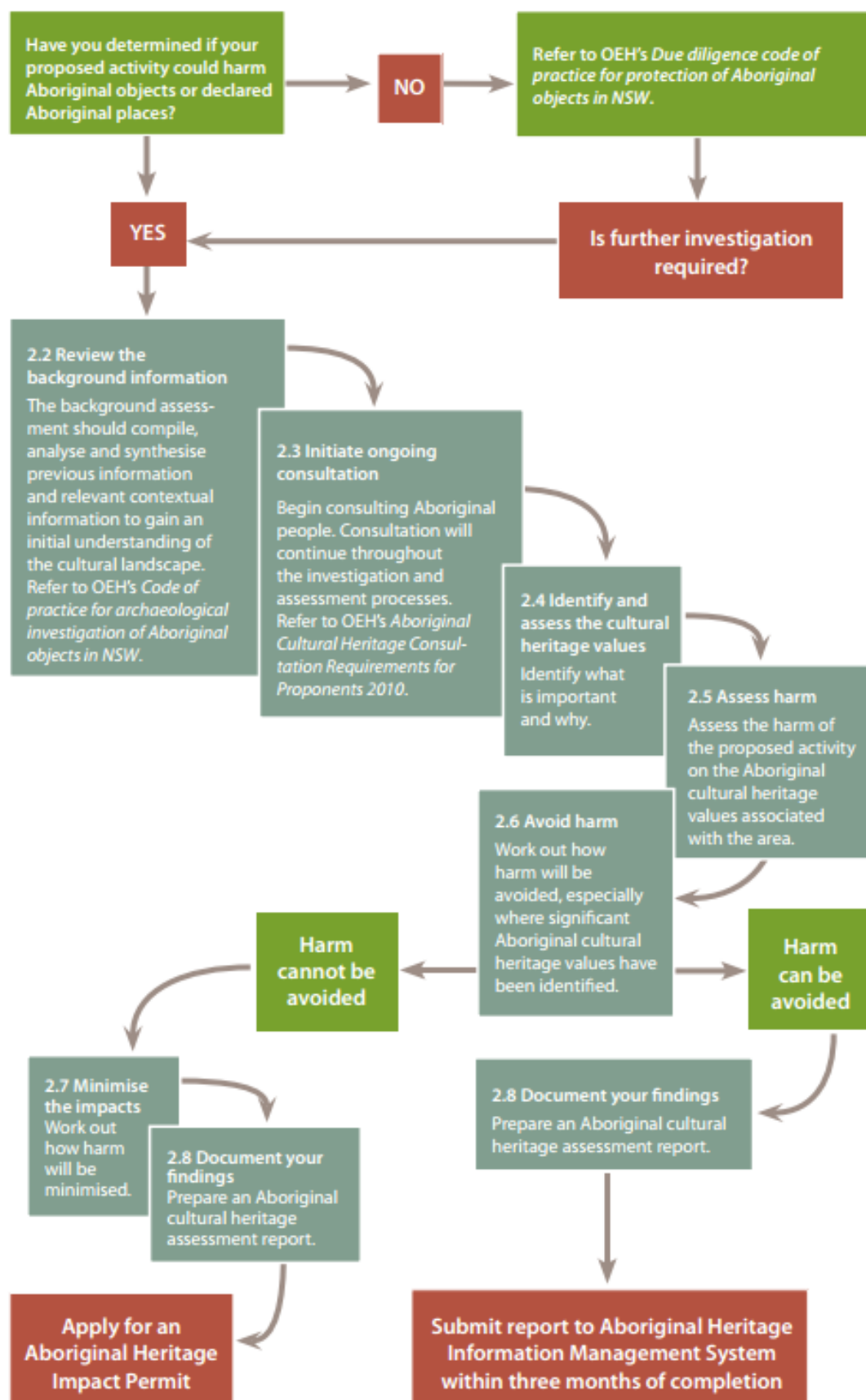


Figure 4.1 Aboriginal heritage investigation, assessment and recording process in NSW. (Source: OEH 2010 *Guide to investigating assessing and reporting on Aboriginal cultural Heritage in NSW*, Figure 1, p 4)

The identification process involves:

- sending initial letters to select government agencies to determine relevant Aboriginal stakeholder groups to contact; and
- placement of a notice in local press inviting Aboriginal people who hold relevant cultural knowledge to register in the process of community consultation.

A letter notifying all Aboriginal people and the Local Aboriginal Land Council (LALC) about the proposed project must be sent to each individual and group identified through the above steps.

Aboriginal people have a minimum of 14 days after the letter was sent or the notice was published in the newspaper to register an interest in the project.

The outcome of Stage 1 is a list of Aboriginal people who have registered to be involved in consultation for the project—the Registered Aboriginal Parties (RAPs). The RAPs are to be involved for the remainder of the project; no Aboriginal consultation outside of that undertaken with the RAPs is required.

Stage 2: Presentation of Information

- A letter is to be sent to all RAPs informing them of the project outline, project impacts, the timeline and milestones of the project.
- A methodology for undertaking field assessment⁵ and a request for any information on culturally sensitive areas of local traditional knowledge relating to the study area should be included.
- The OEHL has determined that in Stage 2, 28 days must be allowed for the RAPs to respond.

Stage 3: Gathering of Information

- Field assessment can commence four weeks after the Stage 2 information package has been sent to the RAPs.
- During the field assessment, the RAPs may provide knowledge about local traditions and cultural aspects of the study area.
- Any such information would be presented in the project heritage assessment.

Stage 4: Review of Draft Report

- Following client review of the draft Aboriginal heritage assessment, if the client requires an AHIP (ie Section 87 or Section 90), each RAP must be provided with the draft report for comment.

The OEHL stipulates that RAPs should be allowed 28 days to provide comment on the draft report. All community comments should be appended to the report and appear in the final heritage assessment.

4.4 Recommended DCP Controls

4.4.1 Review of Current DCP Provisions

GML has undertaken a review of the current The Hills DCP 2012 Part C Section 4 Heritage in terms of Aboriginal heritage. GML recommends that the Council consider revising the current overarching DCP controls to:

1. Where relevant, use more inclusive or specific language to encompass all types of heritage, including Aboriginal heritage. For example, 'heritage building' in Subsection 3.2 of the DCP Section 4, should be replaced universally with '**heritage item**' (except for the example in development control (b) 2 which is specifically about outbuildings). This will make the DCP more inclusive of other heritage site types, especially historical archaeology and Aboriginal heritage.
2. Include any Aboriginal heritage object, site, place or value as defined under Subsection 3 Part 1 of the NPW Act and any land located in the vicinity of any known or potential Aboriginal heritage object, site, place or value, in the schedule of land which the heritage section of the DCP applies to.
3. Provide direction with the inclusion of reference to OEH guidelines for Aboriginal heritage management for any development associated with Aboriginal heritage objects, sites or values.

4.4.2 Recommended Precinct DCP Controls

It should be stated at the beginning of the DCP section that the Precinct contains Aboriginal sites and places of heritage significance and that these development controls not only apply to items listed in Part 3 of Schedule 5 of the DCP 2012, but all sites identified as archaeological sites or sites with historic or Aboriginal archaeological potential. This includes sites listed on the LEP, State Heritage Register and the AHIMS.

The Hills DCP 2012 Part A Section 4 Information Required for a Development Application, 4.2 Documentation includes a requirement for an Aboriginal Cultural Report/Archaeological Assessment where a site is 'known to, or is likely to, contain relics, evidence of occupation, or has particular cultural significance.'⁶

The recommended DCP controls, specific to the Precinct, set out below, provide more detailed guidance for managing Aboriginal heritage in the Precinct. These recommended controls would be consistent with the existing DCP control noted above.

1. New development should avoid harm and impacts to Aboriginal heritage sites, values, object and/or places where possible.
2. Any development proposal within the Precinct which may disturb the ground surface and potentially harm Aboriginal sites and objects must be accompanied by an Aboriginal Due Diligence report prepared in accordance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW*.
3. If development is within or in the vicinity of any known Aboriginal heritage objects, sites, Potential Archaeological Deposits, places or values—such as within 100m of the creek—community consultation and Aboriginal Cultural Heritage Assessment must be undertaken in accordance with the following guidelines prior to the preparation of a Development Application (DA).
 - a. Department of Environment, Climate Change and Water (DECCW) *Aboriginal cultural heritage consultation requirements for proponents 2010* as per Part 6 of the *National Parks and Wildlife Act 1974* (as amended April 2010).

- b. DECCW *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (13 September 2010) (Code of Practice).
 - c. DECCW *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (24 September 2010).
 - d. Office of Environment and Heritage NSW (OEH) *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (April 2011).
 - e. Evidence of the undertaking of both consultation and Aboriginal Cultural Heritage Assessment in the form of an Aboriginal Cultural Heritage Assessment Report and Archaeological Technical Report are required by council for DAs.
4. Development that is likely to impact on any Aboriginal heritage object, site, Potential Archaeological Deposit, place or value will require an Aboriginal Heritage Impact Permit (AHIP) from the Office of Environment and Heritage (OEH) following DA approval.
5. Development or any other activity (other than that deemed to be 'low impact activities' in accordance with Section 87 of the NPW Act) must not harm or impact any Aboriginal cultural heritage sites or objects without a relevant permit in accordance with Section 87 of the NPW Act.
6. Aboriginal heritage sites may be investigated in accordance with the DECCW *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (24 September 2010) but harm or impact cannot occur to Aboriginal heritage sites, objects or places without an AHIP.
7. The subdivision of land upon which an Aboriginal heritage site or value is located has the potential to isolate parts of that heritage item/site from its setting, thereby reducing its cultural/social, scientific, aesthetic or historical significance. The setting of an Aboriginal item, site, objects or place is essential for retaining and interpreting the heritage significance of that Aboriginal heritage site, object or place and must be considered in any assessment of impacts to Aboriginal heritage.
8. Consideration must also be given to the archaeological potential of land within the vicinity of a known heritage site—for example, an Aboriginal archaeological site may actually be larger than previously recorded and extend into land previously thought as being 'within the vicinity'. The Aboriginal subsurface archaeological potential of any development area and potential impacts to subsurface archaeology by development activities is to be assessed and considered in review of all development proposals that may impact the ground surface in any way.
9. Where Aboriginal heritage is proposed to be retained and conserved in a development, a Conservation Management Plan detailing how the design respects the existing landscape setting of the conservation area, compliments the existing significance and avoids impacts to Aboriginal objects, sites, archaeology and values will be required as a condition of DA consent.
10. In relation to Aboriginal heritage, it is recommended that council require the following items be submitted as part of a DA application:

- a. An Aboriginal archaeology due diligence assessment in accordance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* which determines whether the proposed development area has or does not have the potential to contain Aboriginal archaeological remains.
- b. Where a development area is known or has potential to contain Aboriginal archaeology which may be impacted upon by the proposed development, an Archaeological Assessment Report including a Heritage Impact Statement should also be provided. For Aboriginal heritage, this may be in the form of an Aboriginal Cultural Heritage Assessment and Archaeological Technical Report as per the OEH *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (April 2011).

4.5 Endnotes

- ¹ DECCW 2010 NPWS Act 1974 Fact sheet 1, September 2010.
- ² DECCW. 24 April 2009. *Due diligence guidelines for protection of Aboriginal objects in NSW*. Accessed Online.
- ³ DECCW. 24 April 2009. *Due diligence guidelines for protection of Aboriginal objects in NSW*. Accessed Online.
- ⁴ DECCW 2010 NPWS Act 1974 Fact sheet 2, September 2010.
- ⁵ Field assessment can involve both field survey and/or test excavation in accordance with the DECCW *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (24 September 2010).
- ⁶ The Hills Development Control Plan (DCP) 2012, Part A Introduction, p 11, viewed 9 January 2015, <<http://www.thehills.nsw.gov.au/The-Hills-Development-Control-Plan.html>>.