



**MARSDEN PARK PRECINCT
NORTH WEST GROWTH CENTRE**

Aboriginal Heritage Assessment

Prepared for Winten Property Group and
Department of Planning and Infrastructure

Blacktown Local Government Area

November 2012

Ref. 1108

KELLEHER NIGHTINGALE CONSULTING PTY LTD
Archaeological and Heritage Management

ACN 120 187 671

Suite 911-912, 155 King Street
SYDNEY NSW 2000
Phone 02 9232 5373
Fax 02 9232 5316

Document Information

Project Name	Marsden Park Precinct, North West Growth Centre Aboriginal Heritage Assessment
Project Number	1108
Status	Final Public Version
Version	6
Client Name	Winten Property Group and Department of Planning and Infrastructure
Recipient	Bill Sarkis (Winten); David Fitzgibbon (DP&I)
Issue Date	13 November 2012
Prepared by	Alison Nightingale; Dr Matthew Kelleher; Josh Symons; Kylie McDonald
Approved by	Dr Matthew Kelleher; Alison Nightingale

Disclaimer for Public Version

Portions of this document have been removed or censored for reasons of privacy and confidentiality to protect sensitive cultural information.

Executive Summary

Marsden Park Precinct, in the North West Growth Centre, was one of two Precincts released for planning by the NSW Government in August 2011 under the Precinct Acceleration Protocol. Precinct planning has commenced in the Marsden Park Precinct. The Department of Planning and Infrastructure partnered with Blacktown City Council to identify the future zoning and development controls for the precinct.

The precinct planning process includes assessment of Aboriginal cultural heritage. Assessment is based on the Department's Protocol for Aboriginal Stakeholder Involvement in the Assessment of Aboriginal Heritage in the Sydney Growth Centres and Precinct Assessment Method for Aboriginal Cultural Heritage in the Sydney Growth Centres, as well as requirements of the Office of Environment and Heritage.

Investigations have identified 67 Aboriginal archaeological sites within the Marsden Park Precinct. Sites consisted of open artefact scatters, isolated artefacts and two scarred trees. These results were consistent with predictions for the study area. Sites ranged from low to moderate scientific significance. With appropriate management and/or mitigation none of the identified Aboriginal heritage features should prevent development of the precinct.

Aboriginal objects are protected and regulated under Part 6 of the *National Parks and Wildlife Act 1974*. It is an offence to harm or desecrate an Aboriginal object without appropriate approval. An Aboriginal heritage impact permit (AHIP) under section 90 (1) of the Act is required for any activity which will harm an Aboriginal object or declared Aboriginal place. All impacted Aboriginal heritage objects will require implementation of a process for appropriate management and/or mitigation.

Throughout the precinct planning process it was recommended the development of the Indicative Layout Plan (ILP) avoid harm to Aboriginal objects where possible. The draft ILP also shows that almost half of the identified Aboriginal archaeological sites will be retained in considerable environmental management zones, including riparian corridors of South Creek and tributaries, as well as the former Air Services Australia site/Shanes Park land in the south of the precinct which is zoned environment conservation and public recreation. Ongoing management strategies for avoiding harm to Aboriginal objects should be implemented, such as inclusion of measures related to Aboriginal heritage within conservation management plan, environmental management plan or development control plan prepared for the precinct.

Assessment of the draft ILP in relation to Aboriginal heritage of the precinct shows that Aboriginal heritage is also located within developable land within the precinct. Where harm to Aboriginal objects cannot be avoided, based on consideration of other factors investigated through the precinct planning process, an AHIP would be required. Measures for mitigating harm to Aboriginal objects were recommended for sites or areas with higher archaeological or cultural values. An AHIP would be required for mitigation activities.

In summary, the Aboriginal heritage assessment of the precinct has shown that:

- 67 sites of Aboriginal objects recorded in the precinct, 32 sites conserved and 35 sites impacted by future development according to the draft ILP.
- An Aboriginal heritage impact permit (AHIP) issued by the Office of Environment and Heritage (OEH) under section 90(1) of the *National Parks and Wildlife Act 1974* is required prior to any activity which may harm an Aboriginal object.
- Mitigation measures (salvage excavation and collection of objects) are required to mitigate harm to Aboriginal objects resulting from development of the precinct. An AHIP is required for mitigation activities.
- Existing archaeological understanding of the Cumberland Plain correlates well with the identified archaeology of the Marsden Park Precinct. Test excavation is not necessary or warranted for the archaeological sites shown to be impacted by the precinct development. Test excavation should only be required where the potential exists to conserve an archaeological site.
- Management measures should be implemented for Aboriginal objects retained in environment conservation and environmental management zones, including riparian corridors of South Creek and tributaries.
- Registered Aboriginal stakeholders identified Marsden Park Precinct has cultural value and is significant to the contemporary Aboriginal community.
- Consultation with registered Aboriginal stakeholders for the precinct should continue in relation to future development activities within the precinct. Consultation for seeking an AHIP should be undertaken in accordance with section 80C of the *National Parks and Wildlife Regulation 2009* and *OEH Aboriginal cultural heritage consultation requirements for proponents 2010*.

Contents

EXECUTIVE SUMMARY	II
CONTENTS	III
FIGURES.....	IV
TABLES.....	IV
1 INTRODUCTION	1
1.1 PROJECT DESCRIPTION	1
1.2 STUDY OBJECTIVES.....	1
1.3 ASSESSMENT PROCESS.....	1
2 ABORIGINAL STAKEHOLDER CONSULTATION AND PARTICIPATION	5
2.1 STAKEHOLDER IDENTIFICATION AND CONSULTATION PROCESS	5
2.2 ABORIGINAL CULTURAL HERITAGE VALUES AND RECOMMENDATIONS	6
3 REGISTER SEARCHES AND PREVIOUS ARCHAEOLOGICAL WORK.....	7
3.1 HERITAGE REGISTER SEARCHES	7
3.2 REGISTERED SITES IN THE PRECINCT.....	7
3.3 PREVIOUS ARCHAEOLOGICAL INVESTIGATION IN THE PRECINCT	11
3.4 REGIONAL ARCHAEOLOGICAL CONTEXT	12
3.5 ETHNOHISTORICAL AND HISTORICAL BACKGROUND	13
4 LANDSCAPE CONTEXT	16
4.1 GEOLOGY.....	16
4.2 SOILS AND LANDFORM.....	16
5 SITE PREDICTIONS.....	19
6 SAMPLING STRATEGY	20
7 FIELD METHODS.....	20
8 RESULTS	21
8.1 ABORIGINAL CULTURAL HERITAGE SITES IN THE PRECINCT	21
8.2 SITES DESCRIPTIONS	26
8.3 PREVIOUSLY RECORDED SITES	56
9 ASSESSMENT FOR RICHMOND ROAD UPGRADE.....	66
10 SURVEY COVERAGE.....	68
11 SIGNIFICANCE ASSESSMENT.....	69
11.1 ASSESSMENT CRITERIA	69
11.2 STATEMENT OF SCIENTIFIC SIGNIFICANCE.....	71
12 LEGISLATION AND MANAGEMENT PRINCIPLES	73
12.1 LEGISLATIVE CONSIDERATIONS.....	73
12.2 MANAGEMENT PRINCIPLES	74
13 DRAFT INDICATIVE LAYOUT PLAN ASSESSMENT.....	75
13.1 CONSIDERATION OF ALTERNATIVES – LIMITING HARM	75
13.2 CONSIDERATION OF ALTERNATIVES – LIMITING HARM	75
13.3 IMPACT OF FUTURE DEVELOPMENT BASED ON DRAFT ILP	76
14 CONCLUSIONS AND RECOMMENDATIONS	86
REFERENCES.....	89
APPENDIX A ADVERTISEMENT FOR REGISTRATION OF INTEREST	91
APPENDIX B REGISTERED STAKEHOLDER COMMENTS	93

Figures

Figure 1. Marsden Park Precinct location	2
Figure 2. Marsden Park Precinct Release	3
Figure 3. Previously recorded sites (AHIMS data)	9
Figure 4. Registered sites in the precinct	10
Figure 5. Geology within the precinct and surrounding area (Clark and Jones 1991)	17
Figure 6. Soil landscapes within the precinct and surrounding area (Hazelton, Bannerman and Tille 1989)	18
Figure 7. Aboriginal archaeological features in Marsden Park Precinct.....	25
Figure 8. Aboriginal sites in Richmond Road upgrade corridor	67
Figure 9. Precinct significance rankings	70
Figure 10. Archaeological significance rankings	72
Figure 11. Draft Indicative Layout Plan	77
Figure 12. Draft ILP and Aboriginal heritage	78

Tables

Table 1. Site types from OEH AHIMS database search.....	7
Table 2. Identified Aboriginal sites in the precinct.....	21
Table 3. Survey Coverage	68
Table 4. Landform Coverage	68
Table 5. Impacts, mitigation and management (based on draft Indicative Layout Plan)	79
Table 6. Summary of recommendations for Aboriginal heritage sites.....	88

1 Introduction

1.1 Project description

The Department of Planning and Infrastructure (DP&I) is coordinating the sustainable supply of land and delivery of infrastructure within the North West and South West Growth Centres, to accommodate the future growth of Sydney.

The Department has commenced precinct planning for the Marsden Park Precinct in the North West Growth Centre. The Minister for Planning and Infrastructure declared a release of the Marsden Park Precinct under the NSW Government's Precinct Acceleration Protocol. The precinct was announced as having capacity for around 10,000 new homes, a town centre with 30,000 square metres of retail space and 50 hectares for public recreation.

Marsden Park Precinct is within Blacktown Local Government Area. It covers approximately 1,800 hectares and is bounded by South Creek to the north, Stony Creek Road to the west, suburbs of Willmot, Shalvey, Bidwill and Hassell Grove in the south and generally Richmond Road to the east with a small area extending east to Bells Creek. The location of the precinct and release in relation to the North West Growth Centre are shown on Figures 1 and 2.

Under the terms of the Voluntary Planning Agreement with the Minister, Winten (No 25) Pty Ltd and Woorong Park Pty Ltd are responsible for commissioning planning studies as part of the precinct planning process.

Precinct planning involves detailed investigations into appropriate land use options, physical environmental constraints and infrastructure requirements. Environmental and urban form assessments are being undertaken to inform the rezoning of the land as well as the development layout of the precinct.

The precinct planning process includes assessment of Aboriginal cultural heritage. Winten Property Group (Winten) commissioned Kelleher Nightingale Consulting Pty Ltd (KNC) to undertake an Aboriginal archaeological assessment and facilitate a consultation process with Aboriginal stakeholders for the precinct. The assessment was based on established DP&I processes, including the Protocol for Aboriginal Stakeholder Involvement in the Assessment of Aboriginal Heritage in the Sydney Growth Centres and Precinct Assessment Method for Aboriginal Cultural Heritage in the Sydney Growth Centres, as well as requirements of the Office of Environment and Heritage (OEH).

The assessment of Aboriginal heritage as part of the precinct planning process represented an opportunity to consider Aboriginal cultural heritage sites, places and values in the early planning stages of the proposed development site.

1.2 Study objectives

The objectives of precinct-based assessments are to:

- undertake background research and primary investigations, including historical, ethnohistorical, landscape/environmental, archaeological and cultural, to identify Aboriginal cultural heritage places and values within the precinct;
- involve Aboriginal stakeholders in all stages of Aboriginal heritage assessment and development of management recommendations;
- identify, assess, rank and map Aboriginal cultural heritage places and values within the precinct;
- report on significant Aboriginal heritage places and make recommendations as to how places with high known or potential heritage value should be conserved;
- work with other contractors in establishing an Indicative Layout Plan (ILP) which recognises significant sites or values;
- develop appropriate land use and management options for significant heritage places (including landscapes, sites, objects, historical places, etc.) based on their level of significance; and
- provide information to inform an application under Part 6 of the *National Parks and Wildlife Act 1974*.

1.3 Assessment process

The Aboriginal heritage assessment process aims to provide an integrated Aboriginal cultural heritage assessment, incorporating identified cultural, historical, landscape and archaeological values, to build an understanding of opportunities and constraints to future development and appropriate land use layout of the study area. The DP&I process is structured according to three key steps:

- Step 1 – Gather and analyse existing documentation
- Step 2 – Identify and assess Aboriginal cultural heritage values
- Step 3 – Develop land use and management options

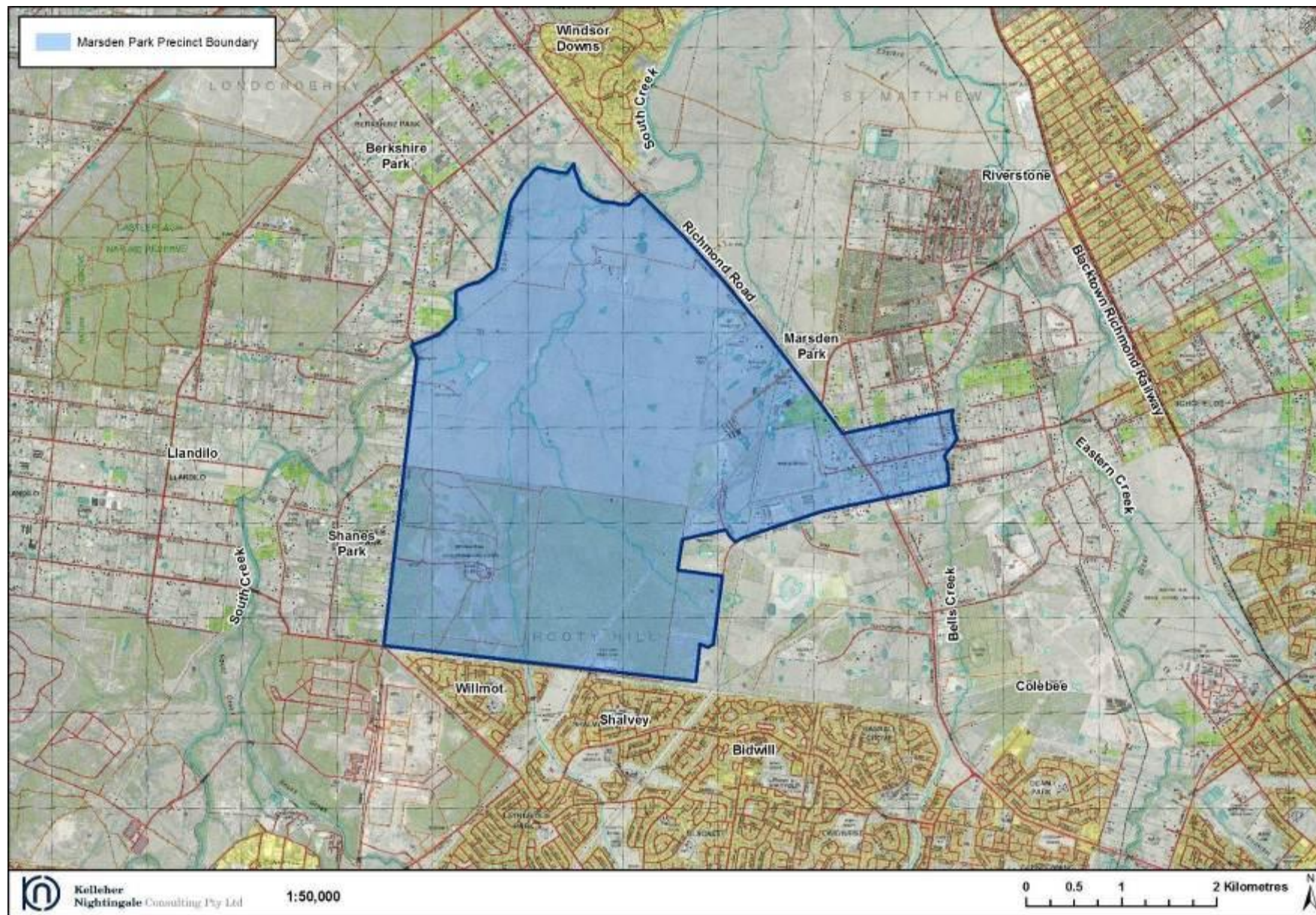


Figure 1. Marsden Park Precinct location

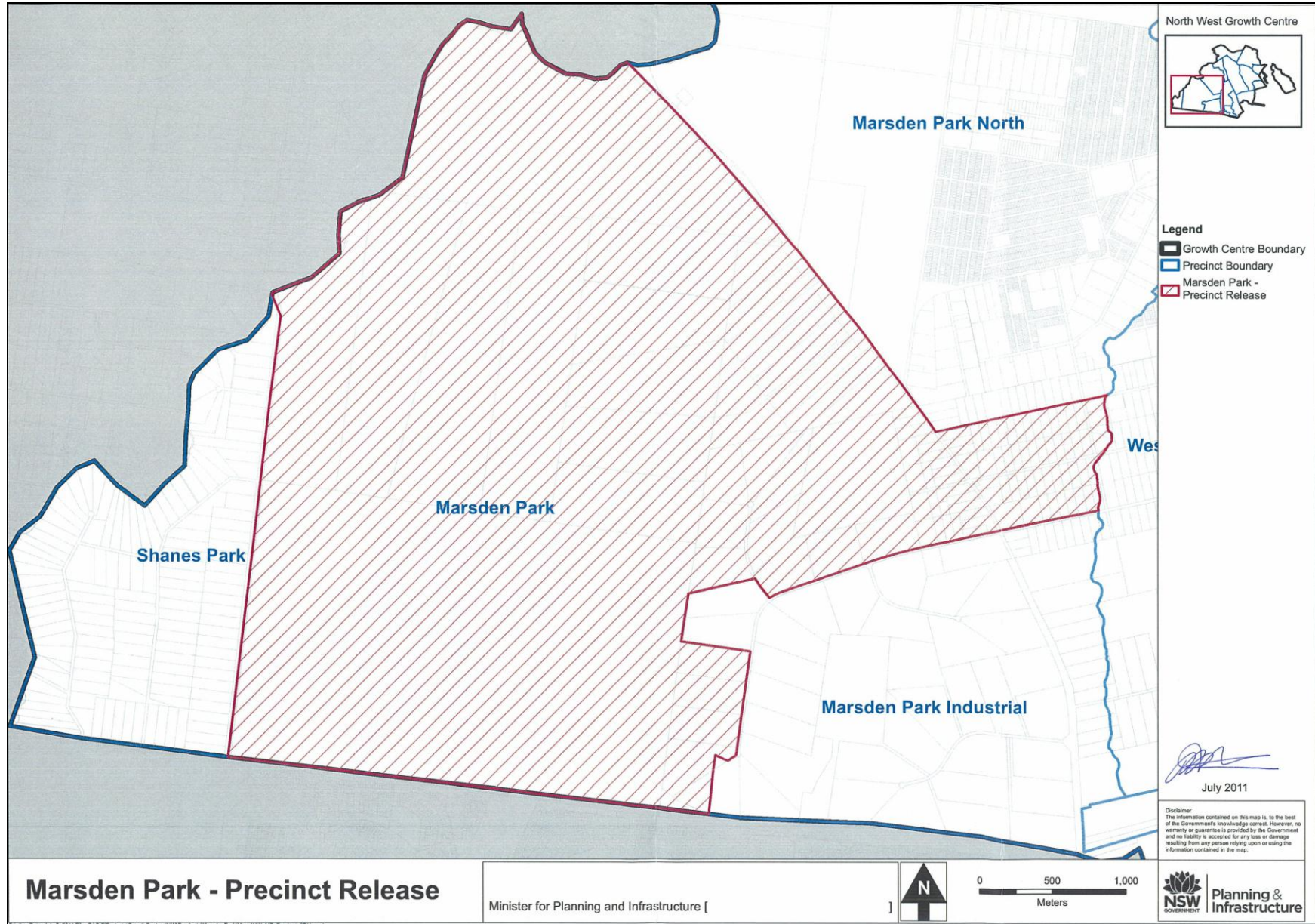


Figure 2. Marsden Park Precinct Release

Step 1 of the process involved gathering and analysing existing documentation and identification of gaps in the information for further investigation in Step 2.

Sources of known information regarding the precinct and immediate surrounds have been identified during Step 1 of the assessment process. This included an understanding of the known archaeological context, ethnohistorical and historical context and landscape context including geology, soils and landform of the area. The results of background information gathering as well as some thoughts for further discussion and consideration have been presented in a Step 1 report. Registered Aboriginal stakeholders for the precinct have been provided with a Step 1 report and invited to identify any additional known sources of information and information gaps to be assessed in Step 2.

Step 2 involved detailed site investigations, including field survey with registered Aboriginal stakeholders and identification of Aboriginal sites and cultural heritage values across the precinct. The results of detailed survey and mapping of identified Aboriginal heritage sites and places were presented in a Step 2 report. The results formed the basis for discussion on significance of Aboriginal heritage sites and the precinct as a whole as part of the DP&I significance ranking process. Significance rankings formed the basis of preliminary recommendations in relation to Aboriginal cultural heritage values for precinct planning developed in Step 3 of the process. Registered Aboriginal stakeholders were invited to review and comment on results, rank significance and provide input into the development of the future land use for the precinct and management recommendations for Aboriginal heritage.

Step 3 of the assessment process involved review of the draft Indicative Layout Plan (ILP) in relation to Aboriginal cultural heritage sites and values identified in the precinct. The findings of the assessment process were presented in a draft report, which contributed to the development of final land use options and resultant management recommendations.

In this way, Aboriginal heritage has been considered during all stages of the precinct planning process, helping to inform the development of the Indicative Layout Plan (ILP) for the precinct.

2 Aboriginal Stakeholder Consultation and Participation

2.1 Stakeholder identification and consultation process

All steps of the assessment process were undertaken in consultation with and participation of registered Aboriginal stakeholders for the precinct. Consultation with Aboriginal stakeholders is essential for identifying Aboriginal cultural heritage sites, values, constraints and opportunities for the precinct. The aim of consultation is to ensure all registered stakeholders have an opportunity to find out about the proposed future development of Marsden Park Precinct and provide input into the rezoning, precinct planning and management of Aboriginal heritage.

Consultation with Aboriginal stakeholders was undertaken in accordance with the DP&I Protocol to ensure Aboriginal people have an opportunity to provide input into each step of the assessment process. In accordance with the Department's requirements, notice was made that precinct planning had commenced and Aboriginal heritage studies and consultation would be undertaken to inform the precinct planning process and future approvals required. The notice included acknowledgement that the groups and individuals specified in the protocol would be consulted and an invitation for other interested parties to register their interest in a consultation process regarding precinct planning and future development of the precinct.

Identified stakeholders were contacted at the outset of the project to discuss proposed future development of the precinct, assessment process and their participation in the assessment including providing information, undertaking site walkovers and reviewing and commenting on the various step reports. In addition to discussions throughout the assessment, each step report was provided to stakeholders for review and input for the next step of the process.

The development of Marsden Park Precinct may be the subject of Aboriginal heritage impact permit (AHIP) applications made under section 90A of the *National Parks and Wildlife Act 1974*. To support future AHIP applications consultation was undertaken in accordance with the OEH *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, April 2010).

In accordance with OEH requirements, this process is undertaken in four key stages:

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

Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the Marsden Park Precinct were invited to register interest in a consultation process regarding precinct planning and proposed development activity in the precinct. Stage 1 of the consultation process involved written notification of the project, advertisement and registration of interest. The closing date for registration of interest was 15 December 2011. A copy of the advertisement is attached as Appendix A.

Following the notification and advertisement process, registered Aboriginal stakeholder groups and individuals for the precinct include:

- Darug Aboriginal Cultural Heritage Assessments;
- Darug Custodian Aboriginal Corporation;
- Darug Land Observations (late registration);
- Darug Tribal Aboriginal Corporation;
- Deerubbin Local Aboriginal Land Council;
- Gil Saunders;
- Gunjee Wong Cultural Heritage Aboriginal Corporation;
- Parramatta City Council Aboriginal and Torres Strait Islander Advisory Committee; and
- Tocomwall / Yarrowalk.

Following registration of interest, information about the project and assessment methodology was provided to registered Aboriginal stakeholders, with a 28 day review period for the methodology. Aboriginal stakeholders were involved in site inspections and walkovers of the precinct to identify Aboriginal sites and cultural heritage values. Cultural information was gathered as part of the Step 2 assessment and input into the development of the draft ILP and management measures and recommendations during Step 3. Comments on the ILP were sought by DP&I to assist in the precinct planning process. The draft ILP was provided to stakeholders for a 28 day review and comment period. Information provided and authorised for inclusion in the report has been presented here. Written comments received throughout the assessment process are included below and attached in full as Appendix B.

2.2 Aboriginal cultural heritage values and recommendations

The value of the precinct and potential for further subsurface Aboriginal objects to exist has been expressed by registered Aboriginal stakeholders throughout the precinct assessment process. Recommendations have been made for:

- conservation of Aboriginal heritage;
- educational opportunities;
- salvage of Aboriginal heritage sites;
- management planning and training related to future development activities; and
- ongoing consultation for future development stages.

Deerubbin Local Aboriginal Land Council (letter dated 16 March 2012) stated that Aboriginal cultural material in the form of stone artefacts was found where exposures were present and that extensive grass cover hindered visibility elsewhere. As such, there was potential for further cultural material to exist across the precinct and further investigation was recommended before development.

Darug Custodian Aboriginal Corporation (letter dated 5 April 2012) stated that the Marsden Park area is a significant area and represents an area where Aboriginal people have lived for thousands of years continuing into the contact period when people were moved off their land into nearby fringe areas and reserves. It is therefore important to the corporation to protect and collect any information about the Darug and the Marsden Park Precinct was considered to show a complex of sites that can be compared to sites around the Cumberland Plain. The need for conservation strategies for sites was recommended.

Following review of the draft ILP, Darug Custodian Aboriginal Corporation (email dated 21 September 2012) stated support for the findings and recommendations presented in the Step 3 report. It was again expressed that the area “is highly significant to the Darug people it is in close proximity to highly significant Darug resources that have been used for thousands of years and this area also has a highly significant history post contact”.

Darug Aboriginal Cultural Heritage Assessments (letter dated 18 April 2012) stated that “this area is part of a very important cultural landscape for the Darug”. Further consideration for recommendations for the protection of significant places for the future was recommended.

Information obtained from the consultation process specifically informed the precinct planning process and may be used in the preparation of AHIP applications made under section 90A of the *National Parks and Wildlife Act 1974* for the Marsden Park Precinct.

3 Register Searches and Previous Archaeological Work

3.1 Heritage register searches

3.1.1 Aboriginal Heritage Information Management System (AHIMS)

A series of searches of the OEH Aboriginal Heritage Information Management System (AHIMS) were conducted on 10 October 2011 to identify any known Aboriginal archaeological sites within or in close proximity to the study area, as well as identifying the specific type and distribution of sites in the area. The AHIMS search was conducted within the following coordinates with a 200m buffer zone included in the search (GDA, Zone 56):

Eastings: 0294400 to 0301030
 Northings: 6265960 to 6271955
 Number of sites registered on AHIMS database (not including duplicated records): 158
 Number of Aboriginal Places declared in or near the search area: 0

The type and distribution of recorded Aboriginal sites within these coordinates are shown in Figure 3. The frequencies of site types within the AHIMS database search area are summarised in Table 1 below.

Table 1. Site types from OEH AHIMS database search

Site Feature (site type)	Frequency	(%)
AFT (artefact)	148	93.7
PAD (potential archaeological deposit)	5	3.2
QUA (stone quarry)	1	0.6
TRE (modified or scarred tree)	1	0.6
CER (Aboriginal ceremony or dreaming)	1	0.6
AFT, TRE (artefact, modified or scarred tree)	1	0.6
AFT,QUA (artefact, stone quarry)	1	0.6
<i>Total</i>	<i>158</i>	<i>100</i>

3.1.1 Heritage Registers

In addition to the AHIMS database other heritage databases and lists were searched to identify any Aboriginal heritage within or in close proximity to the study area. These included:

- Blacktown City Council Local Environment Plan 1998
- Roads and Maritime Services Heritage Register (accessed 10/01/2012)
- Railcorp Heritage Register (accessed 10/01/2012)
- Sydney Water Heritage Register (accessed 10/01/2012)
- State Heritage Register and State Heritage Inventory (accessed 10/01/2012)
- Commonwealth Heritage List (accessed 23/01/2012)
- National Heritage List (accessed 23/01/2012)
- Register of the National Estate (accessed 24/01/2012)
- Australian Heritage Places Inventory (accessed 23/01/2012)
- State Environmental Planning Policy (Sydney Regional Growth Centres 2006) (accessed 12/01/2012)
- Historic Heritage Information Management System (HHIMS) (03/02/2012 and 10/02/2012)

There were no listings of Aboriginal heritage items on these registers. A number of Aboriginal sites are situated on lands associated with heritage listings (e.g. Clydesdale property, Shale Woodland Llandilo at Shanes Park). These are discussed in the following section.

3.2 Registered sites in the precinct

Forty three sites were registered on the AHIMS database as being within the precinct boundary (see Figure 4). The majority of these sites were open artefact scatters (n=33), consisting of two or more artefacts and isolated finds (n=8). Two scarred trees have been registered in the northern part of the precinct on the Clydesdale property, one of which was recorded in association with an open artefact scatter.

Predominant raw materials from open artefact scatters and isolated finds are silcrete followed by indurated mudstone. Very low concentrations of chert, quartz and basalt have been identified at select sites. Artefact scatters and isolated finds are primarily clustered in the south eastern portion of the property and generally located on slopes and crests of rises and ridgelines in the vicinity of tributaries of South Creek. Artefacts are largely flakes or broken flakes, with a small number of cores and tools.

The scarred trees are located in the northern portion of the precinct, in the Clydesdale property. Site Clydesdale EKC-31 (AHIMS # 45-5-0267) was described as a possible scarred tree located on the alluvial flats of South Creek and associated with an open artefact scatter that included a partial hatchet head and thumbnail scraper.

Site C-ST-1 was located on the eastern boundary of the Clydesdale property, approximately [REDACTED] west of Richmond Road. The tree was dead but standing and while the scar was an irregular shape and no axe marks were visible it was determined scarring was likely caused by deliberate bark removal (Kelton 2001:41).

AHIMS results list an Aboriginal heritage impact permit (AHIP) has been issued for two registered locations (Permit # 870). The two sites, SR-OS-07 and SR-OS-06 (AHIMS # 45-5-2382 and 45-5-2383) were located in the south eastern corner of the precinct, identified during field survey of Lots 37-42, D.P. 262886, South Street. The sites were a single silcrete broken flake (SR-OS-06) and a red silcrete scraper (SR-OS-07) which had been assessed as having low significance.

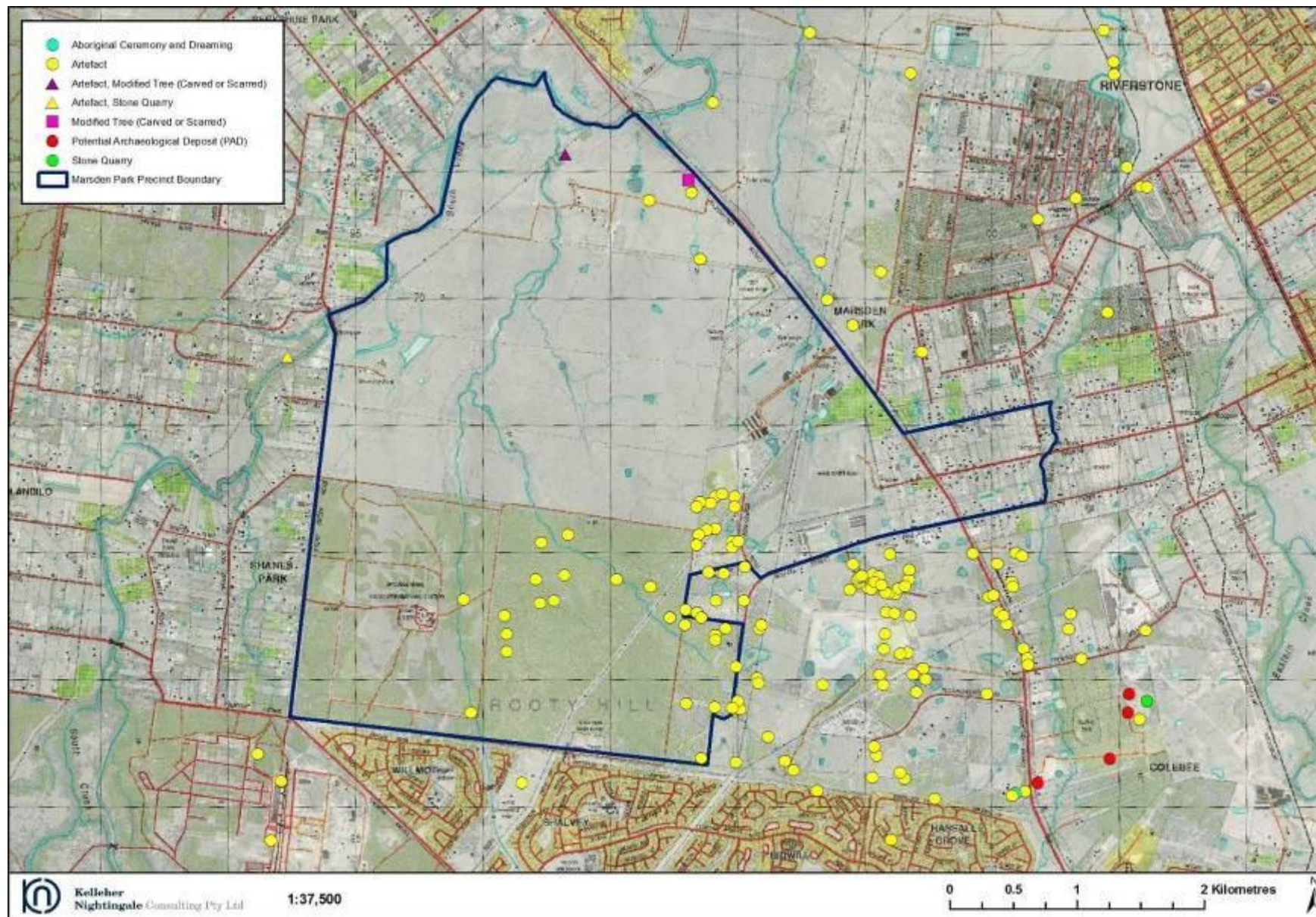


Figure 3. Previously recorded sites (AHIMS data)

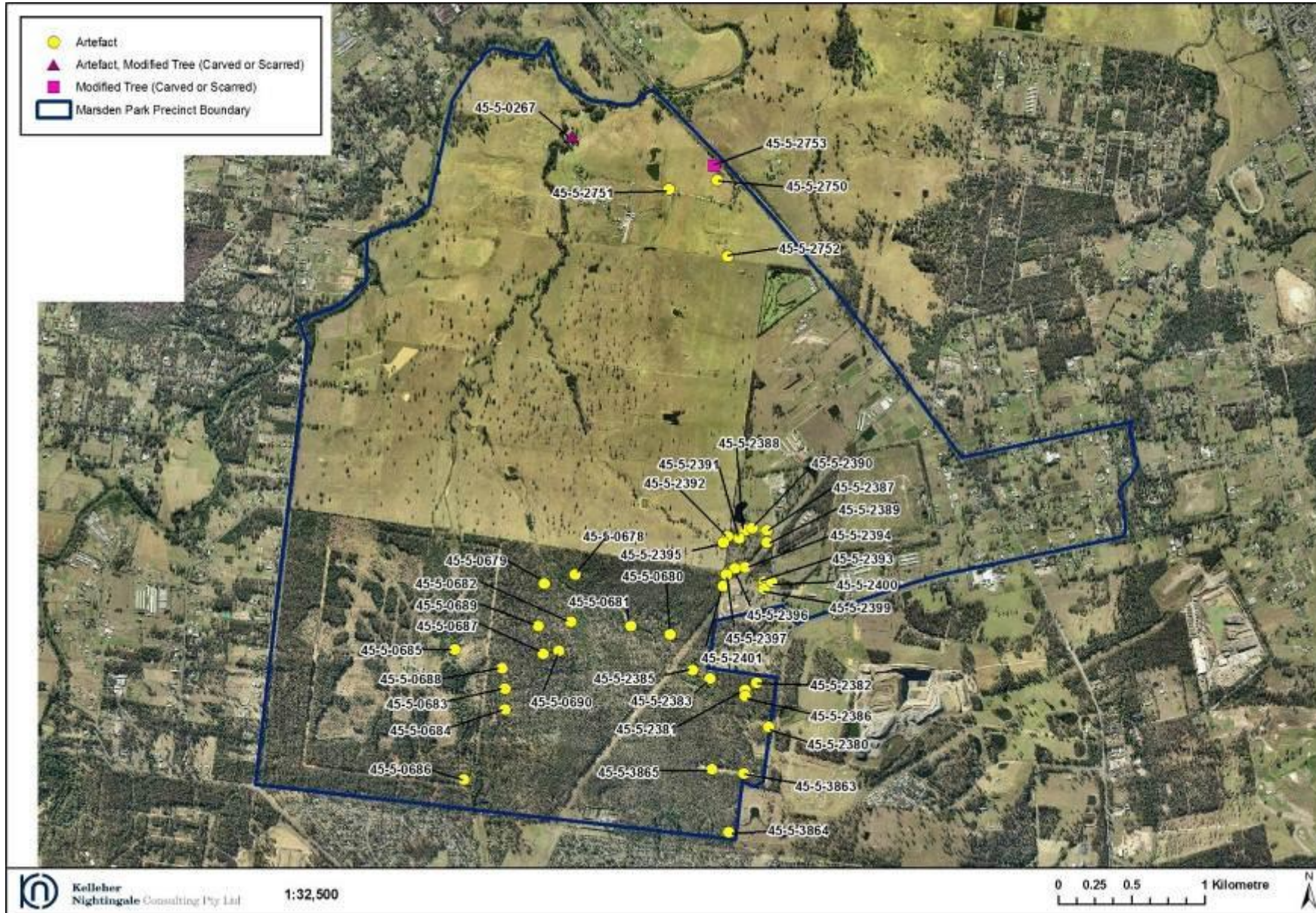


Figure 4. Registered sites in the precinct

3.3 Previous archaeological investigation in the precinct

A number of archaeological investigations have previously been undertaken in parts of the precinct. These have mostly been concentrated in the south east of the precinct, resulting in identification of sites registered on AHIMS (see Figures 3 and 4). Previous investigations and sites identified as a result within the precinct are summarised below.

Marsden Park Nature Reserve (Smith 1988)

Smith (1988) conducted Stage 1 of a management study for the northern Cumberland Plain. The investigation aimed to categorise site type and variation across various micro landscapes of the Cumberland Plain and create a predictive model for site identification from this information. The northern Cumberland Plain had abundant stone resources in the landscape. Stone outcrops at Riverstone and Plumpton Ridge of the St Mary's Formation provided significant sources of silcrete while river gravels provided additional sources of silcrete and other materials such as quartz, chert, tuff and basalt. Overall, 79 sites were identified across 15 survey areas on the northern Cumberland Plain. Just under half of all sites recorded were located within 50m of a permanent or temporary water source, located either on creek banks or flats, with a third located on ridge crests or hill slopes.

The Marsden Park Nature Reserve, located in the south of the Marsden Park Precinct in what is currently referred to as the Shanes Park Air Services Australia land, was included in the study as it was identified as having potential to contain unusual or higher density site types than other areas in the study (Smith 1988:11). There were 13 sites (MP40 – 52, AHIMS 45-5-0678 to 45-5-0690), all open artefact scatters, identified at Marsden Park, assessed as having moderate to high significance (Smith 1988:137). The majority of sites were located on slopes or raised ground/ridges overlooking a Melaleuca swamp and/or a tributary to South Creek. Silcrete was the predominant raw material at each site, followed by tuff, chert, quartz, quartzite and basalt.

Site MP48 (AHIMS 45-5-0686) was a large open artefact scatter that stretched across both banks of a South Creek tributary and continued to a ridgeline west of the creek. The density of artefacts on the surface was interpreted to indicate a subsurface potential of 40,000 artefacts. Additionally, differences in recorded artefacts suggested repeated use of the site over a period of time. Although MP48 appeared disturbed, the site was assessed as being highly significant.

Subsequent assessment of MP48 found there was a high level of naturally occurring silcrete gravel and cobbles in ground exposures and the creek bank and it was concluded the subsurface density of artefacts was not likely as high as previously thought (AMBS 1996:8).

Lots 37-42, South Street, Marsden Park (AMBS 1996)

Assessments of Lots 37-42 on South Street covered the south eastern part of the Marsden Park Precinct. Seven sites were identified (SR-OS-1, AHIMS 45-5-2380; SR-OS-2, AHIMS 45-5-2381; SR-OS-3 AHIMS 45-5-2386; SR-OS-4, 45-5-2385; SR-OS-5, 45-5-2384; SR-OS-6, 45-5-2383; SR-OS-7, 45-5-2382). These included artefact scatters and isolated finds, predominantly of silcrete. Sites were located on ridges and slopes and generally interpreted to represent low density utilisation of a landscape in proximity to a watercourse, consistent with other investigations in the area. Some sites were considered to have subsurface potential.

While most sites were considered of low significance due to the level of disturbance and low potential for subsurface artefacts, three (SR-OS-2, 3 and 4 on [REDACTED]) were assessed as having potential subsurface deposit. These three sites were located within the precinct boundary.

Glengarrig Road (AMBS 1997)

Fifteen sites (GROS 1-15, AHIMS 45-5-2387 to 45-5-2401) were recorded as part of this assessment within the precinct boundary. Sites were all artefact scatters or isolated finds, predominantly of silcrete. The presence of naturally occurring silcrete was also noted. Some sites were considered to have potential for subsurface deposits.

Clydesdale Property (Kelton 2001)

The Clydesdale property, which forms the northern part of the precinct, was assessed for its Aboriginal heritage as part of an assessment of the historic 'Clydesdale' House and associated buildings. Kelton (2001) investigated the eastern part of the property related to a proposed egg packing station and detention pond. Much of the area comprised alluvial floodplain, drainage lines and shallow hill slopes. Based on proximity to South Creek the area was considered to be of low to moderate archaeological potential, depending on level of disturbance.

Four sites (C-IF-1, AHIMS 45-5-2750; C-ST-1, AHIMS 45-5-2753; C-IF-2, AHIMS 45-5-2751; C-OS-1, AHIMS 45-5-2752) were identified including two isolated finds, one of which was interpreted as being part of imported fill to construct a gate, a scarred tree and an open artefact scatter along the eroded surface of a dam bank. The sites were assessed as being of low significance, with the exception of scarred tree (site CS-T-1) which was of moderate significance based on its cultural values.

Rouse Hill Development Area (Jo McDonald Cultural Heritage Management 2002)

As a part of the Rouse Hill Infrastructure Project, an assessment was undertaken of sites and potential landforms associated with the drainage lines of Kilarney Chain of Ponds Creek, Eastern Creek and South Creek. This included part of the precinct. Based on stream order modelling it was predicted that the area was likely to contain complex sites that were repeatedly occupied over time (JMCD CHM 2002:10). Of the sixteen areas of potential identified on the eastern banks of South Creek, three areas (S6, S7, and S8) were situated in the Woorong Park property. The remaining areas of archaeological potential were located to the north and south of Marsden Park Precinct boundaries.

Marsden Park Industrial Precinct (Kelleher Nightingale Consulting Pty Ltd 2009)

Marsden Park Industrial Precinct (MPIP) borders the south east boundary of the Marsden Park Precinct. Assessment for the industrial precinct identified 63 Aboriginal archaeological sites and four areas of potential archaeological deposit (PAD) (Kelleher Nightingale Consulting (KNC) 2009, Comber Consultants 2008, Brayshaw and Haglund 1997).

Clusters of archaeological activity (sites) were identified at 12 landforms identified as having greater archaeological potential than others. Of the 12 landforms two were ranked as demonstrating high significance, and ten as moderate significance. 32 sites were identified outside of the 12 heritage significant landforms. These 32 sites were assessed as having low archaeological significance. The four areas of PAD were assessed as demonstrating moderate to high archaeological potential. Silcrete was the primary raw material across all sites, with low levels of tuff, chert and quartz.

Part of the Colebee land grant, a site of historical and cultural value to Aboriginal stakeholders, was located in the south eastern portion of the industrial precinct. The land was given to Colebee and Nurragingy in 1816 by Governor Macquarie and represents the first land grant to an Aboriginal person after colonisation. It was assessed as being of exceptional Aboriginal cultural heritage significance. The land grant is further discussed further in Section 4.

Three sites (MPIP29, AHIMS 45-5-3864; MPIP30, AHIMS 45-5-2865; MPIP 31, AHIMS 45-5-3963) were identified within MPIP but based on current precinct boundaries are located in the Marsden Park Precinct. The sites were all open scatters of predominantly silcrete artefacts, situated on crest or slope landforms associated with a tributary of South Creek.

In sum, archaeological sites are located across the precinct. Previous studies have underscored the relationship between relatively elevated landforms along the margins of creeks and ground disturbance as the key factors in the location of archaeological sites. Significant archaeological sites will occur where suitable and undisturbed landforms are found in close proximity to water.

3.4 Regional archaeological context

The predominance of silcrete artefacts in the general area is related to an underlying silcrete source in the form of the St Marys Formation outcrops and the ubiquitous spreading of appropriate lithic material/gravels via the multitude of creek systems. The geology of the region also underscores the predominance of open archaeological sites as few rock shelters are found in the region. Preservation of archaeological sites in open context is difficult because of the adverse effects of erosion and floods.

A considerable amount of archaeological investigation has been undertaken at Plumpton Ridge south east of the precinct (Jo McDonald Cultural Heritage Management (JMCD CHM) 2003, 2006). This work has shown that outcrops of silcrete were intensively quarried to produce large amounts of stone tools, with upwards of a 1,000 artefacts per square metre identified. Elsewhere work has taken place at the Australian Defence Industries (ADI) land in St Marys (JMCD CHM 1996, 2003), located approximately 3km south west of the precinct, which identified over sixty areas of archaeological significance and numerous sources of silcrete (gravels, cobbles, and outcrops).

Archaeological investigation of the Alex Avenue and Riverstone Precincts, both located to the east of the precinct, identified 37 Aboriginal sites within the two precincts (ENSR Australia 2008). Larger sites with higher archaeological significance tended to be concentrated within 100m of First Ponds Creek. The highest density of archaeological material was identified as the A7 Complex, consisting of several artefact scatters and two areas of PAD within an area covering approximately 1000m north-south and 400m east-west along both sides of First Ponds Creek (ENSR 2008:71).

Assessment of the Area 20 Precinct, approximately 4km east of Marsden Park, identified an extensive spread of artefacts along Second Ponds Creeks, with other sites situated on raised areas away from the main drainage line (KNC 2010; JMCD CHM 2005, 2002; Stephanie Garling Archaeological Consulting 2000; Douglas 1993; Corkill 1992). Silcrete was the dominant raw material, followed by low concentrations of silicified tuff and quartz.

In regional terms, therefore, it is clear that silcrete was the dominant lithic material for past Aboriginal peoples. Archaeological sites containing silcrete artefacts will occur on suitable landforms with site containing high artefact densities most prevalent in close proximity to water.

3.5 Ethnohistorical and historical background

The interaction between the early British settlers and the local Aboriginal people varied between friendly and inquisitive to outright hostility. The official British policy was to gather information about the local inhabitants of the Sydney region, including scientific information, and what role they could play in the colony (Attenbrow 2002:13). The reality of the situation was the colony's expansion and establishment of farmland subsumed the traditional areas used to gather and hunt subsistence needs (Attenbrow 2002, Brook and Kohen 1991).

After their arrival in Sydney Cove in 1788, the British set about exploring the surrounding area. In the first three years of settlement this included visits to Broken Bay, Botany Bay, Rose Hill (Parramatta), Prospect Hill, and overland to the Nepean, Hawkesbury and Georges Rivers – essentially across most of the Cumberland Plain. During these explorations some of the British Officers, including Governor Phillip and Captain Watkin Tench, made a number of written observations regarding the local Aboriginal people that they met and travelled with (Attenbrow 2002:13).

These observations describe a number of named groups of Aboriginal people associated with particular areas of land around Port Jackson (Attenbrow 2002:22). These groups were described as 'tribes' in many of these observations, when in fact they were more likely small territorial clans or local clans consisting of extended family groups, forming larger land-using bands linked through marriage and communal participation in subsistence gathering activities (Attenbrow 2002:22, Brook and Kohen 1991:2). The British also noted a difference between the subsistence activities and dialect of the Aboriginal people along the coast compared with those further inland on the Cumberland Plain. Captain Tench observed when two Aboriginal man from the coast conversed with an Aboriginal man further inland 'they conversed on a par and understood each other perfectly, yet they spoke different dialects of the same language; many of the most common and necessary words used in life bearing no similitude, and others being slightly different' (Tench 1793:122).

None of the British observations from the late 18th and early 19th Century make reference to any name for the different dialects or wider language groups that they noted (Attenbrow 2002:33). It was only in the late 19th Century that the name Darug (also referred to as Daruk, Dharuk, Dharook, and Dharug) was used to refer to the language of the traditional inhabitants of the Cumberland Plain (Attenbrow 2002:33, Brook and Kohen 1991:2). In the early 20th Century, anthropologist/linguist R H Matthews noted that 'The Dharuk speaking people adjoined the Thurawal on the north, extending along the coast to the Hawkesbury River, and inland to what are now Windsor, Penrith, Campbelltown, and intervening towns' (Matthews 1901:155 [Attenbrow 2002: 32]).

As well as differences in the dialect spoken between the coastal inhabitants and those further inland, the British also observed differences in subsistence activities. Brook and Kohen (1991:3) noted that 'the Dharug people were apparently divided into two distinct sub-tribes: those along the coast, who lived on fish; those inland, who were frequently referred to as the 'woods tribes''. Captain Tench recorded differences in the food eaten and methods used to acquire these resources between the inhabitants of the coast and those to the west of Rose Hill (Parramatta). On one occasion Tench observed a method of climbing trees for animals that involved cutting notches in the trunk and using these as toe-holds to climb the tree (Tench 1793:82). The ease with which the individual carried out this activity impressed the British and, Tench noted, also the two Aboriginal men from the coast who 'allowed that he was a capital performer, against whom they dared not to enter the lists; for as they subsist chiefly by fishing they are less expert at climbing on the coast than those who daily practice it' (Tench 1793:82).

Kohen (1986:77) explains that the Aboriginals who lived between Parramatta and the Blue Mountains were not as dependant on fish and shellfish as groups closer to the coast, but relied on small animals and plant foods in addition to seasonally available freshwater mullet and eels. Tench (1793:230) observed that 'they depend but little on fish, as the river yields only millets, and that their principal support is derived from small animals which they kill, and some roots (a species of wild yam chiefly) which they dig out of the earth'. These wild yams were found in considerable quantities along the banks of the Nepean and Hawkesbury Rivers. Berries, Banksia flowers and wild honey were also recorded as foods of the local inhabitants (Collins 1798 [Kohen 1985:9]). A particularly important plant food was the Burrawong (*Macrozamia communis*), which provided a nutritious nut that was pounded and soaked in running water to leach out toxins before the flour-like extract was made into small cakes and baked over a fire (Kohen 1993:8).

Small animals provided the protein component of the Aboriginal diet on the Cumberland Plain, with hunting comprising a major economic role of the men. Along the river, traps and snares were set for bandicoots and wallabies, while decoys for snaring birds were also a commonly employed technique, 'these are formed of underwood and reeds, long and narrow, shaped like a mound raised over a grave, with a small aperture at one end for the admission of the prey' (Tench 1793 [Kohen 1985:9]). Possums and gliders were particularly common in the open woodland across the Cumberland Plain, and probably formed the main sources of animal food. These were hunted in a number of ways, including smoking out the animal by lighting a fire in the base of a hollow tree, burning large tracts of land and gathering the stranded animals, as well as cutting toe-holds in trees mentioned above (Kohen 1993:10; Tench 1793:82).

Black Town Native Institution and Colebee Land Grant

Some of the early interactions between and resultant policies established by Governor Macquarie in the early part of the 19th Century have an important association with the Marsden Park area. This included the first land grant in Australian history to an Aboriginal person and the establishment of a Native Institution for Aboriginal and Maori children (Brook and Kohen 1991).

Tension between the British settlers on farm allotments and the local Aboriginal people increased during periods of drought, when conflict arose because traditional hunting and gathering areas were subsumed by the expansion of farmland. Many officials, including Governor Macquarie, often recognised that these issues were started by the settlers, but with the colony on a tentative footing, especially during periods of drought, he was more inclined to protect the interests of the farmers.

In response to the violence between the settlers and the local Aboriginal people across the Sydney region, in April 1816 Governor Macquarie ordered a punitive expedition to capture or kill those Aborigines involved in the skirmishes with settlers (Brook and Kohen 1991:23). Three groups of soldiers were sent from Sydney to Cowpastures, the Airds and Appin district and to Parramatta, Windsor, the Grose and the banks of the Nepean respectively (Brook and Kohen 1991:23). Several Aboriginal guides took part in the punitive expeditions, including Colebee and Nurragingy, both Darug people. Brook and Kohen (1991:34) note that of the three punitive expedition parties sent out, the two with Aboriginal guides did not make any significant contact with Aboriginal groups, whereas the one party without Aboriginal guides did, leading to the suggestion that the Aboriginal guides were 'cunningly and successfully shielding their "wild" compatriots'.

For their assistance in the punitive expeditions, Governor Macquarie jointly granted Colebee and Nurragingy 30 acres of land in 1816, located around 2.6 km south east of the study area. The grant was registered in 1819 with only Colebee's name (Brook and Kohen 1991: 38). The actual location of the grant within the District of Bathurst was selected by Colebee and Nurragingy, Brook and Kohen (1991:44-45) suggesting that they chose this location based on its proximity to Plumpton Ridge and its importance to the South Creek tribe. Colebee did not stay long on the grant, instead becoming a constable at Windsor in 1822, before marrying an Aboriginal girl called Kitty from the Black Town Native Institution and settling with her on a small farm in the area (Brook and Kohen 1991:51). Nurragingy spent more time on the 30 acre land grant, growing various crops and practising animal husbandry.

The site of the land grant has been registered on AHIMS as a Potential Archaeological Deposit (PAD) – Contact Site (AHIMS # 45-5-2988). The importance of the Colebee and Nurragingy land grant has recently been recognised by its listing on the State Heritage Register (listing number O1877, gazetted 10 February 2012, Gazette Number 18, pages 405-406). The summary statement of significance on the listing (source: Nomination from prepared by Godden Mackay Logan October 2010) states that:

The Colebee/Nurragingy Land Grant is a site of state heritage significance because of its combination of historical, social and cultural values. The site was the first land grant ever given to Aboriginal people in Australia. The land grant is associated with two significant Aboriginal figures from the early colonial period – Nurragingy and Colebee – to whom the land was jointly granted in 1816. The location of the land grant is significant because it was an Aboriginal choice, being on land belonging to Nurragingy's clan. The land grant is valued by the contemporary Aboriginal community and the wider Australian community as a landmark in the history of cross-cultural engagement in Australia. For Aboriginal people, in particular, it represents a key historical site symbolising Aboriginal resilience and enduring links to the land.

The Native Institution was a residential school for Aboriginal children and Reserve which operated between 1823 and 1829, located around 2.5 km south east of the study area. In addition to the schoolhouse/residence, kitchen and stables, the Reserve had both a garden and a stockyard with 22 head of cattle. Water was gathered from Bells Creek (then called Gidley Chain of Ponds) which bisected the area, the only supply for all fresh water needs. The site of the Blacktown Native Institution is a registered contact/mission site (AHIMS # 45-5-0398) and is a site of Aboriginal significance.

An archaeological investigation of the Native Institution found archaeological evidence of both traditional Aboriginal and contact period sites on the Reserve (Bickford 1981). Stone flakes were found on the south eastern side of Bells Creek. Evidence of an Aboriginal contact site on the fringe settlement on the north west side of the creek included stone artefacts (flakes and cores), earthenware pottery sherds (dated to the mid-19th century) and convict brick. Bickford claimed this site was consistent with historical records that indicated the adult family of the Aboriginal children were living nearby the school house (Bickford 1981:15). A scarred tree had also been recorded on the north western side of Bells Creek. Bickford indicated that it was possible the bark had been removed from the tree, leaving an oval shaped scar, by Aboriginal people either during or subsequent to the use of the Native Institution, or possibly by Europeans as a survey mark (Bickford 1981:15). The Blacktown Native Institution site is archaeologically, historically and socially significant.

The Blacktown Native Institution is listed on the:

- State Heritage Register (listing number 01866, gazetted 18 November 2011, Gazette Number 111, page 6682);
- Local Environment Plan, Amendment No. 143, Gazette Number 72, page 2262, 12 April 2002 for Blacktown Local Government Area; and
- Register of the National Estate (Listing number: 15905, 30 June 1992).

4 Landscape Context

4.1 Geology

Marsden Park Precinct is located on the Cumberland Plain, a large low-lying and gently undulating landform in the Sydney Basin. The Sydney Basin is a large geological feature that stretches from Batemans Bay to Newcastle and west to Lithgow. The formation of the basin began between 300 to 250 million years ago when river deltas gradually replaced the ocean that had extended as far west as Lithgow (Pickett and Alder 1997). The oldest, Permian layers of the Sydney Basin consist of marine, alluvial and deltaic deposits that include shales and mudstone overlain by Coal Measures. By the Triassic period the basin consisted of a large coastal plain, with deposits from this period divided into three main groups, the Narrabeen Group, Hawkesbury Sandstone and the Wianamatta Group (Clark and Jones 1991, Pickett and Alder 1997).

Geology within the precinct comprised three major units (see Figure 5). The oldest geological unit was Bringelly Shale of the Triassic Period, which underlies the higher south eastern and eastern portions of the precinct. Subsequent fluvial activity during the Tertiary Period resulted in deposition of gravels and finer sediments called Rickabys Creek Gravel and Londonderry Clay respectively. These are the surface units across the large, central portion of the precinct. The youngest geological unit within the precinct were Quaternary alluvial deposits associated with the South Creek floodplain. That area comprised the lower-lying western and north western portions of the precinct, extending south along several 1st and 2nd order tributaries. Archaeologically all of the river gravels have potential to contain lithic materials suitable to tool production.

Bringelly Shale was formed during the late Triassic Period and consisted of shale, carbonaceous claystone, claystone, laminate, fine to medium-grained lithic sandstone, rare coal and tuff (Clark and Jones 1991). The Rickabys Creek Gravel and Londonderry Clay units were the result of fluvial activity during the mid-Tertiary Period. Rickabys Creek Gravel consisted of matrix supported conglomerate, including large gravels from as far afield as the Lachlan Fold Belt. It is possible that these gravels were deposited in a braided stream environment (Smith and Clark 1987:35). The Londonderry Clay consisted of sand lenses and iron-cemented sand, with clay aggregates occurring throughout and abundant ironstone pisolites.

Lithic raw materials favoured for artefact manufacture were present in the precinct and surrounding area, including silcrete, chert and tuff. The concentration of silcrete material in the area was the result of locally formed silcrete formed as part of a 'crust' over portions of the Wianamatta Group. That silcrete, through colluvial and alluvial activity, was subsequently redistributed not far from its original source during the Tertiary Period and re-deposited as the St Marys Formation. The fact that the material did not move far from its origin explained the large size of silcrete boulders within the St Marys formation. Subsequent fluvial activity across the Sydney Basin re-deposited materials from various geological units (Rickabys Creek Gravel). Amongst those materials were silcrete cobbles and clasts of chert. Sections of Rickabys Creek Gravel are exposed within the precinct. Surface manifestations of these gravels are often associated with archaeological sites as past peoples exploited the quality stone material.

4.2 Soils and landform

The study area is characterised by higher, rolling landforms in the south east and east, neatly defined and low-lying spurlines bordering incised waterways through the centre of the precinct and a broad, low-lying area to the west and north-west.

Several unnamed 1st and 2nd order drainage channels flow north through the centre of the precinct, merging towards the northern portion of the Woorong Park property to form a 3rd order drainage line that flowed north to join South Creek on the northern boundary of the precinct. Additionally, South Creek, a major waterway that flows north across the Cumberland Plain, abuts the northwestern boundary of the precinct.

Much of the low-lying area associated with South Creek and defined by the distribution of Quaternary Alluvium (see Figure 5) would be subject to severe inundation during major flooding of South Creek.

Soils within the precinct (see Figure 6) are largely derived in situ from the underlying fluvial Tertiary age Rickabys Creek Gravel and Londonderry Clay (Bannerman and Hazelton 1990). These soils, known as Berkshire Park, consisted of a sandy loam to sandy clay loam that was susceptible to erosion where cleared of vegetation.

Residual soils called the Blacktown soil landscape were associated with the higher, eastern part of the precinct underlain by Bringelly Shale (Bannerman and Hazelton 1990). The Blacktown soil landscape consisted of shallow to moderately deep soil with relatively low susceptibility to erosion. The lower parts of the precinct associated with the Quaternary Alluvium were called the South Creek soil landscape (Bannerman and Hazelton 1990) and consisted of deep to very deep soils susceptible to erosion and frequent flooding.

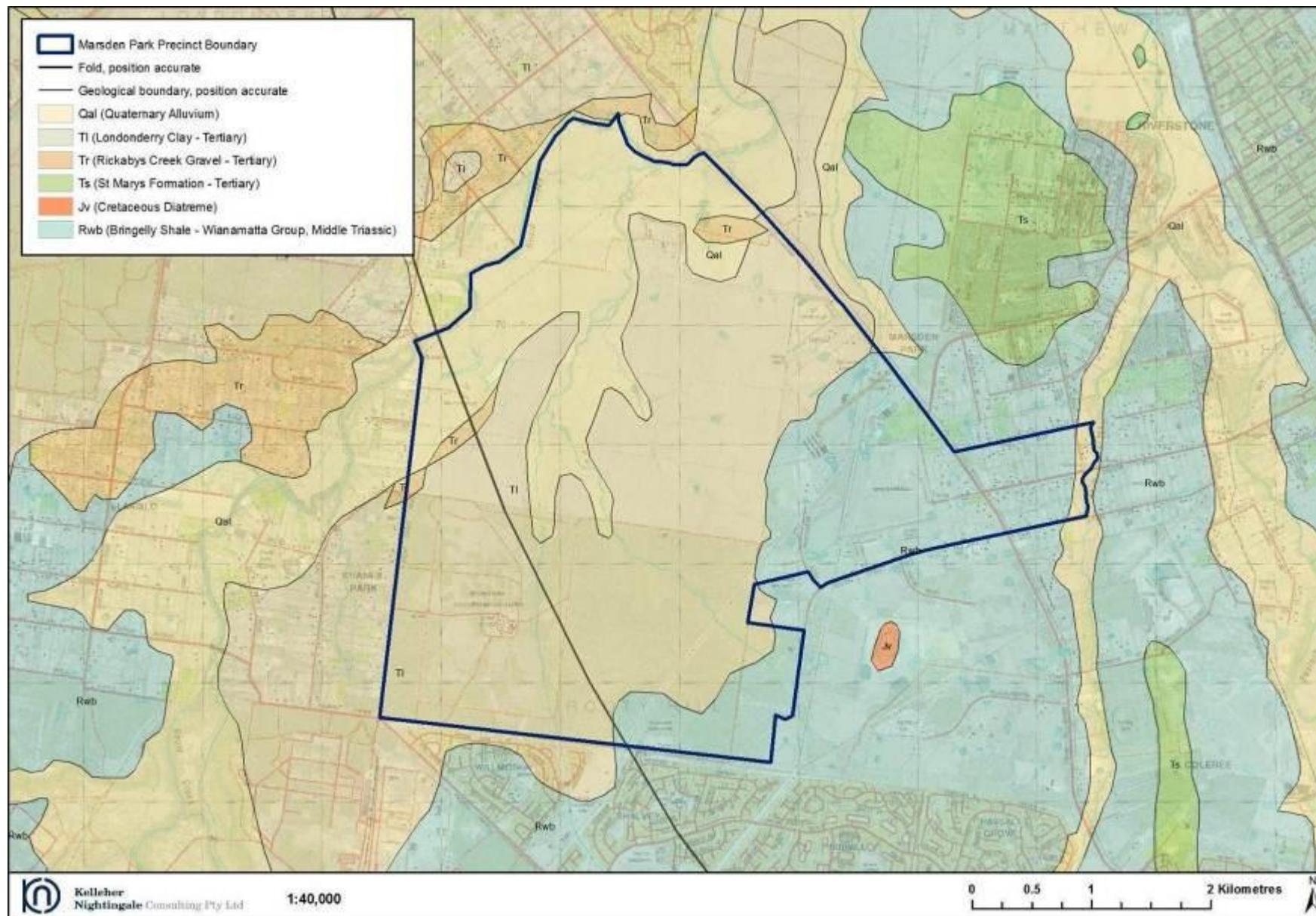


Figure 5. Geology within the precinct and surrounding area (Clark and Jones 1991)

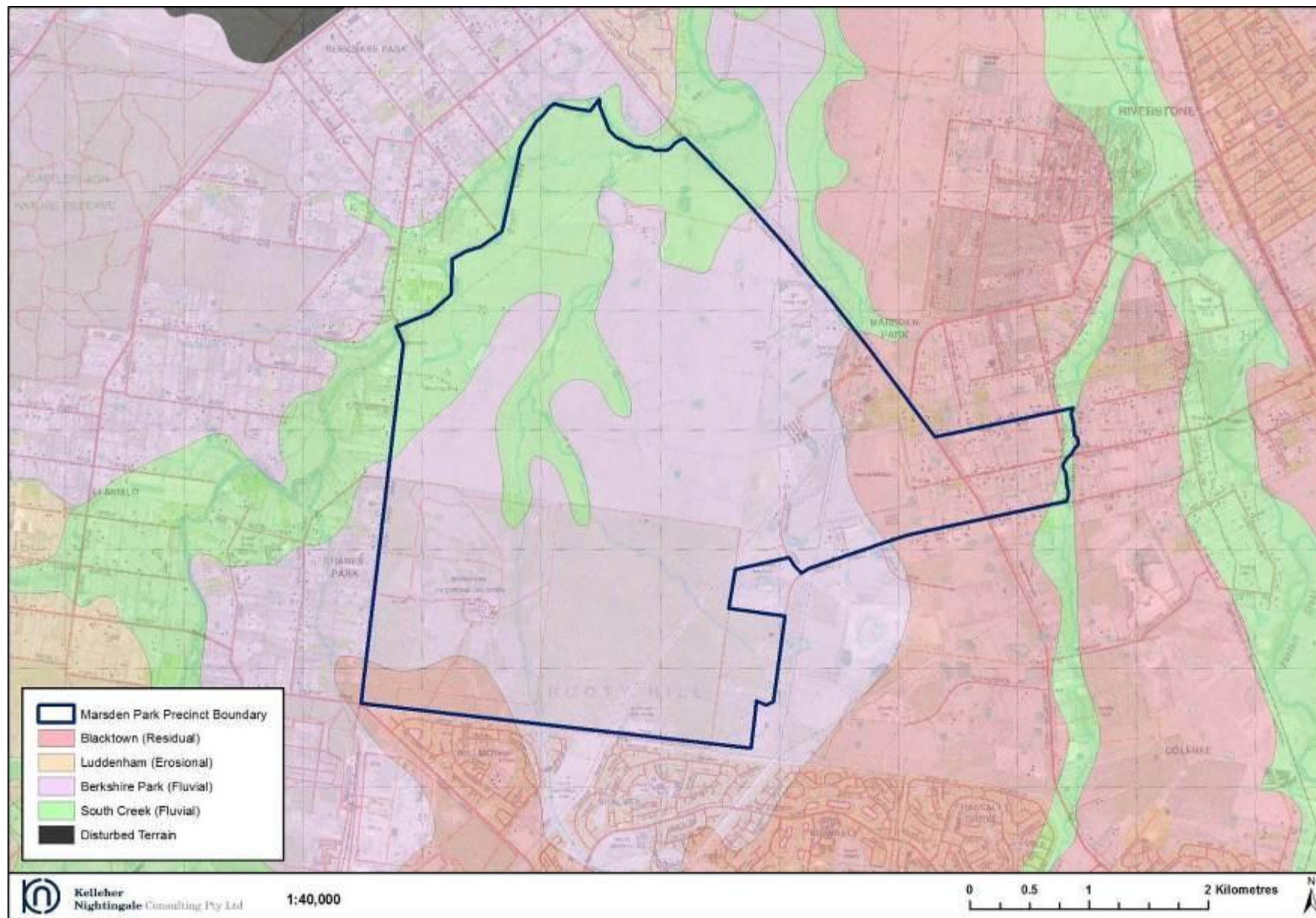


Figure 6. Soil landscapes within the precinct and surrounding area (Hazelton, Bannerman and Tille 1989)

5 Site Predictions

Previous archaeological field surveys and excavations across the Cumberland Plain have provided data on artefact distribution, site typology and lithic raw material use that assist in the development of site predictions within the precinct.

Many of the discussions regarding the distribution of archaeological material focus on a combination of artefact density and landform context. One of the most prominent findings has been the relationship between high artefact density and high order waterways, with lower artefact densities consistently recorded at excavated sites in upper slopes and ridge crest contexts away from high order drainage lines.

Artefact typology data and localised artefact concentrations have been used to demonstrate activity events, with the localised high density artefact scatter the result of one or more knapping events. Previous archaeological excavations have indicated the concentration of knapping events is highest closest to higher order waterways, suggesting frequent visitation/longer stays and numerous overlapping activities in those areas.

Furthermore, the area in close proximity to high order waterways will contain a complex of sites featuring numerous overlapping knapping floors represented by high density concentrations of artefacts due to the repeated use of the area. Although many resources and facilities are associated with high order waterways, others, such as lithic raw material sources and vistas, may have been dotted across other parts of the landscape. In this sense, high density archaeological material would be expected in association with those resources irrespective of their association with waterways.

Artefact analysis has provided information on the specific knapping techniques and tools manufactured at different sites. This data provides information on types of raw material used and the way each raw material was used. Raw material utilisation varied between sites, with sites away from resources and facilities tending to consist of a lower density of artefacts, a high frequency of backed artefacts, less discard of large broken cores, slightly lower rates of cortex and a tendency to exhibit higher proportions of good quality lithic raw material.

Implications for the precinct

A number of unique landform and resource features characterise the precinct, including ready access to lithic raw material and the prevalence of that resource in association with low-lying spurs bordering reliable waterway resources.

The prevalence of lithic raw material in the Marsden Park area is perhaps one of its defining salient features. Large silcrete cobbles and clasts of chert are available in sections of exposed Rickabys Creek Gravel beneath the Londonderry Clay on slope landforms through the central portion of the precinct, providing ready access to quality flaking material.

A unique characteristic of the precinct includes the contrast of resource availability and landform between the central and western/north western parts of the precinct. Lithic raw material and well-drained landforms with ready access to reliable waterways characterised the central portions of the precinct, while the broad, low-lying western and north western portions of the precinct provided ready access to South Creek, which is subject to major flood events.

Archaeological implications for the precinct based on previous archaeological investigations in the region and unique environmental characteristics of the precinct are that:

- natural silcrete gravels and other culturally significant raw material types occur amongst Rickabys Creek Gravel that is exposed across large parts of the precinct;
- silcrete artefacts are likely to occur across significant parts of the study area. The highest density of archaeological deposit will occur in association with low-lying spurs and waterways through the centre of the precinct, as well as in association with South Creek and higher order tributaries in the west and north west of the precinct;
- the precinct is characterised by almost complete vegetation clearance, making the occurrence of modified (scarred or carved) trees limited; and
- the subsurface context is likely to be relatively intact, with impact limited to contemporary land use and major flood events.

6 Sampling Strategy

The aim of archaeological survey was to conduct a comprehensive survey of all landforms within the precinct. Particular attention was focussed on those areas outlined in Section 5 as having high potential for archaeological deposit. Sample transects were conducted across the remaining portions of the precinct.

Landforms included crest, simple slope, lower slope, mid slope, upper slope, flat and open depression.

The nature of each sample survey unit was dictated by two main factors – property size and surface visibility. Survey units were restricted by property boundaries within the smaller properties bordering Richmond Road. Key access and survey units covered the large properties in the precinct including the Winten property forming the central part of the precinct, Clydesdale property in the north and former Air Services Australia site in the south, which allowed coverage of all landforms.

Low surface visibility across parts of the precinct meant that a sample survey unit rather than full survey coverage was justified.

Additionally, the survey sought to expand upon information already recorded within the precinct.

7 Field Methods

Field survey was carried out between November 2011 and February 2012. Registered Aboriginal stakeholders were invited to participate in survey. The survey team included Steve Randall (DLALC), Leanne Watson (DCAC), Gordon Morton (DACHA), Dennis Hardy (DTAC) and Matthew Kelleher, Jaclyn Ward, Josh Symons and Kylie McDonald (KNC).

Terrain across the precinct was characterised by shallow to moderate slopes with broad crests overlooking narrow flood plains associated with tributaries of South Creek. The land had been modified in the past and showed some disturbance in areas surrounding dams and unsealed vehicle tracks. It has been extensively cleared for pastoral use in the past. Vegetation consisted primarily of thick low lying grass with occasional stands of *Melaleuca* spp. along creek lines and isolated trees on slopes and crests.

All survey units were inspected by pedestrian survey. The location of each survey unit was documented on an aerial map, with observations made during each transect documented by the survey team. Each survey unit was photographed.

The survey team was equipped with aerial maps showing the boundaries of the study area.

All recordings were made in WGS84.

Aboriginal archaeological sites were identified and defined by:

1. the spatial extent of visible objects or direct evidence of their location;
2. obvious physical boundaries where present, such as landform, past disturbance; or
3. identification by Aboriginal stakeholders on the basis of cultural information.

Sites were recorded using an AHIMS Site Recording Form and submitted to the AHIMS Registrar for inclusion on AHIMS in accordance with section 89A of the *National Parks and Wildlife Act 1974*.

Results of survey are described in section 7 (Marsden Park Precinct on the whole) and section 8 (Richmond Road upgrade – west side of Richmond Road). Survey coverage data is presented in section 9.

8 Results

Field survey and background data gathering has identified 67 Aboriginal sites in the precinct. Sites consist of open artefact scatters, isolated artefacts and two scarred trees. Sites are summarised in Table 2 and their locations shown on Figure 7 following. Site descriptions are presented in section 8.2 for newly recorded sites and section 8.3 for previously recorded sites.

8.1 Aboriginal cultural heritage sites in the precinct

The results of the field survey include:

- 67 total archaeological sites within the Marsden Park Precinct (see table below and Figure 7), comprising
 - 43 previously identified Aboriginal archaeological sites; and
 - 24 newly recorded Aboriginal archaeological sites.

Table 2. Identified Aboriginal sites in the precinct

Site ID (AHIMS #)	Site Name	AGD*	GDA*	Landform	Site Type	Site Summary
45-5-0267	Clydesdale EKC 31			Alluvial Flats	Open artefact scatter, Scarred tree	Artefact scatter over an area 30x10m. Artefacts of silcrete, chert and quartz; including partial hatchet and thumbnail scraper. Scatter associated with a possible scarred tree.
45-5-2750	C-IF-1			Floodplain	Isolated artefact	Indurated mudstone core identified in a highly disturbed area.
45-5-2751	C-IF-2			Upper hillslope	Isolated artefact	Grey chert core, determined to be part of imported fill at gate.
45-5-2752	C-OS-1			Lower hillslope, ephemeral drainage line	Open artefact scatter	Artefact scatter over a highly disturbed area 25X10m. Artefacts included one silcrete and two indurated mudstone.
45-5-2753	C-ST-1				Scarred tree	Probable scarred tree. Tree dead but standing. Elongate scar.
45-5-2387	GR-OS-1			Ridge crest	Open artefact scatter	Artefact scatter over an area 72 x 12m. Recorded artefacts included ten silcrete, four indurated mudstone and one quartzite. Flaked pieces, broken flakes and two cores. Site highly disturbed. High potential for subsurface deposit in undisturbed parts.
45-5-2388	GR-OS-2			Ridge crest	Open artefact scatter	Artefact scatter over an area 40 x 8m. Eight artefacts recorded mostly silcrete and one indurated mudstone.
45-5-2389	GR-OS-3			Ridge slope	Open artefact scatter	Low density scatter of three artefacts: 2 silcrete flaked pieces and 1 yellow indurated mudstone broken flake.
45-5-2390	GR-OS-4			Ridge slope	Open artefact scatter	Artefact scatter over an area 16 x 10m. Silcrete dominant material. Broken flakes and flaked pieces.
45-5-2391	GR-OS-5			Ridge slope	Isolated artefact	One silcrete flake. Silcrete naturally occurring in the area.
45-5-2392	GR-OS-6			Ridge slope	Open artefact scatter	Artefact scatter over an area 15x10m. Five silcrete artefacts. Silcrete naturally occurring in the area. Potential to extend.
45-5-2393	GR-OS-7			Alluvial creek bank	Open artefact scatter	Scatter of two silcrete artefacts over 3m. Silcrete occurring naturally in the area.

Site ID (AHIMS #)	Site Name	AGD*	GDA*	Landform	Site Type	Site Summary
45-5-2394	GR-OS-8			Alluvial creek bank	Open artefact scatter	Artefact scatter over an area 15x5m. Five silcrete artefacts. Silcrete occurring naturally in the area.
45-5-2395	GR-OS-9			Alluvial creek bank	Open artefact scatter	Scatter of two artefacts over 2m. Silcrete naturally occurring in the area.
45-5-2396	GR-OS-10			Ridge slope	Open artefact scatter	Artefact scatter over an area 10x10m. Ten silcrete artefacts, one indurated mudstone and one quartz. Silcrete naturally occurring in the area.
45-5-2397	GR-OS-11			Adjacent to flat alluvial area	Open artefact scatter	Scatter of three artefacts. Silcrete naturally occurring in the area.
45-5-2398	GR-OS-12			Adjacent to flat alluvial area	Isolated artefact	One indurated mudstone core. Silcrete naturally occurring in the area.
45-5-2399	GR-OS-13			Ridge slope	Open artefact scatter	Artefact scatter over an area 15x2m. Three artefacts. Silcrete naturally occurring in area.
45-5-2400	GR-OS-14			Alluvial creek bank	Isolated artefact	One silcrete flaked piece in a highly disturbed area. High level naturally occurring silcrete.
45-5-2401	GR-OS-15			Adjacent to flat alluvial area	Open artefact scatter	Artefact scatter over an area 15x20m. Eight silcrete artefacts. Silcrete naturally occurring in area.
45-5-2380	SR-OS-1			Ridge slope	Open artefact scatter	Artefact scatter over an area 26x15m. Two silcrete flakes. Silcrete cobbles in the area.
45-5-2381	SR-OS-2			Ridge slope	Open artefact scatter	Artefact scatter over an area 10x2m. Five silcrete artefacts. Silcrete cobbles in the area
45-5-2382	SR-OS-7			Ridge slope	Isolated artefact	One silcrete flake tool. Silcrete occurring in the area.
45-5-2383	SR-OS-6			Ridge slope	Isolated artefact	One broken silcrete flake. Silcrete cobbles in the area
45-5-2385	SR-OS-4			Ridge slope	Open artefact scatter	Artefact scatter over an area 25x3m. 12 artefacts. Silcrete cobbles in the area.
45-5-2386	SR-OS-3			Ridge slope	Open artefact scatter	Artefact scatter over a 20m ² area. Three silcrete artefacts. Silcrete cobbles in the area.
45-5-0678	MP 40			Flat rise	Open artefact scatter	Artefact scatter in an area 70m long, comprising 107 silcrete, four indurated mudstone and one quartz artefacts. Rickabys Creek Gravels visible in creek bank.
45-5-0679	MP 41			Flats	Open artefact scatter	Scatter of three silcrete artefacts.
45-5-0680	MP 42			Flats	Open artefact scatter	Scatter of seven silcrete and one indurated mudstone artefacts.
45-5-0681	MP 43			Slopes	Open artefact scatter	Dense scatter of 70 silcrete artefacts.
45-5-0682	MP 44			Flats	Open artefact scatter	Scatter of nine silcrete and three indurated mudstone artefacts in a highly disturbed area.
45-5-0683	MP 45			Ridge line	Open artefact scatter	Scatter of three silcrete artefacts.
45-5-0684	MP 46			Ridge line	Open artefact scatter	Artefact scatter comprising 17 silcrete artefacts and two possible silcrete manuports.

Site ID (AHIMS #)	Site Name	AGD*	GDA*	Landform	Site Type	Site Summary
45-5-0685	MP 47			Creek flats	Open artefact scatter	Artefact scatter of 97 silcrete, 13 indurated mudstone, eight quartzite, two quartz, two basalt and one chert artefacts. One quartzite knapping floor. High level disturbance.
45-5-0686	MP 48			Creek bank, slope, ridge line	Open artefact scatter	Artefact scatter over an area 500x380m. Sample of artefacts recorded, including 154 silcrete and 19 indurated mudstone. Extraction site; Rickabys Creek Formation gravels exposed along creek bank. High level of disturbance along ridge line (gravel removal) and exposed fire breaks (gravel dumping). Suggested repeated occupation of site.
45-5-0687	MP 49			Ridge line	Open artefact scatter	Scatter of six silcrete artefacts.
45-5-0688	MP 50			Ridge line	Open artefact scatter	Artefact scatter of four silcrete and two chert.
45-5-0689	MP 51			Ridge line	Open artefact scatter	Three dense artefact scatters of silcrete. Sample of 200 taken from a minimum estimated 2000. Three knapping floors.
45-5-0690	MP 52			Ridge line	Open artefact scatter	Scatter of nine silcrete and one quartz artefacts.
	IF19			Slope	Isolated artefact	Isolated silcrete flaked piece
45-5-3863	MPIP 31			Crest	Open artefact scatter	Artefact scatter comprising three silcrete flaked pieces and one yellow chert distal flake. Naturally occurring silcrete in the area.
45-5-3864	MPIP 29			Mid slope	Open artefact scatter	Scatter of five silcrete artefacts.
45-5-3865	MPIP 30			Crest	Open artefact scatter	Scatter of red silcrete core, flake and two flaked pieces.
45-5-4158	MPP-01			Crest	Isolated artefact	Red silcrete proximal flake fragment within exposed vehicle track.
45-5-4159	MPP-02			Flood plain / creek bank	Open artefact scatter	Artefact scatter located along a series of erosion scours on a narrow floodplain over approx. 600m long. 33 silcrete and one tuff artefact. Artefact types included flakes, flake fragments and core fragments.
45-5-4160	MPP-03			Dry creek bed	Open artefact scatter	Artefact scatter on dry bed of creek. Two silcrete and two tuff artefacts. Types included flake fragments and core.
45-5-4167	MPP-04			Terrace	Open artefact scatter	Artefact scatter of three flake fragments: two silcrete and one chert.
45-5-4168	MPP-05			Spur crest	Open artefact scatter	Artefact scatter of a silcrete core and flake fragment. Located on the western end of spur crest.
45-5-4169	MPP-06			Crest	Isolated artefact	Silcrete flake fragment on crest along track.
45-5-4170	MPP-07			Flat	Isolated artefact	Yellow tuff flake located on exposed creek terrace.
45-5-4171	MPP-08			Crest	Artefact scatter	Silcrete artefacts located on crest.
45-5-4172	MPP-09			Crest	Artefact scatter	Artefact scatter located on the east side of Richmond Road. Artefacts are found eroding out of road cutting.

Site ID (AHIMS #)	Site Name	AGD*	GDA*	Landform	Site Type	Site Summary
45-5-4173	MPP-10			Upper slope	Artefact scatter	Artefact scatter located on the east side of Richmond Road. Artefacts are found eroding out of road cutting.
45-5-4174	MPP-11			Upper slope	Artefact scatter	Artefact located on break in slope within a road cutting along Vine Street West.
45-5-4175	MPP-12			Slope	Artefact Scatter	Artefact scatter on the south side of Vine Street West east of intersection with Richmond Rd.
45-5-4176	MPP-13			Slope	Isolated artefact	Isolated artefact on slope between Bells Creek and a west drainage line.
45-5-4177	MPP-14			Slope	Artefact scatter	Artefacts on slope of rise west of Bells Creek. Artefact found in road cutting.
45-5-4178	MPP-15			Slope	Isolated artefact	Isolated artefact east of junction with Richmond Rd located in a disturbed context.
45-5-4179	MPP-16			Slope	Open artefact scatter	Scatter of artefacts on unformed track on slope landform context.
45-5-4180	MPP-17			Slope	Isolated artefact	Isolated artefact amongst introduced material in driveway.
45-5-4181	MPP-18			Open Depression	Open artefact scatter	Scatter of artefacts identified in open depression of western edge of paddock bordering South Creek.
45-5-4161	WP1			Slope	Open artefact scatter	Scatter of ten yellow mudstone, crystal quartz and red silcrete flakes and flake fragments. Artefact types included backed artefact and pitted hammerstone.
45-5-4162	WP2			Slope	Isolated artefact	Yellow mudstone flake on upper slope deposit near a dam.
45-5-4163	WP3			Flood channel margin	Open artefact scatter	Yellow mudstone core and grey/red chert flake. Evidence of post depositional rolling.
45-5-4165	WP4			Slope	Open artefact scatter	Small quartz core, red mudstone flake and two cream flaked pieces.
45-5-4166	WP5			Terrace	Open artefact scatter	Scatter of 24 artefacts of silcrete, chert and mudstone. Artefact types include flakes, flake fragments, angular fragments and cores.
45-5-4164	WP6			Raised ground	Open artefact scatter	Two chert flakes and one yellow mudstone flake. Fill imported into area.

Notes:

* Removed from public report

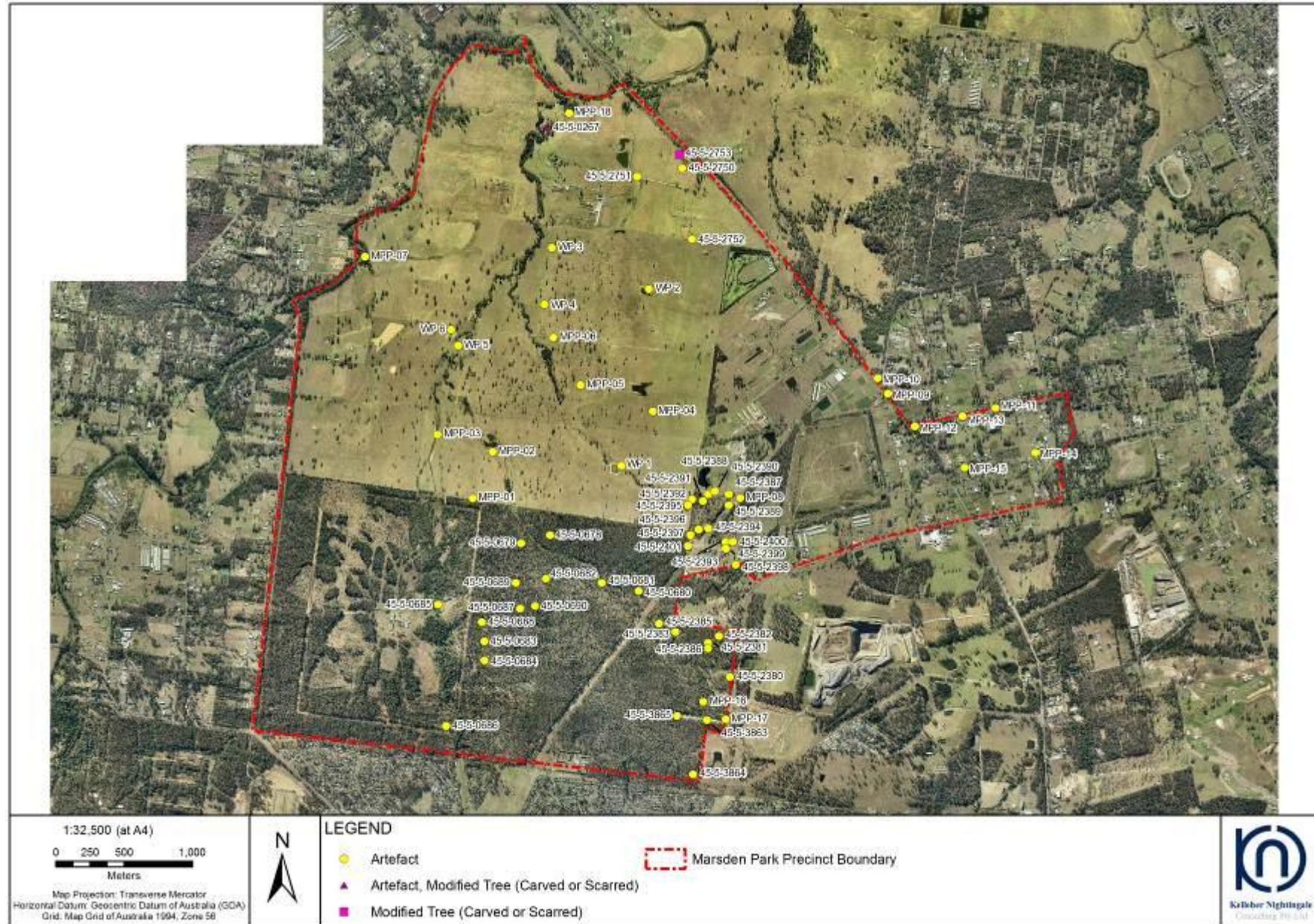


Figure 7. Aboriginal archaeological features in Marsden Park Precinct

8.2 Sites descriptions

Site Name:	MPP-01 (AHIMS # 45-5-4158)
Site Type:	Isolated artefact
Site Coordinates:	[REDACTED]
Landform:	Crest
Vegetation:	Patchy grass
Surrounding Features:	280 m equidistant from a 2 nd order watercourse to the west and 1 st order watercourse to the east
Site Extent:	0.5 x 0.5 m
Site Condition:	Moderate / good – some localised impact from surface erosion on vehicle track
Site Boundary Criteria:	Artefact location
Significance:	Low-moderate
Map:	See Figure 7

Site Contents:

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)	Width (mm)	Thickness (mm)
P.F.F.	Silcrete	Red	Plain	-	13*	10*	3*

* = Block measurement

P.F.F. = Proximal flake fragment

Site MPP-01 consisted of a single silcrete artefact located on a broad crest landform. The artefact was identified on the margin of an unsealed vehicle track that ran parallel to the southern boundary of the Woorong Park property.

Large cobbles from Rickabys Creek gravels were present in moderate to high numbers across the landform, with an average size between 100 and 200mm long. Identified lithic types included sandstone, ironstone, silcrete and quartzite.

Ground exposure on the vehicle track was 75% with an overall visibility of approximately 50%. The surrounding paddock was covered by low, dense grass with approximate visibility of 1%.


Site MPP-01 was assessed as demonstrating low-moderate scientific significance based on the likelihood that archaeological deposit extends across the surrounding, crest landform which had low surface visibility during the field survey.



Plate 1. View west across site MPP-01



Plate 2. Silcrete artefact, site MPP-01

Site Name:	MPP-02 (AHIMS # 45-5-4159)
Site Type:	Artefact scatter
Site Coordinates:	
Landform:	Flat / open depression
Vegetation:	Long dense grass, Melaleuca
Surrounding Features:	Located on a 1 st order watercourse
Site Extent:	770 x 160 m
Site Condition:	Moderate – incised drainage channel through increased sedimentation from historical land clearance, cattle have eroded creek banks, revegetation works
Site Boundary Criteria:	Artefact distribution
Significance:	Moderate
Map:	See Figure 7

Site Contents:

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)	Width (mm)	Thickness (mm)	Notes
M.F.F.	Silcrete	Red	-	-	12*	11*	2*	-
Flake	Silcrete	Red	-	-	8	8	2	-
Flake	Silcrete	Red	-	-	19	15	6	One cortical margin
M.F.F.	Silcrete	Red	-	-	24*	11*	4*	-
A.F.	Silcrete	Red	-	-	31*	15*	9*	30% cortex
Pot lid	Silcrete	Red	-	-	15*	12*	2*	-
D.F.F.	Silcrete	Red	-	Feather	36*	24*	14*	-
Pot lid	Silcrete	Red	-	-	12*	8*	2*	-
P.F.F.	Silcrete	Red	-	-	17*	13*	2*	-
M.F.F.	Silcrete	Red	-	-	16*	12*	2*	-
Core fragment	Silcrete	Purple	-	-	25*	22*	12*	2 partial negative scars
Flake	Silcrete	Purple	-	Step	9	12	2	-
Flake	Silcrete	Reddish white	-	-	14	9	3	-
Flake	Silcrete	Pink	-	-	18	12	3	-
M.F.F.	Tuff	Red	-	-	10*	8*	1*	-
M.F.F.	Silcrete	Grey	-	-	19*	17*	6*	100% cortical dorsal surface
Flake	Silcrete	Pink	-	-	16	14	11	-
M.F.F.	Silcrete	Red	-	-	32*	20*	16*	-
Flake	Silcrete	Red	-	Step	15	12	4	-
Core fragment	Silcrete	Red	-	-	39	31	18	-
Flake	Silcrete	Red	-	-	25	27	9	Large quartzite inclusions
M.F.F.	Silcrete	Red	-	-	17*	11*	4*	-
Flake	Silcrete	Pink	-	Hinge	18	11	6	-
Flake	Silcrete	Red	-	Hinge	30	16	14	-
P.F.F.	Silcrete	Red	-	-	24*	18*	6*	-
P.F.F.	Silcrete	Red	-	-	11*	7*	2*	-
A.F.	Mudstone	Yellow	-	-	43*	25*	9*	-
Flake	Silcrete	Yellow	-	-	13	16	10	-
A.F.	Silcrete	Red	-	-	15*	14*	4*	-
Flake	Silcrete	Red	-	-	28	21	8	-
Flake	Silcrete	Red	-	-	30	18	4	-
Core fragment	Silcrete	Red	-	-	25*	21*	12*	-
A.F.	Silcrete	Red	-	-	11*	9*	6*	-
Flake	Silcrete	Red	-	-	12	9	3	-

* = Block measurement

P.F.F. = Proximal flake fragment; M.F.F. = Medial flake fragment; D.F.F. = Distal flake fragment; A.F. = Angular fragment

Site MPP-02 consisted of an extensive scatter of artefacts along a perennial watercourse. The scatter extended north for 770 m from the southern boundary of the Woorong Park property. The watercourse was bordered by a relatively narrow, flat landform located between two low lying spurs. Vegetation across the site included dense grass cover, occasional Lomandra, a series of very young plantings and stands of Melaleuca.

Artefacts were predominantly identified across erosion scours on the flat landform. Some of the erosion scours were the result of cattle activity along the watercourse. Artefacts were predominantly silcrete, with two tuff artefacts identified. The watercourse was deeply incised in places through the flat landform. In some sections of creek bank a clear soil profile was visible, demonstrating a clear A Horizon sitting on yellow clay.

Site MPP-02 was assessed as demonstrating moderate scientific significance based on the likelihood of archaeological deposit extending over a wide area bordering the water course.



Plate 3. View north east across a surface exposure with artefacts marked by flags, site MPP-02



Plate 4. View north across site MPP-02



Plate 5. Soil profile exposed in drainage channel, site MPP-02



Plate 6. Artefact at site MPP-02

Site Name:	MPP-03 (AHIMS # 45-5-4160)
Site Type:	Artefact scatter
Site Coordinates:	
Landform:	Open depression
Vegetation:	Sparse grass cover
Surrounding Features:	Located on 2 nd order watercourse
Site Extent:	230 x 65 m
Site Condition:	Moderate – deeply incised creekline with badly eroded margins
Site Boundary Criteria:	Artefact extent
Significance:	Low-moderate
Map:	See Figure 7

Site Contents:

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)	Width (mm)	Thickness (mm)	Notes
A.F.	Silcrete	Red	-	-	35	40	12	30% cortex
Core fragment	Tuff	Brown	-	-	20	16	4	
Core	Silcrete	Red	-	-	63	46	31	30% cortex, silcrete cobble with 3 negative scars. Evidence of platform preparation
P.F.F.	Tuff	White / yellow	Plain	-	16	12	6	

A.F. = Angular fragment; P.F.F. = Proximal flake fragment

Site MPP-03 consisted of a scatter of artefacts along the margins of an eroded creek. The drainage line was deeply incised with precipitous banks. Artefacts were identified on sections of creek bank eroded by cattle, creating large exposures.

A large number of natural gravels were observed across the exposures, including quartz and silcrete, while surrounding vegetation consisting of dense grass cover within a pastoral paddock. Four artefacts were identified, including a silcrete core.


Site MPP-03 was assessed as demonstrating low-moderate moderate scientific significance based on the close proximity of artefact bearing deposit to a perennial water course.



Plate 7. View south west across MPP-03



Plate 8. Artefacts at site MPP-03

Site Name:	MPP-04 (AHIMS # 45-5-4167)
Site Type:	Artefact scatter
Site Coordinates:	
Landform:	Slope
Vegetation:	Dense grass cover, one large White Gum and one Ironbark
Surrounding Features:	Adjacent to a dam and 1 st order watercourse
Site Extent:	140 x 225 m
Site Condition:	Good – vegetation clearance appeared to be the main surface impact
Site Boundary Criteria:	Artefact extent
Significance:	Moderate
Map:	See Figure 7

Site Contents:

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)	Width (mm)	Thickness (mm)
D.F.F.	Chert	White / grey	-	Feather	12*	7*	5*
A.F.	Silcrete	Pink	-	-	7*	5*	5*
P.F.F.	Silcrete	Yellow	-	Plain	38*	22*	9*

* = Block measurements

D.F.F. = Distal flake fragment; A.F. = Angular fragment; P.F.F. = Proximal flake fragment

Site MPP-04 consisted of a scatter of three artefacts across a gentle slope landform bordering an ephemeral watercourse. The area was almost completely cleared of vegetation, with only two trees in the vicinity of the site – one large White Gum and one Ironbark. A dam within the ephemeral watercourse formed the northern boundary of the site.

Vegetation clearance and some surface deflation appeared to be the only potential impacts to the archaeological deposit. Three artefacts were identified across an area measuring approximately 140 m north-south by 225 m east-west. Artefacts were identified in small surface exposures measuring no more than 0.5 x 0.5 m.

Site MPP-04 was assessed as demonstrating low-moderate scientific significance based on the likelihood that the archaeological deposit would extend over the surrounding relatively intact and gently sloping landform bordering a 1st order watercourse.



Plate 9. View north west across site MPP-04



Plate 10. Artefacts recorded at site MPP-04

Site Name:	MPP-05 (AHIMS # 45-5-4168)
Site Type:	Artefact scatter
Site Coordinates:	
Landform:	Crest / slope
Vegetation:	Dense grass cover
Surrounding Features:	Located between a 2 nd order and two 1 st order watercourses
Site Extent:	215 x 285 m
Site Condition:	Moderate / good – surface impact from historical vegetation clearance and more recent tree removal
Site Boundary Criteria:	Landform
Significance:	Moderate
Map:	See Figure 7

Site Contents:

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)	Width (mm)	Thickness (mm)	Notes
D.F.F.	Silcrete	Red	-	Feather	40*	25*	11*	-
Core	Silcrete	Red	-	-	11*	8*	4*	Mini core

* = Block measurements

D.F.F. = Distal flake fragment

Site MPP-05 consisted of two artefacts identified at the western end of a low lying spur overlooking a 2nd order watercourse. The spur sloped gently down to the watercourse on its western boundary. Vegetation consisted of dense grass cover. Larger trees were almost completely removed with occasional Ironbarks extant across the site area.

One artefact was identified in a small surface exposure and one in a tree-throw depression. Vegetation clearance and some surface deflation appeared to be main potential impacts to the archaeological deposit. The artefact in a tree-throw depression demonstrated impact to archaeological deposit by vegetation clearance.

Site MPP-05 was assessed as demonstrating moderate scientific significance based on the likelihood that the two artefacts identified at the site represent a larger, slightly deflated, archaeological deposit across a raised crest landform overlooking a perennial water course.



Plate 11. View south west across site MPP-05 towards 1st order watercourse



Plate 12. Silcrete artefact at site MPP-05

Site Name:	MPP-06 (AHIMS # 45-5-4169)
Site Type:	Isolated artefact
Site Coordinates:	[REDACTED]
Landform:	Crest
Vegetation:	Dense grass cover
Surrounding Features:	165 m east of 2 nd order watercourse
Site Extent:	0.5 x 0.5 m
Site Condition:	Moderate – vegetation clearance and vehicle track erosion
Site Boundary Criteria:	Artefact location
Significance:	Low
Map:	See Figure 7

Site Contents:

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)	Width (mm)	Thickness (mm)
P.F.F.	Silcrete	Red	Cortical	-	18	22	6

* = Block measurements

P.F.F. = Proximal flake fragment

MPP-06 was an isolated artefact on a paddock access track. The site was located on a crest landform east of a 2nd order watercourse. The artefact was situated west of the ridgeline apex. Visibility away from the access track was poor.

MPP-06 was assessed as demonstrating low scientific significance based on localised disturbance.



Plate 13. View north west across vehicle track, site MPP-06



Plate 14. Silcrete artefact, site MPP-06

Site Name:	MPP-07 (AHIMS # 45-5-4170)
Site Type:	Isolated artefact
Site Coordinates:	[REDACTED]
Landform:	Flat
Vegetation:	Dense grass cover, regrowth Eucalypts
Surrounding Features:	Located 15 m east of South Creek
Site Extent:	0.5 x 0.5 m
Site Condition:	Poor – heavy erosion on South Creek margin
Site Boundary Criteria:	Artefact location
Significance:	Low
Map:	See Figure 7

Site Contents:

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)	Width (mm)	Thickness (mm)	Notes
Flake	Tuff	Yellow	-	-	32	40	14	20% cortex

MPP-07 was located on an eastern terrace of South Creek. The creek line was heavily incised. The terrace lay approximately 70m north of a junction of two tributaries of South Creek. Only one artefact, a yellow tuff flake, was located in an area of exposure caused by erosion of the terrace toward South Creek.

MPP-07 was assessed as demonstrating low scientific significance based on heavy erosion of the site area and susceptibility to high water events.



Plate 15. View showing site MPP-07 in relation to South Creek



Plate 16. Artefact at site MPP-07

Site Name:	MPP-08 (AHIMS # 45-5-4171)
Site Type:	Artefact scatter
Site Coordinates:	[REDACTED]
Landform:	Crest
Vegetation:	Grass, regrowth Eucalypts
Surrounding Features:	490 m southwest of 1 st order watercourse, ephemeral tributary of South Creek
Site Extent:	100 m x 300 m
Site Condition:	Poor – exposure along road verge
Site Boundary Criteria	Landform
Significance:	Moderate
Map:	See Figure 7

Site Contents:

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)	Width (mm)	Thickness (mm)	Notes
Core	Silcrete	Red	-	-	66	48	52	1 negative scar

Site MPP-08 was an artefact scatter located on the eastern roadside of Glengarrie Road. The site extended from the road verge eastward to capture a rise east of Glengarrie Road. Three artefacts of red and grey silcrete were identified in an exposure along the road verge at the base of the rise.


Site MPP-08 was assessed as demonstrating moderate scientific significance based on the likely distribution of artefact material across the crest to the east of the road.



Plate 17. View south across roadside surface exposure, site MPP-08



Plate 18. Artefact at site MPP-08

Site Name:	MPP-09 (AHIMS # 45-5-4172)
Site Type:	Artefact scatter
Site Coordinates:	
Landform:	Crest
Vegetation:	Grass, regrowth Eucalypts
Surrounding Features:	290 m west of 1 st order watercourse, tributary of South Creek
Site Extent:	50 x 25 m
Site Condition:	Moderate – road construction
Site Boundary Criteria:	Exposure
Significance:	Moderate
Map:	See Figure 7

Site Contents:

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)	Width (mm)	Thickness (mm)	Notes
P.F.F.	Silcrete		-	-	32*	26*	14*	Bleached cortex
A.F.	Silcrete		-	-	25*	17*	8*	Potlid scar
Core	Silcrete		-	-	18*	15*	12*	Micro core, several scars
Flake	Silcrete		Focal	Feather	23	14	6	
A.F.	Silcrete		-	-	22*	14*	5*	Bleached cortex
M.F.F.	Silcrete		-	-	26*	22*	5*	Heat treatment

* = Block measurements

P.F.F. = Proximal flake fragment; A.F. = Angular fragment; M.F.F. = Medial flake fragment

MPP-09 was an artefact scatter located on the eastern side of Richmond Road, south of the intersection of Garfield Road West. The artefact scatter was identified across a rise dissected by the Richmond Road corridor. An eroded road cutting exposure contained approximately 30 artefacts eroding down the artificial slope. The western side of the road cutting, although part of the same raised landform, demonstrated significant disturbance and was therefore not included in the site area.


Site MPP-09 was assessed as demonstrating moderate scientific significance based on the likely presence of an intact archaeological deposit across the crest landform.



Plate 19. View south across site MPP-09 with Richmond Road to the right of photo



Plate 20. Artefacts identified at site MPP-09

Site Name:	MPP-10 (AHIMS # 45-5-4173)
Site Type:	Artefact scatter
Site Coordinates:	
Landform:	Slope
Vegetation:	Grass, Ironbark, regrowth Eucalypts
Surrounding Features:	380 m west of 1 st order watercourse tributary of South Creek
Site Extent:	40 x 30 m
Site Condition:	Moderate – road construction, installation of underground services
Site Boundary Criteria:	Artefact location
Significance:	Low-moderate
Map:	See Figure 7

Site Contents:

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)	Width (mm)	Thickness (mm)	Notes
Core fragment	Silcrete	Red	-	-	47*	37*	32*	Bleached cortex
A.F.	Silcrete	Red	-	-	29*	16*	9*	
Flake	Silcrete	Red	-	-	23	18	4	
Core	Silcrete	Red	-	-	27*	28*	10*	1 negative scar
A.F.	Silcrete	Red	-	-	34*	31*	7*	15% cortex
A.F.	Silcrete	Red	-	-	26*	10*	8*	Bleached cortex

* = Block measurements

A.F. = Angular fragment

MPP-10 was an artefact scatter at the north east corner of the junction of Richmond Road and Garfield Road West. The artefact scatter was located on the upper slope of a rise south of the road junction. Artefacts were identified in an exposure along the road verge of Richmond Road. Underground services had caused some disturbance to the immediate roadside.

Site MPP-10 was assessed as demonstrating low-moderate scientific significance based on the likelihood that the site would extend across the neighbouring relatively intact area.



Plate 21. View west across Garfield Road West, site MPP-10



Plate 22. Artefacts identified at site MPP-10

Site Name:	MPP-11 (AHIMS # 45-5-4174)
Site Type:	Artefact scatter
Site Coordinates:	[REDACTED]
Landform:	Crest / slope
Vegetation:	Grass
Surrounding Features:	510 m west of Bells Creek
Site Extent:	25 x 125 m
Site Condition:	Poor – road construction and installation of underground services
Site Boundary Criteria:	Extent of artefact locations
Significance:	Low
Map:	See Figure 7

Site Contents:

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)	Width (mm)	Thickness (mm)	Notes
Core	Silcrete	-	-	-	31*	22*	14*	9 negative scars, 30% cortex
Core	Silcrete	-	-	-	36*	26*	23*	5 negative scars
Flake	Silcrete	-	-	-	19	12	4	

* = Block measurements

Site MPP-11 was an artefact scatter located at the crest and break of slope of a rise west of Bells Creek. The site was bisected by Vine Street West. Artefacts were identified on both the northern and southern road sides. A cut in the natural ground surface on the northern road verge provided an exposure, as did an ant nest on the southern roadside. Ground disturbance had occurred from installation of underground services, including water and telecommunications.


Site MPP-11 was assessed as demonstrating low scientific significance due to high level disturbance from road and underground services construction.



Plate 23. View west across site MPP-11



Plate 24. Detail of silcrete artefact, site MPP-11

Site Name:	MPP-12 (AHIMS # 45-5-4175)
Site Type:	Artefact scatter
Site Coordinates:	
Landform:	Slope
Vegetation:	Grass, regrowth Eucalypts
Surrounding Features:	90 m west of a 1 st order watercourse, ephemeral drainage line
Site Extent:	40 x 50 m
Site Condition:	Poor / moderate – large ants nests and road construction
Site Boundary Criteria:	Artefact location
Significance:	Moderate
Map:	See Figure 7

Site Contents:

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)	Width (mm)	Thickness (mm)	Notes
A.F.	Silcrete	-	-	-	24	18	11	Bleached cortex
Flake	Silcrete	-	-	-	28	20	3	Distal retouch
P.F.F.	Silcrete	-	-	-	15	12	4	-
M.F.F.	Silcrete	-	-	-	12	12	10	Retouched
Backed artefact	Silcrete	-	Scarred	-	24	18	4	Backed right margin, use-wear left margin
P.F.F.	Silcrete	-	-	-	19	12	5	Retouched both lateral margins
P.F.F.	Petrified Wood	Reddish brown	Scarred	-	25	21	6	-

* = Block measurements

A.F. = Angular fragment; P.F.F. = Proximal flake fragment; M.F.F. = Medial flake fragment

MPP-12 was an artefact scatter located east of the intersection of Richmond Road and Vine Street West. High quantities of retouched silcrete artefacts were recorded, including a backed artefact. One artefact of petrified wood was also identified. This site was situated southward of the Vine Street West road verge in an area of relatively undisturbed ground.

Site MPP-12 was assessed as demonstrating moderate scientific significance based on the range of artefacts identified at the site and the relatively intact and gently sloping land bordering the road corridor.



Plate 25. View west across MPP-12 with Richmond Road in the background



Plate 26. Backed artefact at site MPP-12



Plate 27. Petrified wood artefact at MPP-12



Plate 28. Silcrete artefacts at site MPP-12

Site Name:	MPP-13 (AHIMS # 45-5-4176)
Site Type:	Isolated artefact
Site Coordinates:	[REDACTED]
Landform:	Slope
Vegetation:	Grass
Surrounding Features:	275 m east of a 1 st order watercourse, ephemeral drainage line
Site Extent:	0.5 x 0.5 m
Site Condition:	Poor – impact from road construction and installation of underground services
Site Boundary Criteria:	Artefact location
Significance:	Low
Map:	See Figure 7

Site Contents:

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)	Width (mm)	Thickness (mm)	Notes
Core	Silcrete	Pink	-	-	48	24	24	5 negative scars, 30% cortex

MPP-13 was an isolated artefact found mid-slope of a rise between Bells Creek in the east and an ephemeral drainage line in the west. The site was situated on a simple slope descending westward toward the drainage line. A roadside exposure on the south side of Vine Street West revealed a silcrete core. Underground water services had caused subsurface disturbance in the area.


Site MPP-13 was assessed as demonstrating low scientific significance due to high level disturbance from road and underground services construction.



Plate 29. View east across site MPP-13



Plate 30. Silcrete core at site MPP-13

Site Name:	MPP-14 (AHIMS # 45-5-4177)
Site Type:	Artefact scatter
Site Coordinates:	
Landform:	Slope
Vegetation:	Grass
Surrounding Features:	180 m west of Bells Creek
Site Extent:	25 x 30 m
Site Condition:	Poor – dumped material, modification from road construction and underground services
Site Boundary Criteria:	Artefact location
Significance:	Low
Map:	See Figure 7

Site Contents:

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)	Width (mm)	Thickness (mm)	Notes
Flake	Silcrete	Pink	-	-	25	32	10	
Flake	Silcrete	Pink	-	-	25	17	9	Distal edge damage
A.F.	Silcrete	Pink	-	-	45	34	8	
A.F.	Silcrete	Pink	-	-	18	12	8	
Split flake	Silcrete	Pink	-	-	13	10	8	

* = Block measurements

A.F. = Angular fragment

MPP-14 was an artefact scatter located on the lower slope of a rise stretching westward from Bells Creek. The site was located above a road cutting on the northern side of Grange Road. Visibility was obscured at the eastern end of the site where introduced gravels and blue metal overlay the ground surface. Underground service installation on an east-west alignment had also caused some subsurface disturbance.

Site MPP-14 was assessed as demonstrating low scientific significance due to high level disturbance from road and underground services construction as well as imported material.



Plate 31. View east across site MPP-14



Plate 32. Silcrete artefacts at site MPP-14

Site Name:	MPP-15 (AHIMS # 45-5-4178)
Site Type:	Isolated artefact
Site Coordinates:	[REDACTED]
Landform:	Slope
Vegetation:	Dense grass cover
Surrounding Features:	375 m northwest of a 1 st order watercourse
Site Extent:	0.5 x 0.5 m
Site Condition:	Poor – dumped material, impact from road construction
Site Boundary Criteria:	Artefact location
Significance:	Low
Map:	See Figure 7

Site Contents:

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)*	Width (mm)*	Thickness (mm)*
P.F.F.	Silcrete	Red	Plain	-	17	10	3

* = Block measurements

P.F.F. = Proximal flake fragment

An isolated artefact was found in an exposure on the upper slope of Grange Road, [REDACTED] east of the junction with Richmond Road. Land north of the roadside had several areas of dumped soil material. Underground services had also caused subsurface disturbance to the immediate roadside.

Site MPP-15 was assessed as demonstrating low scientific significance due to high level disturbance from road construction and imported material.



Plate 33. View west across site MPP-15



Plate 34. Silcrete artefact at site MPP-15

Site Name:	MPP-16 (AHIMS # 45-5-4179)
Site Type:	Artefact scatter
Site Coordinates:	[REDACTED]
Landform:	Slope
Vegetation:	Open woodland
Surrounding Features:	80 m west of 1 st order water course
Site Extent:	15 m x 2 m
Site Condition:	Good
Site Boundary Criteria:	Landform
Significance:	Low-moderate
Map:	See Figure 7

Site Contents:

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)*	Width (mm)*	Thickness (mm)*
A.F.	Silcrete	Pink	-	-	17	17	9
Backed M.F.F.	Silcrete	Red	-	-	19	9	3
A.F.	Quartz	Milky white	-	-	19	8	4

* = Block measurements

A.F. = Angular fragment; M.F.F. = Medial flake fragment

Site MPP-16 consisted of a scatter of three artefacts identified on an unformed track within [REDACTED]. The track ran northwest from an abandoned compound with numerous small buildings. The track measured up to 1.5 m wide, with surface visibility greater than 70%. Surface visibility away from the track dropped to 0% due to dense grass cover. Surrounding vegetation included sparse regrowth eucalyptus. The area appeared relatively intact, with disturbance largely limited to vegetation clearance. Heavy rain during the week of the field survey resulted in the surrounding area becoming swampy.

Site MPP-16 was assessed as demonstrating low-moderate scientific significance. Although the area was relatively close to a perennial water course, parts of the area surrounding the site were prone to water inundation during high water events.



Plate 35. View southeast across MPP-16 towards abandoned structures



Plate 36. Detail of artefacts, site MPP-16

Site Name:	MPP-17 (AHIMS # 45-5-4180)
Site Type:	Isolated artefact
Site Coordinates:	[REDACTED]
Landform:	Slope
Vegetation:	Grass
Surrounding Features:	95 m west of 1 st order water course
Site Extent:	0.5 m x 0.5 m
Site Condition:	Poor – identified amongst dumped road base
Site Boundary Criteria:	Artefact
Significance:	Low
Map:	See Figure 7

Site Contents:

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)*	Width (mm)*	Thickness (mm)*	Notes
Flaked tool	Tuff	Yellow	-	-	120.4	80.2	40	Extensive flaking along margins

* = Block measurements

Site MPP-17 consisted of a large flaked tool identified at the entrance gate to [REDACTED]. The artefact was identified among introduced road base in a heavily disturbed area at the property entrance. The artefact was likely introduced to the location with the surrounding material.

The margins of the artefact had been extensively bifacially worked. It was likely used as a transportable core as well as a tool.


Site MPP-17 was assessed as demonstrating low scientific significance based on the likelihood the artefact was introduced to the area with road base.



Plate 37. View southwest across location of artefact, site MPP-17



Plate 38. Detail of artefact, site MPP-17

Site Name:	MPP-18 (AHIMS # 45-5-4181)
Site Type:	Artefact scatter
Site Coordinates:	
Landform:	Open depression
Vegetation:	Grass, open woodland
Surrounding Features:	110 m south of South Creek and 45 m south of a 3 rd order water course
Site Extent:	30 m x 10 m
Site Condition:	Poor / Moderate – extensive erosion along cattle track
Site Boundary Criteria:	Landform
Significance:	Low-moderate
Map:	See Figure 7

Site Contents:

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)	Width (mm)	Thickness (mm)
Flake	Silcrete	Brownish orange	Focal	Hinge	31	13	3
Flake	Silcrete	Brownish orange	Flaked	Feather	12	13	2
D.F.F.	Silcrete	Brownish orange	Feather	Feather	17*	8*	2*
M.F.F.	Silcrete	Brownish orange	-	-	18*	12*	4*

* = Block measurements

D.F.F. = Distal flake fragment; M.F.F. = Medial flake fragment

Site MPP-18 consisted of a scatter of four artefacts in an open depression on the northern margin of the Clydesdale property. Heavy rain prior to the field survey resulted in the paddocks across the Clydesdale property being water logged and flooded in parts. Shallow open depressions that would often be dry were instead full and draining large amounts of water.

Artefacts were identified on the margins of a shallow depression where exposure resulted from multiple cattle tracks. Landforms to the north and south of the open depression consisted of broad, flat landforms bordering South Creek and a 3rd order tributary. To the west of the site, the margins of the 3rd order tributary were covered by dense regrowth eucalypts and casuarina.

Site MPP-18 was assessed as demonstrating low-moderate scientific significance based on localised disturbance within the site and susceptibility to high water events. The raised area to the north of the site may contain intact archaeological deposit in close proximity to major watercourses.




Plate 39. View northeast across site MPP-18



Plate 40. View northwest across site MPP-18



Plate 41. Detail of artefacts, site MPP-18

Site Name:	WP1 (AHIMS # 45-5-4161)
Site Type:	Artefact scatter
Site Coordinates:	
Landform:	Slope / open depression
Vegetation:	Dense grass cover, Melaleuca, Ironbark and Yellow Box
Surrounding Features:	Located along an ephemeral watercourse
Site Extent:	150 x 575 m
Site Condition:	Moderate – vegetation clearance, soil deflation
Site Boundary Criteria:	Landform
Significance:	Moderate
Map:	See Figure 7

Site Contents:

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)	Width (mm)	Thickness (mm)	Notes
M.F.F.	Silcrete	Red	-	-	22	12	4	-
Backed artefact	Quartz	-	-	-	15	8	4	-
Flake	Mudstone	Yellow	-	-	20	13	5	-
A.F.	Tuff	Cream	-	-	17	12	6	-
P.F.F.	Silcrete	Red	-	-	25	30	11	-
A.F.	Silcrete	Red	-	-	24	16	3	-
Flake	Silcrete	Red	-	-	21	25	5	-
A.F.	Silcrete	Red	-	-	30	20	7	-
Flake	Quartz	-	-	-	11	13	3	-
Hammerstone	Silcrete	-	-	-	60	50	37	Pitted both ends

* = Block measurements

M.F.F. = Medial flake fragment; A.F. = Angular fragment; P.F.F. = Proximal flake fragment

Scatter of nine stone and mineral flakes located in the south east portion of the Woorong Park property along a first order creek and dam. Artefacts were evident in erosion scars and around the dam. Raw material included silcrete, mudstone, tuff and crystal quartz. Notable lithic types include a backed artefact and pitted hammerstone. The site extended along the creek for several hundred metres and the condition was considered moderate beyond disturbed areas. Archaeological implications are that artefacts likely have collected (through deflation) in the upper podsolc soils (15-30 cm). The elevation and slope of the ground further suggest moderate artefact survivability.

Site WP1 was assessed as demonstrating moderate scientific significance based on the largely intact nature of the site and its location bordering and slightly raised above a well-defined water course.



Plate 42. View south east across dam on western margin of site WP1



Plate 43. Artefacts at site WP1

Site Name:	WP2 (AHIMS # 45-5-4162)
Site Type:	Isolated artefact
Site Coordinates:	[REDACTED]
Landform:	Open depression
Vegetation:	Dense grass cover
Surrounding Features:	Located adjacent to a dam
Site Extent:	0.5 x 0.5 m
Site Condition:	Moderate – adjacent to large dam, vegetation clearance
Site Boundary Criteria:	Artefact location
Significance:	Low
Map:	See Figure 7

Site Contents:

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)	Width (mm)	Thickness (mm)
Flake	Mudstone	Yellow	-	-	11	13	6

Isolated find consisting of a single yellow mudstone flake. The artefact was found near a dam in the north east corner of the Woorong Park property along an ephemeral drainage channel. The podsolic soils were deflated but more developed and showed only moderate evidence of erosion. Archaeologically the area was relatively stable although the topography suggested only low to moderate significance.

Site WP2 was assessed as demonstrating low scientific significance due to disturbance to the area from dam construction.



Plate 44. View north across site WP3



Plate 45. Mudstone flake identified at site WP3

Site Name:	WP3 (AHIMS # 45-5-4163)
Site Type:	Artefact scatter
Site Coordinates:	[REDACTED]
Landform:	Slope
Vegetation:	Dense grass
Surrounding Features:	150 m east of 3 rd order watercourse
Site Extent:	10 x 10 m
Site Condition:	Moderate – soil movement and vegetation clearance
Site Boundary Criteria:	Artefact location
Significance:	Low-moderate
Map:	See Figure 7

Site Contents:

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)	Width (mm)	Thickness (mm)	Notes
Core	Mudstone	Yellow	-	-	37	40	43	-
Flake	Chert	Grey-red	-	-	28	17	5	Edge damage on one margin

WP3 comprised two stone artefacts along the northern boundary of the Woorong Park property near the flood channel margin of a tributary of South Creek, locally referred to as Little South Creek. A yellow mudstone core was identified which displayed some evidence of post depositional rolling. A grey-red chert flake was also found to display some damage along the margin. The creek channel and associated margin (above the primary flood plain) exhibited soils of varying archaeological quality. The riparian corridor was archaeologically more sensitive, but the potential levels of disturbance were also greater.


Site WP3 was assessed as demonstrating low-moderate scientific significance based on the likely disturbance to the archaeological deposit from flooding, soil movement and vegetation clearance.



Plate 46. Artefacts identified at site WP3



Plate 47. Mudstone core at site WP3

Site Name: WP4 (AHIMS # 45-5-4165)
Site Type: Artefact scatter
Site Coordinates: 
Landform: Slope / crest
Vegetation: Dense grass, occasional Ironbark
Surrounding Features: 145 m east of 2nd order watercourse
Site Extent: 50 x 50 m
Site Condition: Moderate – erosion and vegetation clearance
Site Boundary Criteria: Landform
Significance: Low-moderate
Map: See Figure 7

Site Contents:

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)	Width (mm)	Thickness (mm)	Notes
Core	Quartz	-	-	-	23	26	14	-
A.F.	Chert	Cream / orange	-	-	17	13	4	-
A.F.	Chert	Cream / orange	-	-	15	15	3	-
P.F.F.	Tuff	Red	-	-	17	10	3	-
Core	Silcrete	-	-	-	79	60	55	3 negative scars
Core tool	Silcrete	-	-	-	82	78	49	Usewear
A.F.	Quartz	-	-	-	23	28	22	25% cortex
Retouched flake	Silcrete	-	-	-	48	32	11	Water worn material
Core	Tuff	-	-	-	62	38	40	4 negative scars, 45% cortex

* = Block measurements

A.F. = Angular fragment; P.F.F. = Proximal flake fragment

Scatter of stone and mineral artefacts identified along a ridgeline east of a tributary of South Creek. The site was located on the upper mid slope overlooking the creek, above the flood plain. Soils were poor in this location and the site was covered in stone cobbles. Artefacts were identified in an area of exposure amongst the cobbles. Topographically the area was well defined, a benefit to the deposition of archaeology. However, the soils were poorly developed and suffered from some erosion. Visibility was low in the surrounding area with dense pastoral grass scattered with cobbles.


Site WP4 was assessed as demonstrating low-moderate scientific significance based on poorly developed, eroded soils and vegetation clearance.



Plate 48. View north along crest, site WP4



Plate 49. Silcrete core tool at site WP4

Site Name:	WP5 (AHIMS # 45-5-4166)
Site Type:	Artefact scatter
Site Coordinates:	
Landform:	Flat
Vegetation:	Dense grass, occasional Sheoak and Yellow Box
Surrounding Features:	Bordered to the east by a 2 nd order watercourse
Site Extent:	240 x 115 m
Site Condition:	Good – some erosion scours and impact from flood events
Site Boundary Criteria:	Landform
Significance:	Moderate
Map:	See Figure 7

Site Contents:

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)	Width (mm)	Thickness (mm)	Notes
Flake	Silcrete	Red	-	-	20	23	10	-
Core	Silcrete	Red	-	-	13	13	10	-
Flake	Silcrete	Red	-	-	20	16	3	-
A.F.	Silcrete	Red	-	-	42	40	15	-
A.F.	Silcrete	Red	-	-	26	18	18	-
A.F.	Silcrete	Red	-	-	24	21	8	-
A.F.	Silcrete	Red	-	-	26	18	12	-
Flake	Silcrete	Red	-	-	12	8	2	-
A.F.	Silcrete	Red	-	-	12	10	2	-
Flake	Silcrete	Red	-	-	6	5	1	-
A.F.	Silcrete	Red	-	-	14	8	3	-
Flake	Silcrete	Yellow	-	-	20	18	6	-
Flake	Silcrete	Yellow	-	-	26	23	9	-
Flake	Silcrete	Yellow	-	-	15	8	2	-
A.F.	Chert	Reddish grey	-	-	10	5	1	-
Flake	Chert	Yellow cream /	-	-	38	32	14	-
P.F.F.	Chert	Cream	-	-	20	24	14	-
Flake	Mudstone	Yellow	-	-	6	6	1	-
Flake	Silcrete	Red	Plain	Step	19	29	8	-
M.F.F.	Silcrete	Red	-	-	23	8	4	-
Core Fragment	Mudstone	Yellow	-	-	54	34	16	2 complete negative scars
Flake	Silcrete	Red	Cortical	Feather	34	23	8	10% distal cortex
Flake	Silcrete	Red	Plain	Feather	16	12	3	-
Flake	Chert	Brown	Flaked	Feather	42	39	20	-

* = Block measurements

A.F. = Angular fragment; P.F.F. = Proximal flake fragment; M.F.F. = Medial flake fragment

Scatter of 18 artefacts located in a remnant creek terrace/bench in the centre of the Woorong Park property. Artefacts included flakes, flaked pieces and small cores of silcrete, chert and mudstone. The terrace was defined by two channels of Little South Creek. Soils were stable, although the site was located within the flood plain. Artefacts were found in exposures along the top and sides of the terrace. The land feature appeared relatively intact despite its location and would likely contain at least moderate levels of subsurface artefacts.


Site WP5 was assessed as demonstrating moderate scientific significance, as the area was relatively undisturbed and covered a terraced landform bordering a perennial 2nd order watercourse.



Plate 50. View north across site WP5



Plate 51. Artefacts at site WP5

Site Name:	WP6 (AHIMS # 45-5-4164)
Site Type:	Artefact scatter
Site Coordinates:	
Landform:	Crest
Vegetation:	Dense grass and occasional Ironbark
Surrounding Features:	150 m west of 2 nd order watercourse
Site Extent:	110 x 50 m
Site Condition:	Poor – introduced fill, unsealed vehicle track and vegetation clearance
Site Boundary Criteria:	Artefact location
Significance:	Low
Map:	See Figure 7

Site Contents:

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)	Width (mm)	Thickness (mm)	Notes
A.F.	Mudstone	Yellow	-	-	45	21	18	-
A.F.	Mudstone	Yellow	-	-	36	25	8	-
A.F.	Silcrete	Red	-	-	45	28	21	-
Hammerstone	Basalt	Greyish black	-	-	125	75	30	Percussion and abrasion wear, striations visible
Core	Tuff	-	-	-	68	58	50	Two complete negative scars, six partial scars

* = Block measurements

A.F. = Angular fragment

Five artefacts, including one hammerstone, were located on raised ground overlooking site WP5. The site was on the western side of the creek in the central portion of the Woorong Park property. The raised ground had been modified by dumping of imported fill. Artefacts were found north of the fill site close to an existing fenceline.

Site WP6 was assessed as demonstrating low scientific significance due to disturbance including introduced fill, a vehicle track and vegetation clearance.



Plate 52. View north east across site WP6



Plate 53. Hammerstone at site WP6

8.3 Previously recorded sites

EKC 31 45-5-0267

Site EKC 31 (AHIMS # 45-5-0267) was recorded by Koettig (1980) as part of a transmission line survey. The site consisted of a scatter of artefacts and a possible scarred tree on a creek embankment. The artefacts consisted of silcrete, chert and quartz raw materials over an area of 30 x 10 m. The tip of an edge ground hatchet and a thumbnail scraper were identified among the artefacts.

The scarred tree was described as *Eucalyptus moluccana* on the edge of the creek bank. The scar extended to ground level, where it was also widest.

No artefacts were observed at site EKC 31 during the current field survey due to very dense grass cover. The scarred tree was identified and photographed. The tree was located at the top of a high creek bank. Some parts of the bank slope have been used for rubbish disposal, much of which has been deposited in a large trench 35 m west of the tree. The remainder of the area was subject to localised disturbance from tree throw and overgrown vehicle tracks. The creek slopes would be subject to powerful flooding during high water events.

The site was assessed as demonstrating moderate scientific significance. Although the scarring on the tree was more than likely not Aboriginal in origin, the results of the original survey clearly demonstrate a range of archaeological material across the surrounding area.

GR-OS-1 45-5-2387

Site GR-OS-1 (AHIMS # 45-5-2387) consisted of a scatter of artefacts identified on the northern margin of [REDACTED] by AMBS (1997). The site was described as an estimated 20-30 artefacts in an area of high disturbance, with potential for further artefacts to occur in relatively undisturbed subsurface deposit. Artefacts observed during the original recording included flaked pieces and broken flakes predominantly, with two cores, one with an utilised edge. Raw materials included silcrete, indurated mudstone and quartzite (AMBS 1997:15-16).

Nine artefacts were identified at the site during the current field survey. Artefacts were identified over an area measuring 75 m east-west x 10 m north-south. Surface exposure included intermittent small exposures beneath the 330kV transmission line, along the northern boundary fence of the property and an eroded unformed vehicle / livestock track that ran west from the transmission line. Artefacts identified at site GR-OS-1 during the current field survey are outlined in the table below.

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)	Width (mm)	Thickness (mm)
D.F.F.	Silcrete	Grey	-	Feather	20*	11*	3*
M.F.F.	Tuff	Light brown	-	-	11*	9*	1*
A.F.	Chert	Reddish brown	-	-	12*	6*	2*
D.F.F.	Silcrete	Pink	-	Feather	28*	16*	16*
Core	Silcrete	Red	-	-	39*	38*	13*
Flake	Silcrete	Greyish red	Flaked	Feather	22	19	9
P.F.F.	Silcrete	Red	Flaked	-	16*	12*	2*
M.F.F.	Silcrete	Greyish pink	-	-	14*	3*	2*
M.F.F.	Silcrete	Greyish pink	-	-	10*	9*	2*

* = Block measurements

A.F. = Angular fragment; D.F.F. = Distal Flake Fragment; P.F.F. = Proximal flake fragment; M.F.F. = Medial flake fragment

Surface disturbance was prevalent across the area where artefacts were identified during the current field survey. Beneath the transmission line disturbance was the result of livestock activity, vehicle tracks and vegetation removal. The surface of the vehicle / livestock track leading west from the transmission line had been subject to surface wash erosion and was bordered by a low earth embankment.

Site GR-OS-1 was assessed during the original survey as demonstrating moderate – high significance based on high site integrity and moderate to high scientific significance. The results of the current field survey, noting current surface disturbance, suggest the site reflects moderate scientific significance.

GR-OS-2 45-5-2388

Site GR-OS-2 (AHIMS # 45-5-2388) consisted of a scatter of six silcrete artefacts and one indurated mudstone artefact identified near the northern boundary fence of [REDACTED]. The original site recording described the site as (AMBS 1997:16):

The majority of artefacts were found on piles of disturbed soil within a 10m² area. The occurrence of artefacts outside this area is sparse, limited to singular sightings over a wider area. The site is restricted to the ridge of exposed land that occurs before the open forest cover.

The visibility varied, from 40% in leaf litter affected areas, to 70% visibility on the disturbed piles of soil and gravel. A high level of naturally occurring silcrete gravel is present on the surface of the top soil in the area.

No artefacts were identified at the site during the current field survey. The area was covered by dense grass and occasional shrubs. No piles of disturbed soil were observed, however this may have been because they were covered by dense vegetation. Overall the area appeared relatively intact with minimal surface disturbance.

Site GR-OS-2 was assessed during the original survey as demonstrating moderate – high significance based on high site integrity and moderate to high scientific significance. The site currently exhibits moderate significance based on surface disturbance.

GR-OS-3 45-5-2389

Site GR-OS-3 (AHIMS # 45-5-2389) consisted of a scatter of three artefacts identified by AMBS (1997) beneath the 330kV transmission line within [REDACTED]. The original site recording (AMBS 1997:17) described the site as:

Two artefacts were located together in the scrub area. The third artefact occurs directly south in similar terrain. The area has been disturbed during the clearing of land and construction of the power easement.

Ground surface visibility varied between 40 to 60% with grass and leaf litter obscuring the surface.

The artefacts consisted on two pink-red silcrete flaked pieces and a yellow mudstone broken flake.

No artefacts were identified at the site during the current field survey. The area was covered by dense grass with occasional small surface exposures. Surface disturbance was prevalent beneath the 330kV transmission line through livestock activities, vehicle access and vegetation removal.

Site GR-OS-3 was assessed during the original survey as demonstrating low significance based on low site integrity and low scientific significance.

GR-OS-4 45-5-2390

Site GR-OS-4 (AHIMS # 45-5-2390) consisted of a large scatter of artefacts approximately [REDACTED] south of the northern boundary of [REDACTED]. An estimated 100 artefacts were visible across the site, of which a sample of eight was recorded. The original site recording (AMBS 1997:17-18) described the site as:

The site occurs in an open forest stand, with moderate tree cover and occasional understorey. The soil is naturally gravelly and porous. The south-westerly aspect of the site overlooks the creek channel on a gradual slope. Apart from the past felling of trees for timber, the area is believed to be relatively intact.

Surface visibility was poor (10%) due to dense leaf litter and extreme weather conditions, the site was observed both before and after a rain storm in overcast light. Visibility was significantly increased, to approximately 20-30% after the rain.

A large amount of natural silcrete gravel was also noted across the ground surface at the site location.

No artefacts were identified during current site inspection. Dense grass and shrub covered the site and a mound of felled trees stretched across the area. The area appeared relatively intact with disturbance limited to vegetation clearance.

Site GR-OS-4 was assessed during the original survey as demonstrating moderate – high significance based on high site integrity and moderate to high scientific significance. The site currently exhibits moderate significance based on surface disturbance.

GR-OS-5 45-5-2391

Site GR-OS-5 (AHIMS # 45-5-2391) consisted of a single artefact identified in [REDACTED], originally recorded (AMBS 1997:18) as:

The find was recovered from a rare clearing in the undergrowth, with 20% visibility. Within the immediate vicinity there is extensive shrub and understorey coverage (blackthorn). The site is believed to be in a relatively undisturbed area.

No artefacts were identified at the site during current site inspection. The area was covered by dense vegetation. The area appeared relatively intact with the exception of vegetation clearance.

Site GR-OS-5 was assessed during the original survey as demonstrating moderate – high significance based on high site integrity and moderate to high scientific significance. The site currently exhibits moderate significance based on surface disturbance.

GR-OS-6 45-5-2392

Site GR-OS-6 (AHIMS # 45-5-2392) consisted of a scatter of five artefacts on the western margin of [REDACTED]. The original site recording (AMBS 1997:19) noted:

The extent of the artefact scatter is 15 m x 10 m, with the site extending under the fence to adjacent land.

The site occurs as a scatter of five silcrete stone artefacts appearing along a narrow band of exposed, cleared land with 30% visibility. This area has been heavily disturbed due to the removal of timber, erection of a boundary fence and the development of a track along the boundary line. Three artefacts could be seen on the adjacent cleared and cultivated land over the western boundary fence.

No artefacts were identified at the site during current site inspection. The area was covered by dense grass cover and appeared relatively intact with the exception of vegetation clearance.

Site GR-OS-6 was assessed during the original survey as demonstrating moderate – high significance based on high site integrity and moderate to high scientific significance. The site currently exhibits moderate significance based on surface disturbance.

GR-OS-7 45-5-2393

Site GR-OS-7 (AHIMS # 45-5-2393) consisted of a scatter of two silcrete artefacts on the northern margin of [REDACTED]. The original site recording (AMBS 1997:19) described the area as:

The land in this area has been disturbed due to the bulldozing of a cleared area to erect the northern boundary fence. The creek bed is situated due north and the forested re-growth area situated immediately to the south. The site is located on a slope with a gradient of 2 degrees.

No artefacts were identified at the site during current site inspection. The area had been subject to substantial disturbance: regrowth vegetation noted in the original recording was not observed during the current survey, the drainage channel bordering the site appeared to have been heavily modified and the ground surface had been ripped and mixed.

Site GR-OS-7 was assessed during the original survey as demonstrating low significance based on low site integrity and low scientific significance.

GR-OS-8 45-5-2394

Site GR-OS-8 (AHIMS # 45-5-2394) consisted of a scatter of five artefacts identified on the western margin of the 330kV transmission line within [REDACTED]. The original site recording (AMBS 1997:20) described:

Open forest surrounds the site (15-20% visibility). High ground surface visibility occurs in the immediate vicinity of the ant hill and the slope of the creek where the topsoil is eroding out of the bank... The site has experienced a moderate to high level of disturbance due to ant activity and erosional factors.

Two artefacts were identified at the site location during current site inspection, listed in the table below.

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)*	Width (mm)*	Thickness (mm)*
Core fragment	Silcrete	Red	-	-	23	16	12
M.F.F.	Chert	Brown	-	-	12	10	2

* = Block measurements

M.F.F. = Medial flake fragment

A dam had been constructed across the bordering water course since the original recording. The area immediately west of where artefacts were identified was adjacent to a large, 2 m high spoil pile that looped round to the north

across the water course to form a dam. The area to the east of the site location, beneath the 330kV transmission line, had been turned into market gardens since the original site recording. Overall, the immediate area was highly disturbed.

Site GR-OS-8 was assessed during the original survey as demonstrating moderate to high significance based on high site integrity and moderate to high scientific significance. Based on the subsequent dam and market garden construction, the site has been assessed as demonstrating low significance.

GR-OS-9 45-5-2395

Site GR-OS-9 (AHIMS # 45-5-2395) consisted of two artefacts on the western margin of [REDACTED]. The original site recording (AMBS 1997:20) noted:

Two silcrete artefacts were located on low lying ground in view of the creek to the north. Grass and scrub regrowth is now present in the area, the ground surface visibility ranged from 30-50%. The disturbance is moderate deriving from past activity in the vicinity. The area has been cleared previously to facilitate the erection of the western boundary fence.

One artefact was identified during current site inspection within the Woorong Park property on the western side of the property fence with [REDACTED] and [REDACTED] south of the original site recording of GR-OS-9. Details of the artefact identified during the current field survey are included in the table below.

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)*	Width (mm)*	Thickness (mm)*
Core	Silcrete	Yellow	-	-	46	42	24

* = Block measurements

The area appeared to be relatively intact and offered a good vantage point over the neighbouring watercourse. Surface impact appeared to be limited to vegetation clearance.

Site GR-OS-9 was assessed during the original survey as demonstrating moderate – high significance based on high site integrity and moderate to high scientific significance. The site currently exhibits moderate significance based on surface disturbance.

GR-OS-10 45-5-2396

Site GR-OS-10 (AHIMS # 45-5-2396) consisted of a scatter of 12 artefacts in the south western portion of [REDACTED]. The original site recording (AMBS 1997:21) noted:

The site is surrounded by a relatively dense timbered area. The presence of paperbarks was noted in this low-lying swampy/marshy section. A series of dirt and cattle tracks criss-cross the area, increasing visibility in these zones from 20% to 80%. The site is positioned in a natural clearing believed to be relatively intact which would ensure a high level of archaeological integrity.

No artefacts were identified at the site during current site inspection. One small portion of surface exposure was observed in a livestock track, otherwise the area was covered by dense grass and occasional undergrowth and regrowth eucalyptus. Following from the original recording, the area appeared relatively intact with surface disturbance largely limited to vegetation clearance.

Site GR-OS-10 was assessed during the original survey as demonstrating moderate – high significance based on high site integrity and moderate to high scientific significance. The site currently exhibits moderate significance based on surface disturbance.

GR-OS-11 45-5-2397

Site GR-OS-11 (AHIMS # 45-5-2397) consisted of a scatter of three artefacts in the south western corner of [REDACTED]. The original recording (AMBS 1997:21) described the site as:

Two artefacts occur within 12 m x 6 m. The third artefact is located 20 m to the south east. The site occurs in a densely forested area, however the artefacts were located in open clearings with 40-50% visibility.

No artefacts were identified during current site inspection. The area was covered by dense vegetation with no surface visibility. It appeared relatively intact with surface disturbance limited to vegetation removal. Site GR-OS-11 was assessed during the original survey as demonstrating moderate – high significance based on high site integrity and moderate to high scientific significance. The site currently exhibits moderate significance based on surface disturbance.

GR-OS-12 45-5-2398

Site GR-OS-12 (AHIMS # 45-5-2398) was an isolated artefact on the southern margin of [REDACTED]. The original site recording (AMBS 1997:22) noted:

The indurated mudstone core was located in a heavily disturbed and eroded section of a dirt track. Visibility was 80-100%, with only a high gravel content interfering with total visibility.

Two artefacts were identified at site GR-OS-12 during current site inspection, within 5 m of each other on a narrow track with >80% surface visibility. Artefacts observed during the current field survey are listed in the table below.

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)	Width (mm)	Thickness (mm)
Flake	Silcrete	Red	Flaked	Step	22	12	3
P.F.F.	Silcrete	Red	Facetted	-	11*	11*	4*

* = Block measurements

P.F.F. = Proximal flake fragment

The area to the north of the track was relatively flat and covered by dense, tall grass. Surface visibility was very low through that area and appeared to have been ripped in the past and subsequently had a moderate level of surface disturbance.

Site GR-OS-12 was assessed during the original survey as demonstrating low significance based on low site integrity and low scientific significance. The findings of the current field survey support the original assessment.

GR-OS-13 45-5-2399

Site GR-OS-13 (AHIMS # 45-5-2399) consisted of a scatter of three artefacts in the eastern portion of [REDACTED]. The original site recording (AMBS 1997:22) noted:

The artefacts were located along the stock track with 60-70% visibility. This site occurs within the forested area, a single artefact was situated 2 m from a cattle track with the other two flaked pieces occurring 15 m north of this on the exposed track area. Minimum disturbance has occurred from recent timber felling in the area and the stock track running in a north-south direction through the site. The artefacts are situated on gradual sloping, approximately 70-80 m from the creek.

No artefacts were identified at site GR-OS-13 during current site inspection. The area where the site had been recorded was covered by dense grass. The surrounding area was disturbed by a house and associated pool, sheds, fences, driveway and parking area.

Site GR-OS-13 was assessed during the original survey as demonstrating moderate – high significance based on high site integrity and moderate to high scientific significance. The site currently exhibits moderate significance based on surface disturbance.

GR-OS-14 45-5-2400

Site GR-OS-14 (AHIMS # 45-5-2400) was an isolated artefact in the north east corner of [REDACTED]. The original site recording (AMBS 1997:23) noted:

A single silcrete flaked piece was found eroding out of a vehicle track in a heavily eroded area. There is a high presence of naturally occurring silcrete and gravel in the vicinity (70-80% visibility). The area has been cleared and subjected to a high level of disturbance.

No artefacts were identified at site GR-OS-14 during current site inspection. The site was in similar condition to site GR-OS-7, located in close proximity to the same modified channel that directed water into the dam on the southern margin of [REDACTED]. As noted in the original recording, surface disturbance was high and the area was cleared with the exception of two regrowth eucalyptus.

Site GR-OS-14 was assessed during the original survey as demonstrating low significance based on low site integrity and low scientific significance.

GR-OS-15 45-5-2401

Site GR-OS-15 (AHIMS # 45-5-2401) was a scatter of eight artefacts in the north western corner of [REDACTED]. The original recording (AMBS 1997:23) noted:

Eight silcrete artefacts were found on a cattle track parallel to the western boundary fence for a distance of 15 m.

All finds were located on exposed patches of land with 70-80% visibility. Minimum disturbance has occurred in this area from clearing of the forest for the construction of the lot division fences and stock tracks.

No artefacts were identified during current site inspection. The area had been subject to localised disturbance since original recording, including spoil piles, trotting track and dense grass and weed cover. Surface visibility at the site location was nil.

Site GR-OS-15 was assessed during the original survey as demonstrating moderate – high significance based on high site integrity and moderate to high scientific significance. The site currently exhibits moderate significance based on surface disturbance.

C-IF-1 45-5-2750

Site C-IF-1 (AHIMS # 45-5-2750) was an isolated artefact near the northern margin of the Clydesdale property. The original site recording (Kelton 2001:38) noted:

Isolated artefact C-IF-1 is located within the survey area on an eroded surface adjacent to a property dam. The surface upon which the artefact was found afforded surface visibility >90% for a radius of approximately 10 m around three side of the artefact and 5 m on its eastern side.

Three artefacts were identified at site C-IF-1 during current site inspection. They were identified across the same cleared, eroded area bordering the dam observed in the original recording. Artefacts are listed in the table below.

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)*	Width (mm)*	Thickness (mm)*
P.F.F.	Silcrete	Red	Flaked	-	14	9	3
A.F.	Silcrete	Red	-	-	12	11	9
A.F.	Silcrete	Red	-	-	19	8	6

* = Block measurements

A.F. = Angular fragment; P.F.F. = Proximal flake fragment

The area was low-lying and soaked after heavy rain with the dam itself overflowing. The high water level and surrounding dense grass cover resulted in a smaller amount of surface exposure than noted in the original recording. The area where the artefacts were identified had been disturbed by the dam construction.

The site was recorded as being of low significance.

C-IF-2 45-5-2751

Site C-IF-2 (AHIMS # 45-5-2751) consisted of a single artefact identified by Kelton (2001) near the centre of the Clydesdale property. The artefact was described as being located on the built up surface at the entrance to one of the paddocks on the property. The artefact was thought to be out of context and brought to the area with other introduced material from a quarry on a neighbouring property.

No artefacts were identified at site C-IF-2 during current site inspection. The area was covered by dense grass.

The site was assessed as being of low significance.

C-OS-1 45-5-2752

Site C-OS-1 (AHIMS # 45-5-2752) was a scatter of three stone artefacts bordering a dam on the southern margin of the Clydesdale property (Kelton 2001). Dam construction and cattle trampling had disturbed the site location.

No artefacts were identified at site C-OS-1 during current site inspection. The low-lying area was flooded at the time of survey due to recent heavy rains. The area surrounding the dam was covered by dense grass with nil surface visibility.

Site C-OS-1 was assessed during the original survey as demonstrating low significance.

C-ST-1 45-5-2753

Site C-ST-1 (AHIMS # 45-5-2753) was recorded as a possible Aboriginal scarred tree situated at the northern margin of the Clydesdale property (Kelton 2001:41-42). The tree was a dead eucalyptus tree on a low-lying area downstream of the dam at site C-IF-1. The low-lying area was flooded at the time of the survey due to recent heavy rains. The original recording noted it as a possible scarred tree as despite proximity to South Creek and numerous archaeological sites, there were no visible bark removal marks and the scar was an indeterminate shape, suggesting that the scar may have resulted from either natural or European activities.

No axe marks were observed on the scar during current site inspection. The top of the scar had occluded and it was difficult to determine whether the base of the scar had also occluded.

The original assessment identified the tree to be of moderate significance.

MPIP 29 45-5-3864

MPIP 29 consisted of a scatter of five silcrete artefacts across an area measuring approximately 20 x 30 m. The artefacts were identified across a series of unsealed vehicle tracks that cross the area. Surrounding vegetation included tufts of dry grass and leaf litter amongst sparse regrowth woodland. Surface disturbance included minor sheetwash erosion across the vehicle tracks and vegetation clearance. The artefacts were located across a very gently sloping mid slope context.

MPIP 30 45-5-3865

Site MPIP 30 (AHIMS # 45-5-3865) consisted of a scatter of four artefacts across a wide surface exposure in the northern margin of [REDACTED] (KNC 2009). The site was located across a flat crest landform with an unsealed vehicle track running through the northern part of the site.

Two artefacts were identified during current field survey of the southern margin of [REDACTED] north of the original MPIP 30 recording. The additional two artefacts were identified on an unsealed vehicle track on the same crest landform as the original recording. Details of artefacts identified during the current field survey are included in the table below.

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)	Width (mm)	Thickness (mm)
Flake	Silcrete	Red	Plain	Step	11	7	4
M.F.F.	Silcrete	Red	-	-	18*	13*	5*

* = Block measurements

M.F.F. = Medial flake fragment

The area where artefacts were identified during both recordings was generally disturbed, with vegetation clearance, unsealed vehicle tracks and evidence of soil deflation contributing to the overall surface disturbance across the site. The gently sloping area to the north of the additional two artefacts appeared more intact, with dense ground cover and moderately dense regrowth eucalyptus.

Site MPIP 30 was assessed as demonstrating moderate scientific significance based on the likely continuation of archaeological material across the gently sloping and less disturbed areas to the south and north of the artefact exposures.

MPIP 31 45-5-3863

Site MPIP 31 (AHIMS # 45-5-3863) was a scatter of four artefacts on the northern margin of [REDACTED] (KNC 2009). Artefacts were identified along a 20 m exposure on the southern margin of an unsealed vehicle track. Several non-artefactual pieces of silcrete were also identified. The area was generally disturbed, due largely to earthworks related to road clearance and subsequent surface erosion.

Eight artefacts were identified during current field survey of the southern margin of [REDACTED] north of the original MPIP 31 recording. Similar to the conditions of the original recording, the subsequent artefacts were identified across an unsealed vehicle track. Surface wash erosion resulted in >80% surface visibility across the exposure. Artefacts identified at MPIP 31 during current site inspection are included in the table below.

Artefact Type / Reduction Type	Raw Material	Colour	Platform Type	Termination Type	Length (mm)	Width (mm)	Thickness (mm)
P.F.F.	Silcrete	Purple	Plain	-	17*	11*	6*
Flake	Silcrete	Yellowish orange	Facetted	Overhang	21	22	2
Flake	Silcrete	Red	Flaked	Feather	22	14	4
M.F.F.	Silcrete	Red	-	-	25*	14*	8*
M.F.F.	Silcrete	Red	-	-	20*	18*	5*
P.F.F.	Tuff	Orange	Flaked	-	11*	8*	3*
A.F.	Silcrete	Red	-	-	27*	3*	13*
P.F.F.	Silcrete	Red	Flaked	-	32*	22*	11*

* = Block measurements

A.F. = Angular fragment; P.F.F. = Proximal flake fragment; M.F.F. = Medial flake fragment

The area where artefacts were identified in the southern portion of [REDACTED] was generally disturbed. Road clearance, surface wash erosion and a compound of various buildings immediately to the north all contributed to the overall surface disturbance across the site.

Site MPIP 31 was assessed as demonstrating moderate scientific significance based on the high levels of localised disturbance across the site area.

SR-OS-1 45-5-2380

Site SR-OS-1 (AHIMS # 45-5-2380) was a small, low density artefact scatter on [REDACTED] on the western side of South Street, [REDACTED] north of a tributary of South Creek. Two silcrete artefacts were identified over a surface area approximately 25x15m. Site boundaries were defined by the extent of visible artefacts. Non-artefactual silcrete pieces were also observed in the area. The site location was adjacent to a low ridge crest, overlooking the creek and associated alluvial floodplain. The area was relatively undisturbed and vegetated with regrowth. Based on levels of disturbance and site location on the ridge crest it was assessed as having potential for further subsurface artefacts.

SR-OS-2 45-5-2381

Site SR-OS-2 (AHIMS # 45-5-2381) was an open artefact scatter on [REDACTED] on the western side of South Street, [REDACTED] north of a tributary of South Creek and close to the boundary with [REDACTED]. Five silcrete artefacts were identified near the base of a low, gentle ridge slope overlooking the creek and associated alluvial floodplain. Artefacts were found over an area approximately 10x2m on a track. Site boundaries were defined by the limit of visible artefacts. The area was relatively undisturbed and vegetated with regrowth. Based on low levels of disturbance and site location it was assessed as having potential for further subsurface artefacts.

SR-OS-3 45-5-2386

Site SR-OS-3 (AHIMS # 45-5-2386) was a scatter of three silcrete artefacts on the crest of a low ridge on [REDACTED] on the western side of South Street, [REDACTED] north of a tributary of South Creek. Artefacts were identified on an exposed unformed vehicle track, covering an area approximately 20x1m. The site was considered to have potential for further subsurface artefacts.

SR-OS-4 45-5-2385

Site SR-OS-4 (AHIMS # 45-5-2385) was an open artefact scatter on [REDACTED] on the western side of South Street, approximately [REDACTED] north of a tributary of South Creek. The site was located on the crest of a low ridge within an area of regrowth. Twelve artefacts were observed on an exposed unformed vehicle track, over an approximate 25x3m area. The surrounding crest area was considered to have moderate potential for further artefact, however had been disturbed in parts by bulldozing, fence construction and land clearing and cultivation.

SR-OS-6 45-5-2383

Site SR-OS-6 (AHIMS # 45-5-2383) was an isolated artefact, a silcrete broken flake, on [REDACTED] on the western side of South Street, [REDACTED] north of a tributary of South Creek. The isolated artefact was situated on an exposed, unformed vehicle track which had been disturbed by bulldozing. The surrounding land, away from the track, was considered to have moderate potential due to more limited disturbance.

SR-OS-7 45-5-2382

Site SR-OS-7 (AHIMS # 45-5-2382) was an isolated artefact on [REDACTED] on the west side of South Street, [REDACTED] north of a tributary of South Creek. The recorded artefact was a silcrete flake tool, located on the crest of a low ridge. The possibility for further subsurface artefacts was noted.

MP 40 45-5-0678

Site MP 40 (AHIMS # 45-5-0678) was a large open artefact scatter on a flat rise and west facing slopes of tributary of South Creek, in the eastern part of the vegetated former Air Services Australia/Shanes Park land in the south of the precinct. Artefacts were exposed on a vehicle track as well as on the crest. Over 100 artefacts were observed, with silcrete the most predominant material with low numbers of indurated mudstone and a quartzite artefact also identified. The site was considered to have potential for further subsurface artefacts away from the track on the crest of the rise.

MP 41 45-5-0679

Site MP 41 (AHIMS # 45-5-0679) was a scatter of three silcrete artefacts on a vehicle track in the eastern part of the vegetated former Air Services Australia/Shanes Park land in the south of the precinct.

MP 42 45-5-0680

Site MP 42 (AHIMS # 45-5-0680) was an artefact scatter on the flats surrounding a swamp, [REDACTED] east of a tributary of South Creek. A low density scatter of seven silcrete and one indurated mudstone artefacts was recorded with potential for further artefacts to exist at the relatively undisturbed location.

MP 43 45-5-0681

Site MP 43 (AHIMS # 45-5-0681) was a dense scatter of artefacts on creek flats and gentle north facing slopes of a tributary of South Creek in the eastern part of the vegetated former Air Services Australia/Shanes Park land in the south of the precinct. Over 100 artefacts were recorded, predominantly silcrete with low numbers of chert and indurated mudstone. A concentration of 70 silcrete artefacts was identified on the crest of the slope, considered to represent a silcrete knapping floor. The site was determined to have potential for further artefacts to occur at the relatively undisturbed location.

MP 44 45-5-0682

Site MP 44 (AHIMS # 45-5-0682) was a small scatter of artefacts located approximately 300m from a tributary of South Creek, in the eastern part of the vegetated former Air Services Australia/Shanes Park land in the south of the precinct. Artefacts, including nine silcrete and three indurated mudstone, were identified along an exposed vehicle track. The site was in a disturbed location and was not considered to have in situ material.

MP 45 45-5-0683

Site MP 45 (AHIMS # 45-5-0683) was a scatter of three silcrete artefacts on a ridge 400m from a tributary of South Creek. The site was considered to have the potential to extend beyond the visible scatter.

MP 46 45-5-0684

Site MP 46 (AHIMS # 45-5-0684) was a small scatter of artefacts on a raised area approximately [REDACTED] east of a tributary of South Creek in the eastern part of the vegetated former Air Services Australia/Shanes Park land in the south of the precinct. 17 silcrete artefacts were identified on an exposed vehicle track and adjacent areas. The site was relatively undisturbed and it was considered very likely in situ artefacts extended beyond the visible scatter.

MP 47 45-5-0685

Site MP 47 (AHIMS # 45-5-0685) was a large dense artefact scatter on creek flats [REDACTED] east of a tributary of South Creek within the International Radio Transmitting Station site in the central part of the former Air Services Australia/Shanes Park land in the south of the precinct. Over 120 artefacts were recorded with a range of raw materials present, mostly silcrete but also indurated mudstone, chert, quartz, quartzite and basalt. The location was moderately disturbed by the road, clearing and radio towers but it was considered that some in situ deposits may remain at the site.

MP 48 45-5-0686

Site MP48 (AHIMS # 45-5-0686) was a large open artefact scatter that stretched across both banks of a South Creek tributary and continued to a ridgeline west of the creek. Over 170 artefacts were recorded, including over 90% silcrete and the remainder indurated mudstone. The surface density of artefacts was interpreted to indicate a subsurface potential of 40,000 artefacts. Additionally, differences in recorded artefacts suggested repeated use of the site over a period of time. Although MP48 appeared disturbed, the site was originally assessed as being highly significant. Subsequent assessment of MP48 found there was a high level of naturally occurring silcrete gravel and cobbles in ground exposures and the creek bank and it was concluded the subsurface density of artefacts was not likely as high as previously thought (AMBS 1996:8).

MP 49 45-5-0687

Site MP 49 (AHIMS # 45-5-0687) was a small scatter of artefacts on a ridge between two arms of a tributary of South Creek. Six silcrete artefacts were exposed on a vehicle track with potential for further artefacts to occur off the track.

MP 50 45-5-0688

Site MP 50 (AHIMS # 45-5-0688) was a small low density scatter of six silcrete artefacts on a ridge approximately [REDACTED] east of a tributary of South Creek, in the eastern part of the vegetated former Air Services Australia/Shanes Park land in the south of the precinct. The site location was relatively undisturbed and it was considered likely in situ materials occurred beyond the visible extent of artefacts.

MP 51 45-5-0689

Site MP 51 (AHIMS # 45-5-0689) was an open artefact scatter of 130 silcrete artefacts in the eastern part of the vegetated former Air Services Australia/Shanes Park land in the south of the precinct. Three distinct dense surface scatters were apparent within a general sparse artefact scatter. The site covered a flat raised area and ridge line, [REDACTED] east of a tributary of South Creek. The site was considered to represent three discrete knapping events or living floors and assessed as being of high archaeological significance (Smith 1988:75).

MP 52 45-5-0690

Site MP 52 (AHIMS # 45-5-0690) was a small scatter of ten artefacts (9 silcrete and 1 quartz) located on a ridge line approximately [REDACTED] east of a tributary of South Creek.

IF19

Isolated Find IF19 was also recorded by Smith (1988) within the eastern part of the vegetated former Air Services Australia/Shanes Park land in the south of the precinct. The isolated silcrete flaked piece was found on a vehicle track on a gentle north facing slope. Site coordinates provided based on the Riverstone 1:25,000 topographic map in AMG were [REDACTED].

9 Assessment for Richmond Road upgrade

As part of the planned future development of the precinct, there is a requirement to upgrade the existing Richmond Road. The upgrade would involve the expansion of Richmond Road from a two lane road to a four lane arterial standard road, with allowance for a future upgrading to six lanes. The works would also comprise associated intersection improvements and installation of stormwater infrastructure and utility relocations.

Survey

A survey was undertaken to identify Aboriginal heritage sites within the road corridor. The survey area covered the existing road corridor and Winten properties along the western side of Richmond Road between Grange Avenue in the south and the entrance to the Clydesdale/Pace property in the north.

Results

Three Aboriginal archaeological sites were identified within the road corridor: MPP-9, MPP-10 and MPP-12 (Figure 8). All of the identified sites are located on the eastern side of Richmond Road. All three sites were artefacts scatters (see section 7.2 for site descriptions) which extend beyond the eastern boundary of the road corridor.

Management

Future concept design should consider the location of these three Aboriginal sites. Appropriate mitigation measures can be determined once a detailed road design has progressed. Best practice is to avoid impact to Aboriginal heritage.

A separate assessment in accordance with Roads and Maritime Services procedures will be undertaken for the upgrade of Richmond Road.

Figure removed from public version

Figure 8. Aboriginal sites in Richmond Road upgrade corridor

10 Survey Coverage

Overall visibility across the study area was low, primarily limited to stock/vehicle tracks and erosion scours. Primary ground cover consisted of short, dense grass. Extensive tree clearance has taken place across all survey units, with the surveyed area comprised of large pastoral properties and smaller private lands. Details of survey coverage and landform coverage are outlined in Tables 3 and 4.

Table 3. Survey Coverage

Survey Unit	Landform	Survey Unit Area (m ²)	Visibility (%)	Exposure (%)	Effective Coverage (m ²)	Effective Coverage (%)
1 Woorong Park	Crest Slope Flat Open depression	6,075,400	5	6	18,226.2	0.3
2 Clydesdale	Crest Slope Flat Open depression	2,121,350	2	5	2,121.35	0.1
3	Slope Open depression	110,700	3	5	166.05	0.15
4	Slope Open depression Crest	108,670	5	5	271.68	0.25
5	Crest Slope Open depression	106,600	2	5	106.6	0.1
6 South Street	Crest Slope Flat	845,000	8	16	14,950	2.5
7 Dump	Crest Slope	420,000	10	24	10,000	2.4
8 Hillview	Crest Slope	900,000	10	20	18,000	2
9 Richmond Road	Crest Slope	300,000	10	20	3,500	1.15

Table 4. Landform Coverage

Landform	Landform Area (m ²)	Area effectively surveyed (m ²)	% of landform effectively surveyed	Number of Sites	Number of artefacts or features
Crest	1,541,706	12,288.24	0.8	7	19
Simple slope	6,068,395	46,228.34	0.8	11	48
Flat	959,675	2,734.76	0.3	3	59
Open Depression	2,417,944	6,090.56	0.3	3	9

Table 4 demonstrates the overall percentage of landform effectively surveyed was low. However, survey coverage was sufficient to statistically assess the precinct. Surface visibility and exposure across crest and slope landforms were relatively higher than the remainder of the study area due to greater likelihood of surface exposures such as vehicle tracks, stock tracks as well as exposure from surface wash erosion.

The biggest limiting factor to surface visibility was dense grass cover across the precinct, particularly due to higher than average rainfall. Much of the low-lying areas within the precinct were swampy and/or flooded at the time limiting survey coverage in those parts of the precinct.

11 Significance Assessment

11.1 Assessment Criteria

One of the primary steps in the process of cultural heritage management is the assessment of significance. Not all sites are equally significant and not all are worthy of equal consideration and management (Sullivan and Bowdler 1984; Pearson and Sullivan 1995: 7). The determination of significance can be a difficult process as the social and scientific context within which these decisions are made is subject to change (Sullivan and Bowdler 1984). This does not lessen the value of the heritage approach, but enriches both the process and the long term outcomes for future generations as the nature of what is conserved and why, also changes over time.

The assessment of significance is a key step in the process of impact assessment for a proposed activity as the significance or value of an object, site or place will be reflected in resultant recommendations for conservation, management or mitigation.

The *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010) requires significance assessment according to criteria established in the *Australia ICOMOS Burra Charter, 1999* (Australia ICOMOS 1999). The *Burra Charter* and its accompanying guidelines are considered best practice standard for cultural heritage management, specifically conservation, in Australia.

Guidelines to the *Burra Charter* set out four criteria for the assessment of cultural significance:

- Aesthetic value - relates to the sense of the beauty of a place, object, site or item;
- Historic value - relates to the association of a place, object, site or item with historical events, people, activities or periods;
- Scientific value - scientific (or research) value relates to the importance of the data available for a place, object, site or item, based on its rarity, quality or representativeness, as well as on the degree to which the place (object, site or item) may contribute further substantial information; and
- Social value - relates to the qualities for which a place, object, site or item has become a focus of spiritual, political, national or other cultural sentiment to a group of people. In accordance with the OEH *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW*, the social or cultural value of a place (object, site or item) may be related to spiritual, traditional, historical or contemporary associations. "Social or cultural value can only be identified through consultation with Aboriginal people" (OEH 2011:8).

The assessment of these values are brought together to form a comprehensive assessment of significance.

The DP&I precinct assessment method for Aboriginal cultural heritage establishes a process for ranking cultural heritage values in the precinct based on the *Burra Charter* criteria. The process is based on identifying cultural heritage values and ranking them from exceptional value to no value (if any) to assist in making decisions about the future development layout of the precinct.

The precinct assessment method provides a consistent means of assessing Aboriginal places and values across precincts within the Sydney Growth Centres. The assessment criteria are based on established criteria of the NSW Heritage Branch (formerly NSW Heritage Office), which are themselves based on addressing the *Burra Charter* criteria. These criteria are:

- a) *An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area).*
- b) *An item has strong or special association with the life or works of a person, or group of persons, of importance in the cultural or natural history of NSW (or the cultural or natural history of a local area).*
- c) *An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area).*
- d) *An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.*
- e) *An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area).*
- f) *An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area).*
- g) *An item is important in demonstrating the principal characteristics of a class of NSW's:*
cultural or natural places; or
cultural or natural environments
(or a class of the local areas' cultural or natural places; or cultural or natural environments).

These criteria involve the assessment of both the cultural and scientific significance of a place or area, in that they incorporate both archaeological or scientific significance and the importance and values placed on these areas by the Aboriginal community. Based on this concept, a significance ranking system was developed to be applied across all precincts within the Sydney Growth Centres (see Figure 9).





Ranking	Example justifications	Suggested mapping colour
Exceptional	<ul style="list-style-type: none"> • Rare example of its type in the nation, state or outstanding example of its type in the region; and / or • Irreplaceably expresses Aboriginal cultural heritage, history or stories of the region (or State or nation); and / or • Of primary and essential importance to the identity and culture of the Aboriginal communities of the region; and / or • Intact with no disturbance; and / or • Loss or unsympathetic or further disturbance or change <i>will irreversibly</i> diminish the Aboriginal cultural heritage significance of the Precinct and/or community cultural identity of the Aboriginal communities associated with the Precinct. 	Red with black hatching 
High	<ul style="list-style-type: none"> • Rare example of its type in the region; and / or • Expresses (possibly in combination with other places or features) the Aboriginal cultural heritage, history or stories of the region; and / or • Important to the identity and culture of the Aboriginal communities of the region; and / or • Existing disturbance and evidence of change does not detract from Aboriginal cultural heritage significance; and / or • Loss or unsympathetic or further disturbance or change <i>is likely to</i> diminish the Aboriginal cultural heritage significance of the Precinct and/or community cultural identity of the Aboriginal communities associated with the Precinct. 	Red 
Moderate	<ul style="list-style-type: none"> • Rare example of its type in the Precinct, but not the region (or Growth Centre); and / or • Expresses in combination with other places or features the Aboriginal cultural heritage, history or stories of the region; and / or • Contributes to the identity and culture of the Aboriginal communities of the region; and / or • Existing disturbance and evidence of change does not detract from Aboriginal cultural heritage significance of the place; and / or • loss or unsympathetic or further disturbance or change <i>may</i> diminish the Aboriginal cultural heritage significance of the Precinct and/or community cultural identity of the Aboriginal communities associated with the Precinct. 	Yellow / orange 
Some	<ul style="list-style-type: none"> • Common example of its type in the Precinct; and / or • Does not express clear community or cultural values of the precinct or only in a minor way; and / or • Substantially modified or impacted; and / or • Loss or change <i>is unlikely to</i> diminish Aboriginal cultural heritage significance of the Precinct and/or applicable Aboriginal community cultural identity. 	Blue / none 

Figure 9. Precinct significance rankings

11.2 Statement of Scientific Significance

A total of 67 known Aboriginal sites occur within the Marsden Park Precinct, ranging from low to moderate scientific significance (Figure 10). The sites are mostly scatters of or isolated artefacts in open contexts, consistent with predictions for the study area. Sites located in intact areas, generally raised areas outside of flood prone lands, retain archaeological integrity and have some research potential to further our understanding of past Aboriginal occupation and use of the precinct and surrounds.

A summary of scientific significance of sites in the precinct are listed in the table below:

Moderate scientific significance	Low-moderate scientific significance	Low scientific significance
MPP-2	MPP-1	MPP-6
MPP-5	MPP-3	MPP-7
MPP-8	MPP-4	MPP-11
MPP-9	MPP-10	MPP-13
MPP-12	MPP-16	MPP-14
WP1	MPP-18	MPP-15
WP5	WP3	MPP-17
EKC 31 (45-5-0267)	WP4	WP2
GR-OS-1 (45-5-2387)	MPIP 29 (45-5-3864)	WP6
GR-OS-2 (45-5-2388)		GR-OS-3 (45-5-2389)
GR-OS-4 (45-5-2390)		GR-OS-7 (45-5-2393)
GR-OS-5 (45-5-2391)		GR-OS-12 (45-5-2398)
GR-OS-6 (45-5-2392)		GR-OS-8 (45-5-2394)
GR-OS-9 (45-5-2395)		GR-OS-14 (45-5-2400)
GR-OS-10 (45-5-2396)		C-IF-1 (45-5-2750)
GR-OS-11 (45-5-2397)		C-IF-2 (45-5-2751)
GR-OS-13 (45-5-2399)		C-OS-1 (45-5-2752)
GR-OS-15 (45-5-2401)		MP 44 (45-5-0682)
C-ST-1 (45-5-2753)		IF19
MPIP 30 (45-5-3865)		
MPIP 31 (45-5-3863)		
SR-OS-1 (45-5-2380)		
SR-OS-2 (45-5-2381)		
SR-OS-3 (45-5-2386)		
SR-OS-4 (45-5-2385)		
SR-OS-6 (45-5-2383)		
SR-OS-7 (45-5-2382)		
MP 40 (45-5-0678)		
MP 41 (45-5-0679)		
MP 42 (45-5-0680)		
MP 43 (45-5-0681)		
MP 45 (45-5-0683)		
MP 46 (45-5-0684)		
MP 47 (45-5-0685)		
MP 48 (45-5-0686)		
MP 49 (45-5-0687)		
MP 50 (45-5-0688)		
MP 51 (45-5-0689)		
MP 52 (45-5-0690)		

Areas of moderate scientific significance demonstrated a broad archaeological assemblage and were likely to contain archaeological deposit. Significance was attached to the relatively intact nature of the soil and identified or expected range of artefacts. Furthermore, landform was an important factor in assessing significance because it was associated with preservation of archaeological deposit and it relates to the range of expected archaeological activities. For example, raised terraces are more likely to contain intact archaeology than the creek valleys and the archaeological activities on hill tops will differ from creek flats.

Areas of low-moderate scientific significance had similar characteristics to sites exhibiting moderate scientific significance, however the low-moderate sites had higher levels of soil disturbance.

Areas of low scientific significance had been affected by context disturbance such as flooding, dumping of soil, extensive landscaping or development.

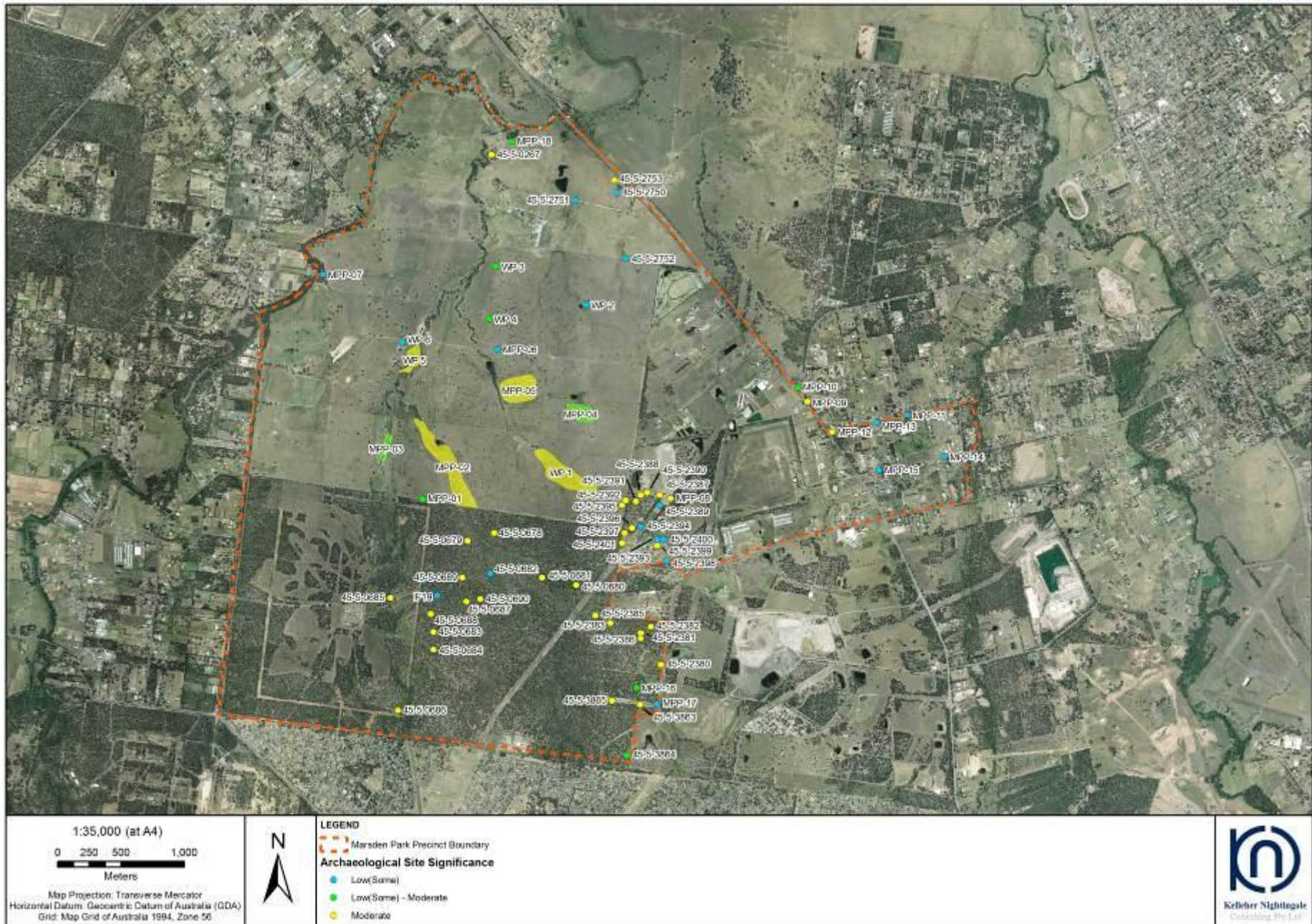


Figure 10. Archaeological significance rankings

12 Legislation and Management Principles

12.1 Legislative considerations

The *National Parks and Wildlife Act 1974* (NPW Act) is the primary statutory control dealing with Aboriginal heritage in New South Wales. Items of Aboriginal heritage (Aboriginal objects) or Aboriginal places (declared under section 84) are protected and regulated under the NPW Act.

Under the Act, an “Aboriginal object” is defined as “any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains”. As such, Aboriginal objects are confined to physical evidence and are commonly referred to as Aboriginal sites.

Areas of special significance, which may or may not include Aboriginal objects, can be recognised and protected (and regulated) if declared as an Aboriginal place. Under section 84 of the NPW Act a place can be declared by the Minister as an Aboriginal place if the place “is or was of special significance with respect to Aboriginal culture”. The NPW Act protects and regulates declared Aboriginal places. Section 86(4) states that “A person must not harm or desecrate an Aboriginal place”. Section 5 of the NPW Act defines an Aboriginal place as “any place declared to be an Aboriginal place under section 84”. The amendments to the NPW Act that came into effect on 1st October 2010 have increased the offences and penalties, with harming or desecrating an Aboriginal place being on the highest tier for penalties.

Aboriginal objects and Aboriginal places are protected under section 86 of the Act. It is an offence to harm or desecrate an Aboriginal object, either knowingly [section 86 (1)] or unknowingly [section 86 (2)]. It is an offence to harm or desecrate an Aboriginal place [section 86 (4)].

There are offences and penalties relating to harm to, or desecration of, an Aboriginal object or declared Aboriginal place. Harm includes to destroy, deface, damage or move. Penalties are tiered according to offences, which include:

- a person must not harm or desecrate an Aboriginal object that the person knows is an Aboriginal object;
- a person must not harm or desecrate an Aboriginal object (strict liability offence);
- a person must not harm or desecrate an Aboriginal place (strict liability offence);
- failure to notify Office of Environment and Heritage of the location of an Aboriginal object (existing offence and penalty); and
- contravention of any condition of an Aboriginal Heritage Impact Permit.

Under section 87 (1) it is a defence to a prosecution for an offence under section 86 (1), (2) or (4) if “(a) the harm or desecration concerned was authorised by an Aboriginal heritage impact permit, and (b) the conditions to which that Aboriginal heritage impact permit was subject were not contravened”.

Section 87 (2) of the Act provides a defence against prosecution under section 86 (2) if “the defendant exercised due diligence to determine whether the act or omission constituting the alleged offence would harm an Aboriginal object and reasonably determined that no Aboriginal object would be harmed”. This defence appears to specifically relate to Aboriginal objects.

Section 89A of the Act relates to the notification of sites of Aboriginal objects, under which it is an offence if the location of an Aboriginal object is not notified to the Director-General in the prescribed manner within a reasonable time.

Under section 90 (1) of the Act “the Director-General may issue an Aboriginal heritage impact permit”. The regulation of Aboriginal heritage impact permits is provided in Part 6 Division 2 of the Act (sections 90 to 90R).

An Aboriginal heritage impact permit (AHIP) is required for any activity which will harm an Aboriginal object or Aboriginal place.

12.2 Management principles

Principles for the management of Aboriginal cultural heritage are focussed on the conservation of objects, places or features of cultural value within the landscape, including places, objects and features of significance to Aboriginal people and places of scientific (archaeological) significance. While there are statutory controls to ensure that Aboriginal objects (sites) are protected and/or regulated, the Aboriginal cultural heritage assessment process is designed to ensure that places or features of cultural value within the landscape and of significance to Aboriginal people are conserved in addition to the sites and objects.

In general, it can be recommended to:

- avoid harm to Aboriginal objects where possible;
- apply for an AHIP for Aboriginal objects where harm cannot be avoided;
- mitigate harm to Aboriginal objects. This would be a particular requirement for sites or areas with high archaeological or cultural values. An AHIP would be required for mitigation activities; and
- implement ongoing management strategies for avoiding harm to Aboriginal objects.

Any decisions regarding the long term management of conserved sites should be made in consultation with registered Aboriginal stakeholders.

13 Draft Indicative Layout Plan Assessment

A draft Indicative Layout Plan (ILP) for the precinct has been developed by the Department of Planning and Infrastructure in partnership with Blacktown City Council (Figure 11). The draft ILP has been considered in relation to identified Aboriginal cultural heritage values within the precinct (Figure 12).

13.1 Consideration of alternatives – limiting harm

The draft ILP was prepared in consultation with government agencies, stakeholders and landowners and in consideration of the various constraints and opportunities identified for the precinct as a result of specialist studies undertaken as part of the precinct planning process, including Aboriginal heritage.

All identified Aboriginal sites within the precinct were considered in relation to proposed future development and associated uses of the land. Throughout the precinct planning process it was recommended the development of the ILP avoid harm to Aboriginal objects where possible.

Aboriginal objects are located within developable land within the precinct, in elevated areas outside flood prone lands where sites have potential for intact subsurface deposits. A number of alternatives were considered for the overall development layout of the precinct, however as Aboriginal heritage was spread across the developable lands of the precinct alternative layouts had a similar level of impact on Aboriginal heritage.

The draft ILP also retains around half of the identified sites of Aboriginal objects in substantial environmental management zones, including riparian corridors of South Creek and tributaries and former Air Services Australia site/Shanes Park land in the south of the precinct which is zoned environment conservation and public recreation - regional. The long term conservation and management of Aboriginal heritage in these areas should be addressed in conservation management plan, environmental management plan and development control plan for the precinct.

13.2 Consideration of alternatives – limiting harm

The *National Strategy for Ecologically Sustainable Development* defines ecologically sustainable development as:

using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased.

The *National Strategy* provides broad strategic directions and a framework for governments to direct policy and decision-making and facilitate a coordinated approach to ecologically sustainable development which encourages long-term benefits for Australia. The strategy was adopted by all levels of Australian government in 1992.

Core objectives of *Ecologically Sustainable Development* (ESD) are to:

- enhance individual and community well-being and welfare by following a path of economic development that safeguards the welfare of future generations;
- provide for equity within and between generations; and
- protect biological diversity and maintain essential ecological processes and life-support systems.

Stated guiding principles are:

- decision making processes should effectively integrate both long and short-term economic, environmental, social and equity considerations;
- where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation;
- the global dimension of environmental impacts of actions and policies should be recognised and considered;
- the need to develop a strong, growing and diversified economy which can enhance the capacity for environmental protection should be recognised;
- the need to maintain and enhance international competitiveness in an environmentally sound manner should be recognised;
- cost effective and flexible policy instruments should be adopted, such as improved valuation, pricing and incentive mechanisms; and
- decisions and actions should provide for broad community involvement on issues which affect them.

The National Strategy requires a balanced approach that takes into account all objectives and principles equally to pursue the goal of ESD.

The development of the draft ILP has evaluated the potential harm of future development of the precinct on Aboriginal archaeological heritage in terms of ESD. The assessment of Aboriginal heritage evaluated long-term and short-term considerations, precautionary environmental impacts, enhancement for future generations and cost/benefit of impacting on archaeological objects.

Many Aboriginal sites are being retained in environment conservation and environmental management zones, representing a positive conservation outcome with overlapping conservation values. Aboriginal sites will be impacted by future development of the precinct. In this regard, following ESD, the long-term impact is significant as physical evidence in context will be removed. However, information held by these sites can be obtained through salvage excavation of significant sites. This can be seen as mitigating impact by increasing our knowledge base regarding Aboriginal culture, helping to further interpret what is conserved and giving future generations a high cost benefit ratio. Outright conservation without an understanding of that which is being conserved has little scientific or cultural value. The information base resulting from salvage excavation of Aboriginal objects at Marsden Park Precinct will assist in increasing an understanding and interpretation of occupation and use of the area by Aboriginal people in the past, connecting to those values being retained in conservation areas and surrounds (e.g. Blacktown Native Institution and Colebee and Nurragingy Land Grant) as well as providing educational and interpretive opportunities within the precinct itself for the local community and specifically new residents in the precinct. This helps to recognise and form a connection between people living in the same space over time.

13.3 Impact of future development based on draft ILP

Aboriginal sites have been identified over much of the precinct. The draft ILP retains around half of these within significant environment conservation and environmental management zones. Sites are also located in the developable lands of the precinct and would be impacted according to the draft ILP. The larger, less disturbed identified Aboriginal sites tended to be clustered in the central portion of the precinct, associated with less long term erosion and more archaeologically informative landforms and soils. Mitigation measures would be required for these sites.

Based on the assessment of the draft ILP in relation to Aboriginal sites recorded within the precinct, potential impacts, management and mitigation measures are outlined in Table 5.

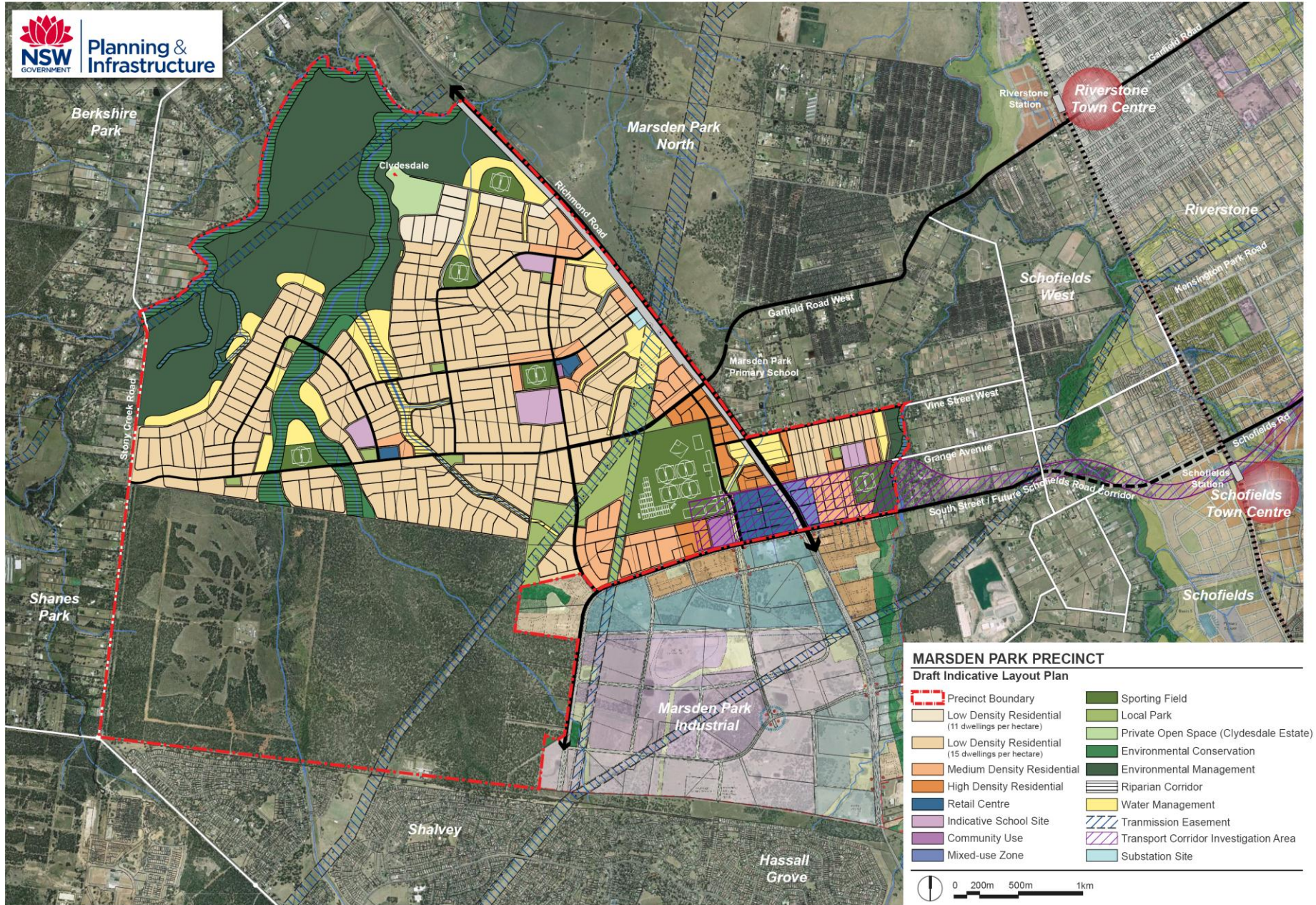


Figure 11. Draft Indicative Layout Plan

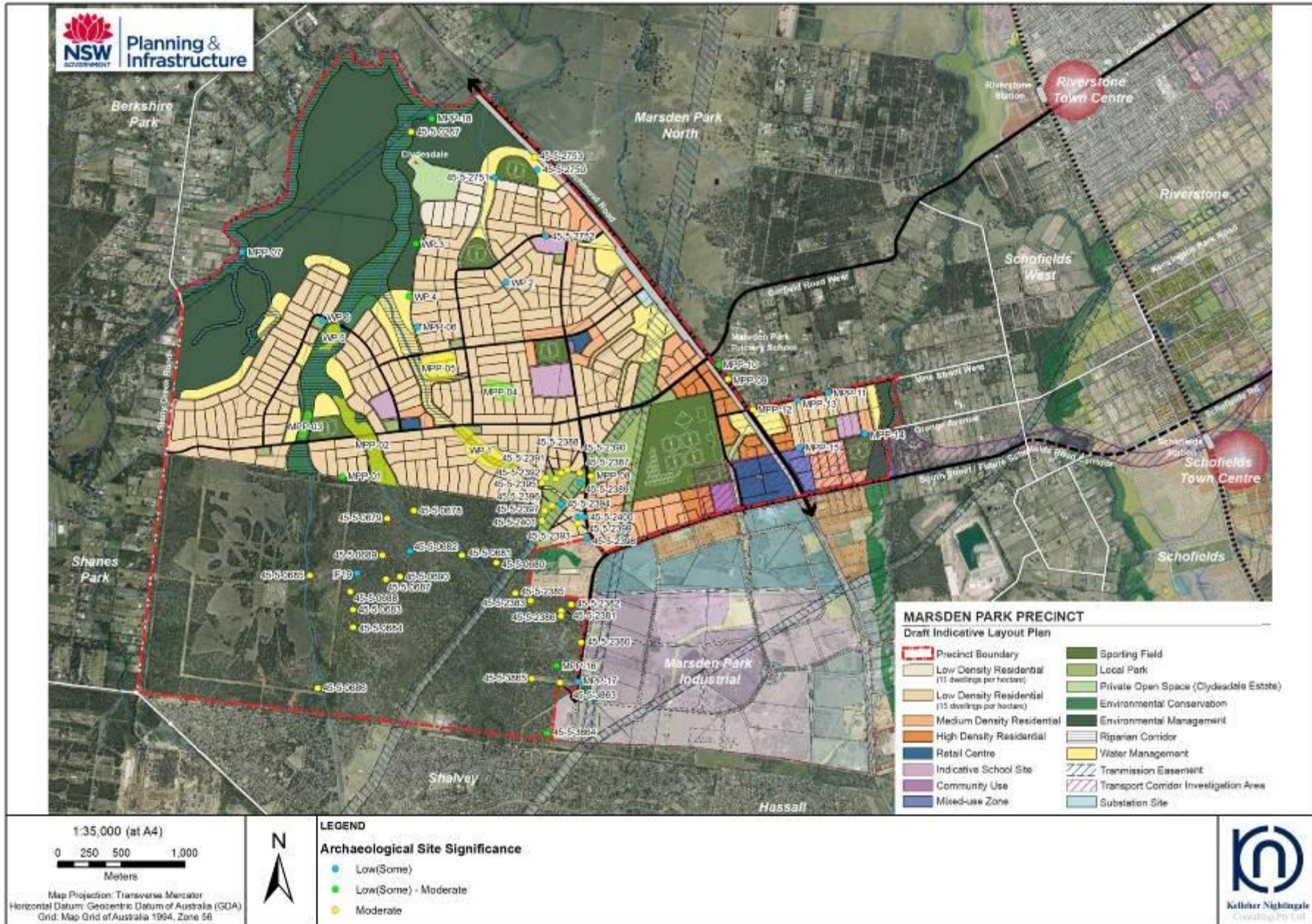


Figure 12. Draft ILP and Aboriginal heritage

Table 5. Impacts, mitigation and management (based on draft Indicative Layout Plan)

AHIMS	Name	Site Type	Significance	Impact Assessment	Zoning	Approvals / Mitigation
45-5-0267	Clydesdale EKC 31	Artefact scatter Scarred tree	Moderate	No impact	Environmental conservation Riparian corridor	No action required. The location of the site should be included in management plans.
45-5-0678	MP 40	Artefact scatter	Moderate	No impact	Environment conservation	No action required. The location of the site should be included in management plans.
45-5-0679	MP 41	Artefact scatter	Moderate	No impact	Environment conservation	No action required. The location of the site should be included in management plans.
45-5-0680	MP 42	Artefact scatter	Moderate	No impact	Environment conservation	No action required. The location of the site should be included in management plans.
45-5-0681	MP 43	Artefact scatter	Moderate	No impact	Environment conservation Riparian corridor	No action required. The location of the site should be included in management plans.
45-5-0682	MP 44	Artefact scatter	Low	No impact	Environment conservation	No action required. The location of the site should be included in management plans.
45-5-0683	MP 45	Artefact scatter	Moderate	No impact	Environment conservation	No action required. The location of the site should be included in management plans.
45-5-0684	MP 46	Artefact scatter	Moderate	No impact	Environment conservation	No action required. The location of the site should be included in management plans.
45-5-0685	MP 47	Artefact scatter	Moderate	No impact	Environment conservation Riparian corridor	No action required. The location of the site should be included in management plans.
45-5-0686	MP 48	Artefact scatter	Moderate	No impact	Environment conservation Riparian corridor	No action required. The location of the site should be included in management plans.
45-5-0687	MP 49	Artefact scatter	Moderate	No impact	Environment conservation	No action required. The location of the site should be included in management plans.

AHIMS	Name	Site Type	Significance	Impact Assessment	Zoning	Approvals / Mitigation
45-5-0688	MP 50	Artefact scatter	Moderate	No impact	Environment conservation	No action required. The location of the site should be included in management plans.
45-5-0689	MP 51	Artefact scatter	Moderate	No impact	Environment conservation	No action required. The location of the site should be included in management plans.
45-5-0690	MP 52	Artefact scatter	Moderate	No impact	Environment conservation	No action required. The location of the site should be included in management plans.
	IF19	Isolated artefact	Low	No impact	Environment conservation	No action required. The location of the site should be included in management plans.
45-5-2380	SR-OS-1	Artefact scatter	Moderate	No impact	Public recreation - regional	No action required. The location of the site should be included in management plans.
45-5-2381	SR-OS-2	Artefact scatter	Moderate	No impact	Public recreation - regional	No action required. The location of the site should be included in management plans.
45-5-2382	SR-OS-7	Artefact scatter	Moderate	No impact	Public recreation - regional	No action required. The location of the site should be included in management plans. Permit #870 issued for site.
45-5-2383	SR-OS-6	Artefact scatter	Moderate	No impact	Public recreation - regional	No action required. The location of the site should be included in management plans. Permit #870 issued for site.
45-5-2385	SR-OS-4	Artefact scatter	Moderate	No impact	Environment conservation	No action required. The location of the site should be included in management plans.
45-5-2386	SR-OS-3	Artefact scatter	Moderate	No impact	Public recreation - regional	No action required. The location of the site should be included in management plans.

AHIMS	Name	Site Type	Significance	Impact Assessment	Zoning	Approvals / Mitigation
45-5-2387	GR-OS-1	Artefact scatter	Moderate	Impacted	Local park Low density residential Transmission easement	AHIP and salvage Aboriginal heritage impact permit (AHIP) required prior to commencement of works affecting the site. Mitigation through salvage excavation will be required if the significant portion of the site cannot be conserved.
45-5-2388	GR-OS-2	Artefact scatter	Moderate	Impacted	Local park Low density residential	AHIP and salvage Aboriginal heritage impact permit (AHIP) required prior to commencement of works affecting the site. Mitigation through salvage excavation will be required if the significant portion of the site cannot be conserved.
45-5-2389	GR-OS-3	Artefact scatter	Low	Impacted	Local park Transmission easement	AHIP Aboriginal heritage impact permit (AHIP) required prior to commencement of works affecting the site.
45-5-2390	GR-OS-4	Artefact scatter	Moderate	Impacted	Local park Low density residential	AHIP and salvage Aboriginal heritage impact permit (AHIP) required prior to commencement of works affecting the site. Mitigation through salvage excavation will be required if the significant portion of the site cannot be conserved.
45-5-2391	GR-OS-5	Isolated artefact	Moderate	Impacted	Local park	AHIP and salvage Aboriginal heritage impact permit (AHIP) required prior to commencement of works affecting the site. Mitigation through salvage excavation will be required if the significant portion of the site cannot be conserved.
45-5-2392	GR-OS-6	Artefact scatter	Moderate	Impacted	Local park Low density residential	AHIP and salvage Aboriginal heritage impact permit (AHIP) required prior to commencement of works affecting the site. Mitigation through salvage excavation will be required if the significant portion of the site cannot be conserved.
45-5-2393	GR-OS-7	Artefact scatter	Low	Impacted	Low density residential	AHIP Aboriginal heritage impact permit (AHIP) required prior to commencement of works affecting the site.
45-5-2394	GR-OS-8	Artefact scatter	Low	Impacted	Local park Transmission easement	AHIP Aboriginal heritage impact permit (AHIP) required for Aboriginal objects prior to commencement of works affecting the site.
45-5-2395	GR-OS-9	Artefact scatter	Moderate	Impacted	Low density residential Water management Riparian corridor Local park	AHIP and salvage Aboriginal heritage impact permit (AHIP) required prior to commencement of works affecting the site. Mitigation through salvage excavation will be required if the significant portion of the site cannot be conserved.

AHIMS	Name	Site Type	Significance	Impact Assessment	Zoning	Approvals / Mitigation
45-5-2396	GR-OS-10	Artefact scatter	Moderate	Impacted	Local park	AHIP and salvage Aboriginal heritage impact permit (AHIP) required prior to commencement of works affecting the site. Mitigation through salvage excavation will be required if the significant portion of the site cannot be conserved.
45-5-2397	GR-OS-11	Artefact scatter	Moderate	Impacted	Local park	AHIP and salvage Aboriginal heritage impact permit (AHIP) required prior to commencement of works affecting the site. Mitigation through salvage excavation will be required if the significant portion of the site cannot be conserved.
45-5-2398	GR-OS-12	Isolated artefact	Low	Impacted	Low density residential	AHIP Aboriginal heritage impact permit (AHIP) required for Aboriginal objects prior to commencement of works affecting the site.
45-5-2399	GR-OS-13	Artefact scatter	Moderate	Impacted	Low density residential	AHIP and salvage Aboriginal heritage impact permit (AHIP) required prior to commencement of works affecting the site. Mitigation through salvage excavation will be required if the significant portion of the site cannot be conserved.
45-5-2400	GR-OS-14	Isolated artefact	Low	Impacted	Low density residential	AHIP Aboriginal heritage impact permit (AHIP) required for Aboriginal objects prior to commencement of works affecting the site.
45-5-2401	GR-OS-15	Artefact scatter	Moderate	Impacted	Local park Transmission easement	AHIP and salvage Aboriginal heritage impact permit (AHIP) required prior to commencement of works affecting the site. Mitigation through salvage excavation will be required if the significant portion of the site cannot be conserved.
45-5-2750	C-IF-1	Isolated artefact	Low	Impacted	Water management	AHIP Aboriginal heritage impact permit (AHIP) required prior to commencement of works affecting the site.
45-5-2751	C-IF-2	Isolated artefact	Low	Impacted	Water management	AHIP Aboriginal heritage impact permit (AHIP) required prior to commencement of works affecting the site.
45-5-2752	C-OS-1	Artefact scatter	Low	Impacted	Medium density residential Indicative school zone	AHIP Aboriginal heritage impact permit (AHIP) required prior to commencement of works affecting the site.

AHIMS	Name	Site Type	Significance	Impact Assessment	Zoning	Approvals / Mitigation
45-5-2753	C-ST-1	Scarred tree	Moderate	Impacted	Water management	AHIP Avoid impact to tree recommended. Aboriginal heritage impact permit (AHIP) required if avoidance is not possible.
45-5-3863	MPIP 31	Artefact scatter	Moderate	No impact	Public recreation - regional	No action required. The location of the site should be included in management plans.
45-5-3864	MPIP 29	Artefact scatter	Low-moderate	No impact	Public recreation - regional	No action required. The location of the site should be included in management plans.
45-5-3865	MPIP 30	Artefact scatter	Moderate	No impact	Public recreation - regional	No action required. The location of the site should be included in management plans.
45-5-4158	MPP-01	Isolated artefact	Low-moderate	Impacted	Low density residential	AHIP Aboriginal heritage impact permit (AHIP) required for Aboriginal objects prior to commencement of works affecting the site.
45-5-4159	MPP-02	Artefact scatter	Moderate	No impact	Environmental conservation Riparian corridor	No action required. The location of the site should be included in management plans.
45-5-4160	MPP-03	Artefact scatter	Low-moderate	No impact	Environmental conservation Riparian corridor	No action required. The location of the site should be included in management plans.
45-5-4161	WP1	Artefact scatter	Moderate	Impacted	Low density residential Riparian corridor Local park Water management	AHIP and salvage Aboriginal heritage impact permit (AHIP) required prior to commencement of works affecting the site. Mitigation through salvage excavation will be required if the significant portion of the site cannot be conserved.
45-5-4162	WP2	Isolated artefact	Low	Impacted	Low density residential	AHIP Aboriginal heritage impact permit (AHIP) required for Aboriginal objects prior to commencement of works affecting the site.
45-5-4163	WP3	Artefact scatter	Low-moderate	No impact	Environmental management	No action required. The location of the site should be included in management plans.
45-5-4164	WP6	Artefact scatter	Low-moderate	Impacted	Local park	AHIP Aboriginal heritage impact permit (AHIP) required for Aboriginal objects prior to commencement of works affecting the site.

AHIMS	Name	Site Type	Significance	Impact Assessment	Zoning	Approvals / Mitigation
45-5-4165	WP4	Artefact scatter	Low	Impacted	Water management	AHIP Aboriginal heritage impact permit (AHIP) required for Aboriginal objects prior to commencement of works affecting the site.
45-5-4166	WP5	Artefact scatter	Moderate	No impact	Environmental conservation Riparian corridor	No action required. The location of the site should be included in management plans.
45-5-4167	MPP-04	Artefact scatter	Low-moderate	Impacted	Low density residential	AHIP Aboriginal heritage impact permit (AHIP) required for Aboriginal objects prior to commencement of works affecting the site.
45-5-4168	MPP-05	Artefact scatter	Moderate	Impacted	Low density residential Water management Riparian corridor	AHIP and salvage Aboriginal heritage impact permit (AHIP) required prior to commencement of works affecting the site. Mitigation through salvage excavation will be required if the significant portion of the site cannot be conserved.
45-5-4169	MPP-06	Isolated artefact	Low	Impacted	Low density residential Water management	AHIP Aboriginal heritage impact permit (AHIP) required for Aboriginal objects prior to commencement of works affecting the site.
45-5-4170	MPP-07	Isolated artefact	Low	No impact	Environmental conservation Riparian corridor	No action required. The location of the site should be included in management plans.
45-5-4171	MPP-08	Artefact scatter	Moderate	Impacted	Local park Transmission easement	AHIP and salvage Aboriginal heritage impact permit (AHIP) required prior to commencement of works affecting the site. Mitigation through salvage excavation will be required if the significant portion of the site cannot be conserved.
45-5-4172	MPP-09	Artefact scatter	Moderate	Impacted	Road	AHIP and salvage Aboriginal heritage impact permit (AHIP) required prior to commencement of works affecting the site. Mitigation through salvage excavation will be required if the significant portion of the site cannot be conserved.
45-5-4173	MPP-10	Artefact scatter	Low-moderate	Impacted	Road	AHIP Aboriginal heritage impact permit (AHIP) required for Aboriginal objects prior to commencement of works affecting the site.
45-5-4174	MPP-11	Artefact scatter	Low	Impacted	Low density residential	AHIP Aboriginal heritage impact permit (AHIP) required for Aboriginal objects prior to commencement of works affecting the site.
45-5-4175	MPP-12	Artefact scatter	Moderate	Impacted	Water management	AHIP and salvage Aboriginal heritage impact permit (AHIP) required prior to commencement of works affecting the site. Mitigation through salvage excavation will be required if the significant portion of the site cannot be conserved.

AHIMS	Name	Site Type	Significance	Impact Assessment	Zoning	Approvals / Mitigation
45-5-4176	MPP-13	Artefact scatter	Low	Impacted	Low density residential	AHIP Aboriginal heritage impact permit (AHIP) required for Aboriginal objects prior to commencement of works affecting the site.
45-5-4177	MPP-14	Artefact scatter	Low	Impacted	Medium density residential	AHIP Aboriginal heritage impact permit (AHIP) required for Aboriginal objects prior to commencement of works affecting the site.
45-5-4178	MPP-15	Artefact scatter	Low	Impacted	Low density residential	AHIP Aboriginal heritage impact permit (AHIP) required for Aboriginal objects prior to commencement of works affecting the site.
45-5-4179	MPP-16	Artefact scatter	Low-moderate	No impact	Public recreation - regional	No action required. The location of the site should be included in management plans.
45-5-4180	MPP-17	Isolated artefact	Low	No impact	Public recreation - regional	No action required. The location of the site should be included in management plans.
45-5-4181	MPP-18	Artefact scatter	Low-moderate	No impact	Environmental conservation Riparian corridor Environmental management	No action required. The location of the site should be included in management plans.

Note: Test excavation is not necessary or warranted for the Aboriginal archaeological sites shown to be impacted by the draft ILP. Test excavation should only be required where the potential exists to conserve an archaeological site.

14 Conclusions and Recommendations

Investigations have identified 67 Aboriginal archaeological sites within the Marsden Park Precinct. Sites consisted of open artefact scatters, isolated artefacts and two scarred trees. These results were consistent with predictions for the study area. Sites ranged from low to moderate scientific significance.

Aboriginal objects are protected and regulated under Part 6 of the *National Parks and Wildlife Act 1974*. It is an offence to harm or desecrate an Aboriginal object without appropriate approval. An Aboriginal heritage impact permit (AHIP) under section 90 (1) of the Act is required for any activity which will harm an Aboriginal object.

Throughout the precinct planning process it was recommended the development of the Indicative Layout Plan (ILP) avoid harm to Aboriginal objects where possible. The draft ILP shows around half of the identified Aboriginal archaeological sites will be retained in sizable conservation lands including environmental management zones and riparian corridors of South Creek and tributaries, as well as the environment conservation and public recreation – regional zones in the former Air Services Australia site/Shanes Park land in the south of the precinct. Ongoing management strategies for avoiding harm to Aboriginal objects should be implemented, such as inclusion of measures related to Aboriginal heritage within conservation management plan, environmental management plan or development control plan prepared for the precinct.

Assessment of the ILP in relation to Aboriginal heritage of the precinct shows that Aboriginal heritage is located within developable land within the precinct. Where harm to Aboriginal objects cannot be avoided, based on consideration of other factors investigated through the precinct planning process, an AHIP would be required. Measures for mitigating harm to Aboriginal objects were recommended for sites or areas with higher archaeological or cultural values. An AHIP would be required for mitigation activities.

The Department of Planning and Infrastructure partnered with Blacktown City Council to identify the future zoning and development controls for the precinct. The draft ILP has been developed in consideration of all factors investigated throughout the precinct planning process, including:

- Aboriginal heritage
- European heritage
- land capability and contamination
- noise
- odour
- transport
- biodiversity
- water cycle management
- economics and employment
- community facilities and open space.

The NSW government is committed to the accelerated release of land to increase the supply of affordable housing in Sydney. The precinct is designed with a capacity for around 10,000 new dwellings and associated services. The resultant draft ILP will not avoid harm to Aboriginal objects across the precinct on the whole. An Aboriginal heritage impact permit (AHIP) is required for any activity which will harm an Aboriginal object.

The degree of impact within the developable lands means that measures are required to mitigate harm to Aboriginal objects in the precinct. Measures for mitigating harm to Aboriginal objects were recommended for sites or areas with moderate archaeological or high cultural values. An AHIP would be required for mitigation activities.

The significant conservation outcome for the precinct, including environmental management zones as well as the former Air Services Australia/Shanes Park land in the south of the precinct, has resulted in a significant conservation outcome for Aboriginal heritage. These areas contain a number of Aboriginal sites and South Creek and tributaries have been identified as having cultural value to Aboriginal stakeholders.

Existing archaeological understanding of the Cumberland Plain correlates well with the identified archaeology of the Marsden Park Precinct. Identified archaeological sites exhibiting moderate or better archaeology should be salvage excavated to retrieve a representative sample of the archaeological deposit. Test excavation is not necessary or warranted for the archaeological sites shown to be impacted by the precinct development. Test excavation should only be required where the potential exists to conserve an archaeological site.

In summary, the Aboriginal heritage assessment of the precinct has shown that:

- Aboriginal heritage sites have been identified in a number of locations on various landforms within the precinct. Sites are mostly scatters of or isolated artefacts in open contexts, consistent with predictions for the study area.
- Sites of Aboriginal objects ranged from low to moderate scientific/archaeological significance. Sites located in intact areas, generally raised areas outside of flood prone lands, retain archaeological integrity and have some research potential to further our understanding of past Aboriginal occupation and use of the precinct and surrounds.
- Registered Aboriginal stakeholders identified Marsden Park as a significant area and all sites have cultural value and are significant to the contemporary Aboriginal community. The value of the precinct is also linked to its connection to surrounding sites and areas, including resources and post contact sites.
- Around half of the identified Aboriginal sites are being retained in sizable environment conservation and environmental management zones in the precinct including the former Air Services Australia/Shanes Park land in the south of the precinct. Long term management measures should be implemented for the conservation of these sites, such as through incorporation into conservation management plan, environmental management plan or development control plan for the precinct.
- Some sites of Aboriginal objects will be harmed by future development of the precinct according to the draft ILP. An Aboriginal heritage impact permit (AHIP) issued by the Office of Environment and Heritage under section 90(1) of the *National Parks and Wildlife Act 1974* is required prior to any activity which may harm an Aboriginal object.
- Mitigation measures (salvage excavation and collection of objects) are required to mitigate harm to Aboriginal objects and the loss of value resulting from development of the precinct. Mitigation measures are recommended for those sites of moderate archaeological or high cultural value. An AHIP is required for mitigation activities.
- Existing archaeological understanding of the Cumberland Plain correlates well with the identified archaeology of the Marsden Park Precinct. Test excavation is not necessary or warranted for the archaeological sites shown to be impacted by the precinct development. Test excavation should only be required where the potential exists to conserve an archaeological site.
- Consultation with registered Aboriginal stakeholders for the precinct should continue in relation to future development activities within the precinct. Consultation for seeking an AHIP should be undertaken in accordance with section 80C of the *National Parks and Wildlife Regulation 2009* and OEH *Aboriginal cultural heritage consultation requirements for proponents 2010*.

Table 6. Summary of recommendations for Aboriginal heritage sites

Site Name	AHIMS #	Conserved management required	Impacted AHIP required	Mitigation required (Salvage)	Consultation with Aboriginal stakeholders
Clydesdale EKC 31	45-5-0267	✓			✓
MP 40	45-5-0678	✓			✓
MP 41	45-5-0679	✓			✓
MP 42	45-5-0680	✓			✓
MP 43	45-5-0681	✓			✓
MP 44	45-5-0682	✓			✓
MP 45	45-5-0683	✓			✓
MP 46	45-5-0684	✓			✓
MP 47	45-5-0685	✓			✓
MP 48	45-5-0686	✓			✓
MP 49	45-5-0687	✓			✓
MP 50	45-5-0688	✓			✓
MP 51	45-5-0689	✓			✓
MP 52	45-5-0690	✓			✓
IF 19		✓			✓
SR-OS-1	45-5-2380	✓			✓
SR-OS-2	45-5-2381	✓			✓
SR-OS-7	45-5-2382	✓			✓
SR-OS-6	45-5-2383	✓			✓
SR-OS-4	45-5-2385	✓			✓
SR-OS-3	45-5-2386	✓			✓
GR-OS-1	45-5-2387		✓	✓	✓
GR-OS-2	45-5-2388		✓	✓	✓
GR-OS-3	45-5-2389		✓		✓
GR-OS-4	45-5-2390		✓	✓	✓
GR-OS-5	45-5-2391		✓	✓	✓
GR-OS-6	45-5-2392		✓	✓	✓
GR-OS-7	45-5-2393		✓		✓
GR-OS-8	45-5-2394		✓		✓
GR-OS-9	45-5-2395		✓	✓	✓
GR-OS-10	45-5-2396		✓	✓	✓
GR-OS-11	45-5-2397		✓	✓	✓
GR-OS-12	45-5-2398		✓		✓
GR-OS-13	45-5-2399		✓	✓	✓
GR-OS-14	45-5-2400		✓		✓
GR-OS-15	45-5-2401		✓	✓	✓
C-IF-1	45-5-2750		✓		✓
C-IF-2	45-5-2751		✓		✓
C-OS-1	45-5-2752		✓		✓
C-ST-1	45-5-2753		Avoid tree		✓
MPIP 31	45-5-3863	✓			✓
MPIP 29	45-5-3864	✓			✓
MPIP 30	45-5-3865	✓			✓
MPP-01	45-5-4158		✓		✓
MPP-02	45-5-4159	✓			✓
MPP-03	45-5-4160	✓			✓
WP1	45-5-4161		✓	✓	✓
WP2	45-5-4162		✓		✓
WP3	45-5-4163	✓			✓
WP4	45-5-4164		✓		✓
WP5	45-5-4165		✓		✓
WP6	45-5-4166	✓			✓
MPP-04	45-5-4167		✓		✓
MPP-05	45-5-4168		✓	✓	✓
MPP-06	45-5-4169		✓		✓
MPP-07	45-5-4170	✓			✓
MPP-08	45-5-4171		✓	✓	✓
MPP-09	45-5-4172		✓	✓	✓
MPP-10	45-5-4173		✓		✓
MPP-11	45-5-4174		✓		✓
MPP-12	45-5-4175		✓	✓	✓
MPP-13	45-5-4176		✓		✓
MPP-14	45-5-4177		✓		✓
MPP-15	45-5-4178		✓		✓
MPP-16	45-5-4179	✓			✓
MPP-17	45-5-4180	✓			✓
MPP-18	45-5-4181	✓			✓

References

- Attenbrow, V., 2002. *Sydney's Aboriginal Past: Investigating the Archaeological and Historical Records*. University of New South Wales Press, Sydney.
- Australia ICOMOS (1999). *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance 1999*. Australia ICOMOS Incorporated. Burwood, Victoria.
- Australia ICOMOS (1988). *Guidelines to the Burra Charter: Cultural Significance*. Australia ICOMOS Incorporated.
- Australian Museum Business Services (AMBS), 1996. Archaeological Survey for Aboriginal Sites; Lots 37 to 42, D.P. 262886, South Street, Marsden Park. Report prepared for Mr Don Watts, Hollinsworth Pty Ltd.
- Australian Museum Business Services (AMBS), 1997. Archaeological Survey for Aboriginal Sites on Lots 45 and 46, D.P. 262886, Glengarrie Road, Marsden Park. Report to Hollinsworth Pty Ltd.
- Baker, N., 2000. Mungerie Park Town Centre archaeological salvage excavations near Kellyville, Cumberland Plain, NSW. Report to the Department of Urban Affairs and Planning. (Australian Museum Business Services).
- Bannerman, S.M. and Hazelton, P.A., 1990. Soil Landscapes of the Penrith 1:100,000 Sheet. Soil Conservation Service of NSW, Sydney.
- Bickford, A., 1981. The archaeological investigation of the Native Institution, Blacktown, New South Wales. A report to Lyle Marshall and Associates.
- Brayshaw, H., and Haglund, L., 1997. Proposed landfill operation, Richmond Road, Marsden Park NSW: Archaeological survey for Aboriginal sites. Report to Penrith Waste Services Pty Ltd through Enviro-Managers Pty Ltd. (Helen Brayshaw Heritage Consultants).
- Brook, J. and Kohen, J.L., 1991. *The Parramatta Native Institution and the Black Town: A History*. New South Wales University Press, Kensington.
- Clark, N.R. and Jones, D.C., (Eds) 1991. Penrith 1:100,000 Geological Sheet 9030. New South Wales Geological Survey, Sydney.
- Collins, D., 1798[1975]. *An Account of the English Colony in New South Wales*. Vol. 1. Fletcher, B.H. (ed), T. Cadell Jun. and W. Davies. The Strand, London [Republished by AH and AW Reed in association with the Royal Historical Society, Sydney].
- Comber, J., 2008. *Aboriginal Cultural Heritage Assessment: Marsden Park Zone Substation Subdivision*. Report to APP Corporation Pty Limited on behalf of Marsden Park Developments Pty Ltd.
- DECCW, 24 September 2010. Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales: Part 6 National Parks and Wildlife Act 1974. Department of Environment, Climate Change and Water NSW, Sydney.
- DECCW, September 2010. *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*. Department of Environment, Climate Change and Water, Sydney.
- DECCW, April 2010. *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010: Part 6 National Parks and Wildlife Act 1974*. Department of Environment, Climate Change and Water NSW, Sydney.
- Environmental Resources Management Australia (ERM), 2003. *Historic Heritage Assessment for Schofields and Adjoining Lands*. Report to Medallist Developments.
- Hazelton, P.A., Bannerman, S.M., and Tille, P.J., 1989. Penrith 1:100,000 Soil Landscapes Map Sheet HA9030. Soil Conservation Service of NSW, Sydney.
- Jo McDonald Cultural Heritage Management (JMcD CHM) 1997 Survey for Archaeological Sites: Knudsen Reserve at Riverstone, NSW. A Report Prepared for Blacktown City Council.

- Jo McDonald Cultural heritage Management Services (JMCD CHM) 2002 Archaeological Assessment of Indigenous Cultural Heritage Values, Rouse Hill Development Area Sewerage Master Plan. Report Prepared for GHD on behalf of RHI.
- Jo McDonald Cultural Heritage Management (JMCD CHM), 2003. Archaeological Assessment of Indigenous Heritage Values for Draft LES: Land Adjoining Colebee Release Area. Report to Medallist Developments.
- Jo McDonald Cultural Heritage Management Pty Ltd, 2005. Archaeological Salvage Excavation of Eight Archaeological Landscapes in the Second Ponds Creek Valley, Rouse Hill Development Area, NSW'. Volume 1. Report to Rouse Hill Infrastructure Pty Ltd and Landcom.
- Jo McDonald Cultural Heritage Management (JMCD CHM), 2006. Archaeological Salvage Excavation of the Colebee Release Area, Schofields, NSW. Report to Medallist Developments.
- Kelleher Nightingale Consulting Pty Ltd (KNC) 2009 Marsden Park Industrial Precinct Aboriginal Heritage Assessment. Report to the Department of Planning.
- Kelleher Nightingale Consulting Pty Ltd (KNC) 2010 Area 20 Precinct Aboriginal Heritage Assessment. Prepared for the Department of Planning
- Kelleher Nightingale Consulting Pty Ltd (KNC), 2010. Woorong Park, Marsden Park, NSW: Preliminary Aboriginal Heritage Assessment. Report prepared for Sinclair Knight Merz on behalf of Winten Property Group.
- Kelton, J., 2001. An Aboriginal Archaeological Study of the Site of a Proposed Egg Packing Station and Detention Ponds on the "Clydesdale" Property, Richmond Road, Marsden Park. Report prepared for Bath Stewart Associates Pty Ltd.
- Koettig, M., 1980. Earing Kemps Creek Southern Section: Aboriginal and Historic Site Survey.
- Kohen, J.L., 1985. Aborigines in the West: Prehistory to Present. Power, J. and West, P. (eds), Western Sydney Project 1985, Seven Hills, Sydney.
- Kohen, J.L., 1986. Prehistoric Settlement in the Western Cumberland Plain: Resources, Environment and Technology. PhD Thesis, School of Earth Sciences, Macquarie University, Sydney.
- Kohen, J.L., 1993. The Darug and Their Neighbours. The Traditional Aboriginal Owners of the Sydney Region. Darug Link in association with Blacktown and District Historical Society, Sydney.
- Brook, J. and Kohen, J.L., 1991. The Parramatta Native Institution and the Black Town: A History. New South Wales University Press, Kensington.
- Matthews, R.H., 1901. The Thurrwal Language (including the Gundungurra and Dharruk Languages, with vocabularies). Journal and Proceedings of the Royal Society of NSW 35: 127-160.
- Navin Officer Heritage Consultants Pty Ltd 2007 Replacement Flows Project. Cultural heritage Impact Assessment. A Report to Sydney Water.
- Pickett, J.W. and Alder, J.D., 1997. Layers of Time: The Blue Mountains and their Geology. New South Wales Department of Mineral Resources, Sydney.
- Smith, L.J., 1988. Aboriginal Site Planning Study in the Sydney Basin, Stage 1: The Cumberland Plain. Interim Report prepared for the NSW National Parks and Wildlife Service.
- Smith, V., and Clark, N.R., 1991. Cainzoic Stratigraphy. In D.C. Jones and N.R. Clark (Eds), Geology of the 1:100,000 Sheet 9030. New South Wales Geological Survey, Sydney.
- Tench, W., 1793. Complete Account of the Settlement at Port Jackson. G. Nicol and J. Sewell, London.
- Wallace, S., 2011. 51 Townson Road, Marsden Park Aboriginal Cultural Heritage Assessment; Blacktown LGA. Report to Grimtrans.

Appendix A Advertisement for registration of interest

Notice of Commencement of Aboriginal Heritage Studies for the Marsden Park Precinct of the North West Growth Centre and Notice for Registration of Interest

The Department of Planning and Infrastructure has commenced precinct planning for the Marsden Park Precinct in the North West Growth Centre. The Minister declared a release of the Marsden Park Precinct under the NSW Government's Precinct Acceleration Protocol. The precinct is bounded by South Creek to the north, Stony Creek Road to the west, suburbs of Willmot, Shalvey, Bidwill and Hassell Grove in the south and generally Richmond Road to the east with a small area extending east to Eastern Creek. Under the terms of the Voluntary Planning Agreement with the Minister, Winten (No 25) Pty Ltd and Woorong Park Pty Ltd are responsible for commissioning planning studies as part of the precinct planning process.

This notice is to inform Aboriginal Stakeholders that Aboriginal Heritage Studies will be commencing in the near future and to request that Aboriginal Stakeholders register their interest in participating in the planning process for Marsden Park Precinct.

The studies will be based on the established Protocol for Aboriginal Stakeholder Involvement in the Assessment of Aboriginal Heritage in the Sydney Growth Centres. Groups and individuals already listed in the Protocol will be consulted with throughout the process and other groups and individuals are now invited to register their interest in participating in the process.

The purpose of this notice is to highlight that Aboriginal cultural heritage studies and consultation with Aboriginal stakeholders will:

1. Inform the precinct planning process and the assessment of any Aboriginal heritage impact permit (AHIP) applications made pursuant to the National Parks and Wildlife Act for Aboriginal objects within the project area;

2. Acknowledge that the Groups and individuals specified in the protocol will be consulted with; and

3. Invite any other interested parties to register their interest in writing, providing their name, address, phone number and information on their connection to the area and the skills and experience they would bring to the process in accordance with Department of Planning and Infrastructure requirements.

Aboriginal groups and/or Aboriginal people with cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the Marsden Park Precinct are invited to register interest in a consultation process regarding precinct planning and proposed development activity in the Precinct.

Information obtained from this consultation process will inform the precinct planning process and may be used in the preparation of Aboriginal heritage impact permit (AHIP) applications made under section 90A of the National Parks and Wildlife Act 1974 for the Marsden Park Precinct. This will assist the Director General of the Office of Environment and Heritage in his or her consideration and determination of AHIP applications.

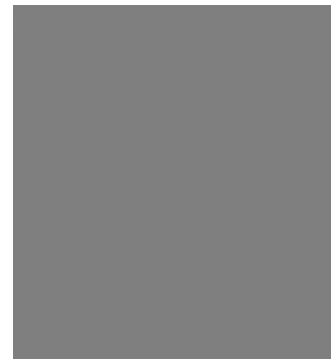
Any group or individual wishing to participate in the Aboriginal Heritage Study consultation process for the Marsden Park Precinct should register their interest by phone or writing. The closing date for the registration of interests is 15 December 2011.

To register your interest please contact:
Winten Property Group
c/o Kelleher Nightingale Consulting
Attention: Josh Symons
Suite 911-912, 155 King Street, Sydney NSW 2000
or by phone 02 9232 5373 or fax 02 9232 5316

Placement details:

- Blacktown City Sun, Tuesday 29 November 2011, page 47

Appendix B Registered stakeholder comments



Woorong Park
Marsden Park Precinct
C/- Kelleher Nightingale Consulting Pty Ltd
Suite 911-912, Level 9
155 King Street
SYDNEY NSW 2000

Our Ref: 2253

16 March 2012

SUBJECT: PROTECTION OF ABORIGINAL CULTURAL HERITAGE
Marsden Park Precinct
Former Allied Dairies
Marsden Park

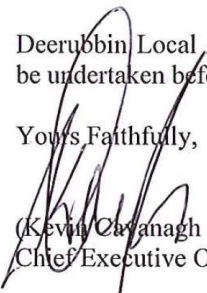
Attention: Josh Symons,

A representative of the Deerubbin Local Aboriginal Land Council inspected the area of the former Allied Dairies in the Marsden Park Precinct on Friday, 10 February 2012. An Aboriginal cultural heritage assessment was undertaken to evaluate the likely impact the proposed development has on the cultural heritage of the land.

Our representative reports, visibility was poor because of the grass cover, and in the few exposure areas, Aboriginal cultural material (in the form of stone artefacts, for example) were found

Deerubbin Local Aboriginal Land Council Therefore, recommend that further investigation be undertaken before development

Yours Faithfully,


(Kevin O'Connell
Chief Executive Officer)

C.c. Miranda Morton, Aboriginal Heritage & Planning Officer – Office of Environment & Culture, Dept. of Premier & Cabinet

DARUG CUSTODIAN ABORIGINAL
CORPORATION

ABN: 81935722930

5th April 2012

Attention: Josh Symons.

SUBJECT: Marsden Park Presinct: Aboriginal Cultural Heritage Assessment – Step 2
Identification and assessment of Aboriginal Heritage.

Dear Josh,

The Darug Custodian Aboriginal Corporation have received and reviewed the Aboriginal Heritage Assessment for the Marsden Park Precinct – Step 2.

Our group has been involved in caring for our sites for many years in this area, there is a complex of sites all over the Cumberland Plain that we need to have conservation strategies for.

The Marsden Park area is a significant area to the Darug, sites and materials found show us that the Darug People have been in this area for thousands of years. The contact period moved our people off their land and into, mostly reserves or into the fringes of areas that were previously lived in. With contact and the years that followed we lost a lot of information on the Darug, our groups main aim is to protect and collect any information about the Darug people as possible, areas such as the Marsden Park precinct can show us a complex of sites compared to separate sites.

We support the findings in this report and are pleased with the accuracy of the information included in this report.

We look forward to working with you on this project please contact us with all further enquiries or send on further information for this project to the above contacts.

Regards


Leanne Watson

From: [REDACTED]
Sent: Friday, 21 September 2012 6:05 PM
To: Matthew Kelleher
Subject: Marsden Park Precinct: Aboriginal Cultural Heritage Assessment - step 3 Draft indicative layout and Draft step 3 report

Dear Alison,

The Darug Custodian Aboriginal Corporation have received and reviewed the Marsden Park Precinct step 3 indicative layout plan, we support the findings and recommendations set out in this report the information is thorough and accurate.

This area is highly significant to the Darug people it is in close proximity to highly significant Darug resources that have been used for thousands of years and this area also has a highly significant history post contact.

Please contact us with all enquire by email or phone [REDACTED]

Regards
Leanne Watson

Darug Aboriginal Cultural Heritage Assessments

ABN 51734106483

Gordon Morton



Attention:
Josh Symons

Celestine Everingham



18.4.12

re Marsden Park Precinct - step 2.

This area is part of a very important cultural landscape for the Darug. DACH have reviewed your assessment of the Darug heritage and we support your management principles and we also feel the next step should be a meeting for stakeholders to discuss the proposal and to make recommendations to help protect places of significance for the future.

Yours Sincerely
C. Everingham

Cultural Heritage – Building respect for the past and Conservation for the future

Darug Aboriginal Cultural Heritage Assessments

ABN 51734106483

Gordon Morton



Celestine Everingham



8. 11. 11

Attention:
 Alison Nightingale
 re: Marsden Park Precinct -

DACHA wishes to register their interest
 in the above area. This precinct is part
 of an important and large Darug cultural
 landscape. We wish to have primary
 involvement and be consulted at all times.
 We look forward to working with you on
 this project.

Yours Sincerely,
 Celestine Everingham

Cultural Heritage – Building respect for the past and Conservation for the future

From: [REDACTED]
Sent: Monday, 6 February 2012 6:45 PM
To: Josh Symons
Subject: hi bro this is letter i sent on the 1-12- 11

DARUG - LAND - OBSERVATIONS



ABN: 87239202455



1-12-2011

Josh Symonds
Kelleher Nightingale Consulting Pty Ltd

Notification and Registration of ALL Aboriginal Interests
Re: Marsden Park Precinct, North West Growth Centre

Please be advice that D.L.O is seeking to be involved in any and all consultation meetings and field work.

This office specializes in Aboriginal and community consultation. An has a membership that comprises of Traditional owners from the area in question those retain strong story and song lines and oral history and continued contact. We would also like to state that we do not except or support any person or organization that are NOT from the DARUG Nation that comments regarding the said area.

Please also be advised that this aboriginal Organization does not do volunteer work or attend unpaid meetings. I hope that you advise your client of this so that, This Group will not be discriminated against and refused paid field work.

All Correspondence should be emailed to the following



Yours faithfully

Uncle
Gordon Workman
Darug Elder

Sites Officer



Tocomwall PTY LTD

ACN 137 694 618

ABN 13 137694618

5th December 2011

Attention: Josh Symons
Kelleher Nightingale Consulting
Suite 911-912 King Street
Sydney NSW 2000
Sent via Fax.

Dear Josh,

RE: Request for Registration for MARSDEN PARK PRECINCT NORTH WEST GROWTH CENTRE. Aboriginal Cultural Heritage Consultation: Stage 1

Tocomwall, trading as Yarrawalk is seeking *primary involvement* as a Primary Knowledge Holder in all consultation meetings and field work for (insert job)

Tocomwall represents traditional owners from this and retains local and oral history on behalf of its membership. We do not accept or support any person or organisation that comments regarding the said area unless confirmed in writing by myself.

Please also be advised that this Aboriginal organisation does not do volunteer work or attend unpaid meetings.

All correspondence should be emailed to the following [REDACTED] or to the above postal address.

Yours faithfully

Scott Franks
Director & Aboriginal Heritage Manager

Tocomwall
Trading as Yarrawalk

Integrating Landscape Science and Aboriginal Knowledge for our Sustainable Future

Kelleher Nightingale Consulting
 [Redacted] ARMY
 CORPORATION Gunjeewong Heritage Aboriginal
 Corporation, CHRIS CARROLL Turbise of 17
 Bellevue place PORTLAND NSW 2887 FOR AND
 AS stakeholder my family go back 6
 generations AND we have always been
 shown and taught about our ABORIGINAL
 people we would like to REGISTER AS
 stakeholders MARS DEN PARK PRECINCT
 WEST ORRUMTA CENTRE we liked RICHARD
 MARS DEN PARK FOR A LOT OF YEARS AND
 I KNOW THE AREA VERY WELL THE SAME
 FOR CATHERINE FIELD we would like to
 REGISTER AS STAKEHOLDERS
 Please excuse my writing BUT I AM GETTING
 OVER A SERIOUS HEAD OPERATION

Yours Sincerely
 Chris Carroll, Sen



From: [REDACTED]
Sent: Monday, 5 December 2011 5:16 PM
To: Josh Symons
Subject: FW: TRIM: registration of Aboriginal and Torres Strait Islander Advisory Committee

Hello Josh-

Please register the Committee using my name and contact details.
The Chairperson's name: Bruce Gale, can be listed as Aboriginal person representing the organisation.

Correspondence to Bruce / contact details, can be via my own.

The Committee will not meet again until the end of February 2012 and I will be able to clarify with people then who – if it is not Bruce- is nominated to be the contact person. If it changes at that point I will advise you.

Many thanks,

Maggie

Maggie Kyle
Community Capacity Building Officer
Parramatta City Council

[REDACTED]

From: Maggie Kyle
Sent: Monday, 5 December 2011 3:24 PM
To: 'josh.symons@knconsult.com.au'
Subject: TRIM: registration of Aboriginal and Torres Strait Islander Advisory Committee

Hello Josh,

I have received a letter from Alison Nightingale, Kelleher Nightingale Consulting regarding the Marsden Park Precinct.
Would you please register Parramatta City Council's Aboriginal and Torres Strait Islander Advisory Committee as an Aboriginal stakeholder?

I convene this Committee and the arrangement in place with the Committee is that I register them as an organisation and if members wish to register themselves as individuals they will do so.
I have forwarded your letter to all members.
I will continue to forward correspondence regarding this matter to them.

Many thanks Josh,

Maggie

Maggie Kyle
Community Capacity Building Officer
Parramatta City Council



Visit <http://www.parracity.nsw.gov.au>

Attention: This e-mail is privileged and confidential. If you are not the intended recipient please delete the message and notify the sender. The use, copying or distribution of this message or any information it contains, by anyone other than the intended recipient is prohibited by Parramatta City Council. Any views or opinions presented are solely those of the individual sender, except where the sender specifically states them to be the views of the Council.

Think before you print - help save our environment!

Message protected by MailGuard: e-mail anti-virus, anti-spam and content filtering.
<http://www.mailguard.com.au/mg>

[Report this message as spam](#)

From: [REDACTED]
Sent: Monday, 5 December 2011 3:24 PM
To: Josh Symons
Subject: registration of Aboriginal and Torres Strait Islander Advisory Committee

Hello Josh,

I have received a letter from Alison Nightingale, Kelleher Nightingale Consulting regarding the Marsden Park Precinct.

Would you please register Parramatta City Council's Aboriginal and Torres Strait Islander Advisory Committee as an Aboriginal stakeholder?

I convene this Committee and the arrangement in place with the Committee is that I register them as an organisation and if members wish to register themselves as individuals they will do so.

I have forwarded your letter to all members.

I will continue to forward correspondence regarding this matter to them.

Many thanks Josh,

Maggie

Maggie Kyle
Community Capacity Building Officer
Parramatta City Council

[REDACTED]

Visit <http://www.parracity.nsw.gov.au>

Attention: This e-mail is privileged and confidential. If you are not the intended recipient please delete the message and notify the sender. The use, copying or distribution of this message or any information it contains, by anyone other than the intended recipient is prohibited by Parramatta City Council. Any views or opinions presented are solely those of the individual sender, except where the sender specifically states them to be the views of the Council.

Think before you print - help save our environment!

Message protected by MailGuard: e-mail anti-virus, anti-spam and content filtering.
<http://www.mailguard.com.au/mg>

[Report this message as spam](#)