

**Proposed North Silverdale Rezoning,
Silverdale Road, Silverdale
Wollondilly Shire LGA, NSW**

Aboriginal Cultural Heritage Assessment Report

Prepared on behalf of Site Plus

June 2017

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Executive Summary

Kayandel Archaeological Services (KAS) was commissioned by Site Plus Pty Ltd on behalf of North Silverdale Centre Landowner Group (the Proponent) to prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) in relation to Aboriginal heritage within the properties of Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447, Silverdale Road, Silverdale, NSW.

The Department of Planning and Environment has issued a Gateway Determination for the proposal. Section 117 Directions under Direction 2.3 Heritage Conservation requires that an Aboriginal Archaeological and Cultural Heritage Assessment be undertaken.

Biosis previously undertook an Aboriginal due diligence assessment of the Subject Area for the proposed rezoning of north Silverdale. Based on advice received from the Office of Environment and Heritage (OEH), it was decided that an ACHAR would be prepared in accordance with the *Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW* (DECCW, 2010a).

The field survey was undertaken on 19th & 25th January 2017, to record the characteristics of the Subject Area (including identification of landforms), any physical evidence of Aboriginal land use and any information which could inform predictions about Aboriginal objects within the Subject Area.

The survey team consisted of Natalie Stiles (Kayandel) along with Glenda Chalker (CBNTCAC) (19th & 25th January 2017), Denise Ezzy (TLALC) (19th January 2017) and Shazda Brown (TLALC) (19th January 2017).

As identified in Section 6.5, no Aboriginal objects had previously been identified within the Subject Area.

As a result of the survey and assessment undertaken for the present study, two (2) additional Aboriginal sites were identified. These sites were assigned the names SD-IF-01 (AHIMS #PENDING), and SD-IF-02 (AHIMS #PENDING).

The DRAFT ACHAR was issued to the RAPs on the 18th April 2017; in accordance with Section 4 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010b:14) the proponent must give registered Aboriginal parties a minimum of 28 days from sending the DRAFT ACHAR to make submissions.

The comments from RAPs for the DRAFT ACHAR are due on the 16th May 2017.

RAP comments are to be included in the final ACHAR.

While the Planning Proposal for rezoning will not result in harm and/or impacts to the identified Aboriginal sites and/or their defined extents, it is possible that the Aboriginal sites may be impacted as a result of any subsequent Development Application that that results from the current proposed works.

Should the Planning Proposal be approved, an Aboriginal Heritage Impact Permit (AHIP), to impact the identified Aboriginal sites and/or their defined extents, would be necessary for any subsequent Development Application.

Obligations

1. Site Cards to be prepared for all Aboriginal sites identified in this study that are not currently recorded in Aboriginal Heritage Information Management System (AHIMS) maintained by the Office of Environment and Heritage;
2. Should Aboriginal sites and/or objects be found during the proposed work, work must cease immediately and OEH must be contacted to inspect the artefacts; and,
3. An Aboriginal Heritage Impact Permit under Part 6 of the *National Parks and Wildlife Act, 1974* may need to be sought for should the proposed works impact a previously unknown Aboriginal object as part of the works. This Aboriginal Heritage Impact Permit would be sought for all known and unknown Aboriginal objects within the Subject Area as a strategy to minimise the risk of delays during works that may results from unexpected finds.

Recommendations

The following management principles and recommendations are based on:

- ✦ The legal requirements of the *National Parks and Wildlife Act 1974* (as amended), whereby it is illegal to damage, deface or destroy an Aboriginal relic without first obtaining the written consent of the Director General of National Parks & Wildlife Service;
- ✦ The legal requirements of the *Heritage Act 1977*, whereby it is illegal to disturb or excavate any land knowing or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed unless the disturbance or excavation is carried out in accordance with an excavation permit;
- ✦ The requirements of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW, 2010a);
- ✦ The requirements of the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011);
- ✦ The findings presented within this Aboriginal Cultural Heritage Assessment Report; and,
- ✦ Recognition that the current assessment has been prepared for a rezoning proposal, and that there will be subsequent Development Applications for construction.

KAS recommends the following:

1. No further assessment of the Aboriginal heritage within the Subject Area is required to inform the Planning Proposal for rezoning;
2. Further investigation, in the form of subsurface test excavation in accordance with the *Code of Practice* (DECCW, 2010a), will be required for SD-IF-02 as identified in Figure 14 and Figure 16;
3. No further investigation of SD-IF-01, in the form of subsurface test excavation in accordance with the *Code of Practice* (DECCW, 2010a), will be required;
4. It is not necessary to seek an Aboriginal Heritage Impact Permit (AHIP) under Part 6 of the *National Parks and Wildlife Act 1974* for the Planning Proposal;

5. It would be necessary for any Development Application, subsequent the rezoning proposal, to seek an Aboriginal Heritage Impact Permit (AHIP) under Part 6 of the *National Parks and Wildlife Act 1974* in order to impact the identified Aboriginal sites and/or their defined extents (refer to Figure 16);
6. Should the proposed works be amended and result in potential impacts to areas previously not inspected as part of this assessment, further investigations may be required;
7. Further investigations may result in the identification of additional Aboriginal sites and/or amendments to the extents of sites shown within this report. It is recommended that any further investigation should also provide updated recommendations for the proposed works;
8. Temporary fencing should be erected around SD-IF-01 and SD-IF-02 to prevent inadvertent damage to the sites occurring prior to the approval of an AHIP;
9. The aforementioned temporary fencing should be maintained in good repair and should be periodically inspected by a qualified Archaeologist experienced in Aboriginal Cultural Heritage, until such time as an AHIP has been determined; and,
10. A copy of the final report should be sent to the Registered Aboriginal Parties (RAPs) identified in Table 3.

Disclaimer: This archaeological assessment and the management recommendations contained herein, will be independently reviewed by the Planning & Aboriginal Heritage Section of the NSW Office of Environment & Heritage (OEH), and the relevant Aboriginal community.

OEH and the Aboriginal community will make consideration of the findings of the consultant's report and the recommendations in relation to the management of cultural heritage. Formal approval for all actions outlined should be sought from the relevant authority prior to the completion of any works. At no time should automatic approval of the management recommendations stated herein be assumed.

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1 INTRODUCTION

Kayandel Archaeological Services (KAS) was commissioned by Site Plus Pty Ltd on behalf of North Silverdale Centre Landowner Group (the Proponent) to prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) in relation to Aboriginal heritage within the properties of Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447, Silverdale Road, Silverdale, NSW.

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Biosis previously undertook an Aboriginal due diligence assessment of the Subject Area for the proposed rezoning of north Silverdale. Based on advice received from the Office of Environment and Heritage (OEH), it was decided that an ACHAR would be prepared in accordance with the *Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW* (DECCW, 2010a).

1.1 Location of the Subject Area

The Subject Area is situated within the Wollondilly Shire Council (WSC) Local Government Area (LGA) and is located on the eastern side of Silverdale Road (see Figure 1).

The Subject Area comprises of the allotments listed below, and covers approximately 68.12ha. The Subject Area extends along the eastern side of Silverdale Road, and from Waterhouse Drive and Lachlan Close to the south (see Figure 2):

- ✦ Lot 2 DP 519533;
- ✦ Lot 6 DP 1086325;
- ✦ Lot A DP 161634;
- ✦ Lots 7, 10 & 11 DP 38123;
- ✦ Lots 121 & 122 DP 747833; and,
- ✦ Lots 199 & 200 DP 1092447.

1.2 Proposed Works

The Subject Area is currently zoned as RU2 Rural Landscape and B1 Neighbourhood Centre under Wollondilly Local Environmental Plan 2011 (LEP). The Proponent has proposed that the Subject Area be rezoned as a mixture of R2 Low Density Residential, R3 Medium Density Residential, B2 Local Centre, B4 Mixed Use, and E4 Environmental Management.

1.3 Study Aim and Objectives

The objective of this study is to produce a report that details the Aboriginal heritage within the Subject Area, and presents sufficient information to facilitate an informed decision regarding the potential impact to known and unknown Aboriginal heritage within the Subject Area in accordance with the *Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW* (Code of Practice) (DECCW, 2010a).

The report has therefore been prepared in accordance with the specifications of the *Code of Practice* (DECCW, 2010a) and *The Guide for Investigating, Assessing, and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011). The following tasks were undertaken to achieve these objectives:

- ✦ A review of background information, including landscape and ethnographic history as described in the *Code of Practice* (DECCW, 2010a);
- ✦ A review of archaeological context, including identification of known Aboriginal sites in the Subject Area through a search of Aboriginal Heritage Information Management System (AHIMS) and an analysis of existing archaeological reports relating to the Subject Area and its immediate environs;
- ✦ Detail the consultation undertaken with Aboriginal community stakeholders;
- ✦ Determine if subsurface artefacts are present within the area defined as Potential Archaeological Deposit (PAD);
- ✦ Characterise the nature of any archaeological deposits encountered (within the limitations of the sampling and processing methodology); and,
- ✦ Provide informed mitigation measures and management recommendations for any sites located within the proposed development area.

1.4 Limitations

The study was limited primarily by previous land disturbance at the site. This took the form of construction of petrol station and shopping centre, farming practices, such as initial vegetation clearance for creation of paddocks, fencing and stock grazing, light industrial practices such as nursery, and residential construction (refer to Figure 9).

Limited visibility of the ground surface within the Subject Area was a constraint on the visual assessment conducted for this project. Areas of ground surface exposure within the Subject Area had >40% visibility.

1.5 Personnel

This study was carried out by Kayandel Archaeological Services (KAS). The field survey was completed by Natalie Stiles. Background research was undertaken by Natalie Stiles. Mapping was completed by Lance Syme and Natalie Stiles. Natalie Stiles drafted the report, which was reviewed by Lance Syme.

The process for identifying Registered Aboriginal Parties (RAPs) and community consultation was undertaken by Kristen Kerr under the supervision of Lance Syme. The qualifications of the KAS team are included on Table 1, as required by the *Code of Practice* (DECCW, 2010a).

Person	Qualifications	Experience	Tasks
Lance Syme	BArts (Arch/Palaeo), Grad. Dip. (Heritage Cons.), M.ICOMOS	19 years	Project supervisor, mapping, report review
Natalie Stiles	BArts (Arch/Palaeo), Grad. Cert. Arts (Arch)	6 years	Background research, field survey, report drafting, mapping
Kristen Kerr	-	5 years	RAP Identification

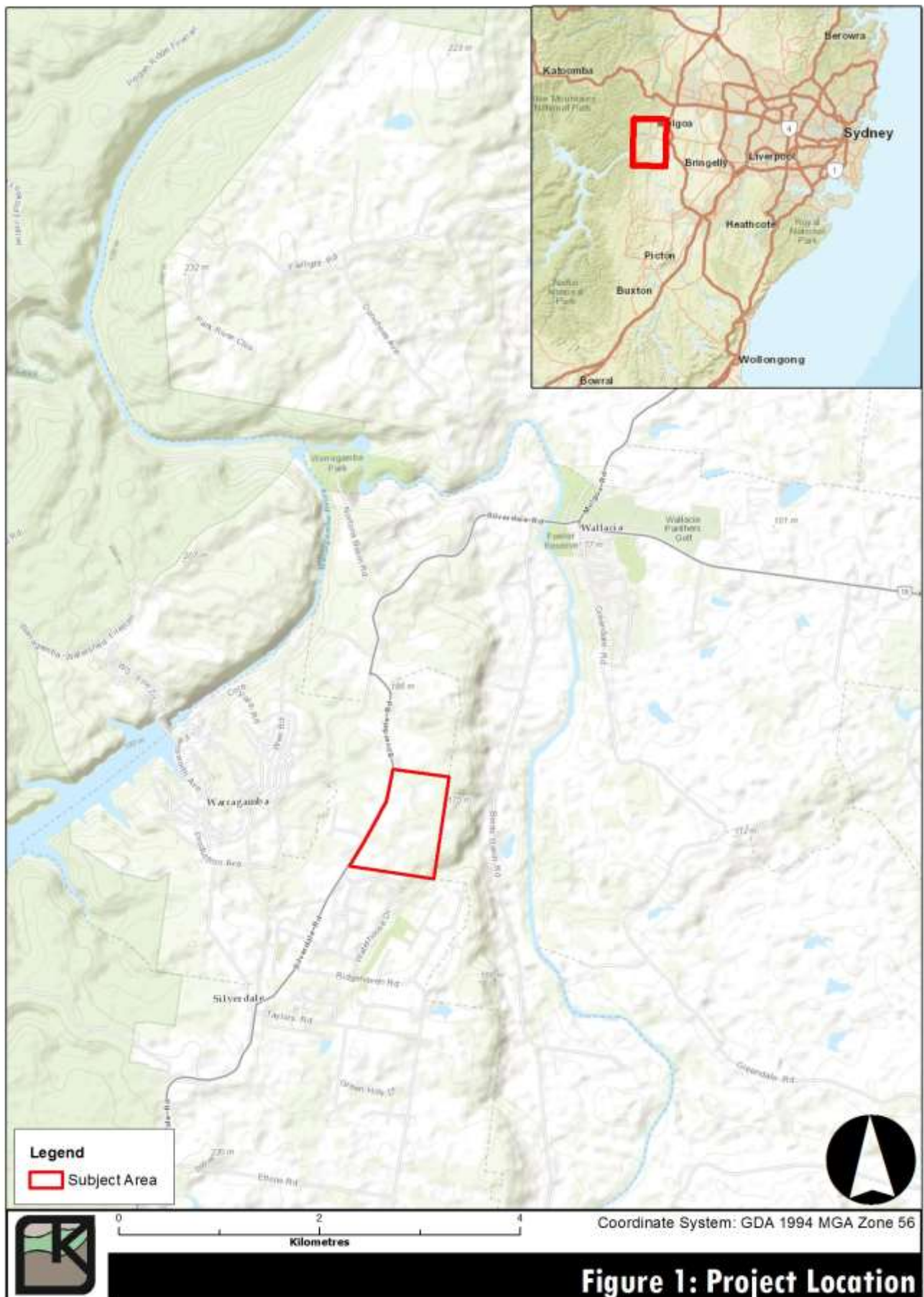
Table 1: KAS Personnel involved in the Archaeological Assessment

Lance Syme, Principal Archaeologist, Kayandel Archaeological Services BA (Arch/Palaeo), Grad Dip. (Heritage Conservation), M.ICOMOS

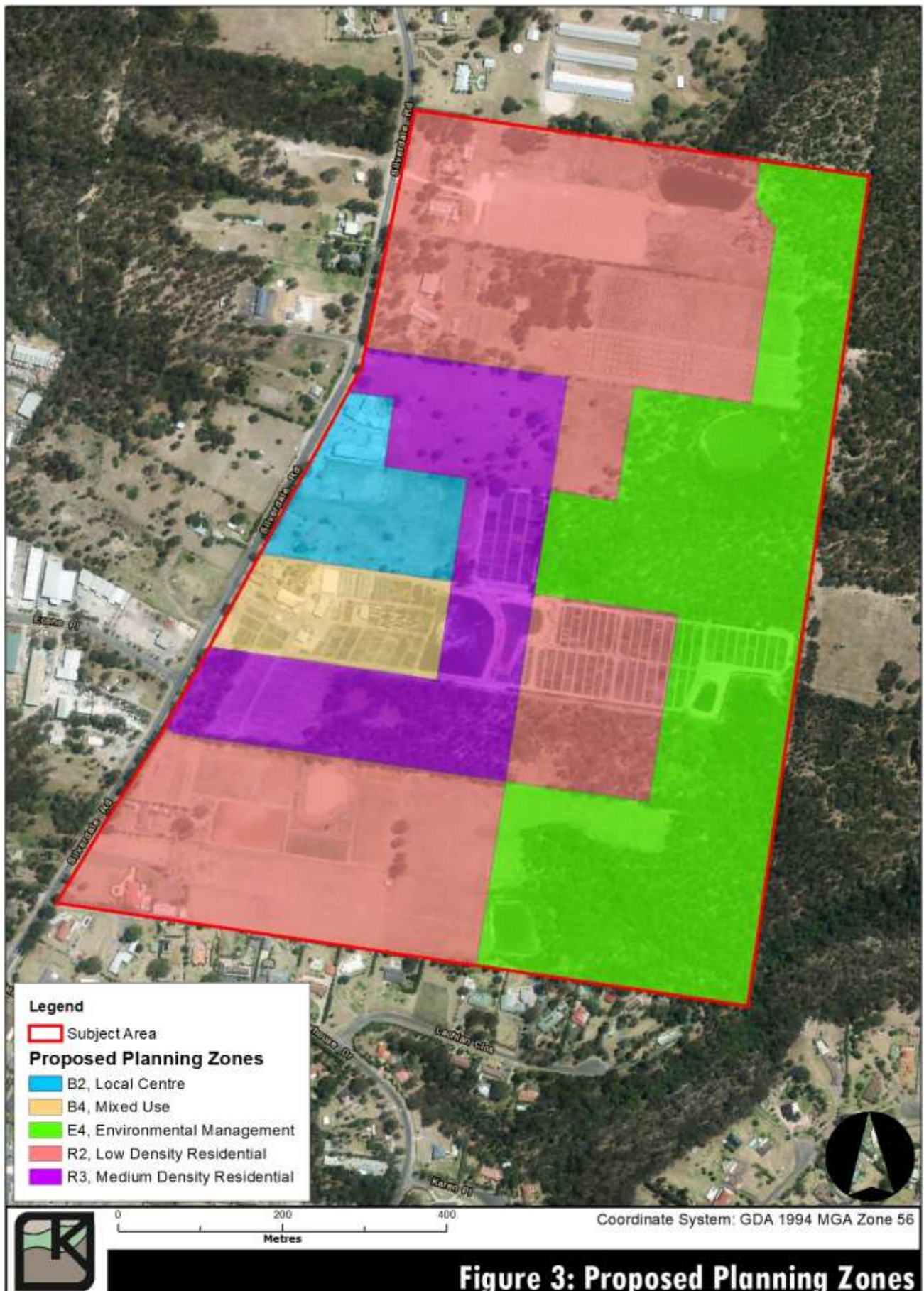
As principal archaeologist and director of Kayandel Archaeological Services, Lance has conducted projects that have variously included Aboriginal and non-Aboriginal community consultation, heritage management liaison, field survey, site recording, archaeological excavation, artefact analysis and interpretation, archival research, and report preparation detailing heritage assessment and recommendations for cultural management plans. Projects undertaken to date have been completed within a full range of statutory contexts ranging from principal roles carried out as part of the Master planning process, Conservation Management Planning (CMP),

preparation of Environmental Impact Studies (EIS), locality specific Reviews of Environmental Factors (REF), and the needs that develop as a consequence of ongoing Development Applications.

Lance is a Full Member of the International Council on Monuments and Sites (ICOMOS), and an Expert Member of the International Committee on Archaeological Heritage Management.







2 APPLICABLE POLICY AND LEGISLATION

Aboriginal and non-Aboriginal cultural heritage in Australia is protected and managed under a variety of legislation. The following section provides a brief summary of the Acts which are relevant to the management of cultural heritage in NSW. It is important to note that these Acts are presented as a guide and are not legal interpretations of legislation by the consultant.

2.1 Commonwealth Legislation

2.1.1 Aboriginal and Torres Strait Islander Heritage Protection Act 1984

The purpose of the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Heritage Protection Act) is the preservation and protection from injury or desecration of areas and objects in Australia and in Australian waters that are of particular significance to Aboriginal people in accordance with Aboriginal tradition.

Under the Heritage Protection Act the responsible Minister can make temporary or long-term declarations to protect areas and objects of significance under threat of injury or desecration. The Act can, in certain circumstances, override state and territory provisions, or it can be implemented in circumstances where state or territory provisions are lacking or are not enforced. The Act must be invoked by or on behalf of an Aboriginal or Torres Strait Islander or organisation.

2.1.2 Environment Protection & Biodiversity Conservation Act 1999 (EPBC Act)

The *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) took effect on 16 July 2000. Under Part 9 of the EPBC Act, any action that has, or is likely to have, a significant impact on a matter of National Environmental Significance (known as a controlled action under the Act), may only progress with approval of the Commonwealth Minister for the Environment. An action is defined as a project, development, undertaking, activity (or series of activities), or alteration to any of these. Where an exception applies, an action will also require approval if:

It is undertaken on Commonwealth land and will have or is likely to have a significant impact;

1. It is undertaken outside Commonwealth land and will have or is likely to have a significant impact on the environment on Commonwealth land; and,
2. It is undertaken by the Commonwealth and will have or is likely to have a significant impact.

Under Section 28 subsection (1) "The Commonwealth or Commonwealth Agency must not take inside or outside Australian jurisdiction an action that has, will have, or is likely to have a significant impact on the environment inside or outside Australian jurisdiction." The EPBC Act defines 'environment' as both natural and cultural environments and therefore Aboriginal and historic cultural heritage items included on the Register of the National Estate are regarded as part of the cultural environment.

Recently, Australia has changed legislation that protects its national heritage places. Three new laws came into effect in January 2004 and are essentially a combination of previous heritage system with a number of changes that include the establishment of a National Heritage List (NHL) and a Commonwealth Heritage List (CHL).

The National Heritage List records places with outstanding natural and cultural heritage values that contribute to Australia's National identity. The Commonwealth Heritage List will comprise natural, Aboriginal and historic places owned or managed by the Commonwealth. The new laws provide changes that offer greater legal protection under the existing *Environment Conservation and*

Biodiversity Conservation Act 1999 (EPBC Act). Under the new system, National Heritage will join six other important 'matters of national environmental significance' (NES) already protected by the EPBC Act.

The three new Acts are:

- ✦ The Environment and Heritage Legislation Amendment Act (No.1) 2003;
- ✦ The Australian Heritage Council Act 2003; and
- ✦ The Australian Heritage Council (Consequential and Transitional Provisions) Act 2003

Approval under the EPBC Act is required if you are proposing to take an action that will have, or is likely to have, a significant impact on the National Heritage values of a National Heritage place and/or any other NES matter. This action must be referred to the Australian Government Minister for the Environment and Heritage. The Minister will decide whether an action will, or is likely to, have a significant impact on a matter of national environmental significance.

The heritage provisions of the EPBC Act allow for a transition period whilst the National and Commonwealth Heritage Lists are finalised. During this transition period the Register of the National Estate acts in conjunction with the formative National and Commonwealth lists to provide full coverage for items already identified as having cultural heritage significance.

2.1.3 Native Title Act 1993 (Amended)

The *Native Title Act of 1993*, as amended, recognises and protects native title, and provides that native title cannot be extinguished contrary to the Act. The National Native Title Tribunal (NNTT) is a Commonwealth Government agency set up under this Act to mediate native title claims under the direction of the Federal Court of Australia.

The National Native Title Tribunal maintains the following registers:

- ✦ National Native Title Register;
- ✦ Register of Native Title Claims;
- ✦ Unregistered Claimant Applications; and
- ✦ Register of Indigenous Land Use Agreements.

The objective of a search of the NNTT registers is to identify possible Aboriginal Stakeholders that would not perhaps receive representation as part of the Local Aboriginal Land council or Elders groups.

2.2 New South Wales Legislation

The following New South Wales legislation protects aspects of cultural heritage and is relevant to development activities in the Subject Area.

2.2.1 Environmental Planning and Assessment Act 1979

The EP&A Act requires that consideration be given to environmental impacts as part of the land use planning process. This includes impacts on Aboriginal and non-Aboriginal cultural heritage items and places. The Act also requires that Local Government Areas (LGAs) prepare Local Environmental Plans (LEP) and Development Control Plans (DCP) in accordance with the Act to provide guidance on the level of environmental assessment required. LEPs often list locally significant heritage items. Three parts of the EP&A Act are most relevant to Heritage. Part 3 relates to planning instruments, including those at local and regional levels; Part 4 controls development assessment processes; and Part 5 refers to approvals by determining authorities.

2.2.2 National Parks and Wildlife Act 1974

The *National Parks and Wildlife Act 1974* provides for protection of Aboriginal objects (sites, relics and cultural material) and Aboriginal places. Under the Act (Section 5), an Aboriginal object is defined as:

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

An Aboriginal place is defined under this Act as an area that has been declared by the Minister administering the *National Parks and Wildlife Act* as a place of special significance for Aboriginal culture. It may or may not contain physical Aboriginal objects.

Under Section 90 of the Act it is an offence to knowingly destroy, deface, damage or desecrate, or cause or permit the destruction, defacement, damage or desecration of, an Aboriginal object or Aboriginal place, without the prior written consent from the Director-General of the NSW Office of Environment and Heritage (OEH). In order to obtain such consent, a Section 90 Aboriginal Heritage Impact Permit (AHIP) application must be submitted and approved by the OEH Director-General. In considering whether to issue a permit under Section 90, OEH will take into account:

- ✦ The objectives and justifications for the proposed activity;
- ✦ The appropriateness of the methodology to achieve the objectives of the proposed activity;
- ✦ The significance of the Aboriginal object(s) or place(s) subject to the proposed impacts;
- ✦ The effect of the proposed impacts and the mitigation measures proposed;
- ✦ The alternatives to the proposed impacts;
- ✦ The conservation outcomes that will be achieved if impact is permitted;
- ✦ The outcomes of the Aboriginal community consultation regarding the proposed impact and conservation outcomes;
- ✦ The views of the Aboriginal community about the proposed activity; and,
- ✦ The knowledge, skills, and experience of the nominated person (s) to adequately undertake the proposed activity.

Under Section 89A of the Act it is a requirement to notify the OEH Director-General of the location of an Aboriginal object. Identified Aboriginal items and sites are registered with the NSW OEH on AHIMS.

2.2.3 The Heritage Act 1977 (NSW) (Amended 1999)

The *Heritage Act 1977* is the primary piece of State legislation affording protection to all items of environmental heritage (natural and cultural) in New South Wales. "Items of environmental heritage" include places, buildings, works, relics, moveable objects and precincts identified as significant based on historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic values. A 'Place' is defined as an area of land, with or without improvements and a 'Relic' is defined as any deposit, object or material evidence that relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and that is 50 years or more old. The *Heritage Act 1977*, established the Heritage Council of NSW, provides advice and recommendations to the Minister for Planning relating to conservation and management of items of environmental heritage. The Heritage Council is also required to maintain a database of items of

State heritage significance: the State Heritage Register (SHR), a database of items of both State and local heritage significance and the State Heritage Inventory (SHI).

If the Heritage Council believes that a heritage item or place needs to be conserved, it can make a recommendation to the Minister, who decides whether to place protection on that item. There are two types of protection available: interim heritage orders and listing on the State Heritage Register. These forms of protection are 'binding directions', which means that the heritage item that is protected in one of these ways cannot be demolished, redeveloped or altered without permission from the Heritage Council.

The *Heritage Act 1977* does not apply to Aboriginal "relics" (any deposit, object or material evidence). These items are protected under the *National Parks and Wildlife Act 1974*; however, some aspects of Aboriginal cultural heritage management and protection are covered by provisions of the *Heritage Act 1977*.

The Heritage Council NSW can recommend that the Minister of Planning make Interim Protection Orders (IPOs) to preserve areas of land that have natural, scientific or cultural significance that can include land with Aboriginal places or relics on it.

Particular Aboriginal places and items that the community has formally recognised as being of high cultural value can also be listed on the State Heritage Register. This provides an extra level of protection in addition to that provided by the *National Parks and Wildlife Act 1974*.

2.3 Local Government Controls

2.3.1 Wollondilly Local Environmental Plan (LEP) (2011)

Heritage items are protected under the provisions of the Wollondilly Local Environmental Plan (LEP) (2011) Section 5.10.

Section 5.10.2 of the LEP outlines consent requirements for undertaking activities within identified heritage conservation areas, such as within the curtilage of locally listed heritage items. Heritage items and archaeological sites are listed in Schedule 5 to the LEP. If a proposed development does not adversely affect the heritage significance of the heritage item the development consent is not required. Therefore the LEP recommends a heritage document assessing the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item be created for the consent authority for all development to a heritage item.

There were no heritage items listed under Schedule 5, Part 1 of the LEP (Wollondilly Shire Council, 2011) identified within the Subject Area.

2.3.2 Wollondilly Development Control Plan (DCP) (2016)

Part 7 'Aboriginal Heritage' of the *Wollondilly Development Control Plan 2016* identifies the criteria that Council uses to determine if an Aboriginal heritage impact assessment is required in accordance with Section 5.10 of the LEP. Under Section 7.2 of the DCP, a report prepared in accordance with the *Code of Practice* (DECCW, 2010a) may be required at the discretion of the assessing officer where:

- ✦ There is impact or disturbance to the content, or within the immediate vicinity (100 metres) of a known Aboriginal object or Aboriginal place of heritage significance;
- ✦ There is impact or disturbance to, or within the immediate vicinity (100 metres) of a previously recorded or known Aboriginal object or Aboriginal place of heritage significance and can include a cultural landscape, an existing or former ceremonial ground, a burial

ground or cemetery, a story place or mythological site, a former Aboriginal reserve or historic encampment, or an archaeological site of high significance;

- ✦ A proposal (including subdivision) which affects primarily undeveloped land (irrespective of land size) and has the following site features:

- ✦ River frontage;
- ✦ Creek line;
- ✦ Sandstone exposures at ground level larger than 5m² ;
- ✦ Sandstone cliff line or isolated boulder higher than 2m; and,
- ✦ Disturbance to the roots, trunk, branches, of old growth trees, which are native to the Wollondilly Shire and greater than 150 years of age.

2.4 Non Statutory Listings

The National Trust of Australia (NSW) is a community-based organisation with independently constituted Trusts in each state and territory. The NSW National Trust compiles a heritage list primarily of historic places, but they also include some Aboriginal and natural places. Listing helps to provide recognition, and promote public appreciation and concern for local heritage.

The National Trust Register has no legal foundation or statutory power, but is recognised as an authoritative statement on the significance to the community of particular items, and is held in high esteem by the public.

3 PARTNERSHIP WITH INDIGENOUS COMMUNITIES

The Office of Environment and Heritage (OEH) recognises and values Aboriginal cultural heritage. Evidence of Aboriginal occupation is present as objects throughout the NSW landscape, and cultural heritage is present in the memories, stories and relations Aboriginal people have with their traditional land or Country. Aboriginal cultural heritage is an essential part of Aboriginal people's cultural identity, connection, and sense of belonging to Country. OEH recognises that Aboriginal people who hold cultural knowledge should be provided an opportunity to inform OEH of the cultural significance of objects or places, and have an input into the management of their cultural heritage. To this end, they produced the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010b).

In recognising the rights and interests of Aboriginal people in their cultural heritage OEH acknowledges that Aboriginal people:

- ✦ Are the primary source of information about the value of their heritage and how this can be protected and conserved;
- ✦ Must have an active role in any Aboriginal cultural heritage planning process;
- ✦ Must have early input into the assessment of cultural significance of their heritage and its management so that they can continue to fulfil their obligations towards their heritage; and,
- ✦ Must control the way in which cultural knowledge and other information relating specifically to their heritage is used, as this may be an integral aspect of its heritage value (DECCW 2010b:2).

OEH sets out a process for identifying Aboriginal parties who may have information on the cultural significance of objects or places, and providing Aboriginal people with opportunities to comment on the methods used to identify and assess objects or places, and opportunities to contribute to the development of management options and recommendations (DECCW 2010b:7).

The process must be followed if an application is made to OEH under Part 6 of the *National Parks and Wildlife Act, 1974* as amended. Consultation for the current study was carried out in accordance with the specified requirements (DECCW 2010b).

KAS undertook consultation with the identified Aboriginal stakeholders known to hold cultural knowledge relating to the Subject Area and who were generally accepted within the Aboriginal community as being the holder of a right to speak for the *country* in which the Subject Area is located. The purpose of this community consultation was to understand the cultural values of the Subject Area and to understand the community's views and concerns about the proposed development.

The objectives of Aboriginal community consultation were to:

- ✦ Give Aboriginal people an opportunity to comment on the design of the field methods for identifying Aboriginal objects or places within the Subject Area;
- ✦ Obtain information about the cultural significance and values of any Aboriginal objects or places within the Subject Area;
- ✦ Give Aboriginal people an opportunity to contribute to the development of cultural heritage management options and recommendations; and,
- ✦ Give Aboriginal people an opportunity to comment on any draft report.

3.1 Consultation Process

3.1.1 Stage 1 – Notification of Project Proposal and Registration of Interest

As there was not an approved determination of native title in relation to the Subject Area (see Appendix II), the identification of RAPs was carried out in accordance with the specifications of Section 4.1.2 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010b:10). KAS made enquiries with the following (see Appendix I):

- ✦ Office of Environment and Heritage;
- ✦ Tharawal Local Aboriginal Land Council (TLALC);
- ✦ The Registrar, Aboriginal Land Rights Act 1983, for a list of Aboriginal owners;
- ✦ The National Native Title Tribunal for a list of registered native title claimants, native title holders and registered Indigenous Land Use Agreements;
- ✦ Native Title Services Corporation Limited (NTSCORP Limited);
- ✦ Wollondilly Shire Council; and,
- ✦ Greater Sydney Local Land Services (formerly known as Hawkesbury-Nepean Catchment Management Authority).

Correspondence from these organisations is included in Appendix III to Appendix IX.

The groups and individuals that were identified by the various organisations as having a potential interest in the cultural heritage of the Subject Area as a result of these enquiries are listed in Table 2.

Potential Aboriginal Party	Representative/Contact	Identified By
Deerubbin Local Aboriginal Land Council	Kevin Cavanagh	OEH
Tharawal Local Aboriginal Land Council	-	OEH/WSC
Metropolitan Local Aboriginal Land Council	Nathan Moran	OEH
Gandangara Local Aboriginal Land Council	-	OEH
La Perouse Local Aboriginal Land Council	Chris Ingrey	OEH
Parramatta City Council Aboriginal Advisory Committee	-	OEH
Holroyd City Council Advisory Committee	-	OEH
Darug Custodian Aboriginal Corporation	Justin Coplin	OEH
Darug Tribal Aboriginal Corporation	-	OEH
Darug Aboriginal Cultural Heritage Assessments	Gordon Morton	OEH
Wollondilly Aboriginal Advisory Committee	Denise Ezzy	WSC
Darug Land Observations	Gordon Workman	OEH
-	Des Dyer	OEH
-	Ken Foster	OEH
La Perouse Botany Bay Corporation	Yvonne Simms	OEH
-	Norma Simms	OEH
-	Andrew & Matthew Coe	OEH
Gundungurra Aboriginal Heritage Association Inc.	Merl Williams	OEH
Gundungurra Tribal Council Aboriginal Corporation	Sharon Brown	OEH
-	Trevor Robinson	OEH
-	Tania Matthews	OEH
A1 Indigenous Services	Carolyn Hickey	OEH
Cubbitch Barta Native Title Claimants Aboriginal Corporation	Glenda Chalker	OEH/WSC

-	Rebecca Chalker	OEH
-	Eric Keidge	OEH
Gunjeewong Cultural Heritage Aboriginal Corporation	Cherie Carroll Turrise	OEH
Merrigarn Indigenous Corporation	Shaun Carroll	OEH
Corroboree Aboriginal Corporation	Steve Johnson	OEH
Murri Bidgee Mullangari Aboriginal Corporation	Darleen Johnson	OEH
Muragadi Heritage Indigenous Corporation	Jesse Johnson	OEH
Bidjawong Aboriginal Corporation	James Carroll	OEH
-	Phil Khan	OEH
Peter Falk Consultancy	Peter Falk	OEH
Wurrumay Consultants	Kerrie Slater	OEH
Warragil Cultural Services	Aaron Slater	OEH
Kawul Cultural Services	Kelly Slater	OEH
Tocomwall	Scott Franks	OEH
D'harawal Mens Aboriginal Corporation	Elwyn Brown	OEH
Amanda Hickey Cultural Services	Amanda Hickey	OEH
Widescope Indigenous Group	Steven Hickey	OEH
HSB Consultants	Patricia Hampton	OEH
Rane Consulting	Tony Williams	OEH
Anthony Williams	Anthony Williams	OEH
Dhinawan - Dhigaraa Culture and Heritage Pty Ltd	Ricky Fields	OEH
Gunyu	Kylie Ann Bell	OEH
Walbunja	Hika Te Kowhai	OEH
Badu	Karia Lea Bond	OEH
Goobah Developments	Basil Smith	OEH
Wullung	Lee-Roy Boota	OEH
Yerramurra	Robert Parson	OEH
Nundagurri	Newton Carriage	OEH
Murrumbul	Mark Henry	OEH
Jerrinjong	Joanne Stewart	OEH
Pemulwuy CHTS	Pemulwuy Johnson	OEH
Bilinga	Simalene Carriage	OEH
Munyunga	Kaya Bell	OEH
Wingikara	Hayley Bell	OEH
Minnamunnung	Aaron Broad	OEH
Gundungurra Tribal Technical Services	Christopher Payne	OEH
Walgala	Ronald Stewart	OEH
Thauaira	Shane Carriage	OEH
Dharug	Andrew Bond	OEH
Bilinga Cultural Heritage Technical Services	Robert Brown	OEH
Gunyu Cultural Heritage Technical Services	Darlene Hoskins - McKenzie	OEH
Munyunga Cultural Heritage Technical Services	Suzannah McKenzie	OEH
Murrumbul Cultural Heritage Technical Services	Levi McKenzie	OEH

Wingikara Cultural Heritage Technical Services	Wandai Kirkbright	OEH
Gulaga	Wendy Smith	OEH
Biamanga	Seli Storer	OEH
Callendulla	Corey Smith	OEH
Murramarang	Roxanne Smith	OEH
Duncan Suey & Associates	Darren Duncan	OEH
Butucarbin Aboriginal Corporation	Jennifer Beale	OEH
Didge Ngunawal Clan	Lillylea Carroll	OEH
Ginniderra Aboriginal Corporation	Steven Johnson	OEH
Gundungurra Tribal Council Aboriginal Corporation	-	NNTT
Gundungurra Aboriginal Heritage Association Inc.	-	NNTT
-	Elsie Stockwell and Mervyn Trindall	NNTT

Table 2: Potential Aboriginal Parties

In accordance with Section 4.1.3 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010b:11), an advertisement for the project was placed in the Wollondilly Advertiser on 16th November 2016 (Figure 4). There was no response to this advertisement, KAS subsequently wrote to the organisations and individuals outlined in Table 2 (see Appendix X), and the responses to these letters are given in Appendix I and O.

Those organisations that responded, and registered their interest in the project, are outlined in Table 3.

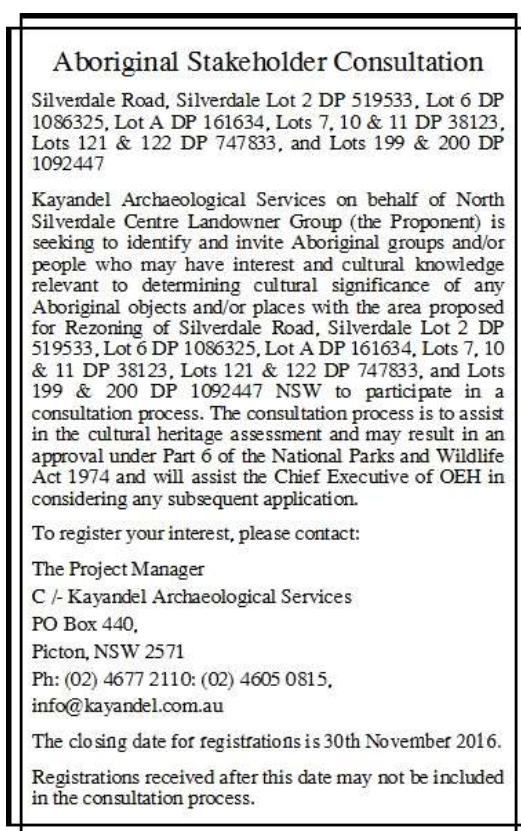


Figure 4: Public Notice

Registered Aboriginal Party	Representative
Gulagas	-
Cubbitch Barta Native Title Claimant Aboriginal Corporation (CBNTCAC)	Glenda Chalker
Tharawal Local Aboriginal Land Council (TLALC)	Denise Ezzy
-	Andrew & Matthew Coe
Corroboree Aboriginal Corporation	Steve Johnson
Walbunja	Hika Tekowhai
Nundagurri	Newton Carriage
Badu	Karia Bond
Yerramurra	Owen Carriage Jr
Ngarigo	Newton Bond
Ngunawal	Mitchel Freeman
Gangangarra	Kim Carriage
Eora	Kahu Brennan
Elouera	Lenard Nye
Bidawal	Stella Brieley
Djiringanj	Keith Nye
Tharawal CHTS	Violet Carriage
Thauaira	Shane Carriage
Murrin	Tarlarra Te Kowhai
Kuringgai	Toni Brierley
Dharug	Andrew Bond
Wandandian	William Bond
Walgalu	Ronald Stewart
Murrumbul	Steven McCarron
Bilinga	Simalene Carriage
Wingikara	Izahya Henry
Duncan Suey & Associates	Darren Duncan
Minnamunnung	Aaron Broad
AAS	Andrew Williams
Widescope	Steven Hickey/Donna Hickey
A1 Indigenous Services	Carolyn Hickey
Pollowan Phillip Khan	Phil Khan
Darug Land Observations	Jamie Workman
Kawal Cultural Services	Vicky Slater
Wurrumay Consultants	Kerry Slater
Warrigal	Aaron Slater
Dhinawan-Dhigaraa Culture and Heritage	Ricky Fields

Table 3: Registered Aboriginal parties at the completion of the registration period (30th November 2016).

3.1.2 Stage 2 – Presentation of Information about the Proposed Project

In fulfilment of Section 4.2.1 and 4.2.2 of *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010b:12), KAS produced a Stage 2/Stage 3 Document that was provided to all RAPs (see Table 3), outlining the project details, the local environment and previous Aboriginal heritage assessments undertaken, the proposed field survey methodology, and the project time line (refer to Appendix XII).

Comments were received from four of the RAPs (see Appendix XIII), all of which agreed with the methodology detailed in the combined Stage 2/Stage 3 Document.

A copy of the combined Stage 2/Stage 3 Document is included in Appendix XII. Responses to these letters are included in Appendix XIII.

3.1.3 Stage 3 – Gathering Information about Cultural Significance

In fulfilment of the Stage 3 requirements of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010b), KAS provided the RAPs with a combined Stage 2/Stage 3 Document, which outlined the project details, environmental context, and proposed field survey methodology (see Appendix XIII).

No comments or information relating to cultural significance was received from the RAPs as a result of this document being issued (see Appendix XIII).

3.1.4 Stage 4 – Review of Draft Cultural Heritage Assessment Report

KAS undertook a consultation process as outlined in Section 3.1 above. RAP submission comments relating to the draft ACHAR for the investigation undertaken detailed in this report are included in Table 4 and Appendix XV.

RAP Submission	RAP's Comment	Response
CBNTCAC (Received 24/4/2017)	1. The ridge line that runs North to South is an old Aboriginal walking track and is a separation of the water catchments, with one side of Silverdale Road, the water flowing to the West, and the other water flows to the East. Both flows eventually running to the North into the Nepean River catchment. 2. The site recorded as SDIF02 is situated on one of the spur lines heading in an easterly direction off Silverdale Road. 3. Even SDIF01 is possibly, although it is harder to tell also on the spur line further to the northern end of the project area. 4. The Silverdale Road ridgeline would have been used for travellers to move through different groups, and certainly there would have been occasions for people to camp whilst enroute. 5. I agree with the recommendations that have been made as part of the ACHAR.	1. KAS agrees that the ridgeline through Silverdale would have been utilised Aboriginal people as a travel route. 2. Based on the topography and landforms SD-IF-02 is located on a spur that runs in a northeast direction. 3. Based on the topography and landforms SD-IF-01 is located on a spur that runs in a northeast direction. 4. KAS agrees that the ridgeline through Silverdale is likely to have been utilised by Aboriginal people while transiting through an area and that Aboriginal people may have camped along the ridge. There has been insufficient archaeological investigations (both surface and sub-surface investigations) undertaken within the Silverdale area, and as such a generalised predictive model has been prepared as part of this assessment. 5. Thank you for providing comments in regards to Aboriginal cultural heritage.
TLALC (Received 16/5/2017)	Agree with the recommendations and conclusions stated in the Aboriginal Cultural Heritage Assessment report	Thank you for providing comments in regards to Aboriginal cultural heritage.
Corroboree Aboriginal Corporation (Received 10/5/2017)	We see no problems.	Thank you for providing comments in regards to Aboriginal cultural heritage.
AAS (Received 23/4/2017)	AAS read your review on the above project and consider it to true and accurate	Thank you for providing comments in regards to Aboriginal cultural heritage.
Widescope (Received 28/4/2017)	I Steven Hickey seek to endorse the ACHA	Thank you for providing comments in regards to Aboriginal cultural heritage.
Darug Land Observations (Received 11/5/2017)	1. Would like to receive a copy of the Section 90 Aboriginal Heritage	1. Should it be necessary to seek an AHIP for any of the Aboriginal sites

	Impact Permit (AHIP) 2. Would be involved in the monitoring of the topsoil removal, test excavation and all other forms of works to be carried out on the site	identified within the Subject Area, Kayandel will comply with all conditions of an approved AHIP. One condition of any approved AHIP will be to provide a copy of the AHIP to all RAPs. 2. The Proponent will comply with all their obligations in accordance with the <i>Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010</i> (DECCW, 2010b).
Pollowan Phillip Khan	Have read your report and am happy with it and all your recommendations	Thank you for providing comments in regards to Aboriginal cultural heritage

Table 4: RAP Comments and Response related to the Rezoning Proposal ACHAR

4 STUDY METHODS

The assessment reported here involved Aboriginal community consultation, background research, the completion of the field survey. A breakdown of the various tasks that have been undertaken to achieve the objectives of this assessment is provided below. The process for Aboriginal community consultation is set out in Section 3 above.

4.1 Background Research

Prior to the fieldwork, the following tasks were undertaken:

- ✦ A search of the AHIMS maintained by OEH was obtained to determine whether any sites or areas of sensitivity had previously been recorded within or near the Subject Area. This search also assisted with the development of a local site distribution model;
- ✦ A search of the AHIMS report catalogue was conducted to identify previous archaeological studies that had been carried out in and near the subject area. The reports identified were able to provide information on the local archaeological context and assisted with the development of predictions for site location within the Subject Area;
- ✦ Published archaeological texts and grey literature regarding the Silverdale area were consulted to assist with the development of regional and local archaeological contexts for the Subject Area;
- ✦ KAS library was searched and an internet search was carried out to identify any Aboriginal history, ethnography, environmental and climate information relevant to the Subject Area;
- ✦ A predictive model for the Subject Area was prepared; and,
- ✦ The topographic map and air photos were examined to plan the field survey. It was intended that pedestrian survey (transects) would target areas of exposure which could have improved ground surface visibility (GSV), as well as areas which appeared less disturbed and had potential for intact Aboriginal sites.

4.1.1 Field Inspection

The field survey was undertaken on 19th & 25th January 2017, to record the characteristics of the Subject Area (including identification of landforms), any physical evidence of Aboriginal land use and any information that could inform predictions about Aboriginal objects within the Subject Area.

The survey team consisted of Natalie Stiles (Kayandel) along with Glenda Chalker (CBNTCAC) (19th & 25th January 2017), Denise Ezzy (TLALC) (19th January 2017) and Shazda Brown (TLALC) (19th January 2017).

The Subject Area was divided into ten (10) survey units that utilised readily identifiable features in the field to establish their limits. The survey units were assessed using pedestrian survey (transects) which was undertaken in accordance with the specification for archaeological survey contained within Burke and Smith (2004).

The following tasks were carried out during the field survey:

- ✦ Landform units were inspected for any potential of archaeological sensitivity across the Subject Area;
- ✦ Ground surface exposures were inspected for archaeological material; and,
- ✦ Large mature trees were inspected for signs of cultural modification.

The survey team walked transects targeting exposures and mature trees for inspection. Visibility variables were recorded for all transects within the Subject Area.

Ground disturbance of varying levels were observed across the full extent of the Subject Area. This disturbance was mapped to assist with an assessment of archaeological potential (see Figure 9).

Details and results of the site inspection are outlined in Section 7.1.

5 LANDSCAPE CONTEXT

The natural environment of an area influences not only the availability of local resources such as food and raw materials for artefacts but also determines the likely presence and/or absence of various archaeological site types that may be encountered during a field investigation. Landforms, soil types, and soil depths in combination with the underlying geology have implications for subsurface archaeological deposits in a study such as this.

Resource distribution and availability (such as the presence of drinking water, plant and animal foods, raw materials of stone, wood and vegetable fibre used for tool production and maintenance) is strongly influenced by the nature of soils, the composition of vegetation cover and the climatic characteristics of a given region.

The location of different site-types (such as open campsites, culturally modified trees, rock-shelters, middens, grinding grooves, engravings etc.) are strongly influenced by factors such as these along with a range of other associated features which are specific to different land systems and bedrock geology.

The environmental background is important in order to give a context to the archaeological record. With respect to Aboriginal archaeology, land formation processes may impact upon the type and frequency of archaeological remains encountered. Past climatic conditions may also impact upon the location and types of resources available, which in turn would impact upon settlement and mobility patterns of past Aboriginal groups in the area.

OEH requires a review of the landscape context to assist in the determination or prediction of the potential of a landscape to have accumulated or preserved objects, the ways Aboriginal people may have used the landscape in the past, and the likely distribution of the material traces of Aboriginal land use (DECCW 2010a:8).

Detailing the environmental context of a study region is an integral procedure for modelling potential past Aboriginal land-use practices and/or predicting site distribution patterns within any given landscape. The information that is outlined below is considered pertinent to the assessment of site potential and site visibility within the specific contexts of the current study.

5.1 Climate

The Subject Area lies within the Warragamba region. The climate is a mostly cool and temperate.

According to the recordings of the Automatic Weather Station (AWS) at the nearby Badgerys Creek (67108), annual mean maximum temperatures have ranged between 23.1°C-24.6°C over the past 19 years. The highest recorded temperature was 32.8°C in January 2011 (BOM, 2016) and the lowest was 1.8°C in July 2002 (BOM, 2017b).

Rainfall data has been taken from the Bringelly (Maryland) AWS (Station Number 67015). Rainfall is spread uniformly throughout the year but with a slight summer–autumn dominance for an annual average of 1699.7mm. Lowest recorded rainfall is 0.00mm for August 1995 and a maximum of 397.5mm recorded in February 1956 (BOM, 2017c).

5.2 Geology

Geological information can contribute to archaeological studies by providing information on the nature of rock resources, as well as informing soils and landforms.

The Sydney Basin Bioregion consists of a geological basin filled with near horizontal sandstones and shales of Permian to Triassic age that overlie older basement rocks of the Lachlan Fold Belt. The sedimentary rocks have been subject to uplift with gentle folding and minor faulting during the formation of the Great Dividing Range. Erosion by coastal streams has created a landscape of deep cliff gorges and remnant plateaus (OEH, 2012).

Silverdale is located in the western portion of the Sydney Basin Bioregion. The larger scale geology of the Sydney Basin Bioregion is characterised by marine deposition events from the Carboniferous to the early Permian. Numerous coal deposits accumulated before large river systems covered the region in quartz sandstone, known as the Hawkesbury sandstone. The Hawkesbury sandstone, which forms the bedrock for all of the Sydney Basin, dates to the mid Triassic. This bedrock of sandstone is then capped by a thin layer of shale (Bannerman and Hazelton, 1990; OEH, 2012).

The underlying geology of the Subject Area is predominantly the Wianamatta Group Shales including Ashfield Shales and Bringelly Shales, and Hawkesbury Sandstone (Hazelton and Tille, 1990). Hawkesbury sandstone is located along many of the watercourses within Silverdale. Hawkesbury sandstone comprises primarily of medium to coarse-grained quartz sandstone with minor shale or laminate bands (Hazelton and Tille, 1990) (see Figure 5).

5.3 Soil Landscape

Murphy (2000:9) suggested that most Australian soils might be of great antiquity. The Last Glacial Maximum, a very cold phase between 30,000-21,000 BP, may have rejuvenated extensive soil erosion and deposition in the eastern highlands and many of today's soils in this region may date from that time (McGowan and Moss 2008; Hope 2005). Climate change between 1,500 and 4,000 years ago and may have led to a new series of small but significant alluvial deposits on the landscape and a new round of soil formation (Murphy 2000:9). The antiquity of soils and details of soil development are relevant to the survival of Aboriginal archaeological materials.

In general, soils consist of A, B and C horizons. The A and B horizon soils are layers that have been modified by weathering and soil development, and the C horizon is weathering parent material. The A₁ horizon is usually referred to as top soil and includes an accumulation of organic matter, is darker in colour and has more biological activity than other horizons. The A₂ horizon is usually paler in colour than the A₁ and B horizons with less organic matter. It is often the zone of maximum leaching, clay translocation and weathering. When those processes are particularly strong, the horizon is white or grey and may be referred to as bleached. The underlying B horizon is usually more clayey, denser, and stronger in colour (Murphy and Murphy 2000:71-73). In open landscape settings (open sites), Aboriginal artefacts are most commonly found in A-horizon soils, and especially the A₂ horizon.

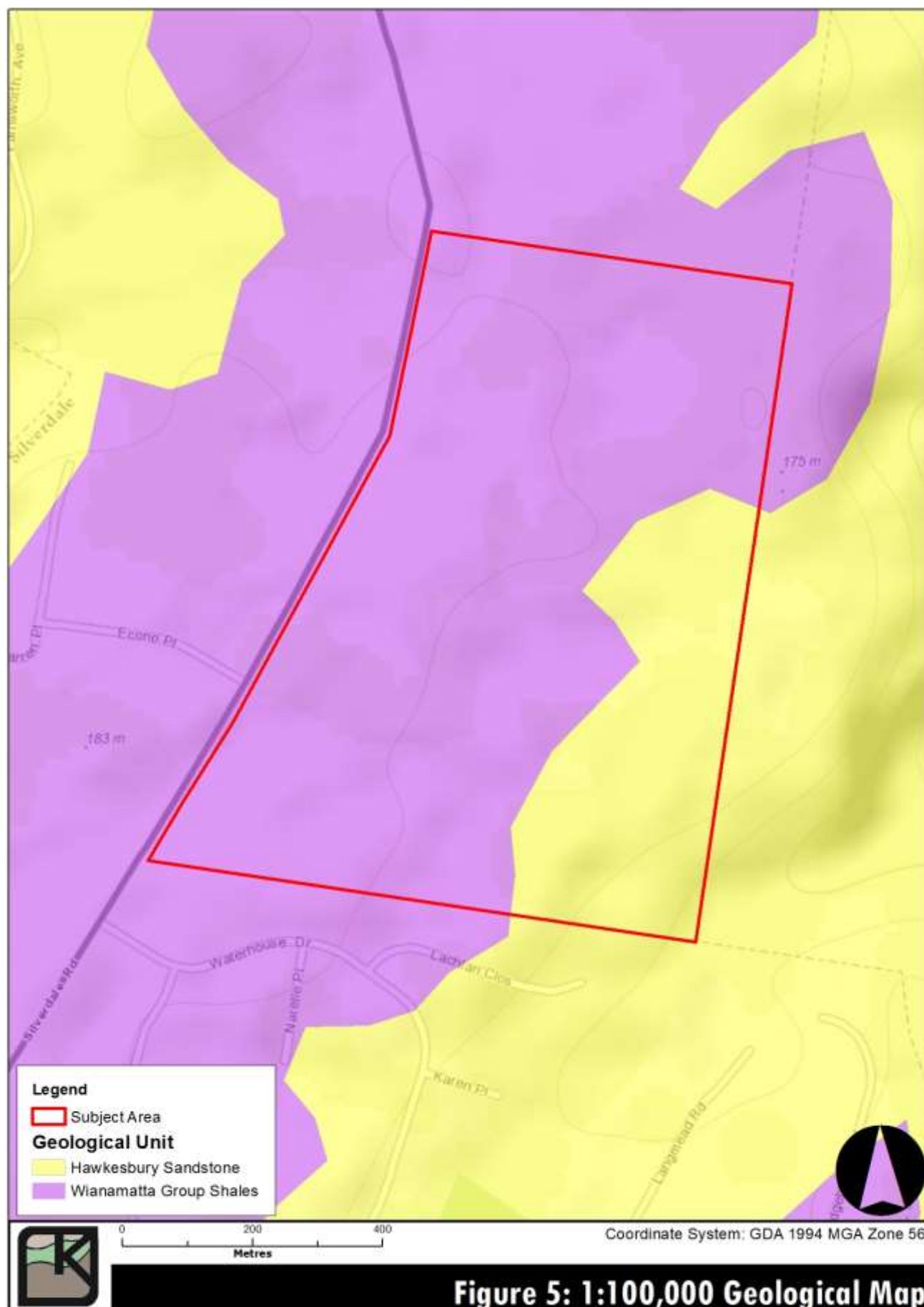
There are three (3) soil landscapes identified within the Subject Area. These are the Blacktown (bt), Hawkesbury (ha), and the Gynea (gy) soil landscapes (Bannerman and Hazelton, 1990) (see Figure 6).

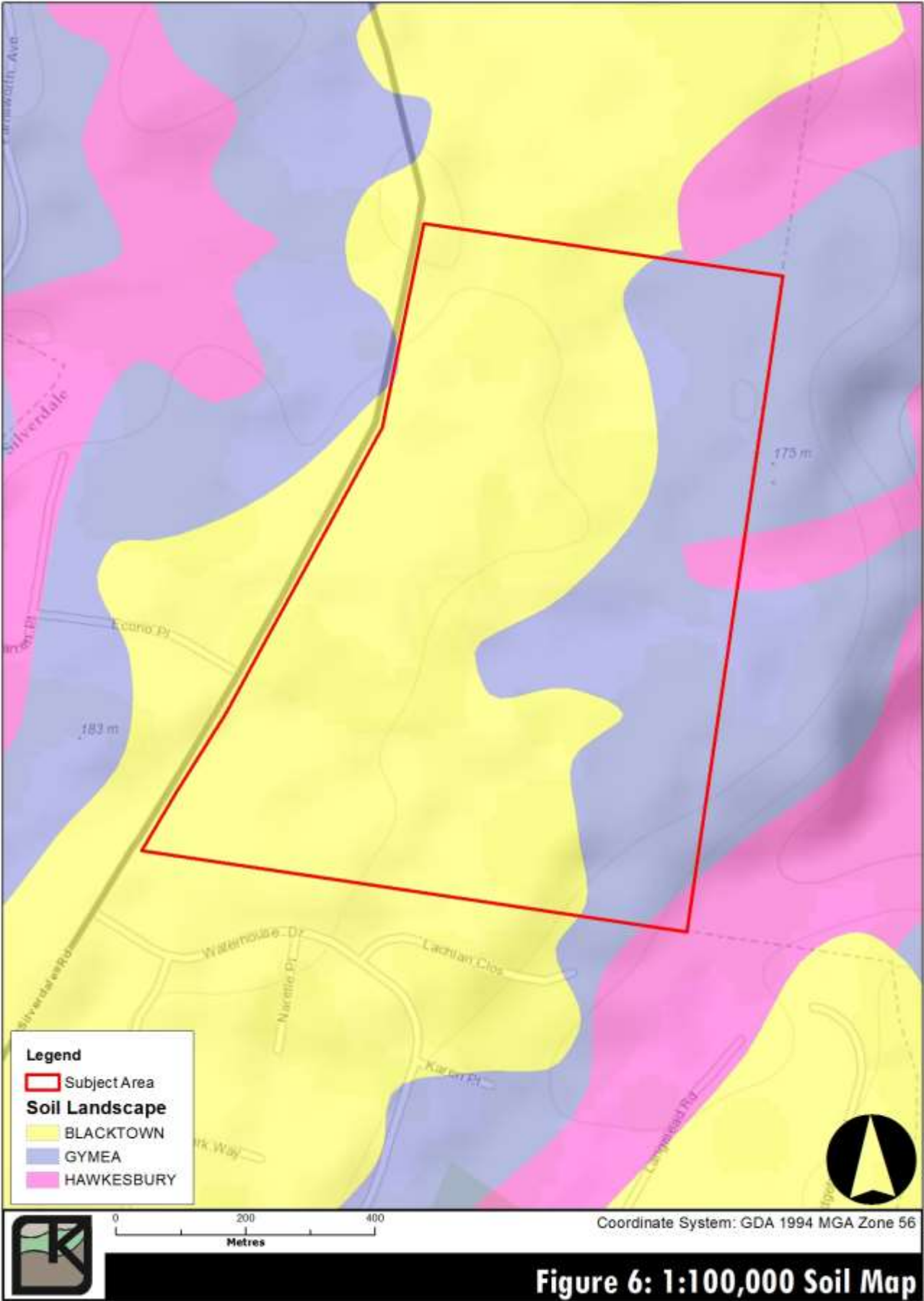
The Blacktown soil is a residual soil landscape, which is characterised by gently undulating rises on the Wianamatta Group shales with slopes usually >5%. The soils are shallow to moderately deep (<100 cm), Red and Brown Podzolic Soils on crests, upper slopes and well drained areas, deep (150-300 cm) Yellow Podzolic Soils and Soloths on lower slopes and in areas of poor drainage. Soils are moderately reactive with low fertility, poor soil drainage, and highly plastic subsoil (Bannerman and Hazelton, 1990).

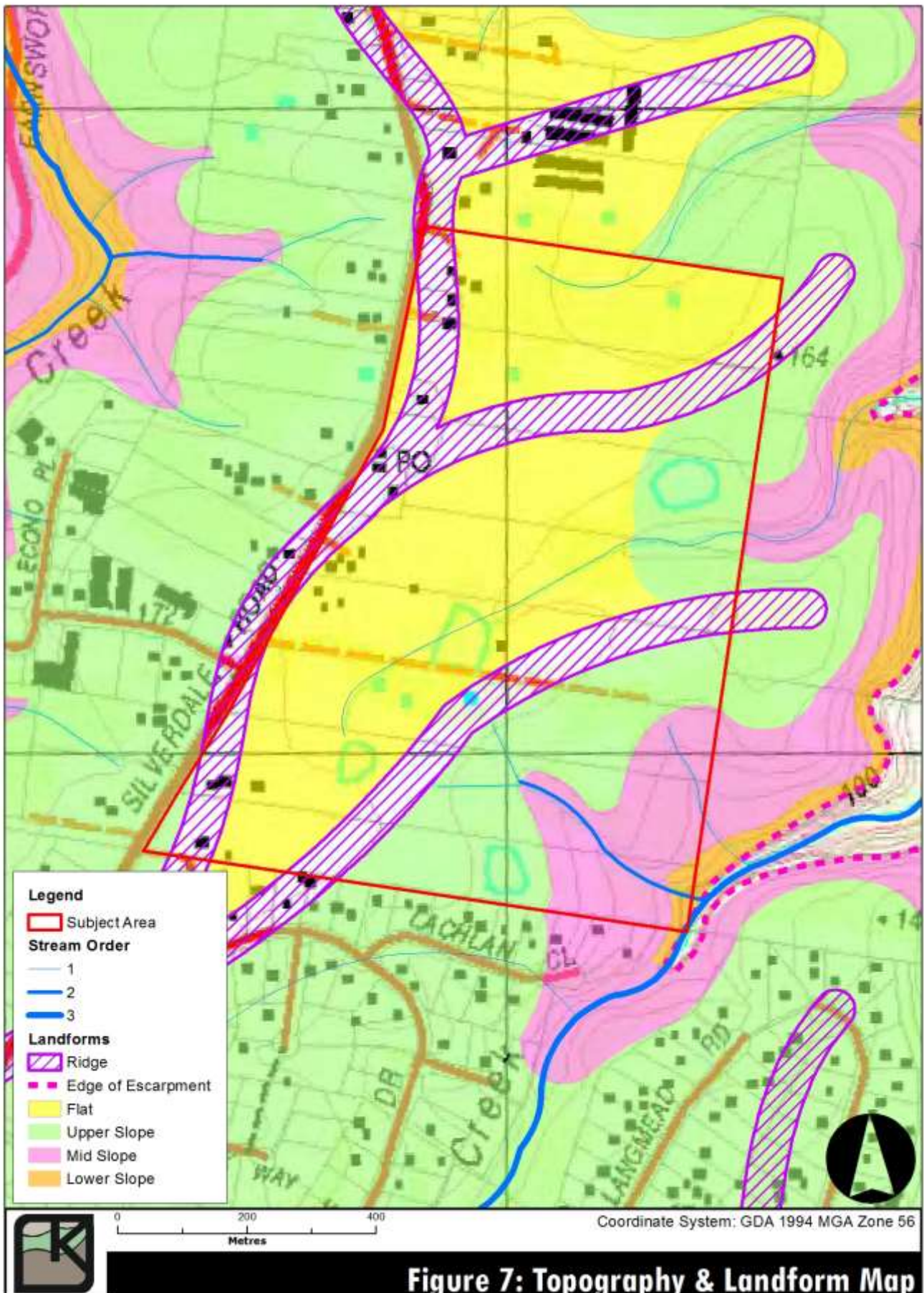
The Hawkesbury soil is a colluvial soil landscape, which is characterised by scarps and benches within hills on Hawkesbury Sandstone with slopes usually between 20% to 70% and rock outcrops usually >50%. The soils are Lentic and Orphic Tensors and Ruidoso's (Lithosols, Siliceous Sands, Earthy Sands), Yellow Kandosols (Yellow Earths), and Yellow, Red and Grey Kurosols (Yellow, Red and Grey Podzolic Soils). The soil is shallow with low fertility, extreme soil erosion hazard, and high permeability (Hazelton and Tille, 1990).

The Gynea soil is an erosional soil landscape, which is characterised by undulating to rolling rises and low hills on Hawkesbury Sandstone, with slopes usually between 10% to 25% and rock outcrops usually <25%.

The soils are shallow to moderately deep (30–100 cm) yellow earths and earthy sands on crests and insides of benches, shallow (<20 cm) siliceous sands on the leading edges of benches, localised gleyed podzolic soils and yellow podzolic soils on shale lenses, and, shallow to moderately deep (<100 cm) siliceous sands and leached sands along drainage lines.







5.4 Topography and Hydrology

The topography within the Subject Area is predominately determined by the underlying geological formation.

The Sydney Basin Bioregion consists of a geological basin filled with near horizontal sandstones and shales of Permian to Triassic age that overlie older basement rocks of the Lachlan Fold Belt. The sedimentary rocks have been subject to uplift with gentle folding and minor faulting during the formation of the Great Dividing Range. Erosion by coastal streams has created a landscape of deep cliffed gorges and remnant plateaus (OEH, 2012).

The Subject Area is situated on a plateau, within the northern end of the Burragorang Tableland, which drains into the Warragamba River to the west and the Nepean River to the north and east.

The Subject Area is located on the eastern side of the ridge that runs north-south through Silverdale, and is located west of the escarpment that overlooks the Nepean River.

The Subject Area comprises of a ridge, drainage depression, lower-, mid- and upper-slopes, and flat located behind the escarpment (see Figure 7). The Subject Area is dissected by five (5) 1st order streams and one (1) 2nd order stream. Two (2) of the five (5) 1st order streams are located with the northern part of the Subject Area, with a north-east orientation and drain directly into the Nepean River. Three (3) of the five (5) 1st order streams are located in the southern portion of the Subject Area, two of the streams meet at a confluence and become 2nd order stream; the streams have a south-east orientation and drain into Scotchey's Creek, that flows north-east into the Nepean River. All the streams are ephemeral in nature (see Figure 7).

5.5 Resource Exploitation

Based on the background information provided from various sources, it is possible to speculate what resources would have been available for pre-contact and contact Aboriginal exploitation.

Vegetation communities, flora, and fauna species present within the Subject Area would have provided a range of resources for Aboriginal people. Food, tools, and ceremonial items were derived from floral resources, with the locations of many campsites predicated on the seasonal availability of resources.

The Subject Area has been historically cleared, as a result the Subject Area contains open and closed woodland consisting of a mixture of relatively immature and mature trees, and introduced pasture grasses occurs across the Subject Area.

Vegetation communities across the Subject Area supported a range of faunal resources that would have been historically utilised by Aboriginal peoples, such as birds, Kangaroos and Possums present during the current study. Avian resources were not only used for food, but also provided a significant contribution to the social and ceremonial aspects of Aboriginal life through their use as ritual implements or even simply through fashioning as personal adornments.

As noted in Section 5.4, the Subject Area consists of five (5) 1st order streams and one (1) 2nd order stream, all of which are ephemeral in nature. However, water would have been present all year round in the 5th order streams, the Warragamba and the Nepean Rivers, located in the incised gorges at the foot of the plateau. At certain times of the year, water would have been particularly abundant, and presumably, these occasions would have resulted in increased faunal resources such as aquatic vertebrates and birds.

Raw materials, such as silcrete, chert, mudstone, quartz, quartzite, and basalt, suitable for artefact manufacture would have been sourced from areas such as the Warragamba and Nepean Rivers, and Plumpton Ridge (Smith 1989a, 1989b).

As previously stated, the Subject Area is located within the northern end of the Burragorang Tableland. It should be noted that the vegetation communities present within the Subject Area are a small snapshot of the vegetation communities present within the wider Silverdale area. Based on the broad scale study undertaken by the NSW National Parks and Wildlife Service (2003), it was identified that the Cumberland Plain Shale Sandstone Transition Forest (High Sandstone Influence) and Nattai Sandstone Dry Shrub Forest are present within the Subject Area.

The Cumberland Plain Shale Sandstone Transition Forest (High Sandstone Influence) has been identified in the area between Buxton and Warragamba. This community is extensively distributed around the periphery of the Cumberland Plain, approximately 400 metres of the shale/ sandstone boundary and varied considerably in response to the degree of sandstone influence evident in the soil (NSW National Parks and Wildlife Service, 2003).

The Cumberland Plain Shale Sandstone Transition Forest (High Sandstone Influence) is dominated by a wide variety of Eucalypt species. *Eucalyptus punctata* and *E. crebra* are regularly recorded within this vegetation unit, along with *E. fibrosa*, *Corymbia gummifera* and *Syncarpia glomulifera* subsp. *glomulifera* occurring less frequently. Within the Warragamba Special Area, *Eucalyptus notabilis* and the closely related *E. resinifera* subsp. *resinifera* may be more prominent with *Corymbia eximia* also featured. A smaller tree stratum is usually present and is most often dominated by *Allocasuarina littoralis*, *Syncarpia glomulifera* subsp. *glomulifera*, and *Acacia decurrens*. This community usually has a well-developed shrub layer, reflecting the influence of Sandstone in the soil. *Kunzea ambigua*, *Persoonia linearis* and *Bursaria spinosa* dominate the shrub stratum with *Jacksonia scoparia* becoming more common with increasing sandstone influence. The ground stratum is dominated by *Entolasia stricta*, *Themeda australis*, *Austrostipa pubescens*, *Lepidosperma laterale*, *Aristida vagans* and *Pomax umbellata* (NSW National Parks and Wildlife Service, 2003).

Cumberland Plain Shale Sandstone Transition Forest (High Sandstone Influence) is essentially a shale community, which typically occurs on the shallow, residual clay soils derived from Wianamatta Shale. This vegetation community is primarily located on the upper slopes and ridges on gently undulating terrain and grades into Cumberland Plain Shale Sandstone Transition Forest (Low Sandstone Influence) as the influence of shale increases (NSW National Parks and Wildlife Service, 2003).

The Nattai Sandstone Dry Shrub Forest is a dry open forest found on the broad Hawkesbury Sandstone ridges. The canopy is moderately tall and open with *Corymbia gummifera*, *Eucalyptus piperita* and Stringybarks (*E. agglomerata*, *E. globoidea*, *E. oblonga* and *E. eugenioides*) most frequently recorded. The understorey is a diverse mix of low shrubs and heath species such as *Banksia spinulosa* var. *spinulosa*, *Persoonia levis*, *Leptospermum trinervium*, *Acacia linifolia*, *Xylomelum pyriforme* and *Leucopogon lanceolatus* var. *lanceolatus*. The sparse ground stratum is comprised of *Lomatia silaifolia*, *Entolasia stricta*, *Phyllanthus hirtellus*, *Pomax umbellata*, *Patersonia sericea* and *Lomandra oblique* (NSW National Parks and Wildlife Service, 2003).

Nattai Sandstone Dry Shrub Forest occurs on the exposed Hawkesbury Sandstones at lower elevations between 185 and 570 metres. Soils are infertile but marginally deeper than those found

on the bony narrow ridges where the heath understorey becomes more abundant (NSW National Parks and Wildlife Service, 2003).

5.6 Former Land Use and Disturbance

Land use across the Subject Area has been a mixture of market garden and grazing practices, , these changes have occurred since European occupation began in the early-mid 19th Century; the majority of the broader changes/impacts observed have occurred primarily as a consequence of European land management strategies.

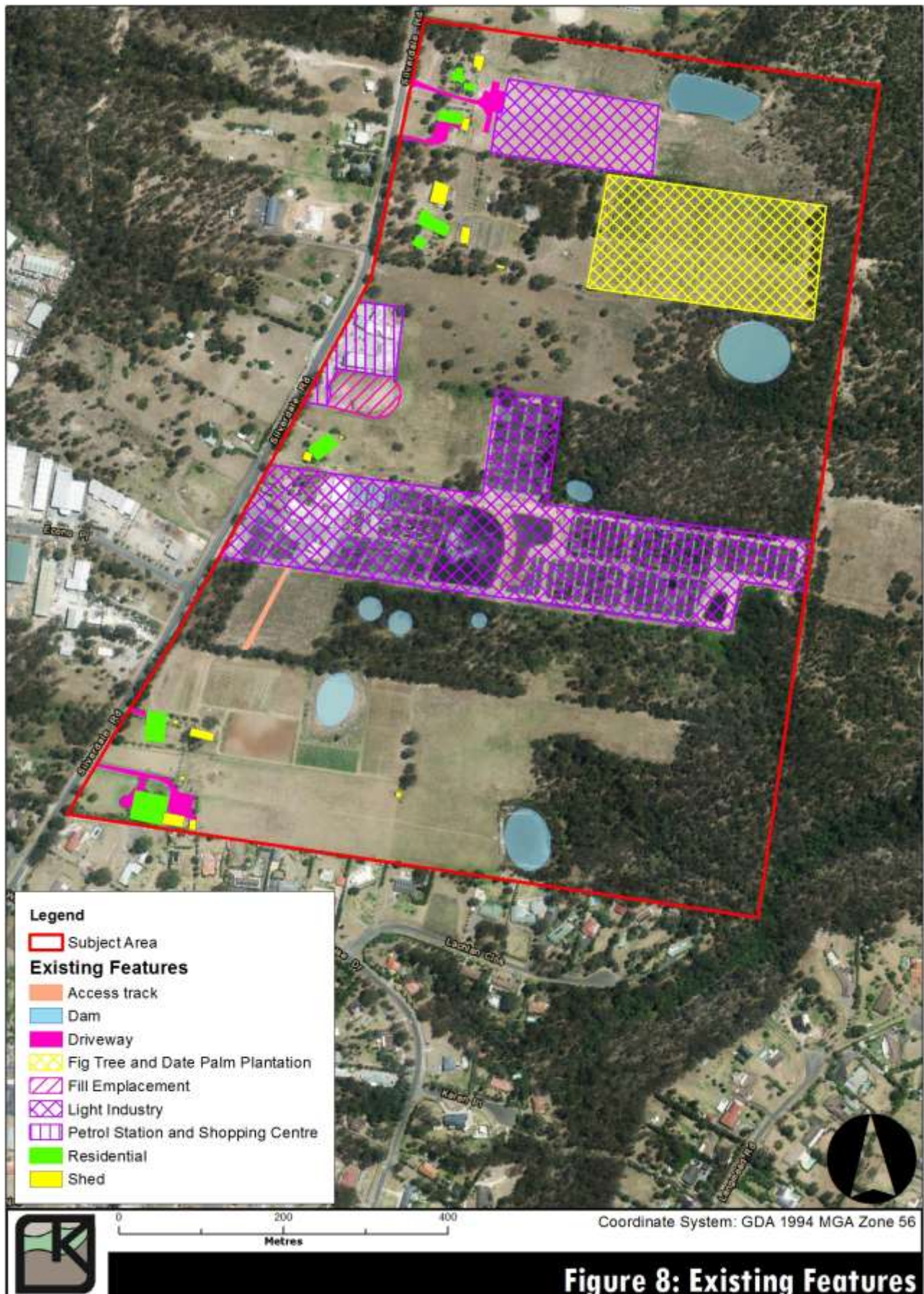
The disturbances identified during the field survey include:

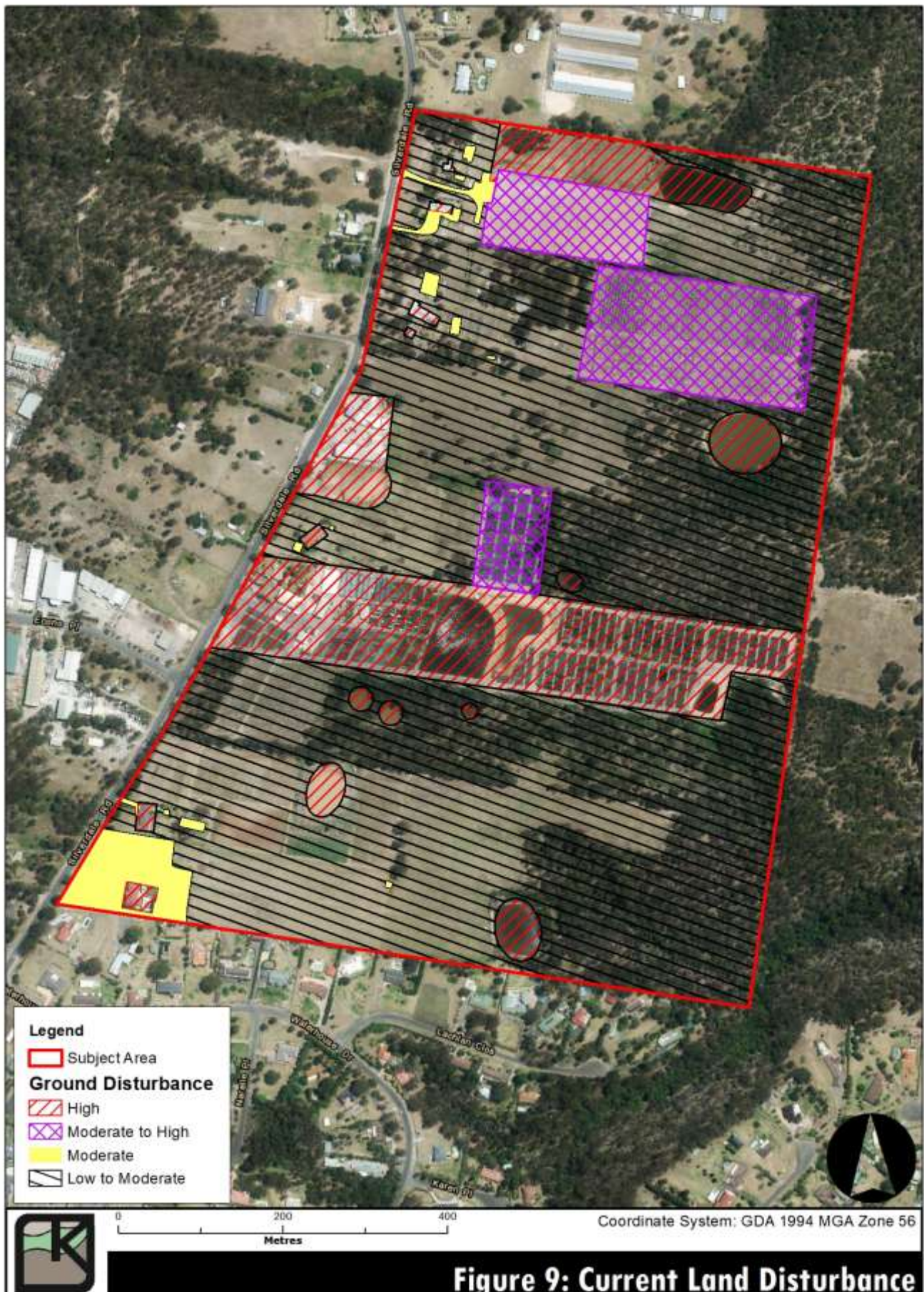
- ✦ Construction of petrol station and shopping centre;
- ✦ Emplacement of fill south of the petrol station and shopping centre;
- ✦ Farming practices, such as initial vegetation clearance for creation of paddocks, fencing and stock grazing;
- ✦ Agricultural practices such as fruit orchards;
- ✦ light industrial practices such as nursery;
- ✦ Disturbance resulting from the construction of buildings (residential and commercial), animal enclosures, and dams; and,
- ✦ Vegetation clearance throughout the Subject Area.

All of the properties within the Subject Area have some type of residential or light industrial buildings present (see Figure 8), which resulted in the removal and/or displacement of topsoil, introducing fill material. The construction of residential and/or light industrial buildings would have resulted in varying levels of ground disturbance within the immediate vicinity of the structure.

Significant previous disturbances were observable within the nursery with the entire property undergone substantial land modifications that include construction of three dams with sealed and unsealed access tracks (see Plate 7) and areas of plantings, outbuildings and car park.

Areas of previous disturbance were also visible at the properties in the north of the Subject Area due to the extensive agricultural practices, such as fig and date palm tree plantations and deep ploughing and drainage channels for soil preparation (see Plate 4, Plate 5, and Plate 23).





6 ARCHAEOLOGICAL CONTEXT

6.1 Ethnohistory

At the time of initial European occupation of the Sydney region, systematic ethnographic study of Aboriginal society was not carried out, but various people made some observations that can be compiled to suggest something of Aboriginal lifeways at the time. Attenbrow (2010) and McDonald (2008) have compiled various observations. It is known that people lived in family groups, consisting of one or two adult males, their wives, and their dependants (young and old). It is also known that people belonged to named groups, which were tied to places, and that people in different areas spoke different dialects (Jo McDonald CHM, 2008:17).

The radiocarbon date obtained from the RTA site in George Street, Parramatta indicates that the Sydney region has been inhabited by Aboriginal people for at least 30,000 years, and possibly longer (Jo McDonald CHM, 2007). Archaeological sites from the Blue Mountains and Hawkesbury/Nepean River System have provided other evidence of early occupation within the region. Stockton and Holland (1974) produced a radiocarbon date of c.22,000 years BP from a site at Kings Tableland in the Blue Mountains. Excavation of the Greaves Creek rock shelter site of Walls Cave near Medlow Bath has produced a date of c.12,000 years BP (ibid). At Shaws Creek KII, a rock shelter on the west bank of the Nepean north of Penrith, a date of c.13,000 years BP is recorded (Kohen et al, 1984).

Due to unreliable sources of the time, exact pre-contact and contact boundaries of Aboriginal territories that existed prior to 1788 in the Sydney region are difficult to reconstruct. However, early written observations of Aboriginal people in the Silverdale area have been collated by Tindale (1974). Silverdale is located in proximity to a north-south trending boundary. The Gundungurra people occupied country to the west, and the Tharawal and Wodi Wodi people lived in the land to the northeast and east of the region (Tindale, 1974).

While information about Aboriginal life in Silverdale is scarce, some generalisations can be made from available writings and research that discusses Aboriginal Australia more broadly. Aboriginal people moved across the land in small family groups likely subsisting on plant food and the aquatic resources of creeks and rivers. In the Silverdale area, this would include the resources of Warragamba and Nepean Rivers. A variety of local terrestrial resources, including possum, kangaroo, snakes and lizards, would also have been exploited.

During the research undertaken as part of this investigation, it was made known to KAS that a Dreamtime story of Gurangadge the giant eel (Gun'yungga'lung in Gandangara language) as told by Robyn Williams in 1988 has been recorded at Bents Basin. The Dreamtime story as told by Robyn Williams is detailed below:

Long ago all animals were people, they were the Burringilling. They could make rivers and mountains and they created all the land that you see. Gurangadge was part eel part reptile. One of his camping places was in a large, deep water hole called Mur-rau-ral. Gurangadge, he used to lie in the shallow water near the bank to sun himself.

One day Murragan, the native tiger, a great fisherman caught a glimpse of Gurangadge's eye which shone like a star in the water. Murragan tried to spear him but Gurangadge swam to the centre of the water hole, where it was very deep. Murragan went into the bush and cut some hickory bark to poison the water and stun the fish, but it was not strong enough to make Gurangadge sick.

Gurangadge was furious so he tore up the ground along the Wollondilly, making water flow after him. Gurangadge burrowed and tunnelled underground until he came out on a rocky ridge where he formed a spring (sacred site) called Birrimbunnunga-lai or Rocky Waterhole. Gurangadge raised his head above the waterhole and his tongue flashed with lightning.

Gurangadge was a great magician so he could make water flow uphill. He kept burrowing under the mountains and he came up inside Wanbeeang caves. Murragan tracked his prey and then lost him in the underground passages. Murragan was too afraid to go in the underground so he went up on top of the rocks and dug a hole as deep as he could. He prodded a long pole down as far as it would reach, trying to frighten Gurangadge out. Murragan dug more holes and shoved poles into each one. These are the potholes at Wan-bee-an caves. Gurangadge dived down into the tunnel towards the Wollondilly River.

Some miles away, Murragan's family heard Gurangadge coming thundering with a flood behind him. They ran away in terror. Murragan's wife scolded him for meddling with Gurangadge.

Murragan chased after Gurangadge and overtook him at Woonggaree (Slippery Rock). They fought for a long time. Gurangadge even as Murragan hit him with a big boondée. Gurangadge made Kedoomba Creek (Katoomba). Gurangadge travelled to Binnoomur (Jenolan caves). He met some relations. He rested in a deep waterhole (sacred site) called Joolundoo. Murragan built a big wall (Dandakmalai) to stop Gurangadge from getting back into the underground caverns.

Murragan went west and found some friends who were eating small eels roasted on the fire. He couldn't at any [sic] and he asked his friends to dive after Gurangadge. Billagoola the shag, Gootagwangwan the diver, and Gundhareen the wood duck.

At Joolundoo, Gundhareen dived into the pool but was unable to reach the bottom. Gootagwangwan brought back a small eel to the surface. Billagoola dived and when he got to the deep section he saw several eels trying to hide Gurangadge by covering him with mud. Gurangadge jammed his head into a crevice and his tail into another. Billagoola could not shift him. Billagoola pulled a huge piece of flesh from Gurangadge's back. The friends cooked the meat and had a huge feast.

Gurangadge did not die. He lives on, in the waterholes in Gandangara country and along the Wollondilly. He lives at Doogalool, Gunggalok, Woongaree and he lives at Gulguer (Bents Basin).

6.2 AHIMS Results

A search of the AHIMS database was carried out 11th November 2016 using the Client Service ID 253766, with the coordinates set out in Table 6 below.

	Easting	Northing
Minimum	274045	6241283
Maximum	286045	6253283

Table 5: AHIMS Database Search Criteria
(Zone 56 additional buffer 1kms)

The search area was a 12km by 12km square centred upon the Subject Area, with a 1km buffer (see Figure 10). The results of the AHIMS search are presented in Appendix XIV and Figure 10. A total of 101 Aboriginal sites have been registered within the search area.

It should be noted that the distribution of sites in the AHIMS database is a reflection of where site surveys have been conducted (see Figure 12), where exposure and visibility conditions have enabled the detection of sites, and where sites have survived modern land disturbance. The distribution of sites from AHIMS may not be a true reflection of the existing Aboriginal sites in an area.

Site Type	Frequency	%
Open Camp Site	65	64.36
Isolated Find	11	10.89
Shelter with PAD	6	5.94
Axe Grinding Groove	5	4.95
Shelter with Art	4	3.96
Shelter with Art with PAD	3	2.97
Scarred Tree	2	1.98
Open Camp Site with PAD	2	1.98
Carved Tree	1	0.99
Open Camp Site with Art	1	0.99
Restricted Information	1	0.99
Total	101	100

Table 6: Site Types from AHIMS Search (Client Service ID 253766)

The AHIMS search indicates that 65 of the 101 sites within the search area are Open Camp Sites, and another 11 of the sites are Isolated Finds (see Table 6). A further six (6) sites are classified as Shelters with PAD. The results are indicative of the number of archaeological assessments that have occurred within the local region, as well as the nature of the landscape, containing open space consisting of large bodies of waters, crests, and slopes, and numerous areas of outcropping sandstone and siltstone in the region suitable for quarrying.

6.3 Regional Archaeological Context

Archaeological investigations generally fall into three categories - large projects that have been carried out within a research-orientated academic framework and broad management context; archaeological surveys carried out by interested amateurs; and, archaeological investigations which have been carried out within a commercial contracting framework and deal with specific localities subject to development or redevelopment.

The spread of new urban development across the Warragamba – Silverdale region, is discrete, which has meant that the need for archaeological investigations has increased in recent times. Most archaeological investigations conducted within the Warragamba – Silverdale region have been restricted to small study areas, on the boundary of the region. These small studies are defined by individual developments, and with limited project briefs. As a result, the understanding of Aboriginal utilisation and occupation of the Warragamba – Silverdale region is constantly being developed and refined as archaeological data becomes available for the area (see Table 7 and Figure 12).

While there has been limited archaeological assessments undertaken within the Warragamba – Silverdale area, so far regional trends within the area indicates that Aboriginal sites are likely to be located in close proximity to permanent watercourses, along ridges and elevated positions overlooking water courses, or on flats immediately behind the escarpment, and within range of food resources and the raw materials for tool making. However, prior to the undertaking of this current study, no Aboriginal archaeological excavations had been undertaken within the Warragamba – Silverdale region; the nearest archaeological excavations to the Subject Area are located at the Twin Creeks Estate, Picton and Wilton.

6.4 Local Archaeology

The Silverdale area and surrounding region has been subject to a limited number of archaeological studies. The majority of archaeological studies in the Silverdale region have been confined to the treatment of specific study areas. The table below (Table 7) contains the details of Aboriginal heritage assessments that have been undertaken in the general vicinity of the Subject Area (see Figure 12 and Table 7). A brief outline of each report is also provided below.

Reference	Locality	Comments	Results
Dallas, M., 1982	Bents Basin State Recreation Area	Archaeological Assessment	A total of 16 Aboriginal sites: 15 potential occupation sites, and 4 isolated finds were identified.
Brayshaw, H., 1989	Warragamba Dam	Archaeological Survey	No Aboriginal sites were identified.
Brayshaw, H., 1992	Warragamba Dam	Archaeological Survey	No Aboriginal sites were identified.
Brayshaw, H., 1993	Warragamba Dam	Archaeological Survey	Two (2) areas of Potential Archaeological Deposit (PAD) were identified in rock overhangs.
Navin Officer, 1994	Bushrangers Creek	Aboriginal Archaeological Assessment	Desktop study concluded it was highly likely that shelter and art sites remained within the study area. This was confirmed by a limited site visit in which 3 Aboriginal sites and several PADs were located.
HLA-Envirosciences Pty Ltd, 1995	Farnsworth Avenue, Warragamba to The Northern Road, Luddenham	Archaeological Survey	A total of twelve (12) Aboriginal sites were identified: 10 sites identified in Wallacia, including 7 PADs on Farnsworth Avenue near Megarritys Creek; 1 artefact scatter near the corner of Park Road and Montelimar Place;; and, 1 isolated artefact (stone axe) to the south of Park Road.
Brayshaw, H., 1999	Warragamba Dam	Archaeological Survey	No Aboriginal sites were identified.
McDonald, J., 2002	Wallacia	Archaeological Survey	A total of 6 artefact scatters were identified. Most of these were associated with land where it is assessed there is good potential for intact archaeological deposit.
Stedinger, 2005	Marsh Road, Silverdale	Archaeological Assessment	1 Aboriginal site was identified.
Artefact Heritage Services, 2012	Silverdale	Aboriginal Heritage Due Diligence Assessment and Preliminary Non-Indigenous Heritage Assessment	No Aboriginal sites were identified.
Biosis, 2014	Silverdale Road, Silverdale	Aboriginal Due Diligence Assessment	No Aboriginal sites were identified.

KAS, 2014	Warradale Road, Silverdale	Aboriginal Cultural Heritage Assessment	1 artefact scatter was identified
KAS, 2015a	Marsh Road, Silverdale	Aboriginal Cultural Heritage Assessment	A total of three (3) artefact scatters are present within the Subject Area: • SAF-1 (previously identified by Stedinger (2005); • MC-OS-02 and MC-OS-03 (previously unidentified)
KAS, 2016	Marsh Road, Silverdale	Aboriginal Cultural Heritage Assessment and Test Excavation	Test excavation was undertaken at SAF-1, MC-OS-02 and MC-OS-03. Two (2) subsurface artefacts were recovered at SAF-1. No subsurface artefacts were recovered at MC-OS-02 and MC-OS-03.

Shading indicates those reports that have specifically considered the Subject Area in this report

Table 7: Cultural heritage investigations conducted in the Silverdale region

6.5 Previous Assessment within the Subject Area

Biosis (2014)

Biosis (2014) undertook a field survey of the Subject Area as part of the preparation of an Aboriginal Due Diligence Assessment which was prepared as a supporting document for the current Planning Proposal, in January 2014.

No mature native trees were observed within the Subject Area. Rock platforms that were present within drainage lines within the Subject Area were inspected for Aboriginal grinding grooves, but none were observed. All areas of exposure and areas that revealed good ground surface visibility were inspected for any Aboriginal cultural material. None were identified.

Areas with limited ground disturbance were assessed as having low archaeological sensitivity and potential.

Areas with moderate to high ground disturbance were assessed as having low archaeological sensitivity and very low to nil for archaeological potential.

6.6 Previous Predictive Models

As discussed in Section 6.4, there have been a limited number of archaeological studies undertaken in the region surrounding Silverdale. Review of this work shows that it is almost exclusively focused upon archaeological survey. Acknowledging this limitation and recognising that the surrounding regions (Cumberland Plain to the north and Nepean Ramp 'Transitional' Zone to the south) have had numerous archaeological excavations to develop robust models of Aboriginal occupation, it is appropriate to review the models for the surrounding regions and assess their relevance in determining an accurate model for Aboriginal occupation and predictions for site types and locations within the Subject Area.

Aboriginal occupation and utilisation is determined by landscape features and not by vegetative features, i.e. sources of permanent or seasonally reliable water were not just a focus of past Aboriginal occupation, but were a necessity for occupation to occur. Therefore, it is expected that the greatest evidence of occupation would be found in association with reliable water sources such as creeks, and rivers where they occur (Koettig & Lance, 1986; McDonald, 2008; Attenbrow, 2010).

The presence of suitable landforms was also extremely important for occupation to occur. Landform often determines the type of archaeological evidence that will be found or, in many instances, whether any evidence at all can be expected to occur (KAS 2015b:40-41, Figure 15, 60, 62). It needs to be acknowledged that the plateau environments such as those present in the current Subject Area differ markedly from the environments of the Cumberland Plain and Southern Highlands. KAS (2015b) discusses the Aboriginal occupation in plateau environments, where the Nepean Ramp Transitional Zone has been developed for similar nearby plateau environments. Streams in plateau landscapes are typically only 1st or 2nd order streams before entering the Rivers (Warragamba and Nepean).

The landscape features of the Subject Area differ from those the Cumberland Plain region, i.e. does not contain 3rd/4th order streams, or major stream confluences. The overall environmental landscape context of the Subject Area is considered to be similar to those found within the Nepean Ramp and therefore the Nepean Ramp Transitional model is considered to be more appropriate for predicting the incidence of Aboriginal sites to be present.

In recent years, KAS has developed an Utilisation Model for Aboriginal occupation within the Nepean Ramp 'Transitional' Zone, which aims to predict and explain the presence of sites within proximity to the watercourses and escarpments. Four utilisation zones are identified in this model, and are described as follows:

- ✦ Zone 1 extends from the creek to the top of the escarpment, is believed to have been the main habitation area for the Silverdale area, due to the large number of sandstone outcrops that have been identified as rock shelters suitable for habitation.
- ✦ Zone 2 extends from the top of the escarpment to the back of the flat behind the escarpment. It is believed that artefact production may have been undertaken in Zone 2, it is also thought that game retrieved from Zone 3 may have been processed into more manageable sizes in this area.
- ✦ Zone 3 is located between the flat behind the escarpment and the highest point in the section. It is thought that Zone 3 may have been utilised as either for hunting and gathering purposes, before heading back down to the rock shelters in the gorge, or as an access point to the main ridge line.
- ✦ Zone 4 is identified as the highest point along the section (see KAS 2015b: Figure 17) and may have been utilised for strategic landscape visibility purposes.

Considering these utilisation zones, and acknowledging that previous predictive models for the Cumberland Plain and Southern Highlands are not suitable for the landform environment found within the Subject Area, the following predictive model has been developed (see Section 6.7).

6.7 Aboriginal Heritage Predictions for the Subject Area

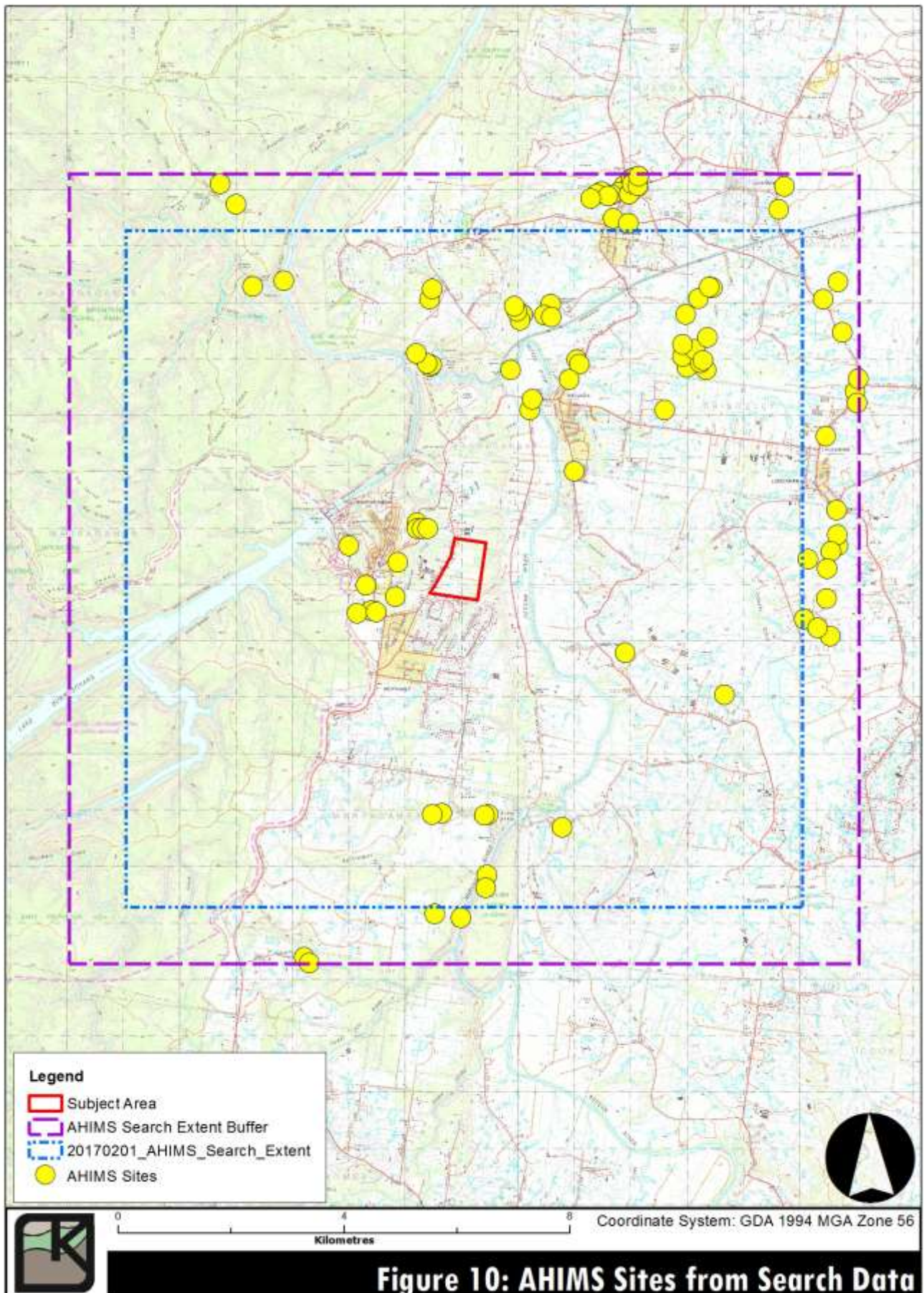
Looking at probable land use strategies based on the distribution of natural resources, the Silverdale area indicates a medium density area of traditional Aboriginal occupation. The high distribution of natural resources, including stone, fresh water from creeks and springs, and food resources suggest that the escarpment of the Warragamba River would be a good location for occupation.

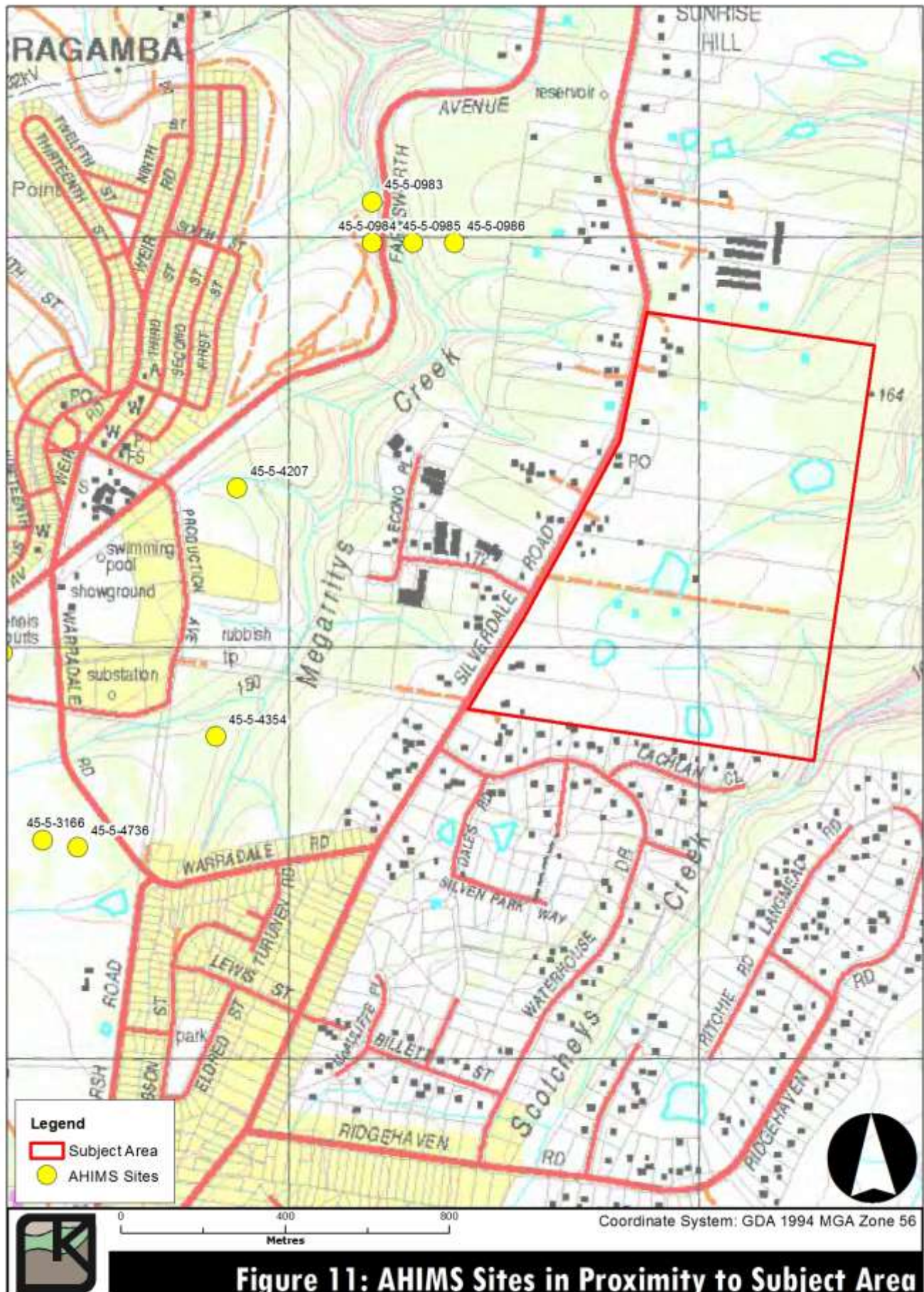
Examination of the landscape features of the Subject Area against the 4 utilisation zones described above (refer to Section 6.6), shows that these features are consistent with features previously noted in Zone 3 of the Nepean Ramp Transitional model as identified by KAS (2015b:40-41, Figure 15, 60,

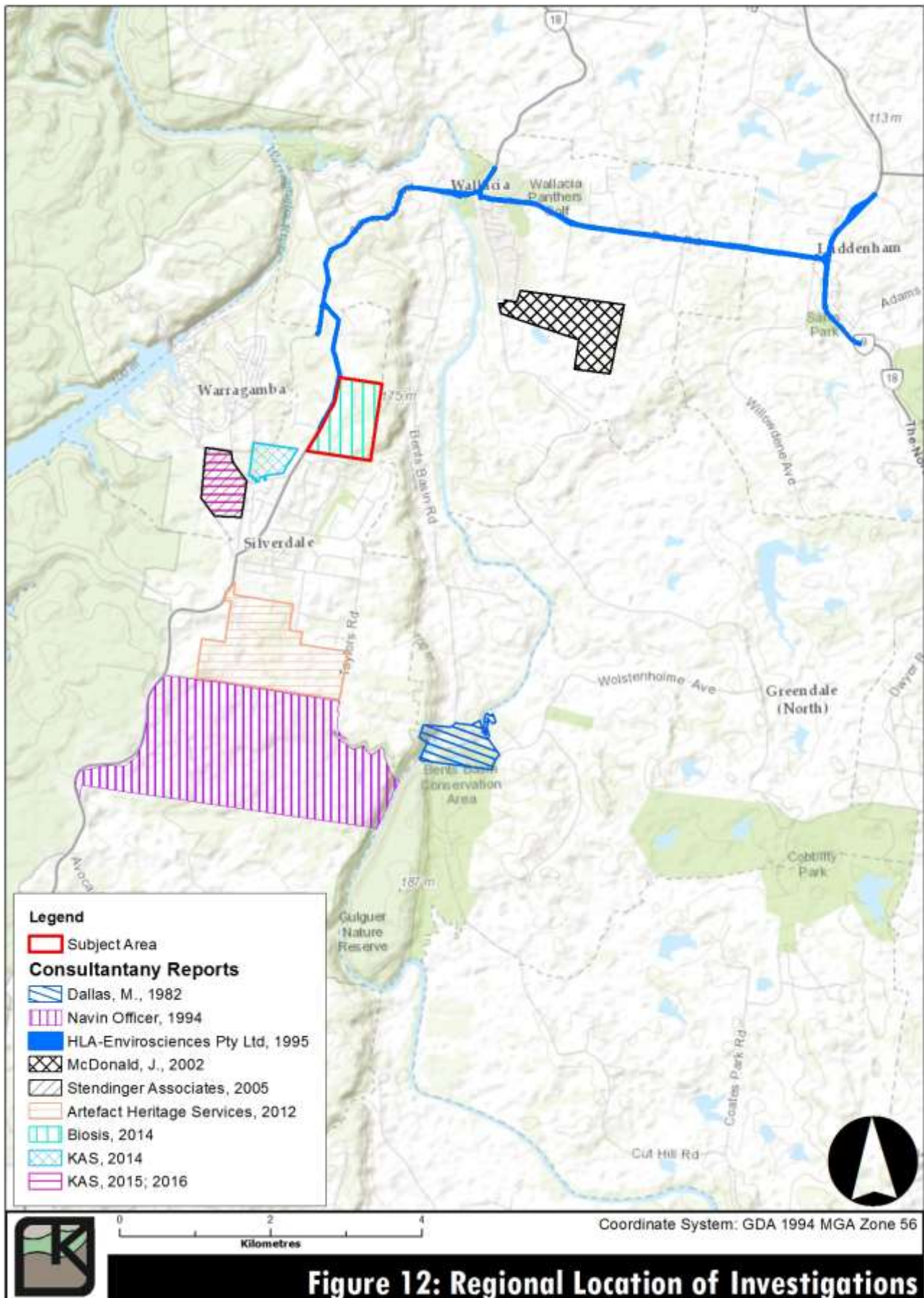
62). These features present within the Subject Area include its location between the flat behind the escarpment and the highest point on the plateau.

Based on the previous predictive model, previous archaeological results, past land use history, and the environmental descriptions, the following predictions for Aboriginal sites to be present within the Subject Area have been made by KAS:

- ✦ Both low density surface and subsurface artefacts may occur across the entire Subject Area;
- ✦ Subsurface archaeological deposits may be present in areas where no visible surface archaeological remains are evident;
- ✦ The size, density and significance of sites will vary, although it is anticipated that any sites will be considerably less complex and less dense at distances greater than 250m from major water sources (3rd/4th order streams) such as Warragamba River or the Nepean River, or along ridges and elevated positions overlooking water courses;
- ✦ Habitation sites will have associated open production and hunting/gathering sites, which will be present in close proximity, along the length of the flat behind the escarpment;
- ✦ No lithic raw material outcrops have been identified in the Subject Area. As such, any archaeological material present within the Subject Area may provide additional understanding to raw material selection in the Silverdale region;
- ✦ As past land use disturbance increases in intensity, the ability for Aboriginal objects to provide spatial and chronological information about past Aboriginal land use will decrease; and,
- ✦ Potential Archaeological Deposits may be located in portions of the Subject Area with minimal previous land disturbance.







7 RESULTS

7.1 Field Survey

7.1.1 Survey Coverage and Visibility Variables

The effectiveness of an archaeological field survey is heavily reliant upon the obtrusiveness of the Aboriginal site being looked for, and the incidence and quality of ground surface exposure. Visibility variables have been estimated for all areas where a comprehensive survey was carried out in the Subject Area. This data provides a measurement with which to gauge and compare the effectiveness of the survey and the level of sampling conducted. It may also be utilised to determine the numbers and types of sites that may be present, but which could not be identified by the survey due to poor ground visibility and exposure.

Ground surface visibility (GSV) is a measure of the bare ground visible to the archaeologist during the field survey. There are two variables used to assess GSV:

- ✦ The frequency and extent of exposures encountered by the archaeologist; and,
- ✦ The quality of visibility within those exposures.

The major factors affecting the quality of GSV within an area of exposure are the extent of vegetation and ground litter, the depth and origin of the exposure, the extent of recent sedimentary deposition and the level of visual interference from surface gravels. Two variables of GSV were estimated during the survey:

- ✦ A percentage estimate of the total area of ground inspected which contained useable exposures of bare ground; and,
- ✦ A percentage estimate of the average levels of GSV within those exposures. This is a net estimate and accounts for all visual and physical variables that have affected the visibility including the archaeological potential of any sediment or rock exposed.

Various Aboriginal site types exhibit different levels of prominence within the landscape. This is an important factor to consider when assessing the impact on visibility levels. Sites present upon or within rock exposures, such as grinding grooves, engravings and rock shelters, are more likely to be encountered than sites that are located on or within sedimentary contexts with little or no ground surface relief. A common factor affecting visibility is the presence of small rocks, pebbles, and gravels in the exposure. If these particular raw materials are also suitable for stone artefact manufacture, it may make stone artefact identification more difficult.

7.1.2 Survey Units

The Subject Area was divided into thirteen (13) survey units for ease of recording. The survey units were assessed using pedestrian survey (transects). The boundaries of the survey units were identified by changes in vegetation, internal fences and landforms (refer to Figure 8).

GSV was very low throughout most of the Subject Area, due to the fact that large proportions of the Subject Area were either covered in plant pots (i.e. Nursery), or covered in thick pasture and/or leaf litter. Areas of ground surface exposure within the Subject Area had >40% visibility.



SU1

The northern portion of SU1 has been recently graded (see Plate 1). There was evidence fill mixed in with the soil. Areas of grading had 100% GSV.

The southern portion of SU1 is covered in crushed gravel, and pot plants associated with the Nursery in SU7 (Plate 3 and Plate 2).

The land dedicated to the stocking of pot plants extends eastward from SU2 to the revegetated woodland at the eastern boundary of the survey unit. There are no areas of ground exposure within the pot plants.

The survey unit has been subject to heavy land clearance, i.e. dam, and grading; there is also evidence of revegetation of native species, as well as invasive species along the eastern boundary.

No Aboriginal cultural heritage was identified in SU1.



Plate 1: SU1 looking west



Plate 2: SU1 looking south



Plate 3: SU1 looking east

SU2

SU2 has been extensively cleared for residential purposes, and is moderately vegetated; with thick grass coverage located away from the existing residential dwelling, and associated structures.

Areas of ground exposure had a GSV of <10%.

No Aboriginal cultural heritage was identified in SU2.

SU3

SU3 is moderately vegetated, with moderate pasture coverage along the western boundary, fig trees and date palm in the centre, and revegetated woodland along the eastern boundary of the survey unit.

Areas of ground exposure on the western boundary had a GSV of >10%.

Areas of ground exposure within the fig trees and date palms had a GSV of >70%.

There are residential dwelling, and built structure located at the western end of the survey unit. The fig and date orchard extends eastwards to the area of revegetation.

One (1) previously unrecorded Aboriginal site was identified in SU3: SD-IF-01 (AHIMS #PENDING).



Plate 4: SU3 looking north along row of date palms and fig trees



Plate 5: SU3 looking south east from northern boundary



Plate 6: SU3 looking south

SU4

SU4 has been extensively cleared for pastoral practices, and is heavily vegetated, with thick pasture coverage, and revegetated trees around the dam (Plate 7 and Plate 8).

Areas of ground exposure have a GSV of <20%.

There is a single structure, and several fences still erected which were associated with the former pastoral practice, as well as an access track used by property in SU1 to transport stock to the Nursery in SU7.

No Aboriginal cultural heritage was identified in SU4.



Plate 7: SU4 looking east along northern boundary



Plate 8: SU4 looking east

SU5

SU5 has been extensively cleared for the construction of the petrol station and Silverdale shopping centre (refer to Plate 9 and Plate 10).

The land that extends south of the petrol station to the southern boundary of the survey unit is covered in a thick layer of emplaced fill.

Areas of ground exposure had a GSV of <10%.

No Aboriginal cultural heritage was identified in SU5.



Plate 9: SU5 looking west



Plate 10: SU5 looking west towards emplaced fill



Plate 11: SU6 looking east



Plate 12: SU6 looking east

SU6

SU6 has been extensively cleared for the construction a residential dwelling, associated infrastructure, pastoral practices, and storage of pot plants (refer to Plate 11 and Plate 12).

The land that extends south of the petrol station to the southern boundary of the survey unit is covered in a thick layer of emplaced fill.

Areas of ground exposure had a GSV of <10%.

No Aboriginal cultural heritage was identified in SU6.

SU7

SU7 has been extensively cleared for the construction of a commercial infrastructure associate with a nursery, dams, and storage of pot plants (refer to Plate 13 and Plate 14).

The majority of the land east of Silverdale Road has been utilised for the nursery; a portion of land in the south-east corner of the SU has not been utilised for commercial purposes.

Areas of ground exposure had a GSV of <80%.

No Aboriginal cultural heritage was identified in SU7.



Plate 13: SU7 looking east



Plate 14: SU7 looking south

SU8

SU8 is heavily revegetated woodland, consisting of immature native trees, and invasive plant species and dams (refer to Plate 15 and Plate 16).

SU3 is moderately vegetated, with moderate pasture coverage along the western boundary, fig trees and date palm in the centre, and revegetated woodland along the eastern boundary of the survey unit.

Areas of ground exposure on the western



Plate 15: SU8 looking east

boundary had a GSV of >40%.

No Aboriginal cultural heritage was identified in SU8.



Plate 16: SU8 looking south

SU9

SU9 has been extensively cleared for residential purposes, pastoral practices, and is heavily vegetated, with thick pasture coverage, and revegetated trees around the dam (Plate 17 and Plate 18).

Areas of ground exposure have a GSV of <20%.

The land east of the dam contains revegetated woodland, two (2) 1st order streams, and a portion of a 2nd order stream, which flows southeast through SU10 into Scotchey's Creek.

One (1) previously unrecorded Aboriginal site was identified in SU9: SD-IF-02 (AHIMS #PENDING).



Plate 17: SU9 looking east



Plate 18: SU9 looking southeast

SU10

SU10 has been extensively cleared for residential purposes, pastoral practices, and is heavily vegetated, with thick pasture coverage, and revegetated trees around the dam (Plate 19 to Plate 22).

Areas of ground exposure have a GSV of <20%.

The land east of the dam contains revegetated woodland, and a portion of a 2nd order stream, which flows southeast into Scotchey's Creek.

No Aboriginal cultural heritage was identified in SU10.



Plate 19: SU10 looking north



Plate 20: SU10 looking east



Plate 21: SU10 looking southeast



Plate 22: SU10 looking east

7.2 Survey Coverage Data

The Subject Area was divided up into survey units for ease of recording. All landforms were sampled during the survey. The main areas that were focused upon were the exposures with low levels of disturbance as these areas would be more likely to yield intact Aboriginal artefacts and deposits.

Survey Units	Landform	Survey Unit Area (ha)	Visibility %	Exposure %	Effective Coverage Area (ha)	Effective Coverage %
SU1	Flat/Ridge	8.11	100%	60%	4.87	60%
SU2	Flat/Ridge	0.40	10%	10%	0.00	1%
SU3	Flat/Ridge/Upper Slope	8.25	40%	60%	1.98	24%
SU4	Flat/Ridge/Upper Slope	7.82	20%	20%	0.31	4%
SU5	Flat/Ridge	1.64	10%	15%	0.02	2%
SU6	Flat/Ridge/Upper Slope	7.14	10%	10%	0.07	1%
SU7	Flat/Ridge/Upper Slope	8.29	80%	50%	3.32	40%
SU8	Flat/Ridge/Upper/Mid Slope	8.16	40%	30%	0.98	12%
SU9	Flat/Ridge/Upper/Mid/Lower Slope	10.14	20%	20%	0.41	4%
SU10	Flat/Ridge/Upper/Mid/Lower Slope	8.10	20%	15%	0.24	3%

Table 8: Survey Coverage Data

Landform	Landform Area (ha)	Area Effectively Surveyed (ha)	% of Landform Effectively Surveyed	Number of Sites	Number of Artefacts or Features
Flat/Ridge	10.16	4.90	48.18%	0	0
Flat/Ridge/Upper Slope	31.49	5.68	18.03%	1	1
Flat/Ridge/Upper/Mid Slope	8.16	0.98	12.00%	0	0
Flat/Ridge/Upper/Mid/Lower Slope	18.25	0.65	3.56%	1	1

Table 9: Landform Summary

7.3 Identified Sites

As identified in Section 6.5, no Aboriginal objects have previously been identified within the Subject Area.

As a result of the survey and assessment undertaken for the present study, two (2) additional Aboriginal sites were identified. These sites were assigned the names SD-IF-01 (AHIMS #PENDING), and SD-IF-02 (AHIMS #PENDING).

A brief description of the sites located within the Subject Area is provided below (refer to Figure 14).

SD-IF-01 (AHIMS #PENDING)

SD-IF-01 is located on a surface within the un-vegetated portion of the date palm and fig tree plantation (refer to Plate 23). The deposit consists of gravel and clayey soils. The artefact is a silcrete medial fragment (25mm x 12mm x 4mm) (see Plate 24 and Plate 25).

SD-IF-01 has been identified within an area of moderate to high ground disturbance, and due to its location and the fact that it was not identified previously by Biosis, it is considered highly likely that the artefact became exposed as a result of the practices associated with the fig tree and date palm plantation.



Plate 23: General view of SD-IF-01 looking south



Plate 24: SD-IF-01 - Ventral Surface



Plate 25: SD-IF-01 - Dorsal Surface

SD-IF-02 (AHIMS #PENDING)

SD-IF-02 is located on the eroding surface of a farm track, which runs along the northern property boundary. The deposit consists of gravel and clayey soils. The artefact is a quartz flake fragment (15mm x 10mm x 3mm) (see Plate 26 and Plate 27).

SD-IF-02 has been identified within an area of low to moderate ground disturbance, and due to its location and the fact that it was not identified previously by Biosis, it is considered highly likely that the artefact became exposed as a result of the land clearance for pastoral and land access practices.



Plate 26: SD-IF-02 - Ventral Surface



Plate 27: SD-IF-02 - Dorsal Surface



8 DISCUSSION

A total of two (2) Aboriginal sites (SD-IF-01 and SD-IF-02) have been recorded within the Subject Area (refer to Section 7.3 and Figure 14).

As noted in Section 6.5, Biosis (2014) undertook an inspection of all areas of exposure and areas that revealed good ground surface visibility for any Aboriginal cultural material. No Aboriginal objects were identified.

The major constraint on the visual assessment of the Subject Area was the GSV, which was low in areas of thick pasture coverage located away from access tracks, and commercial areas; while areas of exposure had >40% visibility.

SD-IF-01 has been recorded in areas identified in Figure 9, as having moderate to high ground disturbance, which has resulted from the continued use of the land as a date palm and fig tree plantation; while SD-IF-02 has been recorded in an area identified as having low to moderate ground disturbance, which has resulted from land clearance for pastoral and land access practices.

Based on the presence of isolated artefacts (SD-IF-01 and SD-IF-02), it is believed that these artefacts may have been discarded during Aboriginal people's travel through the area, rather than as a result of a knapping (artefact manufacture) event.

8.1 Predictive Model

The Subject Area is situated on a plateau, within the northern end of the Burragorang Tableland, which drains into the Warragamba River to the west and the Nepean River to the north and east. The Subject Area is located on the eastern side of the ridge that runs north-south through Silverdale, and is located west of the escarpment that overlooks the Nepean River.

A review of the landscape features present within the Subject Area in consideration of the 4 utilisation zones described in Section 6.6 shows that these features are consistent with features previously noted in Zone 3 of the Nepean Ramp Transitional model as identified by KAS (2015).

The predictive model (Section 6.7) for the Subject Area proposed that Aboriginal sites located within 250m of major water courses (3rd/4th order streams) would have considerably more complexity and greater artefact density when compared to Aboriginal open camp sites which are more than 250m from a major water course (3rd/4th order streams).

The Subject Area does not contain, and is not in the immediate vicinity of any major water courses. SD-IF-01 and SD-IF-02 are located between 60m and 140m from two (2) ephemeral 1st order water courses. The artefact densities of the Aboriginal sites identified within the Subject Area are consistent with the predictive model, as they are low density artefact scatters, located more than 250m of a 3rd/4th order water course.

The Subject Area is located within the area that has been defined as Zone 3. If Zone 3 was used for economic purposes, such as hunting and gathering, and trade, it would be considered likely that there would be limited subsurface archaeology, and any subsurface deposits present in this zone would have resulted from either isolated occurrences of knapping activities such as retouching or re-tasking tools, or from the discarding of tools, either intentionally or unintentionally. While the identification of these surface artefacts may represent a low density scatter, the artefact density of these sites may increase as a result of subsurface investigations. Future subsurface investigations will offer the opportunity to refine the nature of the identified sites within the wider landscape.

It was also proposed that as the level of ground disturbance increased, the ability for Aboriginal objects to provide spatial and/or chronological information about past Aboriginal land use would decrease (refer to Section 6.7). SD-IF-01 and SD-IF-02 has the potential to provide spatial information about Aboriginal land use within the Silverdale area.

9 SIGNIFICANCE ASSESSMENT

While all Aboriginal objects are afforded protection under the National Parks and Wildlife Act decisions about appropriate management of individual cultural heritage items or sites is usually based on their assessed significance as well as the likely impact of a proposed development and the need for the development. OEH requires significance assessment in accordance with the processes set out in the Burra Charter (DECCW 2010a:21).

Australia ICOMOS (1999) adopted the *Guidelines to the Burra Charter: Cultural Significance*. In the Burra Charter cultural significance means “aesthetic, historic, scientific or social value for past, present or future generations”. Cultural significance is a concept that helps in estimating the value of places. The places that are likely to be of significance are those that help an understanding of the past, enrich the present, and may be of value to future generations. The Guidelines develop the following definitions:

Aesthetic value includes aspects of sensory perception for which criteria can and should be stated. Such criteria may include consideration of the form, scale, colour, texture, and material of the fabric; the smells and sounds associated with the place and its use.

A place may have *historic value* because it has influenced, or has been influenced by, an historic figure, event, phase, or activity. It may also have historic value as the site of an important event. For any given place, the significance will be greater where evidence of the association or event survives in situ, or where the settings are substantially intact, than where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of subsequent treatment.

The *scientific or research value* of a place will depend on the importance of the data involved, on its rarity, quality or representativeness, and on the degree to which the place may contribute further substantial information.

Social value embraces the qualities for which a place has become a focus of spiritual, political, national, or other cultural sentiment to a majority or minority group.

The process of significance assessment has received considerable attention since the early 1980s and criteria for assessing these values have been developed and adapted to deal specifically with Aboriginal cultural heritage.

9.1 Cultural Significance Assessment

Cultural significance indicates the importance of a site or feature to Aboriginal communities. This category may include sites, items, and landscapes that people may have traditional ties with, as well as areas that may have contemporary importance to Aboriginal communities. Places of cultural value may have social significance to Aboriginal communities, they may have historic value through association with historic themes (e.g. missions or massacres), or they may take on value because of their rarity or because a place may be able to contribute new information about the past. Places may have aesthetic significance, being natural features with symbolic values, dramatic presence, or tranquil qualities. Cultural significance may not be in accord with the interpretations made by archaeologists – a site may have low archaeological significance but high Aboriginal significance, or vice versa.

9.2 Cultural Significance Assessment of the Subject Area

CBNTCAC was the only RAP to provide any commentary in regards to Aboriginal cultural heritage (refer to Table 4). CBNTCAC stated that “the Silverdale Road ridgeline would have been used for travellers to move through different groups, and certainly there would have been occasions for people to camp whilst enroute”.

No specific advice has been received as to the cultural significance of the Subject Area to the Aboriginal community. However, it is generally accepted that all evidence of Aboriginal occupation is of high cultural significance to the Aboriginal community.

9.3 Archaeological Significance Assessment

Scientific or archaeological significance may be assessed by placing a site, feature, or landscape in a broader regional context and by assessing its individual merits in the context of current archaeological discourse. This type of significance relates to the ability of a site to answer current and future research questions, which may be influenced by physical condition (integrity), information potential, rarity, and/or representativeness.

Rarity and Representativeness is an assessment of how rare or common a site or landscape is. In theory, heritage items may be determined to be significant because they are rare forms, or they may be considered to be very good typical forms. Whether items are of rare or common forms will depend to some extent on the variables used to distinguish them. Open sites, for example, may be distinguished from grinding grooves or scarred trees according to the general type of evidence present (e.g. stone artefacts distinguishable from trees with marks or grooves on rock platforms). To assess rarity and representativeness, site type can be used initially, and then this category subdivided until a satisfactory level of (dis)similarity is achieved. Within the general group “open artefact scatters”, sites may be distinguished according to other variables, such as their content, or their landscape setting. Technically, an assessment of representativeness should identify both what is typical or common as well as what is rare.

Research potential is an assessment of the ability of a site or landscape to provide information to answer questions about the past. Several criteria may be considered:

- ✎ Physical condition. Sites or landscapes in good physical condition are generally able to provide information on spatial relationships between (for example) stone artefacts, other remains, chronological units if present, and landscape settings;
- ✎ The connectedness of individual sites or landscapes – is the content, site or landscape part of a complex of related sites or landscapes?;
- ✎ The potential of a site or landscape to provide a relative or absolute chronology extending back into the past; i.e. stratified sequences of cultural materials and/or dateable materials such as organic remains (radiocarbon dating), or sealed or cultural deposits (optical or thermo luminescence); and,
- ✎ The ability of the site or landscape to provide a large sample size (large numbers of stone artefacts, art motifs, grinding grooves etc.) about which statistically significant statements can be made.

9.4 Archaeological Assessment of the Subject Area

Whilst there is evidence that the Subject Area has been affected by land clearing in the past this is not seen in this instance as being a factor that has significantly reduced the opportunity for relatively intact Aboriginal cultural deposits to be identified.

Rarity and Representativeness

This may be assessed by using site type as the first criterion then landscape, size (number of lithics) and the nature of the lithic content.

SD-IF-01 and SD-IF-02 are isolated artefacts are relatively common type of site in the Silverdale, as 11 isolated finds have been recorded on AHIMS to-date (refer to Table 6).

Research potential

Physical condition. Given that the majority of the former land use of the Subject Area has been pastoral, and plantation, it is expected that any intact Aboriginal artefact bearing deposits would be present in areas of low to moderate ground disturbance (i.e. areas of pastoral practice); while areas of high ground disturbance (i.e. plantation) are highly unlikely to contain intact Aboriginal artefact bearing soil deposits.

Connectedness. It is anticipated that SD-IF-01 and SD-IF-02 would be expected to be connected to all known and unknown Aboriginal sites along the ridgeline through Silverdale, and would form part of a pattern of settlement and/or transient activity through the area.

Potential for a Chronological Sequence. The stylistic dating of lithics (stone tools) is imprecise, given the length of time over which various stone-working (knapping) techniques were used, and also the time it took for any new techniques to be adopted. Dating can be more closely estimated if there is a strong relation with a site, which has sequences of radiocarbon dates, or if the lithics are buried under dateable deposits.

Ability to produce statistically useful samples of objects. The definition of a statistically useful sample is purely dependant on the questions that are being asked of the data. The majority of Aboriginal sites identified within the Silverdale area have produced less than 100 individual artefacts; additional Aboriginal sites, such as the ones identified within the Subject Area would add greatly to the overall knowledge of lithic technologies employed in the Silverdale area, and to assist in the identification of any types or styles of artefacts that may be geographically specific. Artefact densities consistent with surrounding sites would also help to understand the extent and pattern of pre-contact Aboriginal land use in the area.

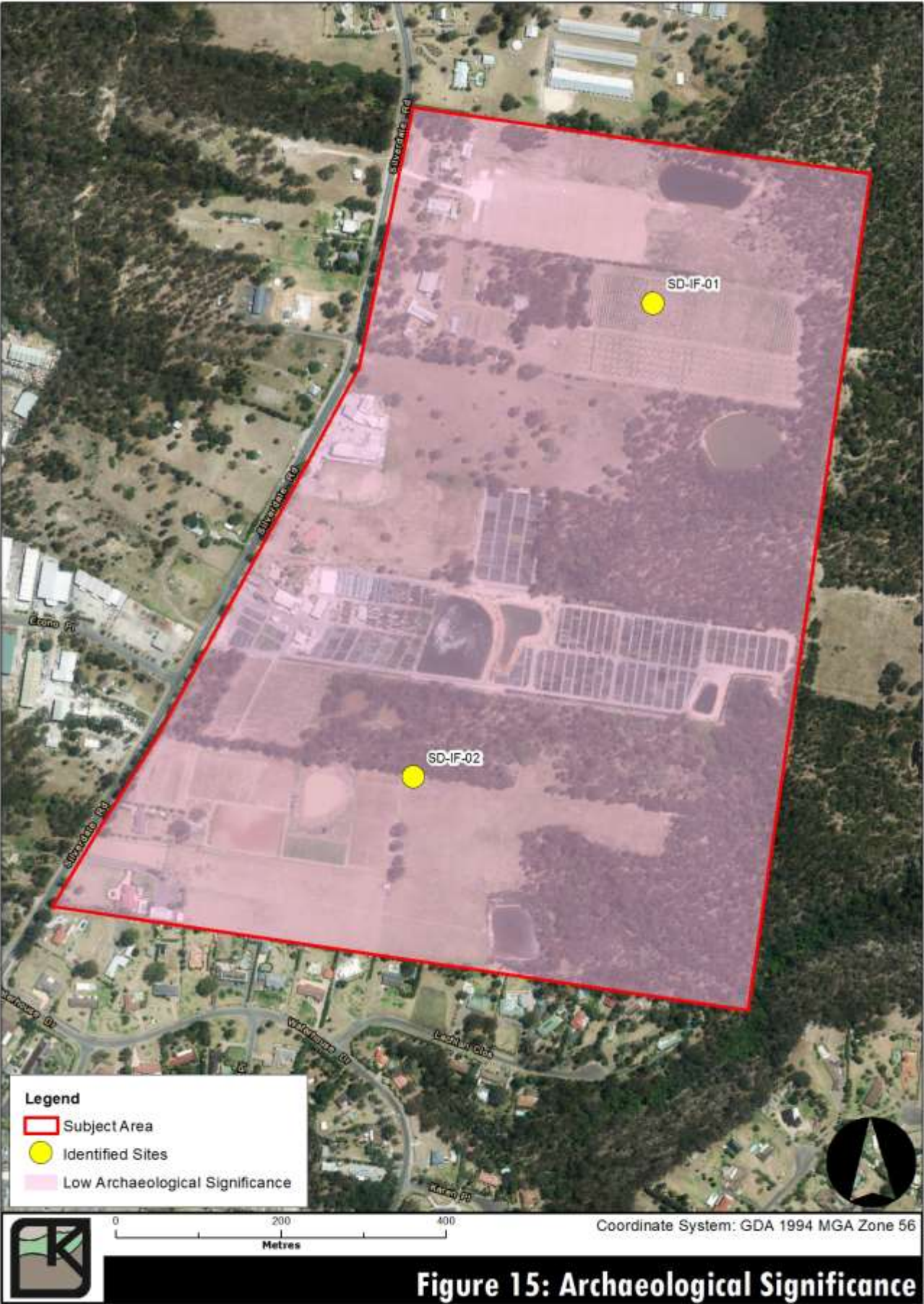
9.5 Statement of Archaeological Potential and Significance

The potential for archaeological material to be present within the Subject Area is low, and in areas where limited or no sub-surface disturbance has taken place previously, the potential for subsurface archaeological material to be present is low (see Figure 15).

The table below (Table 10) details the archaeological significance of the Aboriginal sites detailed in Section 7.3).

Site	Type	Archaeological Significance Ranking
SD-IF-01	Isolated Find	Low
SD-IF-02	Isolated Find	Low

Table 10: Archaeological Significance of Aboriginal sites



10 PRINCIPAL FINDINGS AND IMPACT ASSESSMENT

10.1 Principal Findings

In Section 1.3 of this report a number of aims and objectives were identified. This report has presented details of archaeological surveys that have been undertaken within the Subject Area, and presents sufficient information to facilitate an informed decision regarding the proposed impact upon Aboriginal heritage.

As noted in Section 1.4, the visual assessment of the Subject Area was constrained by the limited visibility of the ground surface. Areas of ground surface exposure within the Subject Area had >40% visibility.

This report has reviewed the available existing documents, including previous archaeological assessments conducted within the Subject Area and the surrounding region (see Section 6). Field surveys have been completed to identify any Aboriginal sites located within the proposed development footprint (see Section 7.1, Figure 13 and Figure 14). The significance of Aboriginal sites within the Subject Area has been identified (see Section 9.5).

Section 6.7 of this report made certain predictions in relation to the location of Aboriginal sites and the site types likely to be present across the Subject Area, i.e. any sites will be considerably less complex and less dense at distances greater than 250m from major water sources (3rd/4th order streams). As there are two (2) 1st order streams (non-permanent water courses) within the Subject Area, it is likely that the Aboriginal sites identified within the Subject Area represent discrete artefact occurrences. From the results presented in Section 7.3 and review of Figure 14, it has been shown that the predictions made in Section 6.7 hold true for the Subject Area.

The Subject Area contains: SD-IF-01 (AHIMS #PENDING) and SD-IF-02 (AHIMS #PENDING) (refer to Section 7.3 and Figure 14).

SD-IF-01 has been identified within an area of moderate to high ground disturbance, and due to its location and the fact that it was not identified previously by Biosis, it is considered highly likely that the artefact became exposed as a result of the practices associated with the fig tree and date palm plantation.

SD-IF-02 has been identified within an area of low to moderate ground disturbance, and due to its location and the fact that it was not identified previously by Biosis, it is considered highly likely that the artefact became exposed as a result of the land clearance for pastoral and land access practices.

The predictive model (refer to Section 6.7) proposed that it was likely that low density Aboriginal sites may be present, given that there are five (5) 1st order streams and one (1) 2nd order stream, which were identified as dry during the recent field inspection, within the Subject Area. The prediction about the presence of low density Aboriginal sites is supported by the identification of 2 isolated artefacts, which are likely to be the result of single discard event, rather than long term use of the area.

Although the Planning Proposal for rezoning will not result in harm and/or impacts to the identified Aboriginal sites and/or their defined extents, it is possible that the Aboriginal sites may be impacted as a result of any subsequent Development Application that results from the current proposed works.

Should the Planning Proposal be approved, an Aboriginal Heritage Impact Permit (AHIP), to impact the identified Aboriginal sites and/or their defined extents, would be necessary for any subsequent Development Application.

10.2 Impact Assessment

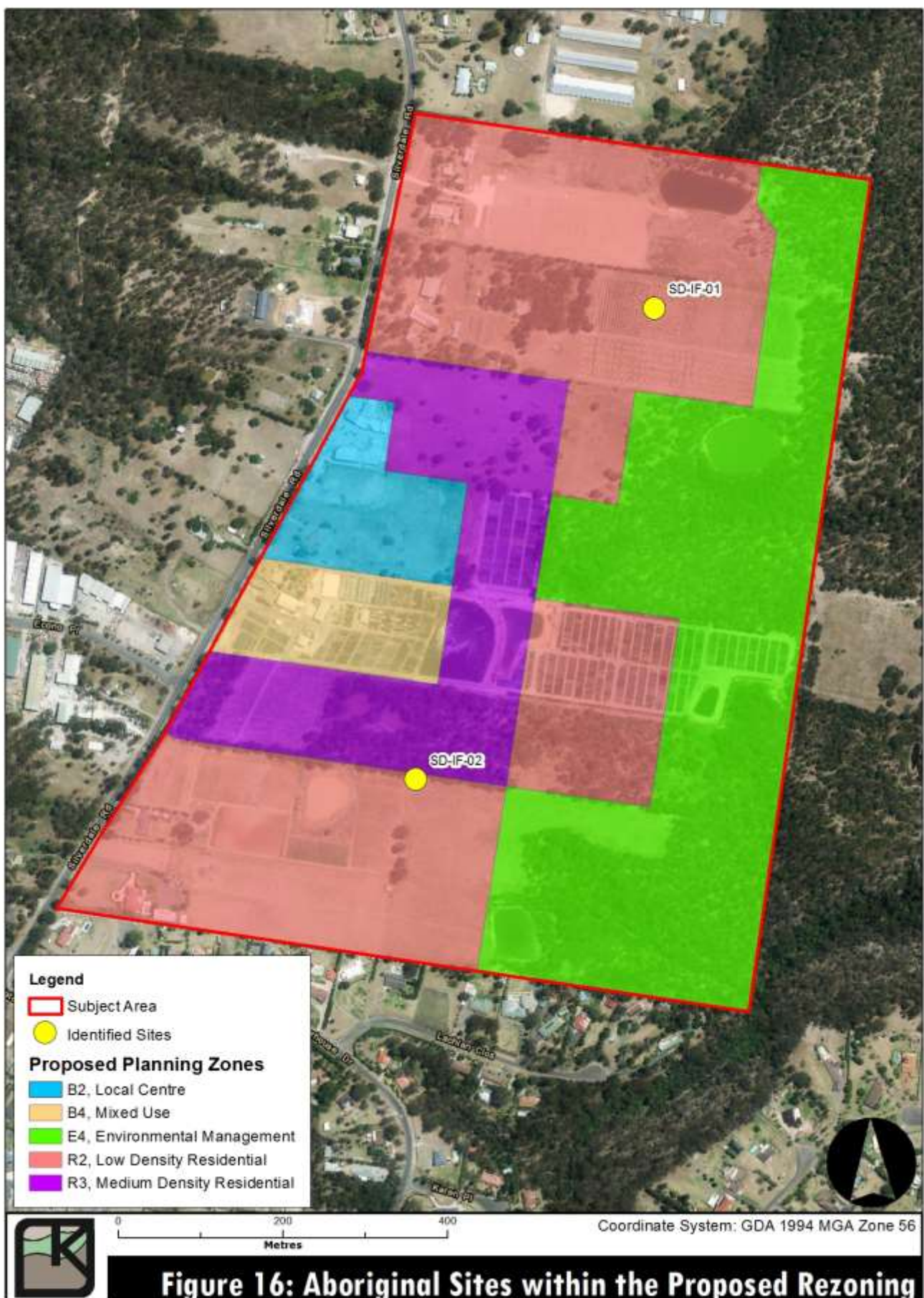
The table below (Table 11) details the anticipated impacts and management/other recommendations for the identified Aboriginal sites, should the rezoning continue as proposed (refer to Figure 16), and any subsequent development approval are lodged as a result of the current Planning Proposal.

Site	Type of Harm	Degree of Harm	Consequence of Harm	AHIP Required
SD-IF-01	Direct	Whole	Whole loss of value	Yes
SD-IF-02	Direct	Whole	Whole loss of value	Yes

Table 11: Summary of Impact Assessment for Proposed Rezoning

While the Planning Proposal for rezoning will not result in harm and/or impacts to the identified Aboriginal sites and/or their defined extents, it is possible that the Aboriginal sites may be impacted as a result of any subsequent Development Application that that results from the current proposed works.

Should the Planning Proposal be approved, an Aboriginal Heritage Impact Permit (AHIP), to impact the identified Aboriginal sites and/or their defined extents, would be necessary for any subsequent Development Application.



11 MANAGEMENT CONSIDERATIONS

As the two identified Aboriginal sites have differing levels of potential and significance, and the management strategies recommended for each site will differ according to the needs of each site.

KAS proposes that the extent of the two Aboriginal sites (SD-IF-01 and SD-IF-02) be fenced while the Planning Proposal, and any subsequent Development Applications be determined, in order to ensure that there is no inadvertent harm to known Aboriginal objects where no Aboriginal Heritage Impact Permit (AHIP), under Part 6 of the *National Parks and Wildlife Act, 1974*, has been approved.

SD-IF-01 (AHIMS #PENDING)

KAS does not propose that a test excavation program be undertaken in accordance with the *Code of Practice* (DECCW, 2010a). Due to the identification of SD-IF-01 within an area of high ground disturbance, it is highly likely that there are no intact Aboriginal artefact bearing soil deposits present; and as such, it is considered unlikely that unknown Aboriginal stone artefacts would be recovered during the test excavation program.

SD-IF-02 (AHIMS #PENDING)

KAS proposes that a test excavation program be undertaken in accordance with the *Code of Practice* (DECCW, 2010a) be undertaken as part of the mitigation strategy. Due to identification of SD-IF-02 within an area of low to moderate ground disturbance, there is the potential for unknown Aboriginal stone artefacts to be present.

The Aboriginal artefacts identified within the Subject Area (see Figure 16) will remain in-situ until such time as an AHIP permit is approved under Part 6 of the *National Parks and Wildlife Act, 1974* for their removal from site. Further management of the Aboriginal artefacts will be discussed with the RAPs as part of the AHIP application process.

12 LEGISLATIVE OBLIGATIONS AND RECOMMENDATIONS

Specific clauses within the *National Parks and Wildlife Act, 1974* (as amended) and the *National Parks and Wildlife Regulations 2009* give rise to certain obligations. Recommendations for other tasks and activities to be undertaken come from the application of industry standards. Where an activity or task must be undertaken to comply with relevant legislation it will be detailed in Section 12.1, where a task or activity is recommended to be undertaken to meet the current industry standards it is presented in Section 1.

12.1 Obligations

1. Site Cards to be prepared for all Aboriginal sites identified in this study that are not currently recorded in Aboriginal Heritage Information Management System (AHIMS) maintained by the Office of Environment and Heritage;
2. Should Aboriginal sites and/or objects be found during the proposed work, work must cease immediately and OEH must be contacted to inspect the artefacts; and,
3. An Aboriginal Heritage Impact Permit under Part 6 of the *National Parks and Wildlife Act, 1974* may need to be sought for should the proposed works impact a previously unknown Aboriginal object as part of the works. This Aboriginal Heritage Impact Permit would be sought for all known and unknown Aboriginal objects within the Subject Area as a strategy to minimise the risk of delays during works that may result from unexpected finds.

12.2 Recommendations

The following management principles and recommendations are based on:

- ✦ The legal requirements of the *National Parks and Wildlife Act 1974* (as amended), whereby it is illegal to damage, deface or destroy an Aboriginal relic without first obtaining the written consent of the Director General of National Parks & Wildlife Service;
- ✦ The legal requirements of the *Heritage Act 1977*, whereby it is illegal to disturb or excavate any land knowing or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed unless the disturbance or excavation is carried out in accordance with an excavation permit;
- ✦ The requirements of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW, 2010a);
- ✦ The requirements of the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011);
- ✦ The findings presented within this Aboriginal Cultural Heritage Assessment Report; and,
- ✦ Recognition that the current assessment has been prepared for a rezoning proposal, and that there will be subsequent Development Applications for construction.

KAS recommends the following:

1. No further assessment of the Aboriginal heritage within the Subject Area is required to inform the Planning Proposal for rezoning;

2. Further investigation, in the form of subsurface test excavation in accordance with the *Code of Practice* (DECCW, 2010a), will be required for SD-IF-02 as identified in Figure 14 and Figure 16;
3. No further investigation of SD-IF-01, in the form of subsurface test excavation in accordance with the *Code of Practice* (DECCW, 2010a), will be required;
4. It is not necessary to seek an Aboriginal Heritage Impact Permit (AHIP) under Part 6 of the *National Parks and Wildlife Act 1974* for the Planning Proposal;
5. It would be necessary for any Development Application, subsequent the rezoning proposal, to seek an Aboriginal Heritage Impact Permit (AHIP) under Part 6 of the *National Parks and Wildlife Act 1974* in order to impact the identified Aboriginal sites and/or their defined extents (refer to Figure 16);
6. Should the proposed works be amended and result in potential impacts to areas previously not inspected as part of this assessment, further investigations may be required;
7. Further investigations may result in the identification of additional Aboriginal sites and/or amendments to the extents of sites shown within this report. It is recommended that any further investigation should also provide updated recommendations for the proposed works;
8. Temporary fencing should be erected around SD-IF-01 and SD-IF-02 to prevent inadvertent damage to the sites occurring prior to the approval of an AHIP;
9. The aforementioned temporary fencing should be maintained in good repair and should be periodically inspected by a qualified Archaeologist experienced in Aboriginal Cultural Heritage, until such time as an AHIP has been determined; and,
10. A copy of the final report should be sent to the Registered Aboriginal Parties (RAPs) identified in Table 3.

12.3 Distribution of Report

One digital copy of the draft report should be sent to each registered Aboriginal stakeholders identified in Table 3 for comment, so that their views can be incorporated into the final report.

One hard copy and one digital copy of the finalised report should be sent to:

Aboriginal Heritage Information Management System (AHIMS)

Office of Environment and Heritage,
PO Box 1967, Hurstville NSW 1481.

13 REFERENCES

- Artefact Heritage Services, 2012, *Proposed Rezoning at Silverdale, NSW: Aboriginal Heritage Due Diligence Assessment and Preliminary Non-Indigenous Heritage Assessment*. Report to Planning Ingenuity.
- Attenbrow, V.J. 2010. *Sydney's Aboriginal Past. Investigating the Archaeological and Historical Records*, 2nd edition. Sydney: UNSW Press.
- Australia ICOMOS, 1999, *Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (the Burra Charter)*, revised edition, Australia ICOMOS, Canberra.
- Baker, N. 1992. *New South Wales National Parks and Wildlife Service Hunter Valley Aboriginal Sites Assessment Project: Stone Artefact Assessment and Analysis – Recording Techniques and Methodology*. Report to NSW NPWS.
- Bannerman, S.M. and Hazelton, P.A., 1990, *Soil landscapes of the Penrith 1/100 000 Sheet*. Soil Conservation Service of NSW, Sydney.
- Biosis, 2014, *Aboriginal Due Diligence Assessment: North Silverdale Re-zoning*. Report prepared for Site Plus.
- Brayshaw, H., 1989, *Warragamba Dam – Archaeological Study. Sample Investigation of Areas Upstream to be Affected by Increased Water Retention*. Report prepared for the Water Board through Mitchell McCotter & Associates Pty Ltd.
- Brayshaw, H., 1992, *Warragamba Dam EIS – Spillway: Archaeological Survey for Aboriginal Sites*. Report prepared for the Water Board through Mitchell McCotter & Associates Pty Limited.
- Brayshaw, H., 1993, *Notes on Warragamba Dam EIS – Spillway: Archaeological Survey for Aboriginal Sites*. Report prepared for the Water Board through Mitchell McCotter & Associates Pty Ltd.
- Brayshaw, H., 1999, *Warragamba Dam Spillway: Archaeological Survey for Aboriginal Sites*. Report prepared for Abigroup Constructions Pty Ltd.
- Bureau of Meteorology, 2017a, *Averages for Camden Airport AWS*. Accessed 20th January 2017 from http://www.bom.gov.au/climate/averages/tables/cw_068192.shtml
- Bureau of Meteorology, 2017b, *Monthly Rainfall for Cataract Dam*. Accessed 20th January 2017 from http://www.bom.gov.au/jsp/ncc/cdio/weatherData/av?p_nccObsCode=139&p_display_type=dataFile&p_startYear=&p_c=&p_stn_num=068016
- Bureau of Meteorology, 2017c, *Monthly Rainfall for Bringelly (Maryland)*. Accessed 20th January 2017 from http://www.bom.gov.au/jsp/ncc/cdio/weatherData/av?p_nccObsCode=139&p_display_type=dataFile&p_stn_num=067015
- Burke, H, and Smith, C., 2004, *The Archaeologist's Field Handbook*, Crow's Nest, N.S.W. Allen & Unwin, 2004.
- Corkill, T., 1997, 'Red, Yellow and Black: Colour and Heat in Archaeological Stone' *Australian Archaeology*, no 45, pp. 54-55.
- Corkill, T., 1999, *Here and There: Links between Stone Sources and Aboriginal Archaeological Sites in Sydney, Australia*, Unpublished MPhil thesis, University of Sydney.

- Corkill, T., 2005, 'Sourcing Stone from the Sydney Region: A Hatchet Job', *Australian Archaeology*, no. 60, pp. 41-50.
- Cotterell, B., and Kamminga, J., 1987, 'The formation of flakes', *American Antiquity*, vol. 52, pp. 675-708.
- Dallas, M., 1982, *An Archaeological Survey of Bents Basin State Recreation Area for a Plan of Management*. Report to National Parks and Wildlife.
- DECCW, 2010a, *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*, Department of Environment, Climate Change and Water NSW, Sydney South, 24 September 2010.
- DECCW, 2010b, *Aboriginal Cultural Heritage Consultation Requirements for Proponents*, Department of Environment, Climate Change and Water NSW, Sydney South, April 2010.
- Hazelton, P.A., and Tille, P.J., 1990, *Soil landscapes of the Wollongong-Port Hacking 1:100 000 Sheet*, Soil Conservation Service of NSW, Sydney.
- HLA-Envirosciences Pty Limited, 1995, *An archaeological survey of Warragamba Dam proposed haulage roads Warragamba Wallacia Luddenham*. Report to Warragamba Dam Project Team.
- Holdaway, S., and Stern, N., 2004, *A Record in Stone: the Study of Australia's Flaked Stone Artefacts*, Museum Victoria and Aboriginal Studies Press
- KAS, 2014, *Proposed Residential Subdivision, 33-35 Warradale Road, Silverdale, Wollondilly Shire Council LGA, NSW: Aboriginal Cultural Heritage Assessment Report*. Prepared for Site Plus on behalf of TJ & RF Fordham Pty Ltd
- KAS, 2015a, *Proposed Residential Subdivision, 1-41 Marsh Road, Silverdale, Wollondilly Shire LGA, NSW: Cultural Heritage Assessment Report*. Prepared for Site Plus Pty Ltd on behalf of Simba Developments Pty Ltd.
- KAS, 2015b, *Fairways East Precinct, Bingara Gorge, Wilton, Wollondilly Shire LGA, NSW: Cultural Heritage Assessment and Test Excavation Report*. Prepared on behalf of Lend Lease Wilton Pty Ltd
- KAS, 2016, *Proposed Residential Subdivision, 1-41 Marsh Road, Silverdale, Wollondilly Shire LGA, NSW: Cultural Heritage Assessment and Test Excavation Report*. Prepared for Site Plus Pty Ltd on behalf of Simba Developments Pty Ltd.
- Koettig, M., 1994, *Bulga lease authorisation 219 salvage excavations*. Report prepared for Saxonvale Coal Pty Ltd. Vol 5: Listing of technological variables used, pp.6-24
- Koettig, M., and Lance, A., 1986, *An Aboriginal Resources Planning Study for the City of Goulburn, NSW*. Report to Goulburn City Council.
- Kohen, J.L., Stockton, E.D., and Williams, M.A.J., 1984, 'Shaws Creek KII Rockshelter: A Prehistoric Occupation Site in the Blue Mountains Piedmont, Eastern New South Wales', *Archaeology in Oceania*, vol. 91, pp. 53-73.
- McBryde, I., and Binns, R.A., 1972, 'A Petrological Analysis of Ground-Edge Artefacts from Northern New South Wales', *Prehistory and Material Culture Series 10*, Canberra: Australian Institute of Aboriginal Studies.

- McDonald, J., 1999, *Archaeological Test Excavation of NG/PAD1 (NG/OC3): Proposed "Nangarin Estate" Agricultural/Rural Residential Subdivision, at Picton, NSW*. Report to Vinnicombe & Associates, on behalf of Bradman Nangarin Pty Ltd.
- McDonald, J., 2002, *Archaeological Survey of Lands at Wallacia for the Greendale Road Masterplan*. Report prepared for SMEC Australia Pty Ltd.
- McDonald, J., 2006, *Aboriginal Archaeological Assessment: Western Sydney Parklands – Phase 1, Bungaribee Precinct and Interface Lands*, Report prepared for APP on behalf of Landcom and DIPNR.
- McDonald, J., 2008, *Dreamtime Superhighway: Sydney Basin Rock Art and Prehistoric Information exchange*. Terra Australis 27. ANU E-Press.
- Murphy, B.W. 2000 "The nature of soil", pp.1-12. (In) Charman, P.E.V. and Murphy, B.W. (eds) *Soils: Their Properties And Management*. Prepared in association with the Department of Land and Water conservation, NSW. Oxford: Oxford University Press
- Murphy, B.W. and Murphy, C.L. 2000 "The soil profile", pp.70-82. (In) Charman, P.E.V. and Murphy, B.W. (eds) *Soils: their properties and management*. Prepared in association with the Department of Land and Water conservation, NSW. Oxford: Oxford University Press.
- Nanson, G.C., Young, R.W., and Stockton, E.D., 1987, "Chronology and Palaeoenvironment of the Cranebrook Terrace (near Sydney) Containing Artefacts more than 40,000 Years Old" *Archaeology in Oceania*, vol 22, no 2, pp. 72-78.
- Navin Officer, 1994, *Aboriginal Archaeological Component – Bushrangers Creek Local Environmental Study and Development Control Plan*. Report to Purdon Associates
- NSW National Parks and Wildlife Service, 2003, *The Native Vegetation of the Warragamba Special Area: Part A: Technical Report*. NSW National Parks and Wildlife Service, Sydney.
- OEHL, 2011, *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*, Office of Environment and Heritage, South Sydney.
- OEHL, 2012, *Sydney Basin Bioregion*. NSW Office of Environment & Heritage, Retrieved June 2014 from <http://www.environment.nsw.gov.au/resources/nature/sydneyBasin.pdf>
- Rich, E., 1990, *Main Road No. 95, Mount Keira Road – Wilton Bypass: Archaeological Survey for Aboriginal Sites*. Report prepared for the Roads and Traffic Authority by Brayshaw MacDonald.
- Site Plus Pty Ltd, 2012, *Aboriginal Archaeological Desk Top Assessment for Warradale Estate, Silverdale*. Report prepared for Wollondilly Shire Council.
- Smith, L.J., 1989a, *Liverpool Release Areas: Archaeological Site Survey and Planning Study*, Report for Liverpool City Council.
- Smith, L.J., 1989b, *Archaeological Site Survey and Analysis of Sites on the Northern Cumberland Plain*. Report for National Parks and Wildlife Service.
- Speth, J.D., 1972, 'Mechanical Basis of Percussion Flaking', *American Antiquity*, vol. 37, no. 1, pp. 34-60.
- Stedinger Associates, 2005, *Aboriginal Archaeological Sites Survey and Assessment: Former African Lion Safari Park, Marsh Road, Silverdale*. Report prepared for Wollondilly Shire Council.

- Tindale, Norman B., 1974, *Tribal Boundaries in Aboriginal Australia*, Canberra: Australian National University Press.
- Witter, D., 1992, *Regions and Resources*, PhD Thesis, Department of Prehistory, Research School of Pacific Studies, Australian National University: Canberra.
- Wright, R.V.S., 1983, 'Stone Implements', in G. Connah (ed), *Australian Field Archaeology: A Guide to Techniques*, Australian Institute of Aboriginal Studies: Canberra, pp. 118-125.

APPENDIX I. CONSULTATION LOG

Date	Time	Nature of consultation	KAS Initials
9/11/2016	2.55pm	Emailed agency letters to NTS Corp, OEH, Office of the registrar, Wollondilly Shire Council, TLALC and Greater Sydney Local Land Services	KK
11/11/2016	11.20am	Received response from Office of the Registrar – advising searched register of Aboriginal Owners and the project area described does not appear to have registered Aboriginal owners, suggested to contract Tharawal Local Aboriginal Land Council	KK
15/11/2016		Received response from OEH with list of stakeholder listed.	KK
18/11/2016	10.40am	Received 23 you have been identified letters as per OEH list.	KK
18/11/2016	12.00pm	Posted 51 you have been identified letters as per OEH list	KK
19/11/2016	1.19pm	Received Gulaga expression of interest to register for project, they wish to be kept informed of any further developments.	KK
21/11/2016	3.43pm	Received CBNTCAC registration	KK
21/11/2016	3.48pm	Received reply from NNTT to agency letter	KK
22/11/2016	1.50pm	Received a return to sender for Rebecca Chalker's you have been identified letter, reason – left address	KK
22/11/2016	2.05pm	Received a phone call from Matthew Coe to register an interest in project,	KK
22/11/2016	4.06pm	Received expression of interest from Corroboree Aboriginal Corporation	KK
22/11/2016		Received reply from Wollondilly council for agency letter to contact TLALC, CBNTCAC, Wollondilly Aboriginal corp.	KK
24/11/2016	1.30pm	Received return to sender for Gundungurra Tribal & Pemulway CHTS	KK
24/11/2016	12.00pm	Posted you have been identified letters to Wollondilly Aboriginal Advisory Committee, Gundungurra Tribal Aboriginal Corp, Elise Stockwell & Mervyn Trindall & Gundungurra Aboriginal Heritage Association Inc	KK
24/11/2016	6.01pm	Received registration for Walbunja	KK
24/11/2016	6.26pm	Received registration for Nundagurri	KK
24/11/2016	6.36pm	Received registration for Badu	KK

24/11/2016	6.47pm	Received registration for Yerramurra	KK
24/11/2016	7.16am	Received registration for Ngarigo	KK
24/11/2016	7.24pm	Received registration for Ngunawal	KK
24/11/2016	9.46pm	Received registration for Gangangarra	KK
24/11/2016	9.53pm	Received registration for Eora	KK
24/11/2016	10.01pm	Received registration for Elouera	KK
24/11/2016	10.10pm	Received registration for Bidawal	KK
24/11/2016	10.23pm	Received registration for Djiringanj	KK
24/11/2016	10.36pm	Received registration for Tharawal CHTS	KK
24/11/2016	10.47pm	Received registration for Thauaira	KK
24/11/2016	10.56pm	Received registration for Murrin	KK
24/11/2016	11.04pm	Received registration for Kuringgai	KK
24/11/2016	11.10pm	Received registration for Dharug	KK
24/11/2016	11.29pm	Received registration for Wandandian	KK
24/11/2016	11.42pm	Received registration for Walgalu	KK
24/11/2016	11.48pm	Received registration for Murrumbul	KK
24/11/2016	11.53pm	Received registration for Bilinga	KK
24/11/2016	11.57pm	Received registration for Wingikara	KK
25/11/2016	12.57pm	Received registration for Darren Duncan	KK
25/11/2016	4:45pm	Aaron Broad (Minnamunnung) called to register	NS
27/11/2016	10.31pm	Received registration for AAS	KK

28/11/2016	9.06am	Received registration for Widescope	KK
28/11/2016	9.07am	Received a reply from Greater Sydney Local Land Services to contact OEH for all inclusive contact list	KK
28/11/2016	9.38am	Received registration for A1 Indigenous Services	KK
28/11/2016	1.30pm	Received return to senders for Trevor Robinson & Tania Matthews – have left address	KK
28/11/2016	1.30pm	Received Phil Khan registration	KK
28/11/2016	1.49pm	Received Darug Land Observation registration	KK
28/11/2016	2.19pm	Sent follow up email to NTS Corp re: agency letters sent 9/11/16	KK
28/11/2016	2.20pm	Sent follow up emails to TLALC re: agency letters sent on 9/11/16	KK
1/12/2016	4.20pm	Received registration from Kawul Cultural Services	KK
1/12/2016	4.27pm	Received registration from Wurrumay Consultants	KK
1/12/2016	4.48pm	Received registration from Warrigl Cultural Services	KK
7/12/2016	12:16pm	Received registration from Dhinawan-Dhigaraa Culture and Heritage	NS
7/12/2016	4:58pm	Tried calling TLALC, left message following up on previous emails	NS
8/12/2016	1:50pm	Called TLALC, and explained I was following up on email sent the 9 th November 2016. TLALC will have someone call me back shortly	NS
8/12/2016	2:00pm	Called NTS Corp, and explained I was following up on email sent the 9 th November 2016. NTS Corp asked if I could reissue the email, and they will have someone respond	NS
8/12/2016	2:19pm	Reissued email to NTS Corp as requested	NS
9/12/2016		Reissued email to NTS Corp, following seasonal email from George Toma	KK
9/12/2016	3:00pm	Call to TLALC following up on yesterday's call. I left a message with the receptionist, who advised that someone would call.	NS
14/12/2016	1:38pm	Called TLALC following up about previous calls. Receptionist advised that she would pass the message on to Delise, once she's back from lunch	NS

16/12/2016	4.30pm	Emailed Stage2 and 3 documents to all RAP's	KK
21/12/2016	7.38am	Email from Widescope agreeing with methodology	KK
21/12/2016	8.10AM	Email from DLO agreeing with methodology	KK
03/1/2017	8.01pm	Received reply from AAS advising they agree with the proposed methodology.	KK
15/1/2017	1.05pm	Received reply from Corroboree advising they see no issues with proposed methodology	KK
16/1/2017		Received reply from Phil Khan advising he is happy with proposed methodology and all our recommendations	KK
18/4/2017	10.19am	Emailed draft ACHAR to all RAP's	KK
18/4/2017	12.00pm	Posted ACHAR to CBNTAC	KK
18/4/2017	4.30pm	Received bounced emails for AAS & Corroboree, printed reports, bind & posted to AAS & Corroboree	KK
18/4/2017	4.52pm	Received email from Phil Khan requesting hard copy of report, printed report, bind & posted to Phil	KK
23/4/17	8.33am	Received an email from AAS re: AAS read your review on the above project and consider it to true and accurate.	KK
24/4/2017	1.25pm	Received CBNTAC comments	KK
28/4/2017	3.14pm	Received Widescope comments	KK
10/5/2017	2.21pm	Sent reminder email to all raps (except CNBTCAC & Widescope) that draft report comments are due by 16/5/17	KK
10/5/2017	2.32am	Phone call with Phil Khan re: he is happy with our draft report	KK
10/5/2017	5.42pm	Received an email from Corroboree agreeing with draft report	KK
11/5/2017	11.24am	Received an email from Darug Land Observation re: support the report	KK

APPENDIX II. AGENCY LETTERS



P.O. Box 440,
Picton NSW 2571

T. +61 (0)2 4627 8622

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W. www.kayandel.com

Our Reference: 4171-2016

9 November 2016

NTS Corp
PO Box 2105
Strawberry Hills NSW 2012

Dear Sir or Madam,

RE: Identification of Aboriginal organisation and people who may have an interest in the Proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447.

Kayandel Archaeological Services (KAS) has been engaged by North Silverdale Centre Landowner Group to undertake an Archaeological and Aboriginal Cultural Heritage Assessment. This assessment will be completed for a Proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447.

In accordance with our obligations under the *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW 2010), we are seeking to identify Aboriginal organisations and people who may have an interest in the project area and hold knowledge relevant to determining the cultural significance of Aboriginal objects and/or places for that area.

The cultural heritage assessment may result in an application for a Section 87 Permit and/or Section 90 Consent under Part 6 of the *National Parks & Wildlife Act 1974* and may also be used in the assessment of impact of the project under the *Environmental Planning & Assessment Act 1979*.

Should your organisation know of any groups or people that meet this requirement we request that you supply their name and most recent contact details to enable our firm to make contact and involve them in future aspects of the project.

Should you have any queries please free to contact our office and ask for the Project Manager for Project ID:4171-2016.

Thank you for your assistance with this matter.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Lance Syme', is written over a light blue rectangular stamp area.

Lance Syme
Principal



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Picton NSW 2571

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W. www.kayandel.com

Our Reference: 4171-2016

9 November 2016

Office of Environment and Heritage
Planning and Aboriginal Heritage Section
PO Box 644
Parramatta NSW 2124

Dear Ms Scully,

RE: Identification of Aboriginal organisation and people who may have an interest in the Proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447

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Lance Syme
Principal



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W. www.kayandel.com

Our Reference: 4171-2016

9 November 2016

Office of the Registrar - Aboriginal Land Rights Act 1983 (NSW)
PO Box 112
Glebe NSW 2037

Dear Sir or Madam,

RE: Identification of Aboriginal organisation and people who may have an interest in the Proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447

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Lance Syme
Principal



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Our Reference: 4171-2016

9 November 2016

Wollondilly Shire Council
PO Box 21
Picton NSW 2571

Dear Sir or Madam,

RE: Identification of Aboriginal organisation and people who may have an interest in the Proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447

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Lance Syme
Principal



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Picton NSW 2571

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W. www.kayandel.com

Our Reference: 4171-2016

9 November 2016

Tharawal Local Aboriginal Land Council
PO Box 168
Picton NSW 2571

Dear Sir or Madam,

RE: Identification of Aboriginal organisation and people who may have an interest in the Proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447

Kayandel Archaeological Services (KAS) has been engaged by North Silverdale Centre Landowner Group to undertake an Archaeological and Aboriginal Cultural Heritage Assessment. This assessment will be completed for a Proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447.

In accordance with our obligations under the *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW 2010), we are seeking to identify Aboriginal organisations and people who may have an interest in the project area and hold knowledge relevant to determining the cultural significance of Aboriginal objects and/or places for that area.

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Yours sincerely,

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Lance Syme
Principal



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Our Reference: 4171-2016

9 November 2016

Greater Sydney Local Land Services
PO Box 4515
Penrith NSW 2750

Dear Sir or Madam,

RE: Identification of Aboriginal organisation and people who may have an interest in the Proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447

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Yours sincerely,

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Lance Syme
Principal

APPENDIX III. NATIONAL NATIVE TITLE SEARCH

From: Enquiries <Enquiries@nntt.gov.au>
Sent: Monday, 21 November 2016 3:47 PM
To: Kristen Kerr
Cc: Enquiries
Subject: RE: Search request
Attachments: 20161121_sr1909_WollondillyLGA_Overlap_Reports.xls

Follow Up Flag: Follow up
Flag Status: Flagged

UNCLASSIFIED

Native title search – NSW Freehold Parcel within Wollondilly Shire Council LGA; NTSCORP Limited
Certificate of Title Volume Lot 6; 11; 122; 200; A; 10; 199; 7; 2; 121 **Folio DP** 1086325;38123;747833;
1092447;161634; 38123;1092447;38123;519533;747833 (**Freehold**)
Your ref: 4171-2016 - **Our ref:** SR1909

Dear Ms Kerr,

Thank you for your search request received on 18 November 2016 in relation to the above area.

Please note: Based on the records held by the National Native Title Tribunal as at 21 November 2016, the ten (10) identified parcels appear to be freehold, and freehold tenure extinguishes native title. For confirmation of freehold data, NSW's Land and Property Information office. However, on the basis that the study area appears to be located within the Wollondilly Shire Council Local Government Area ("Wollondilly LGA"), the National Native Title Tribunal has provided native title overlap results for Wollondilly LGA.

Search Results

The results provided are based on the information you supplied and are derived from a search of the following Tribunal databases:

- Schedule of Applications
- Register of Native Title Claims
- National Native Title Register
- Register of Indigenous Land Use Agreements
- Notified Indigenous Land Use Agreements

Copies of the relevant register extracts are now available on our website [here](#).

Parcel/Tenement ID	Tribunal file number	Name	Type	Percent Selected Feature (approx)
These items not found in tenements or non freehold data:				
6//D1086325				
11//D38123				
122//D747833				
200//D1092447				
A//D161634				

10//D38123				
199//D1092447				
7//D38123				
2//D519533				
121//D747833				

Please note: There may be a delay between a native title determination application being lodged in the Federal Court and its transfer to the Tribunal. As a result, some native title determination applications recently filed with the Federal Court may not appear on the Tribunal's databases.

The search results are based on analysis against external boundaries of applications only. Native title applications commonly contain exclusions clauses which remove areas from within the external boundary. To determine whether the areas described are in fact subject to claim, you need to refer to the "Area covered by claim" section of the relevant Register Extract or Schedule Extract and any maps attached.

Search results and the existence of native title

Please note that the enclosed information from the Register of Native Title Claims and/or the Schedule of Applications is **not** confirmation of the existence of native title in this area. This cannot be confirmed until the Federal Court makes a determination that native title does or does not exist in relation to the area. Such determinations are registered on the National Native Title Register.

Tribunal accepts no liability for reliance placed on enclosed information

The enclosed information has been provided in good faith. Use of this information is at your sole risk. The National Native Title Tribunal makes no representation, either express or implied, as to the accuracy or suitability of the information enclosed for any particular purpose and accepts no liability for use of the information or reliance placed on it.

If you have any further queries, please do not hesitate to contact me on the number below or on the free call number 1800 640 501.

Regards,
[Enquiries](#)

National Native Title Tribunal
Freecall 1800 640 501

Email enquiries@nntt.gov.au

Website www.nntt.gov.au

Shared country, shared future.



Extract from Register of Indigenous Land Use Agreements

NNTT number	NI2014/001
Short name	Gundungurra Area Agreement
ILUA type	Area Agreement
Date registered	27/02/2015
State/territory	New South Wales
Local government region	Blue Mountains City Council, City of Lithgow, Goulburn Mulwaree Council, Oberon Council, Penrith City Council, Upper Lachlan Shire Council, Wingecarribee Shire Council, Wollondilly Shire Council

Description of the area covered by the agreement

1.1 "Agreement Area" means the whole of the area that falls within the outer boundary of the line depicted on the map, and which is described in the technical description, at Schedule A of this Deed.

[a map and description of the Agreement Area is contained in Schedule A of the agreement . A copy of Schedule A is attached to this register extract .

The following general description of the agreement area has been provided by the National Native Title Tribunal to assist people to understand the location of the agreement area . It is provided for information only and should not be considered part of the Register of ILUAs:

The agreement covers about 6942 sq km, approximately 8 km south of Lithgow and approx. 18 km north of Goulburn].

Parties to agreement

Applicant

Party name	Elsie Stockwell and Mervyn Trindall on their behalf and on behalf of the Gundungurra People
Contact address	c/- Eddy Neumann Lawyers Level 1 255 Castlereagh St Sydney New South Wales 2000

Other Parties

Party name	Gundungurra Tribal Council Aboriginal Corporation
Contact address	c/- Eddy Neumann Lawyers Level 1 255 Castlereagh St Sydney New South Wales 2000

Party name	Gundungurra Aboriginal Heritage Association Inc.
Contact address	c/- Benetatos White Solicitors & Attorneys 89 Lurline St Katoomba New South Wales 2780

Party name	Attorney General of New South Wales
Contact address	GPO Box 7060 Sydney New South Wales 2001

Party name	Deputy Premier of New South Wales
Contact address	GPO Box 7060 Sydney New South Wales 2001

Party name	Minister for the Environment of New South Wales
Contact address	PO Box 1967 Hurstville New South Wales 1481

Party name	Office of Environment and Heritage
Contact address	PO Box 1967 Hurstville New South Wales 1481

Party name	Sydney Catchment Authority
Contact address	Level 4 2-6 Station Street Penrith New South Wales 2751

Party name	Forestry Corporation of New South Wales
Contact address	c/- Crown Solicitor for the State of New South Wales GPO Box 25 Sydney New South Wales 2001

Party name	Blue Mountains City Council
Contact address	Locked Bag 1005 Katoomba New South Wales 2780

Period in which the agreement will operate

Start date	20/06/2014
End date	not specified

4.1 The Parties agree that all clauses within this Deed shall commence on the date of making this Deed unless otherwise stated in the clause.

4.2 If, for whatever reason, details of this Deed are not entered on the Register of Indigenous Land Use Agreements within a period of twenty-four (24) calendar months from the date of making of this Deed (or such further period as the State Minister and the applicants agree in writing), the Deed shall expire and cease to have any effect.

5.1 The Parties agree that the term of this Deed shall have continuing effect until one of the following events occurs:

- (a) it expires in accordance with subclause 4.2;
- (b) it is terminated in accordance with clause 18 or clause 20;
- (c) it is terminated by the agreement in writing of all the Parties.

Statements of the kind mentioned in ss. 24EB(1) or 24EBA(1) or (4)

14.6 The Applicants, the Gundungurra Corporation and the Gundungurra Association consent to the undertaking by the State or BMCC of Class 2 Post Registration Acts, being those acts that fall within the classes of acts set out in clause 14.7.

14.7 The Parties agree that the following classes of Post Registration Acts lawfully undertaken in the Agreement Area comprise Class 2 Post Registration Acts:

- (a) the compulsory acquisition of all interests including native title rights and interests where the Right to Negotiate does not apply;
- (b) the grant of a lease or licence other than a lease or licence to which subdivisions G, H, and I of the NTA applies;
- (c) construction or establishment of Public Works;
- (d) preparation, adoption and implementation of a plan of management for any part of the Agreement Area.

14.17 It is the parties' intention that the consent by the Applicants, the Gundungurra Corporation and the Gundungurra Association in subclause 14.6 includes agreement that subdivision P (the right to negotiate) Division 3 Part 2 of the NTA is not intended to apply to any Class 2 Post Registration Act.

14.18 The Parties agree that the following classes of Post Registration Acts lawfully undertaken or any interest (including a lease, licence, permit or authority) granted to undertake any of the following classes of Post Registration Acts in the Agreement Area comprise Class 3 Post Registration Acts:

- (a) an act done in good faith in the Agreement Area so long as the act's impact on native title is no greater than the impact that any act that could have been done under or in accordance with the previous reservation of the Agreement Area would have had, or an act done under or in accordance with the current reservation;
- (b) grant of an easement or right of way;
- (c) construction, maintenance and repair of signage and plaques;
- (d) fire suppression and fire prevention management activities, including hazard reduction burning and temporary closure within the Agreement Area for fire suppression or fire prevention purposes;
- (e) environmental assessment or protection activities including research, survey and

monitoring of species, clearing or spraying of noxious or introduced species, regeneration, rehabilitation, actions in relation to a biosecurity incident and acts carried out in accordance with plans with objectives including any of these acts;

- (f) excavation or clearing necessary for public health and safety;
- (g) construction of a track or other access;
- (h) maintenance of existing roads, tracks, boardwalks, platforms, bridges and fire trails including gravel extraction, grading, sediment control, gravelling, tree lopping and clearing;
- (i) construction, maintenance and repair of fences and gates;
- (j) maintenance, operation and repair of Public Works;
- (k) maintenance, cleaning, operation and repair of existing Public Works;
- (l) replacement of existing Public Works with similar or upgraded works within the same area of the existing Public Works or with a minor realignment;
- (m) removal of existing Public Works;
- (n) any urgent management activities that are required or desirable for public health and safety;
- (o) renewal or re-grant of existing interests which confer rights or interests substantially the same as rights or interests which have previously affected the area covered by the renewal or re-grant;
- (p) re-establishment of timber plantations as Forestry Corporation of New South Wales Forestry Corporation of New South Wales is authorised to do under the Plantations and Reafforestation Act 1999 (NSW);
- (q) any accepted normal management practices in plantation and native forests management, including land preparation such as post harvest burning, planting, weed control, road construction, road maintenance, thinning, harvesting, transport and sale of logs;
- (r) any other act described in section 24KA of the NTA;
- (s) any other act that is similar to any one or more of the acts in the above paragraphs or any other act relating to the care, control and management of the Agreement Area;
- (t) the exercise by the SCA of its statutory functions as set out in the Sydney Water Catchment Management Act 1998, and
- (u) the exercise by BMCC of its statutory functions under the Local Government Act 1993 and the Crown Lands Act 1989 so far as they relate to its role as reserve trust manager.

14.19 The Parties consent to the undertaking of Class 3 Post Registration Acts and the Applicants, the Gundungurra Corporation and the Gundungurra Association agree they shall have no procedural rights in relation to the undertaking of the Class 3 Post Registration Acts. The Parties agree that the Non Extinguishment Principle applies to Class 3 Post Registration Acts.

15.1 The Parties agree that any Public Works constructed or established within the Agreement Area and prior to the date this Deed is Registered, are valid to the extent of any invalidity that may exist by reason of the existence of native title.

Attachments to the entry

[NI2014-001 Gundungurra ILUA technical description.pdf](#)
[NI2014-001 Gundungurra ILUA map.pdf](#)

APPENDIX IV. OFFICE OF ENVIRONMENT AND HERITAGE RESPONSE



Office of
Environment
& Heritage

Our reference: SF16/1530

Lance Syme
Kayandel Archaeological Services
PO Box 440
Picton NSW 2571

Dear Lance,

Thank you for your letter dated 9/11/2016 to the Office of Environment and Heritage (OEH) regarding obtaining a list of the Aboriginal stakeholders that may have an interest in an Aboriginal Cultural Heritage Assessment for a proposed rezoning at Silverdale.

Before making an application for the issue of an Aboriginal Heritage Impact Permit, the applicant must carry out an Aboriginal community consultation process in accordance with the National Parks and Wildlife Regulation 2009 and completed to the stage described in subclause 80C. **Please note that Section 87 Permits no longer exist.**

Please find attached the list of Aboriginal stakeholders known to OEH that may have an interest in the project. OEH's list of regional stakeholders is a list of groups, organisations or individuals who may hold cultural knowledge relevant to a proposal in a region. You should contact the stakeholders who have indicated an interest in the Local Government Area (LGA) relevant to your project. Contact details are correct as at the time of registration. Consultation with Aboriginal people should not be confused with employment. Inclusion on the OEH's list is not an automatic right to employment. It is the decision of a proponent on who they choose to engage to deliver services based on a range of considerations including skills, relevant experience, and WHS considerations. To be clear, the proponent is under no obligation to employ Aboriginal people registered for consultation.

Further, receipt of this information does not remove the requirement of a proponent/consultant to advertise in local print media and contact other bodies seeking interested Aboriginal parties. Consultation with Aboriginal stakeholders must be in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* which can be found on the Office of Environment and Heritage (OEH) public website by accessing the following link:

<http://www.environment.nsw.gov.au/resources/cultureheritage/commconsultation/09781ACHconsultreq.pdf>

If you wish to discuss any of the above matters further please contact Alex Timms, Archaeologist, on (02) 8837 6067. **Please note that all future correspondence should be sent to the Senior Team Leader Planning PO Box 644 Parramatta NSW 2124.**

Yours sincerely

Sam Higgs
A/Senior Team Leader Planning
Greater Sydney Region
Regional Operations

Level 6, 10 Valentine Avenue, Parramatta NSW 2150
PO Box 644, Parramatta NSW 2124
Tel: (02) 9905 5477
ABN 30 841 387 271
www.environment.nsw.gov.au

LIST OF ABORIGINAL STAKEHOLDERS FOR THE GREATER SYDNEY REGION HELD BY OEH FOR THE PURPOSES OF THE ABORIGINAL CULTURAL HERITAGE CONSULTATION REQUIREMENTS FOR PROPONENTS 2010

These lists are provided to proponents in accordance with section 4.1.2 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (the "Consultation Requirements") which commenced on 12 April 2010.

The consultation process involves getting the views of, and information from, Aboriginal people and reporting on these. It is not to be confused with other field assessment processes involved in preparing a proposal and an application. Consultation does not include the employment of Aboriginal people to assist in field assessment and/or site monitoring. Aboriginal people may provide services to proponents through a contractual arrangement however, this is separate from consultation. The proponent is not obliged to employ those Aboriginal people registered for consultation. Consultation as per these requirements will continue irrespective of potential or actual employment opportunities for Aboriginal people.

A copy of the Consultation Requirements can be found on the OEH website at: <http://www.environment.nsw.gov.au/resources/cultureheritage/commconsultation/09781ACHconsultreq.pdf>.

Under the Consultation Requirements, a proponent is required to provide Aboriginal people who hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects and/or places as relevant to the proposed project area, with an opportunity to be involved in consultation. Section 3.3.1 of the Consultation Requirements states that Aboriginal people who can provide this information are, based on Aboriginal lore and custom, the traditional owners or custodians of the land that is the subject of the proposed project.

The Consultation Requirements also state that:

Traditional owners or custodians with appropriate cultural heritage knowledge to inform decision making who seek to register their interest as an Aboriginal party are those people who:

- *continue to maintain a deep respect for their ancestral belief system, traditional lore and custom*
- *recognise their responsibilities and obligations to protect and conserve their culture and heritage and care for their traditional lands or Country*
- *have the trust of their community, knowledge and understanding of their culture, and permission to speak about it.*

Please note: the placement of an organisation's name on any OEH Aboriginal stakeholder list for the Consultation Requirements does not override a proponent's requirement to also advertise in the local newspaper and to seek from other sources the names of any other Aboriginal people who may hold cultural knowledge as required under clause 80C of the *National Parks and Wildlife Regulation 2009*.

How to use this list

1. Determine which Local Government Area/s (LGA/s) your project area falls into
2. Identify which organisations and individuals on the list have an interest in the LGA/s relevant to your project – identified in column 6 of the list
3. Contact the organisations/individuals who have indicated an interest in the relevant LGA/s and invite them to register an interest in your project

Do not reproduce the attached list in publically available reports and other documents. Your report should only contain the names of the organisations and individuals who you have invited to register an interest in your project and those who have registered as stakeholders for your project.

Organisation/ Individual	Contact Name	Phone Number	Email Address/ Fax	Postal Address	LGA's	Additional information
Deerubbin Local Aboriginal Land Council	Kevin Cavanagh	(02) 4724 5600	Not provided	2/8 Tindale St, Penrith NSW 2750	Hawkesbury Blacktown Penrith Fairfield	Holroyd Blue Mountains The Hills Shire Parramatta
Tharawal Local Aboriginal Land Council	Not provided	(02) 4681 0059	Not provided	PO Box 20 Buxton NSW 2571	Camden Campbelltown Wollondilly	Sutherland Liverpool
Metropolitan Local Aboriginal Land Council	Nathan Mvian	(02) 8394 9566	Not provided	PO Box 1103 Strawberry Hills NSW 2015	The Hills Shire Sydney Kogarah Marrickville Rockdale Camden Marrickville Bankstown Strathfield Burwood Ashfield Auburn Canada Bay	Leichhardt Marrickville North Sydney Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater Botany Bay Ryde Warringah Willoughby
Gandangara Local Aboriginal Land Council	Not provided	(02) 8602 5280	Not provided	PO Box 1038 Liverpool NSW 2170	Liverpool Fairfield Holroyd Parramatta	Auburn Barktown Sutherland
La Perouse Local Aboriginal Land Council	Chris Ingrey	(02) 9311 4262	Not provided	PO Box 365 Matraville NSW 2036	Sutherland Randwick Botany Bay Waverley	Woolahra Sydney Rockdale
Parramatta City Council Aboriginal Advisory Committee	Parramatta City Council	(02) 9806 5050	Not provided	PO Box 32, Parramatta, NSW, 2124	Parramatta	
Holroyd City Council Advisory Committee	Holroyd City Council	(02) 9840 8840	Not provided	P.O. Box 42, Merrylands, NSW 2160	Holroyd	
Dang Custodian Aboriginal Corporation	Justine Coplin	02 4577 5181 / 0414 862 765	Not provided	PO Box 81, Windsor NSW 2756	Hawkesbury Blacktown Penrith Fairfield Holroyd Blue Mountains	Camden Campbelltown The Hills Shire Liverpool Parramatta
Dang Tribal Aboriginal Corporation	Not provided	02 9622 4081	Not provided	PO Box 441, Blacktown NSW 2148	Hawkesbury Blacktown Penrith Fairfield Holroyd Blue Mountains	Camden Campbelltown The Hills Shire Liverpool Parramatta
Dang Aboriginal Cultural Heritage Assessments	Gordon Morton	02 9410 3555 or 0422 855 831	Not provided	Unit B, 6 Chapman Avenue, Chatswood, NSW 2057	Hawkesbury Blacktown Penrith Fairfield Holroyd Blue Mountains Camden Campbelltown The Hills Shire	Strathfield Burwood Ashfield Auburn Canada Bay Leichhardt Marrickville North Sydney

Organisation/ Individual	Contact Name	Phone Number	Email Address/ Fax	Postal Address	LGA's	Additional Information
Gunjeewong Cultural Heritage Aboriginal Corporation	Cherie Carroll Turtise	(02) 6355 4110	cheriecarroll68@yahoo.com	1 Bellvue Place, Portland NSW, 2647	Auburn Canada Bay Hawkesbury Blacktown Camden Penrith Fairfield	Cherie is a Nguinawal Elder however lived in the Western Sydney area during her childhood. She recognises she is not from the area but has associations
Meringah Indigenous Corporation	Shaun Carroll	0435 040 842	Not provided	GPO Box 158, Canberra City, ACT, 2601	Hawkesbury Blacktown Penrith Fairfield	Shaun is Nguinawal and is Cherie's brother. NOTE: It has been reported to CEH that the contact details for this group are incorrect, however, CEH has not been provided with revised contact details.
Corroboree Aboriginal Corporation	Steve Johnson	0438 961 221	Not provided	PO Box 3340, Rouse Hill, NSW 2155	Western Sydney Camden	Nguinawal and lives in Western Sydney
Muri Bidgee Mullangari Aboriginal Corporation	Darlean Johnson	0490 051 102	Not provided	PO Box 246, Seven Hills, NSW, 2147	Hawkesbury Blacktown Penrith Fairfield	Nguinawal and lives in Western Sydney
Muregedi Heritage Indigenous Corporation	Jesse Johnson	0447 970 049	Not provided	5 Hession Road, Nelson, NSW 2765	Western Sydney Camden	Nguinawal and lives in Western Sydney
Bidjowong Aboriginal Corporation	James Carroll	0433 224 324	Not provided	PO Box 124, Round Corner, NSW 2158	Hawkesbury Blacktown Penrith Fairfield	
Phil Kahn		0434 545 982	Not provided	78 Forbes Street, Emu Plains, NSW 2750	Hawkesbury Blacktown Penrith Fairfield	
Peter Falk Consultancy	Peter Falk	0401 938 060	Not provided	PO Box 1018 Mittagong NSW 2575	Camden Campbelltown	
Wurruway Consultancy	Kerrie Slater	0423 935 556	Not provided	89 Pyramid street, Emu Plains NSW	Hawkesbury Blacktown Penrith Fairfield Hollroyd	
Warragil Cultural Services	Aaron Slater (Manager)	0481 280 067	Warragil_csh@hotmail.com		Hawkesbury Blacktown Penrith Fairfield	
Kawul Cultural Services	Kelly Slater Vicky Slater (Manager)	0431 720 687	Not provided	89 Pyramid Street, Emu Plains NSW 2750	Hawkesbury Blacktown Penrith Fairfield	

Organisation/ Individual	Contact Name	Phone Number	Email Address/ Fax	Postal Address	LGA's	Additional Information
Toomswai	Scott Franks	0404 171 544	Not provided	PO Box 76, Caringbah NSW 1495	Holroyd Blue Mountains Auburn Sutherland Bankstown Liverpool	The Hills Shire Auburn Bankstown
					Hawkesbury Blacktown Penrith Fairfield Auburn Canada Bay Holroyd Leichhardt Camden Campbelltown The Hills Shire Liverpool Parramatta Sutherland Sydney Kogarah Hurstville Rockdale Canterbury Marrickville Bankstown	Stratfield Burwood Ashfield Auburn Canada Bay Leichhardt Manly Mosman North Sydney Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater Botany Bay Ryde Marrickville Willoughby
D'narawal Mens Aboriginal Corporation Amanda Hickey Cultural Services	Elwyn Brown	0401920982	Not provided	187 Riverside Drive, Ards NSW 2560	Camden Campbelltown	Wollondilly
	Amanda Hickey	0434 480 596	Not provided	41 Dempsey Street, Emu Heights, NSW 2750	Hawkesbury Blacktown Penrith Blue Mountains	Fairfield Holroyd Parramatta
Widescope Indigenous Group	Steven Hickey and Donna Hickey	0425 230 693 (Steven) 0425 232 056 (Donna)	Not provided	73 Russell Street, Emu Plains, NSW 2750	Hawkesbury Blacktown Penrith	Fairfield Holroyd Parramatta Blue Mountains
		0424 142 216	Not provided	62 Ropes Crossing Boulevard, Ropes, Crossing 2780	Hawkesbury Blacktown Penrith	Fairfield Holroyd Parramatta
HSB Consultants	Patricia Hampton	0424 142 216	Not provided	1 Pyrenees Way Beaumont Hills NSW 2155	Hawkesbury Blacktown Penrith	Fairfield Holroyd Parramatta
Rane Consulting	Tony Williams	02 88246991	aw1901@bigpond.com	Unit 2 / 24 Goodwin Street Narrabeen NSW 2101	Hawkesbury Blacktown Penrith	Fairfield Holroyd Parramatta
Anthony Williams	Ricky Fields Athol Smith	0456 359 687	Not provided	19 Mooni Street, Labor Park, NSW, 2147	Hawkesbury Blacktown Penrith	Fairfield Holroyd Parramatta
		0402 942 572	Not provided	16 Yantara Place, Woodcroft, NSW, 2767	Hawkesbury Blacktown Penrith	Fairfield Holroyd Parramatta
Dhinawan-Dhigaraa Culture & Heritage Pty Ltd	Kylie Ann Bell	Not provided	guruyachia@gmail.com	Not provided	Hawkesbury Blacktown Penrith Fairfield Holroyd Parramatta	Burwood Ashfield Auburn Canada Bay Leichhardt Manly
Guruyuu						This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River.

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Organisation/ Individual	Contact Name	Phone Number	Email Address/ Fax	Postal Address	LGA's	Additional information
Wabunja	Hika Te Kowhai	0402 730 612	wabunja@gmail.com	Not provided	Campbelltown Liverpool Parramatta Sutherland Sydney Kogarah Hurstville Rockdale Canterbury Marrickville Banksstown Stratfield Hawkesbury Blacktown Penrith Fairfield Holroyd Camden Campbelltown Liverpool Parramatta Sutherland Sydney Kogarah Hurstville Rockdale Canterbury Marrickville Banksstown Stratfield	Mosman North Sydney Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater Botany Bay Ryde Warringah Willoughby Burwood Ashfield Auburn Canada Bay Leichhardt Marilyn Mosman North Sydney Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater Botany Bay Ryde Warringah Willoughby This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River
Badu	Karla Lea Bond	0476 331 207	Not provided	11 Jeffery Place, Moruya, NSW 2537	Hawkesbury Blacktown Penrith Fairfield Holroyd Camden Campbelltown Liverpool Parramatta Sutherland Sydney Kogarah Hurstville Rockdale Canterbury Marrickville Banksstown Stratfield	Burwood Ashfield Auburn Canada Bay Leichhardt Marilyn Mosman North Sydney Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater Botany Bay Ryde Warringah Willoughby This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River
Goobath Developments	Basil Smith	0405 995 725	Not provided	66 Grantham Road, Batehaven NSW, 2536	Hawkesbury Blacktown Penrith Fairfield Holroyd Camden	Burwood Ashfield Auburn Canada Bay Leichhardt Marilyn This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River

Organisation/ Individual	Contact Name	Phone Number	Email Address/ Fax	Postal Address	LGA's	Additional information
Wullung	Lee-Roy James Boola	0403 703 942	Not provided	54 Blackwood Street, Gerrigong, NSW, 2534	Campbelltown Liverpool Parramatta Sutherland Sydney Kogarah Hurstville Rockdale Canterbury Marrickville Banksstown Strathfield Burwood Ashfield Auburn Canada Bay Leichhardt Manly Mosman North Sydney Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater Botany Bay Ryde Warringah Willoughby	This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River
Yeramurra	Robert Parson	Not provided	yeramurra@gmail.com	Not provided	Hawkesbury Blacktown Penrith Fairfield Holroyd Camden Campbelltown Liverpool Parramatta Sutherland Sydney Kogarah Hurstville Rockdale Canterbury Marrickville Banksstown Strathfield Burwood Ashfield Auburn Canada Bay Leichhardt Manly Mosman North Sydney Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater Botany Bay Ryde Warringah Willoughby	This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River
Nundagurri	Newton Carnage	Not Provided	nundagurri@gmail.com	Not Provided	Hawkesbury Blacktown Penrith Fairfield Holroyd Camden Burwood Ashfield Auburn Canada Bay Leichhardt Manly	This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River

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Organisation/ Individual	Contact Name	Phone Number	Email Address/ Fax	Postal Address	LGA's	Additional Information
					Campbelltown Liverpool Parramatta Sutherland Sydney Kogarah Hurstville Rockdale Canterbury Murrumbidgee Bankstown Strathfield	Mosman North Sydney Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater Botany Bay Ryde Warringah Willoughby
Murrumbidgee	Mark Henry	Not provided	murrumbidgee@gmail.com	Not provided	Hawkesbury Blacktown Penrith Fairfield Holroyd Camden Campbelltown Liverpool Parramatta Sutherland Sydney Kogarah Hurstville Rockdale Canterbury Murrumbidgee Bankstown Strathfield	Burwood Ashfield Auburn Canada Bay Leichhardt Manly Mosman North Sydney Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater Botany Bay Ryde Warringah Willoughby
Jerrigong	Joanne Anne Stewart	0422 900 184	jerrigong@gmail.com	Not provided	Hawkesbury Blacktown Penrith Fairfield Holroyd Camden Campbelltown Liverpool Parramatta Sutherland Sydney Kogarah Hurstville Rockdale Canterbury Murrumbidgee Bankstown Strathfield	Burwood Ashfield Auburn Canada Bay Leichhardt Manly Mosman North Sydney Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater Botany Bay Ryde Warringah Willoughby
Pemulwuy CHTS	Pemulwuy Johnson	0425 066 100	pemulwuy@gmail.com	14 Top Place, Mt Annan	Hawkesbury Blacktown Penrith Fairfield Holroyd Camden	Strathfield Burwood Ashfield Auburn Canada Bay Leichhardt

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Organisation/ Individual	Contact Name	Phone Number	Email Address/ Fax	Postal Address	LGA's	Additional Information
Bilinga	Simalene Carrage	Not provided	bilingacarrage@gmail.com	Not provided	Campbelltown The Hills Shire Liverpool Parramatta Sutherland Sydney Kogarah Hurstville Rockdale Canterbury Marrickville Bankstown Hawkesbury Blacktown Penrith Fairfield Holroyd Camden Campbelltown Liverpool Parramatta Sutherland Sydney Kogarah Hurstville Rockdale Canterbury Marrickville Bankstown Strathfield Manly Mosman North Sydney Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater Botany Bay Ryde Warringah Willoughby	This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River.
Munyunga	Kaya Dawn Bell	Not provided	munyungachits@gmail.com	Not provided	Hawkesbury Blacktown Penrith Fairfield Holroyd Camden Campbelltown Liverpool Parramatta Sutherland Sydney Kogarah Hurstville Rockdale Canterbury Marrickville Bankstown Strathfield Burwood Ashfield Auburn Canada Bay Leichhardt Manly Mosman North Sydney Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater Botany Bay Ryde Warringah Willoughby	This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River.
Wingkara	Hayley Bell	Not provided	wingkarachits@gmail.com	Not provided	Hawkesbury Blacktown Penrith Fairfield Holroyd Camden Burwood Ashfield Auburn Canada Bay Leichhardt Manly	This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River.

Organisation/ Individual	Contact Name	Phone Number	Email Address/ Fax	Postal Address	LGA's	Additional information
Mimamurnung	Aaron Broad	0402 526 888	Not provided	1 Warallah Avenue, Albion Park Rail NSW 2527	Campbelltown Liverpool Parramatta Sutherland Sydney Kogarah Hurstville Rockdale Canterbury Marrickville Bankstown Strathfield	Mosman North Sydney Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater Botany Bay Ryde Warringah Willoughby
Gundungurra Tribal Technical Services	Peter Foster	0432 590 289	chriscayne775@gmail.com	4 Tuspal Way, Airds NSW 2560	Hawkesbury Blacktown Penrith Fairfield Holroyd Camden Campbelltown Liverpool Parramatta Sutherland Sydney Kogarah Hurstville Rockdale Canterbury Marrickville Bankstown Strathfield	Burwood Ashfield Auburn Canada Bay Leichhardt Marilyn Mosman North Sydney Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater Botany Bay Ryde Warringah Willoughby
	Christopher Payne Chairperson	0466 975 437	chriscayne775@gmail.com	9/15/22 Burns Road, Leumeah NSW 2560		This individual is a member of Gundungurra Tribal Technical Services
	Tony Williams Secretary	0490 125 040	chriscayne775@gmail.com or aliw1901@bigpond.com	Not provided		This individual is a member of Gundungurra Tribal Technical Services
	David Bell	0450 124 891	chriscayne775@gmail.com	67 Dickens Road, Ambarvale NSW 2560		This individual is a member of Gundungurra Tribal Technical Services
	Terri Ann Hoskins	0434 874 090	chriscayne775@gmail.com or hoskins.terri@yahoo.com.au	15B Solano Street, Rosemeadow NSW 2560		This individual is a member of Gundungurra Tribal Technical Services
Walgalu	Ronald Stewart	Not provided	walgaluchte@gmail.com	Not provided	Hawkesbury Blacktown Penrith Fairfield	This group states that their boundaries (Murin Peoples) extend from Ashfield Auburn Canada Bay Leichhardt

Organisation/ Individual	Contact Name	Phone Number	Email Address/ Fax	Postal Address	LGA's	Additional information
					Holroyd Camden Campbelltown Liverpool Parramatta Sutherland Sydney Kogarah Hurstville Rockdale Canterbury Marrickville Bankstown Strathfield Randwick Woolahra	Manly Mosman North Sydney Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater Botany Bay Ryde Warringah Willoughby Blue Mountains Burwood The Hills Waverley Wollondilly
Thaiaira	Shane Carriage	Not provided	thaiairachris@gmail.com	Not provided	Hawkesbury Blacktown Penrith Fairfield Holroyd Camden Campbelltown Liverpool Parramatta Sutherland Sydney Kogarah Hurstville Rockdale Canterbury Marrickville Bankstown Strathfield Randwick Woolahra	Ashfield Auburn Canada Bay Leichhardt Manly Mosman North Sydney Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater Botany Bay Ryde Warringah Willoughby Blue Mountains Burwood The Hills Waverley Wollondilly
Dharug	Andrew Bond	Not provided	dharugchris@gmail.com	Not provided	Hawkesbury Blacktown Penrith Fairfield Holroyd Camden Campbelltown Liverpool Parramatta Sutherland Sydney Kogarah Hurstville Rockdale Canterbury Marrickville	Ashfield Auburn Canada Bay Leichhardt Manly Mosman North Sydney Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater Botany Bay Ryde Warringah Willoughby

Organisation/ Individual	Contact Name	Phone Number	Email Address/ Fax	Postal Address	LGA's	Additional Information
Bilnga Cultural Heritage Technical Services	Robert Brown	Not Provided	blinga@mirramalah.com	Not Provided	Bankstown Strathfield Randwick Woolahra Hawkesbury Blacktown Penrith Fairfield Holroyd Camden Campbelltown Liverpool Parramatta Sutherland Sydney Kogarah Hurstville Rockdale Canterbury Marrickville Bankstown Strathfield Randwick Woolahra Blue Mountains Burwood The Hills Waverley Wollondilly Ashfield Auburn Canada Bay Leichhardt Manly Mosman North Sydney Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater Botany Bay Ryde Warringah Willoughby Blue Mountains Burwood The Hills Waverley Wollondilly	This group is a member of the Mirramalah Group of RAPs
Guruyuu Cultural Heritage Technical Services	Darlene Hoskins- McKenzie	Not Provided	guruyuu@mirramalah.com management@mirramalah.com (management & administrative email address for the Mirramalah Group of RAPs).	Not Provided	Hawkesbury Blacktown Penrith Fairfield Holroyd Camden Campbelltown Liverpool Parramatta Sutherland Sydney Kogarah Hurstville Rockdale Canterbury Marrickville Bankstown Strathfield Randwick Woolahra Ashfield Auburn Canada Bay Leichhardt Manly Mosman North Sydney Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater Botany Bay Ryde Warringah Willoughby Blue Mountains Burwood The Hills Waverley Wollondilly	This group is a member of the Mirramalah Group of RAPs
Munyunga Cultural Heritage Technical Services	Suzannah McKenzie	Not Provided	munyunga@mirramalah.com	Not Provided	Hawkesbury Blacktown Penrith Fairfield Holroyd Camden Campbelltown Ashfield Auburn Canada Bay Leichhardt Manly Mosman North Sydney	This group is a member of the Mirramalah Group of RAPs

Organisation/ Individual	Contact Name	Phone Number	Email Address/ Fax	Postal Address	LGA's	Additional information
					Liverpool Parramatta Sutherland Sydney Kogarah Hurstville Rockdale Canterbury Marrickville Bankstown Strathfield Randwick Woolahra	Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater Botany Bay Ryde Warringah Willoughby Blue Mountains Burwood The Hills Waverly Wollondilly
Murumbidgee Cultural Heritage Technical Services	Levi McKenzie- Kirkbright	Not Provided	murumbidgee@mirramajah.com	Not Provided	Hawkesbury Blacktown Penrith Fairfield Holroyd Camden Campbelltown Liverpool Parramatta Sutherland Sydney Kogarah Hurstville Rockdale Canterbury Marrickville Bankstown Strathfield Randwick Woolahra	Ashfield Auburn Canada Bay Leichhardt Manly Mosman North Sydney Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater Botany Bay Ryde Warringah Willoughby Blue Mountains Burwood The Hills Waverly Wollondilly
Wingkara Cultural Heritage Technical Services	Wendal Kirkbright	Not Provided	wingkara@mirramajah.com	Not Provided	Hawkesbury Blacktown Penrith Fairfield Holroyd Camden Campbelltown Liverpool Parramatta Sutherland Sydney Kogarah Hurstville Rockdale Canterbury Marrickville Bankstown Strathfield Randwick	Ashfield Auburn Canada Bay Leichhardt Manly Mosman North Sydney Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater Botany Bay Ryde Warringah Willoughby Blue Mountains Burwood The Hills

Organisation/ Individual	Contact Name	Phone Number	Email Address/ Fax	Postal Address	LGA's	Additional Information
Gulaga	Wendy Smith	Not Provided	gulagachts@gmail.com	Not Provided	Woolahra Hawkesbury Blacktown Penrith Fairfield Holroyd Camden Campbelltown Liverpool Parramatta Sutherland Sydney Kogarah Hurstville Rockdale Canterbury Marrickville Bankstown Strathfield Randwick Woolahra Wollondilly Waverly Wollondilly Ashfield Auburn Canada Bay Leichhardt Marrickville Mosman North Sydney Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater Botany Bay Ryde Warringah Willoughby Blue Mountains Burwood The Hills Waverly Wollondilly	This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River
Biamanga	Sell Storer	Not Provided	biamangachts@gmail.com	Not Provided	Hawkesbury Blacktown Penrith Fairfield Holroyd Camden Campbelltown Liverpool Parramatta Sutherland Sydney Kogarah Hurstville Rockdale Canterbury Marrickville Bankstown Strathfield Randwick Woolahra Wollondilly Ashfield Auburn Canada Bay Leichhardt Marrickville Mosman North Sydney Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater Botany Bay Ryde Warringah Willoughby Blue Mountains Burwood The Hills Waverly Wollondilly	This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River
Callendulla	Corey Smith	Not Provided	callendullachts@gmail.com	Not Provided	Hawkesbury Blacktown Penrith Fairfield Holroyd Camden Campbelltown Liverpool Parramatta Sutherland Wollondilly Ashfield Auburn Canada Bay Leichhardt Marrickville Mosman North Sydney Lane Cove Hunters Hill Hornsby	This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River

Organisation/ Individual	Contact Name	Phone Number	Email Address/ Fax	Postal Address	LGA's	Additional information
Murramarang	Roxanne Smith	Not Provided	murramarangchits@gmail.com	Not Provided	Sydney Kogarah Hurstville Rockdale Canterbury Marrickville Bankstown Strathfield Randwick Woolahra Hawkesbury Blacktown Penrith Fairfield Hornsby Camden Campbelltown Liverpool Parramatta Sutherland Sydney Kogarah Hurstville Rockdale Canterbury Marrickville Bankstown Strathfield Randwick Woolahra	This group states that their boundaries (Murrin Peoples) extend from the Hawkesbury River to the Snowy River
Duncan Suey & Associates	Darren Duncan	0410 510 397	darren@duncan.com.au	Not Provided	Hawkesbury Blacktown Penrith Parramatta Sydney Marrickville Strathfield Warringah Wolloughby Blue Mountains Burwood The Hills Ryde	Ashtfield Auburn Canada Bay Leichhardt Marrickville Mosman North Sydney Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater Ryde Wollondilly
Buluwarrin Aboriginal Corporation	Jennifer Beale	(02)9832 7167	kooni@ozemail.com.au	PO Box E16, Emerton, NSW 2770	Hawkesbury Blacktown Penrith Fairfield Hornsby Camden Campbelltown	Ashtfield Auburn Canada Bay Leichhardt Marrickville Mosman North Sydney Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater

Organisation/ Individual	Contact Name	Phone Number	Email Address/ Fax	Postal Address	LGA's	Additional Information
					Liverpool Parramatta Sutherland Sydney Kogarah Hurstville Rockdale Canterbury Murrumbidgee Bankstown Strathfield Randwick Wollahra	Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater Botany Bay Ryde Warringah Willoughby Blue Mountains Burwood The Hills Waverley Wollondilly
Didge Ngunawal Clan	Lilyea Carroll Paul Boyd	0426823944	didgegunawal@yahoo.com.au	7 Siskin St, Quakers Hill NSW 2763	Hawkesbury Blacktown Penrith Fairfield Holroyd Camden Campbelltown Liverpool Parramatta Sutherland Sydney Kogarah Hurstville Rockdale Canterbury Murrumbidgee Bankstown Strathfield Randwick Wollahra	Ashfield Auburn Canada Bay Leichhardt Manly Mosman North Sydney Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater Botany Bay Ryde Warringah Willoughby Blue Mountains Burwood The Hills Waverley Wollondilly
Giminderra Aboriginal Corporation	Steven Johnson and Krystle Carroll	0406981221	Giminderra.corp@gmail.com	1 Smallwood Road, McGraths Hill NSW 2756	Hawkesbury Blacktown Penrith Fairfield Holroyd Camden Campbelltown Liverpool Parramatta Sutherland Sydney Kogarah Hurstville Rockdale Canterbury Murrumbidgee Bankstown Strathfield Randwick	Ashfield Auburn Canada Bay Leichhardt Manly Mosman North Sydney Lane Cove Hunters Hill Hornsby Ku-Ring-Gai Pittwater Botany Bay Ryde Warringah Willoughby Blue Mountains Burwood The Hills

1 /

Organisation/ Individual	Contact Name	Phone Number	Email Address/ Fax	Postal Address	LGA's	Additional Information
					Woolahra Waverly Wollondilly	

APPENDIX V. WOLLONDILLY SHIRE COUNCIL RESPONSE



Frank McKay Building 62-64 Menangle Street Picton NSW 2571
All Correspondence to PO Box 21 Picton NSW 2571
Telephone: 02 4677 1100 Fax: 02 4677 2339
Email: council@wollondilly.nsw.gov.au Web: www.wollondilly.nsw.gov.au
ABN 93 723 245 808

RURAL LIVING

Our Reference: 6454 mr:mr

Your Reference: 4171-2016

Kayandel Archaeological Services
P.O. Box 440
PICTON NSW 2571

Attention: Lance Syme

21 November, 2016

Dear Sir,

**PLANNING PROPOSAL – NORTH SILVERDALE COMMERCIAL AND
RESIDENTIAL LANDS – ABORIGINAL CULTURAL HERITAGE ASSESSMENT
NOTIFICATION**

Reference is made to your letter to Council dated 9 November, 2016 requesting the contact details of any aboriginal people or organisations that may have an interest in the project area and hold knowledge relevant to determining the cultural significance of aboriginal objects and/or places for that area.

As a minimum, the key groups that Council would require you to consult with on this matter are as follows:

1. Tharawal Local Aboriginal Land Council
reception@tharawal.com.au
P.O. Box 168
Picton, NSW, 2571
Phone: (02) 4681 0059
2. Cubbitch Barta Native Title Claimants Aboriginal Corporation
55 Nightingale Road
Pheasants Nest, NSW, 2574
Phone: (02) 4684 3829
3. Wollondilly Aboriginal Advisory Committee
C/- Aboriginal Engagement Officer – Denise Ezzy
Phone: (02) 4677 8224

TRIM 6454

Page 2 of 2

Please note that these groups may recommend further people/organisations who could provide information on the cultural heritage of the site, and any other people/organisations identified during this process should be consulted with accordingly.

Should you have any further enquiries please contact the undersigned on (02) 4677 9592 between the hours of 8:00am and 4:30pm Monday to Friday or via email at mark.ruddiman@wollondilly.nsw.gov.au



Mark Ruddiman
Senior Strategic Planner
STRATEGIC PLANNING

APPENDIX VI. NTS CORPORATION RESPONSE

From: George Tonna <gtonna@ntscorp.com.au> Sent: Thu 15/12/2016 9:54 AM
To: Natalie Stiles
Cc: George Tonna
Subject: RE: Identification of Aboriginal organisation and or people

As per request please note that I received email concerning the proposed rezoning at Silverdale on the 9 November 2016 and this was then sent out on the 30 November 2016 to any stakeholders. Please note that we do not give comments on notices but have sent it out to the relevant stakeholders that would need to be notified and in return they would contact you if they have comments or concerns about the notice.

Regards

George Tonna

From: Natalie Stiles [<mailto:natalie.stiles@kayandel.com.au>]
Sent: Thursday, 8 December 2016 2:20 PM
To: Nakia Welsh <nwelsh@ntscorp.com.au>
Cc: Lance Syme <Lance.Syme@kayandel.com.au>
Subject: FW: Identification of Aboriginal organisation and or people

Hi,

Following on from our earlier conversation, please find attached the letter emailed through on the 9th November 2016.

Should you have any queries, please don't hesitate to contact me.

Regards,

Natalie Stiles
Archaeologist
Bachelor of Arts (Arch/Palaeo)
Postgraduate Certificate of Arts (Archaeology)
Member Australian Association of Archaeology (AAA)



APPENDIX VII. THARAWAL LOCAL ABORIGINAL LAND COUNCIL RESPONSE

From: Information Officer <informationofficer@tharawal.com.au> Sent: Thu 15/12/2016 10:34 AM
To: Natalie Stiles
Cc:
Subject: RE: Identification of Aboriginal organisation and or people

Hi Natalie,

Please accept my apologies for this delay.
Please register Tharawal Local Aboriginal Land Council as an interested party in the upcoming Heritage Impact Assessment.

Cheers

Yours in Unity

Denise Ezy
Personal Assistant to the CEO
Tharawal Local Aboriginal Land Council
220 West Parade
Couridjah NSW 2571
T: (02) 46810059 F: (02) 46810688 M: 0434740929
Informationofficer@tharawal.com.au



From: Natalie Stiles [<mailto:natalie.stiles@kayandel.com.au>]
Sent: Thursday, 15 December 2016 9:30 AM
To: Tharawal CEO <ceo@tharawal.com.au>
Cc: Information Officer <informationofficer@tharawal.com.au>; Lance Syme <Lance.Syme@kayandel.com.au>; Kristen Kerr <Kristen.Kerr@kayandel.com.au>
Subject: FW: Identification of Aboriginal organisation and or people
Importance: High

Hi,

I'm following up in regards to the attached letter that was sent through to you on the 9th November 2016; I've also called a number of times to follow up on receiving a response to the letter.

At this point we are unable to progress the project referred to in the attached letter without having received a response from Tharawal.

Can you please provide a response to the attached letter by COB today.

Kind regards,

Natalie Stiles
Archaeologist
Bachelor of Arts (Arch/Palæo)
Postgraduate Certificate of Arts (Archaeology)
Member Australian Association of Archaeology (AAA)

APPENDIX VIII. GREATER SYDNEY LOCAL LAND SERVICES RESPONSE

From: Margaret Bottrell <margaret.bottrell@lls.nsw.gov.au> Sent: Mon 28/11/2016 9:07 AM
To: Kristen Kerr
Cc:
Subject: Re: Identification of Aboriginal organisation and or people

To Lance Syme,

**RE: Identification of Aboriginal organisation and people who may have an interest in the
Proposed Rezoning at Silverdale Road, Silverdale**

Thank you for your letter dated 9 November 2016, requesting assistance with identifying Aboriginal stakeholder groups or persons who may have an interest in your project area.

Greater Sydney Local Land Services (GS LLS) acknowledges that Local Land Services have been listed in *Section 4.1.2 (g)* of the *Aboriginal cultural heritage consultation requirements for proponents 2010*, under *Part 6, National Parks and Wildlife Act 1974* as a source of information to obtain the “names of Aboriginal people who may hold cultural knowledge relevant to determining the significance of Aboriginal *objects* and/or *places*”.

GS LLS is a partner with many Aboriginal communities in the region on many natural resource management (NRM) projects. However, GS LLS is not the primary source for contacting or managing contact lists for Aboriginal communities or persons that may inform or provide comment on planning issues. GS LLS considers cultural heritage issues that relate to land-use planning in general and only considers culture and heritage issues in the context of NRM.

We strongly recommend that you make contact with the Office of Environment and Heritage (OEH), Cultural Heritage Division, for all-inclusive contact lists of persons and organisations that may assist with your investigation.

Note: Hawkesbury Nepean Catchment Management Authority (HNCMA) no longer exists. All work previously carried out by HNCMA is now delivered by Greater Sydney Local Land Services (GS LLS).

Regards,

On 9 November 2016 at 14:50, Kristen Kerr <Kristen.Kerr@kayandel.com.au> wrote:

Hi Margaret,

APPENDIX IX. OFFICE OF THE REGISTRAR, ABORIGINAL LAND RIGHTS ACT 1983 (NSW)



11 November 2016

1-15 Mansfield Street
Clyde NSW 2033
PO Box 112, Clyde NSW 2037
t 02 9582 6327 f 02 9582 6390

Lance Syme
Kayandel Archaeological Services
PO Box 440
PICTON NSW 2571

Dear Lance

Re: Request - Search for Registered Aboriginal Owners

I refer to your letter dated 9 November 2016 regarding Aboriginal Stakeholders within the area of Silverdale NSW.

I have searched the Register of Aboriginal Owners and the project area described *does not appear* to have Registered Aboriginal Owners pursuant to Division 3 of the *Aboriginal Land Rights Act 1983* (NSW).

I suggest that you contact the Tharawal Local Aboriginal Land Council on (02) 4681 0059. They will be able to assist you in identifying other Aboriginal stakeholders for this project.

Yours sincerely

Tabatha Dantoine
Directorate Support Officer
Office of the Registrar, *Aboriginal Land Rights Act 1983*

APPENDIX X. COMMUNITY CONSULTATION INVITATION TO REGISTER

There were 74 Potential Stakeholders identified by OEH and Wollondilly Shire Council. Letters were issued to all Potential Stakeholders identified in Table 2, inviting them to register their involvement with the project. The letter below is an example of that which was sent to the identified community groups (refer to Table 2).



P.O. Box 440,
Picton NSW 2571

T. +61 (0)2 4627 8622

F. +61 (0)2 4605 0815

W. www.kayandel.com

17th November 2016

Our Ref: 4171-2016

Deerubbin Local Aboriginal Land Council
Mr Kevin Cavanagh
2/9 Tindale Street
Penrith NSW 2750

Dear Mr Cavanagh,

Re: Rezoning

Kayandel Archaeological Services has been engaged to prepare a Cultural Heritage Assessment Report for Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447. The consultation process is to assist in the cultural heritage assessment to seek approval under S.90 Aboriginal Heritage Impact Permit application under Part 6 of the National Parks and Wildlife Act 1974 and will assist the Director General of OEH in considering that application.

In making our enquires to satisfy Section 4.1.2 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010) your organisation was identified as potentially having an interest in the project area and also being a holder of knowledge relevant to determining the cultural significance of *Aboriginal objects and/or places* within the subject area.

Should you or your organisation be interested in being consulted in relation to the above project we require your expression of interest to be forward to our office no later than COB 1st December 2016. If you are expressing an interest on behalf of an organisation please nominate an authorised representative to receive all future correspondence.

Section 4.1.5 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW) 2010 requires Kayandel to forward your details to the DECCW and the Local Aboriginal Land Council unless you specifically indicate otherwise.

If registering via email, please do so by 5pm on the 1st December 2016, to info@kayandel.com.au.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Lance Syme'.

Lance Syme
Director

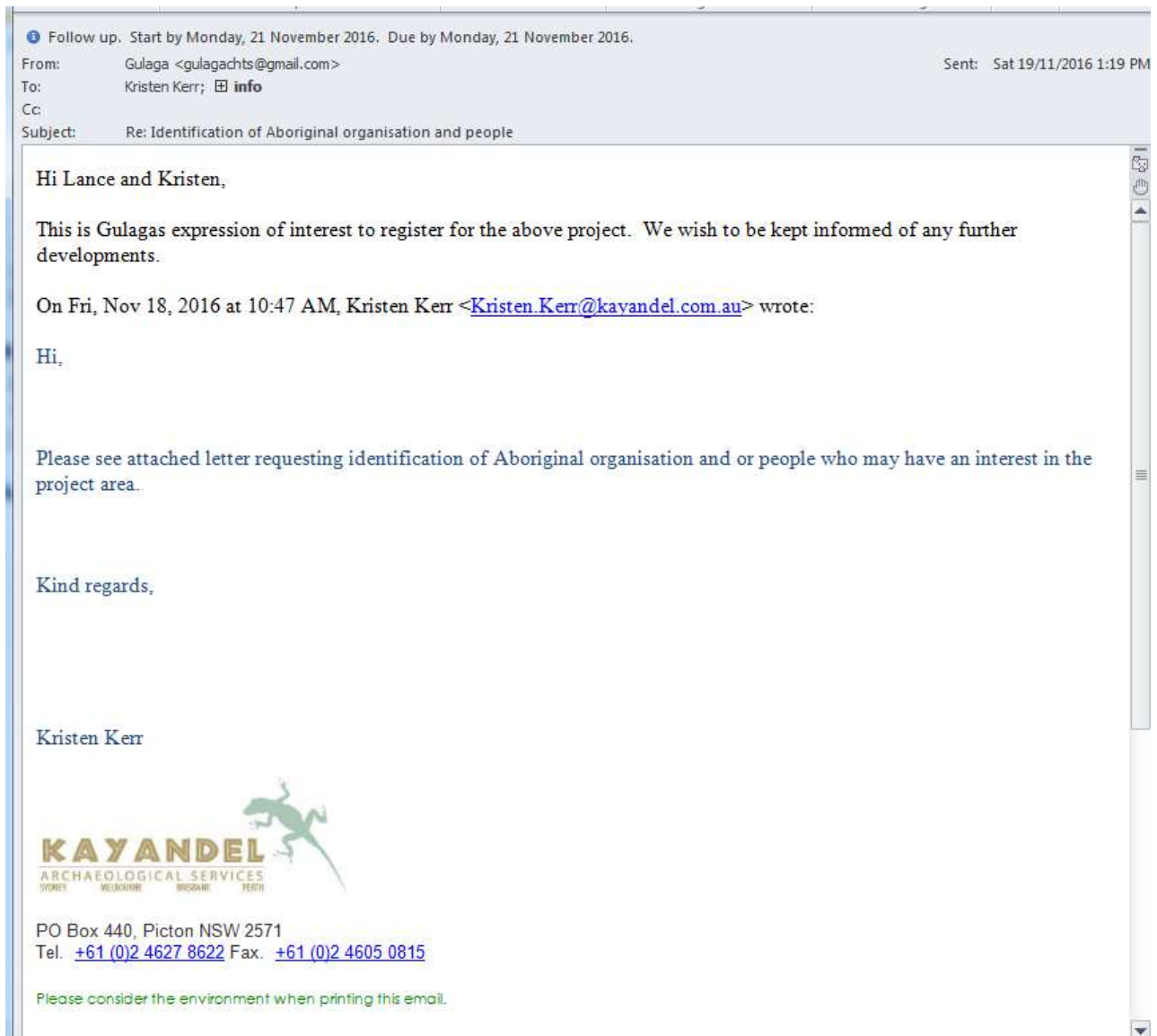
Sydney

Melbourne

Brisbane

Perth

APPENDIX XI. RAP REGISTRATION





**DARUG LAND
OBSERVATIONS PTY LTD
ABN 27 602 765 453**

EMAIL: DARUGLANDOBSERVATIONS@GMAIL.COM
PO BOX 571 PLUMPTON NSW 2761
MOBILE: 0420 591 138 / 0413 687 279

28th November 2016

Project ID: 4171-2016
Att: Lance Syme
Kayandel Archaeological Services (KAS)
PO BOX 440
PICTON NSW 2571

Notification and Registration of ALL Aboriginal Interests

RE: Proposed Rezoning at Silverdale Road, Silverdale, NSW

Aboriginal Archaeological & Cultural Heritage Assessment

Dear Lance,

Please be advised that Darug Land Observations Pty Ltd is seeking to be involved in any and all consultation meetings and fieldwork.

This office specialises in Aboriginal and community consultations, and has a membership that comprises of Traditional owners from the area in question. Those retain strong story, song lines, oral history and continued contact.

Please also be advised that this Aboriginal organisation 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 fieldwork. DLO's rate is \$440 half day (less than 4 hours) and \$880 per day (flat rate), including GST.

All correspondence should be emailed to: daruglandobservations@gmail.com and any further consultation during this project can be directed to Anna or Jamie Workman.

Yours sincerely,

Jamie Workman
Darug Land Observations Pty Ltd

Uncle Gordon Workman
Darug Elder



CORROBOREE ABORIGINAL
CORPORATION PRESERVING
OUR HERITAGE & CULTURE

Mobile | 0406 991 221 Phone | 02 8824 4324 Fax | 02
8824 4324

Email | corroboreecorp@bigpond.com
<http://corroboreecorp.wix.com/corroboreecorp>
PO BOX 3340 ROUSE HILL, NSW 2155
ICN 810

22 November 2016

Kayandel Archaeological Services
Att: Lance Symes
Po Box 440
PICTON NSW 2571
www.kayandel.com
Info@kayandel.com.au

Dear Lance

Re: Expression of Interest Cultural Heritage Assessment rezoning at
Silverdale Rd, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP
161634, Lots 7, 10 & 11 DP 38123, Lots 121& 122 DP 747833, and Lots
199 & 200 DP 1092447

Please register our corporation Corroboree Aboriginal Corporation as stakeholders. We are indigenous people whom have lived in and around the area. My father would collect scrap metals from the Wallacia tip. He would use this money to afford an outing for his family. We use to go to Bullens Animal World and The African Lion Safari frequently. We use to swim out in that area. We often would go to Warragamba Dam. My husbands friend resides in Silverdale. We are registered stakeholders for the area with OEH. My relatives have also lived around there for most of their lives. We always visited them. My parents also passed on many a story from when they lived in the area as well as my many relatives. We therefore have a strong connection to the area. We have consulted in Kemps Creek with Artefact. We therefore have a strong connection to the land.

Our preferred method of communication with Kayandel and the proponent during consultation for this project is email, our nominated contact person is Steve Johnson contact details: 0406 991 221.



CORROBOREE ABORIGINAL
CORPORATION PRESERVING
OUR HERITAGE & CULTURE

Mobile | 0406 991 221 Phone | 02 8824 4324 Fax | 02 8824 4324

Email | corroboreecorp@bigpond.com
<http://corroboreecorp.wix.com/corroboreecorp>
PO BOX 3340 ROUSE HILL, NSW 2155
ICN 810

Our corporation Corroboree Aboriginal Corporation wishes to participate on all levels of consultation including field excavations, etc. We have worked with many archaeologists in and around surrounding areas..

We wish to be involved in all meetings or fieldwork, we have current copies of your public liability, workers compensation and insurances.

We do not want our contact details provided the contact detail to OEH and Local Aboriginal Land Council.

We have provided Guidance on the protocols, sensitivity, use and/or distribution of any cultural information to archaeologists and proponents as part of numerous projects.

We have provided Identification of Aboriginal objects or places of cultural significance, on all our consults, field excavations.

Our RAP is Steve Johnson mob: 0406991221. Email: corroboreecorp@bigpond.com.

Please register our corporation in all aspects. Please do not forward our details to DECCW and the Local Land Council. Please do not publish our expression of interest as it contain our private life.

Yours sincerely,

Marilyn Carroll Johnson
Director CAC

Pollowan Phillip Khan
78 Forbes Street
Emu Plains NSW 2750
23/11/2016
mobile: 0434545982

Kayandel Archaeological Services
PO Box 440
Picton NSW 2571



Dear Lance

Thank you for your letter informing me that Kayandel has been engaged to prepare a Cultural Heritage Assessment Report for Rezoning at Silverdale Road Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot DP 161634, Lots 7, 10 & 11 DP 38123 Lots 121 & 122 DP 747833 and Lots 199 & 200 DP 1092447 and that you are inviting Aboriginal organisations to register, if they wish to be involved in the community consultation process and fieldwork.

As a Senior Aboriginal person who has for the past forty of so years (40) actively participated in the Protection of Aboriginal Cultural Heritage throughout the Sydney Basin, and particularly throughout Western Sydney, I, on behalf of the Kamilaroi Yankuntjatjara- working group, wish to provide to you my organisation, registration of interest.

Information in my registration of interest:

1. I am a Senior Aboriginal and Principal of the Kamilaroi -Yankuntjatjara Working Group, and all Aboriginal entity (ABN33979702507).
2. I prefer communicating by, Mail, Telephone, and; and I am, the Principal, person to contact, and;
My contact details are:
Phillip Khan
78 Forbes Street, Emu Plains NSW 2750
Mobile 043 4545 982 email philipkhan.acn@live.com.au
3. I wish to be involved and participate in all levels of consultation/project involvement. I wish to attend all meetings, and, participate in available field work; and would receive a copy of the report.
4. I attach to this letter a copy of Kamilaroi- Yankuntjatjara Working Group's; GIO Public Liability Insurance; GIO Workers Compensation Certificate.

Should you wish me to provide further information, please do not hesitate to contact me on 0434545982.

Yours Sincerely,


Pollowan Phillip Khan

From: BADU <baduchts@gmail.com> Sent: Thu 24/11/2016 6:36 PM
To: Kristen Kerr
Cc:
Subject: Registration of Interest – In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

Badu registers an interest In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

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Regards
Karia Bond
Chairperson
BADU
Murrin Stakeholder

CONTACT DETAILS

Address: C/O Murrin Administrative Services,
15 Renee Crescent Moruya Heads,
NSW, 2537
Phone: 0412630841
Email: baduchts@gmail.com

From: BIDAVAL <bidawalchts@gmail.com> Sent: Thu 24/11/2016 10:10 PM
To: Kristen Kerr
Cc:
Subject: Registration of Interest – In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

Bidawal registers an interest In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

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Regards
Stella Brierley
Chairperson
Bidawal
Murrin Stakeholder

CONTACT DETAILS

Address: C/O Murrin Administrative Services
15 Renee Crescent Moruya Heads,
NSW, 2537
Phone: 0411526183
Email: bidawalchts@gmail.com

From: Simalene Carriage <bilingachts@gmail.com> Sent: Thu 24/11/2016 11:53 PM
To: Kristen Kerr
Cc:
Subject: Registration of Interest – In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

Bilinga registers an interest In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

--
Regards
Simalene Carriage
Chairperson
Bilinga
Murrin Stakeholder

CONTACT DETAILS

Address: C/O Murrin Administrative Services,
15 Renee Crescent Moruya Heads,
NSW, 2537
Phone: 0413537420
Email: bilingachts@gmail.com

From: Andrew Bond <dharugchts@gmail.com> Sent: Thu 24/11/2016 11:10 PM
To: Kristen Kerr
Cc:
Subject: Registration of Interest – In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

Dharug registers an interest In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

--
Regards
Andrew Bond
Chairperson
Dharug
Murrin Stakeholder

CONTACT DETAILS

Address: C/O Murrin Administrative Services
15 Renee Crescent Moruya Heads,
NSW, 2537
Phone: 0434176340
Email: dharugchts@gmail.com

From: Keith Nye <djiringanjchts@gmail.com> Sent: Thu 24/11/2016 10:23 PM
To: Kristen Kerr
Cc:
Subject: Registration of Interest – In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

Djiringanj registers an interest In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

--
Regards
Keith Nye
Chairperson
Djiringanj
Murrin Stakeholder

From: Lenard Nye <elouerachts@gmail.com> Sent: Thu 24/11/2016 10:01 PM
To: Kristen Kerr
Cc:
Subject: Registration of Interest – In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

Elouera registers an interest In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

--
Regards
Lenard Nye
Chairperson
Elouera
Murrin Stakeholder

C/O
Murrin Administrative Services

15 Renee Crescent
Moruya Heads, NSW 2537
Mobile: 0402730612
Phone: 0244738201

From: Kahu Brennan <eorachts@gmail.com> Sent: Thu 24/11/2016 9:53 PM
To: Kristen Kerr
Cc:
Subject: Registration of Interest – In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

Eora registers an interest In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

--
Regards
Kahu Brennan
Chairperson
EORA
Murrin Stakeholder

From: Kim Carriage <gangangarra@gmail.com> Sent: Thu 24/11/2016 9:46 PM
To: Kristen Kerr
Cc:
Subject: Registration of Interest – In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

Gangangarra registers an interest In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

--

Regards
Kim Carriage
Chairperson
Gangangarra
Murrin Stakeholder

CONTACT DETAILS

Address: C/O Murrin Administrative Services
15 Renee Crescent Moruya Heads,
NSW, 2537
Phone: 0481387894
Email: gangangarra@gmail.com

From: Toni Brierley <kuringgaichts@gmail.com> Sent: Thu 24/11/2016 11:04 PM
To: Kristen Kerr
Cc:
Subject: Registration of Interest – In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

Kuringgai registers an interest In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

--

Regards
Toni Brierley
Chairperson
Kuringgai
Murrin Stakeholder

C/O
Murrin Administrative Services

15 Renee Crescent
Moruya Heads, NSW 2537
Mobile: 0402730612
Phone: 0244738201

From: Tarlarra Te Kowhai <murrinchts@gmail.com> Sent: Thu 24/11/2016 10:56 PM
To: Kristen Kerr
Cc:
Subject: Registration of Interest – In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010

Murrin registers an interest In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010

--
Regards
Tarlarra Te Kowhai
Chairperson
MURRIN
Murrin Stakeholder

C/O
Murrin Administrative Services

15 Renee Crescent
Moruya Heads, NSW 2537
Mobile: 0402730612
Phone: 0244738201

From: Steven McCarron <murrumbul@gmail.com> Sent: Thu 24/11/2016 11:48 PM
To: Kristen Kerr
Cc:
Subject: Registration of Interest – In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

Murrumbul registers an interest In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

--
Regards
Steven McCarron
Chairperson
Murrumbul
Murrin Stakeholder

CONTACT DETAILS

Address: C/O Murrin Administrative Services,
15 Renee Crescent Moruya Heads,
NSW, 2537
Phone: 0432432965
Email: murrumbul@gmail.com

From: Newton Bond <ngarigochts@gmail.com> Sent: Thu 24/11/2016 7:16 PM
To: Kristen Kerr
Cc:
Subject: Registration of Interest – In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

Ngarigo registers an interest In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

--
Regards
Newton Bond
Chairperson
Ngarigo
Murrin Stakeholder

CONTACT DETAILS

Address: C/O Murrin Administrative Services
15 Renee Crescent Moruya Heads,
NSW, 2537
Phone: 0431137597
Email: ngarigochts@gmail.com

From: NGUNAWAL <ngunawalchts@gmail.com> Sent: Thu 24/11/2016 7:24 PM
To: Kristen Kerr
Cc:
Subject: Registration of Interest – In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

Ngunawal registers an interest In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

--
Regards
Mitchel Freeman
Senior Sites Officer
Ngunawal

Member of the
Murrin Group of
Stakeholder

CONTACT DETAILS

Address: C/O Murrin Administrative Services
15 Renee Crescent Moruya Heads,
NSW, 2537
Phone: 0421624380
Email: ngunawalchts@gmail.com

From: NUNDAGURRI <nundagurri@gmail.com> Sent: Thu 24/11/2016 6:26 PM
To: Kristen Kerr
Cc:
Subject: Registration of Interest – In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

Nundagurri registers an interest In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

--
Regards
Newton Carriage
Chairperson
Nundagurri
Murrin Stakeholder

CONTACT DETAILS

Address: C/O Murrin Administrative Services
15 Renee Crescent Moruya Heads,
NSW, 2537
Phone: 0413693987
Email: nundagurri@gmail.com

From: Violet Carriage <tharawalchts@gmail.com> Sent: Thu 24/11/2016 10:36 PM
To: Kristen Kerr
Cc:
Subject: Registration of Interest – In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

Tharawal registers an interest In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

--
Regards
Violet Carriage
Chairperson
Tharawal
Murrin Stakeholder

CONTACT DETAILS

Address: C/O Murrin Administrative Services
15 Renee Crescent Moruya Heads,
NSW, 2537
Phone: 0244738201
Mobile: 0402730612

From: Shane Carriage <thauairchts@gmail.com> Sent: Thu 24/11/2016 10:47 PM
To: Kristen Kerr
Cc:
Subject: Registration of Interest – In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

Thauaira registers an interest In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

--
Regards
Shane Carriage
Chairperson
Thauaira
Murrin Stakeholder

Address: C/O Murrin Administrative Services,
15 Renee Crescent Moruya Heads,
NSW, 2537

Phone: 0421473744

From: WALBUNJA <walbunja@gmail.com> Sent: Thu 24/11/2016 6:01 PM
To: Kristen Kerr
Cc:
Subject: Registration of Interest – In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

Walbunja registers an interest In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

--
Regards

Hika Tekowhai
Chairperson of
Walbunja and
Chief Executive Officer
of the Combined Group
of Murrin Stakeholders

PO BOX 535
10/144 Kelly Road
BINGIE, NSW, 2537

Email: walbunja@gmail.com
Mobile: 0402730612
Office: 0244738201

From: Ronald Stewart <walgaluchts@gmail.com> Sent: Thu 24/11/2016 11:42 PM
To: Kristen Kerr
Cc:
Subject: Registration of Interest – In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

Walgalu registers an interest In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

--
Regards
Ronald Stewart
Chairperson
Walgalu
Murrin Stakeholder

CONTACT DETAILS

Address: C/O Murrin Administrative Services,
15 Renee Crescent Moruya Heads,
NSW, 2537

Phone: 0421473744

Email: walgaluchts@gmail.com

From: William Bond <wandandianchts@gmail.com> Sent: Thu 24/11/2016 11:29 PM
To: Kristen Kerr
Cc:
Subject: Registration of Interest – In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

Wandandian registers an interest In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

--
Regards
William Bond
Chairperson
Wandandian
Murrin Stakeholder

CONTACT DETAILS

Address: C/O Murrin Administrative Services
15 Renee Crescent Moruya Heads,
NSW, 2537

Phone: 0412630841

Email: wandandianchts@gmail.com

From: Izahya Henry <wingikarachts@gmail.com> Sent: Thu 24/11/2016 11:57 PM
To: Kristen Kerr
Cc:
Subject: Registration of Interest – In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

Wingikara registers an interest In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

--
Regards
Izahya Henry
Chairperson
Wingikara
Murrin Stakeholder

CONTACT DETAILS

Address: C/O Murrin Administrative Services,
15 Renee Crescent Moruya Heads,
NSW, 2537
Phone: 0402376131
Email: wingikarachts@gmail.com

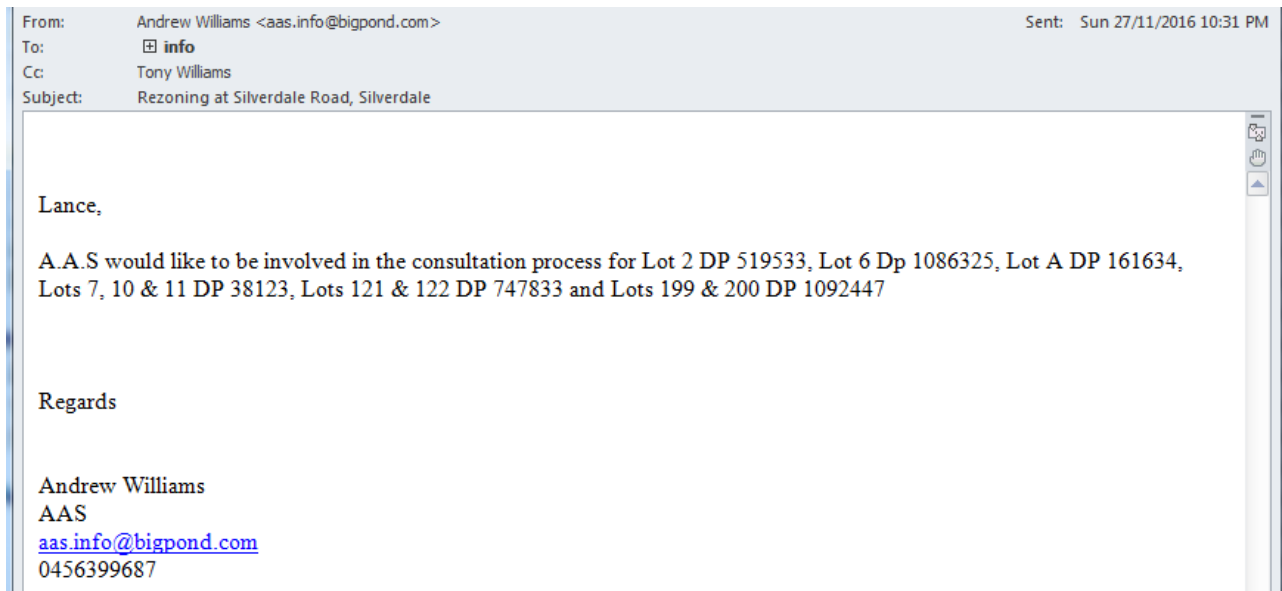
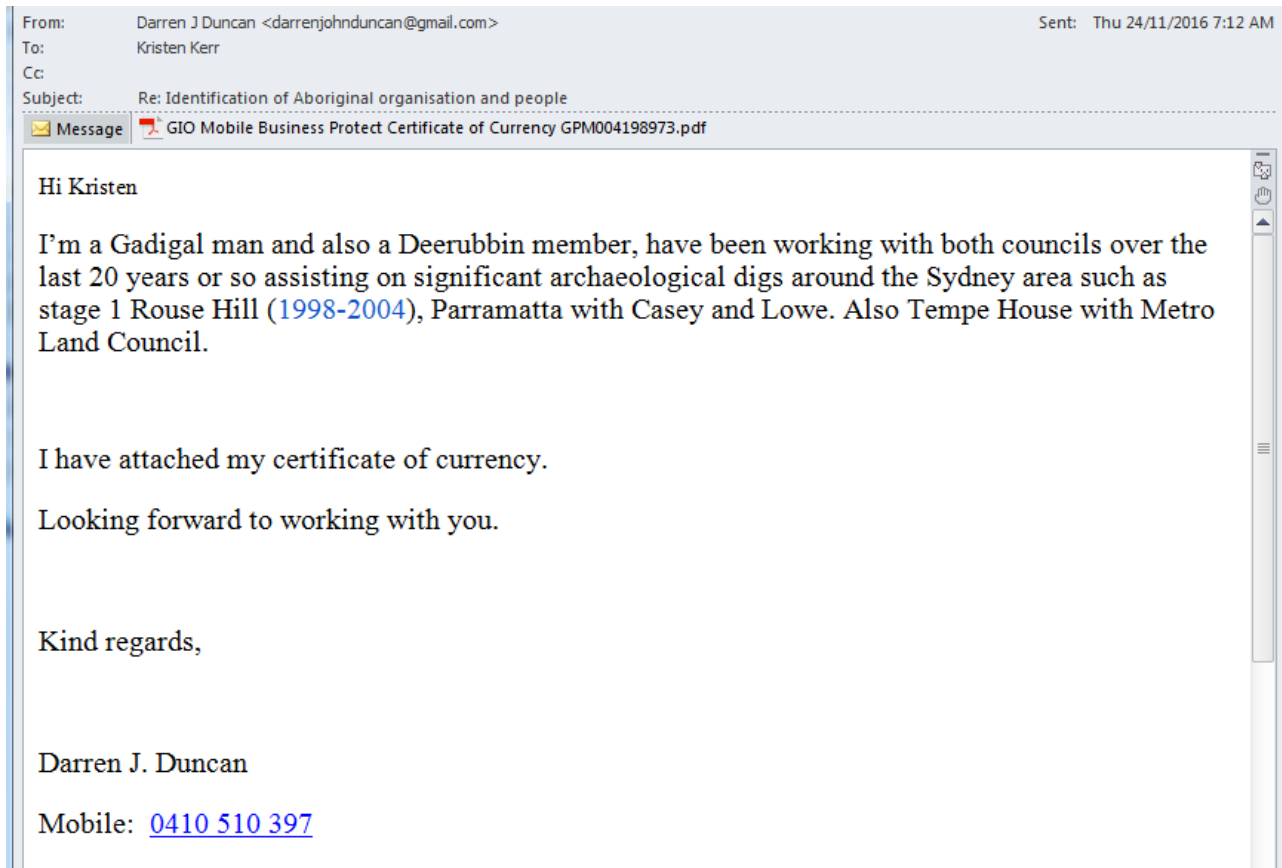
From: Owen Carriage Jr <yerramurra@gmail.com> Sent: Thu 24/11/2016 6:47 PM
To: Kristen Kerr
Cc:
Subject: Registration of Interest – In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

Yerramurra registers an interest In the proposed Rezoning at Silverdale Road, Silverdale Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 for Aboriginal cultural heritage consultation requirements for proponents 2010.

--
Regards
Owen Carriage Jr
Chairperson
Yerramurra
Murrin Stakeholder

CONTACT DETAILS

Address: C/O Murrin Administrative Services,
15 Renee Crescent Moruya Heads,
NSW, 2537
Phone:
Email: yerramurra@gmail.com



From: kerrie slater <wurrumay@hotmail.com>
To: info
Subject: RE: Report for Rezoning Silverdale Road.t Silverdale

Sent: Thu 1/12/2016 4:27 PM

Dear Lance

Wurrumay Consultants would like to submit an Interest in the above project.

Current Insurances & Experienced Site Officer.

Regards

Kerry Slater - Manager

From: Carolyn .H <cazadirect@live.com>
To: info
Cc:
Subject: Fw: Registration /Silverdale

Sent: Mon 28/11/2016 9:38 AM

A1 Indigenous Services
Contact: Carolyn
M: 0411650057
E: [Cazadirect@live.com](mailto:cazadirect@live.com)
A: 73 Russell St, Emu Plains NSW 2750
ABN: 20 616 970 327

Re: Silverdale

Hi Lance,
A1 would like to register for consultation and an field work for this project, I hold cultural knowledge of this area.
Thank you
Carolyn Hickey

From: WIDESCOPE , <widescope.group@live.com>
To: info
Cc:
Subject: Expression of Interest to register an interest in Silverdale Rd Rezoning Project

Sent: Mon 28/11/2016 9:06 AM

To Lance Syme

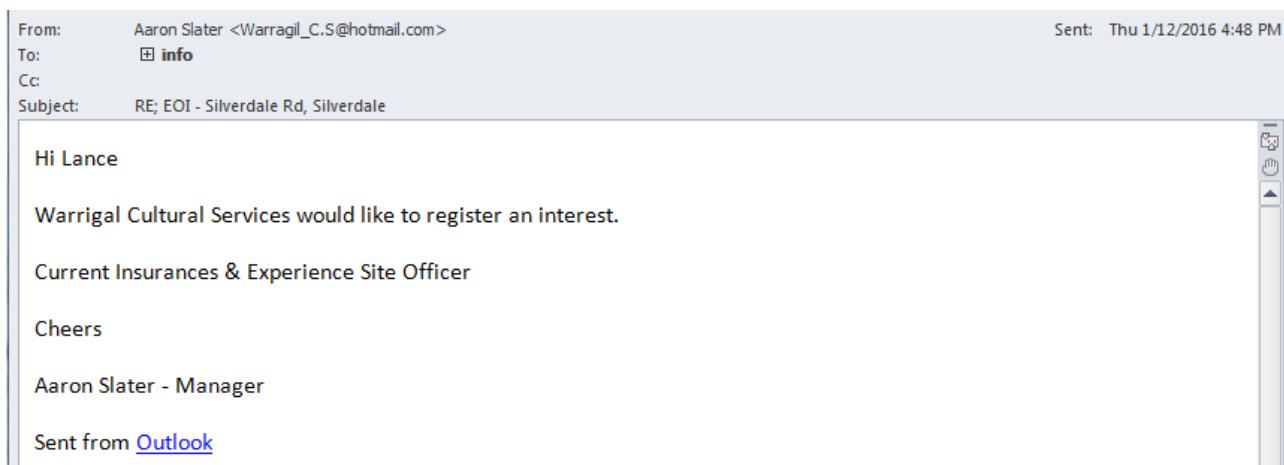
Hi, Lance
I would like to register my interest in the Silverdale Rd Rezoning Project, My name is Steven Hickey I am a cultural Knowledge Holder
I hold a cultural connection to Silverdale and surrounding areas. I would like to be involved in the communication process, and would like to be considered for cultural surveying, I have over 25years experience in cultural surveying.

Preferred method of contact is via Email : widescope.group@live.com
Contact person : Steven Hickey 0425230693 or Donna Hickey (admin) 0425232056
Thank you Steven Hickey

From: Vicki Slater <vicki.slater@hotmail.com>
To: info
Cc:
Subject: Re: Rezoning Silverdale Red. Silverdale.

Sent: Thu 1/12/2016 4:20 PM

Dear Lance. Kawul Cultural Services would like to submit an interest in the project. Current Insurances & Experience d Site Officer.
Regards. Vicky Slater



APPENDIX XII. COMBINED STAGE 2/STAGE 3 DOCUMENT

There were 37 Aboriginal Parties that registered for the project. Letters were issued to all Registered Aboriginal Parties (RAPs) in Table 3, providing details in regards to the project going forward. The letter below is an example of that which was sent to the RAPs (refer to Table 3).



P.O. Box 440,
Picton NSW 2571

T. +61 (0)2 4627 8622

F. +61 (0)2 4605 0815

W. www.kayandel.com

Our Ref: 4171-2016

«AddressBlock»

16th December 2016

«GreetingLine»

RE: Proposed Rezoning of Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447, Silverdale Road, Silverdale
Stage 2 -Presentation of Information about the Proposed Project and
Stage 3 – Gathering Information about Cultural Significance'

Kayandel Archaeological Services (KAS) has been commissioned by Site Plus Pty Ltd on behalf of North Silverdale Centre Landowner Group (the Proponent) to prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) in relation to Aboriginal heritage within the properties of Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447, Silverdale Road, Silverdale, NSW.

The ACHAR will be used to support an application for an Aboriginal Heritage Impact Permit (AHIP) under Section 90 of the *National Parks and Wildlife Act 1974* which will be lodged with the Office of Environment and Heritage (OEH), should it be necessary.

KAS has prepared this document to meet the requirements of 'Stage 2 – Presentation of Information about the Proposed Project' and 'Stage 3 – Gathering Information about Cultural Significance' in the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW 2010a:12).

Location of the Subject Area

The Subject Area is within the Wollondilly Shire Council (WSC) Local Government Area (LGA), and is located approximately 1.9km southeast of the intersection of Silverdale Road and Mulgoa Road (refer to Figure 1). The Subject Area consists of the following properties:

- ✧ Lot 2 DP 519533;
- ✧ Lot 6 DP 1086325;
- ✧ Lot A DP 161634;
- ✧ Lots 7, 10 & 11 DP 38123;
- ✧ Lots 121 & 122 DP 747833; and,
- ✧ Lots 199 & 200 DP 1092447.

The Subject Area covers approximately 68.12 hectares (see Figure 2).

PROJECT BACKGROUND

Environmental Context

The Subject Area is located within an extensively cleared landscape, and incorporates a range of landforms including:

- ✧ Flat immediately behind the escarpment;
- ✧ Drainage depression;
- ✧ Lower-, mid- and upper-slopes; and,
- ✧ Crest.



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W. www.kayandel.com

The Subject Area is located on the eastern side of the ridge that runs north-south through Silverdale, and is located west of the escarpment that overlooks the Nepean River.

Five (5) 1st order streams and one (1) 2nd order stream are located within the Subject Area. The two (2) 1st order streams located with the northern part of the Subject Area have a north-east orientation and drain directly into the Nepean River. Of the three (3) 1st order streams located in the southern portion of the Subject Area, two converge to become a 2nd order stream; the streams have a south-east orientation and drain into Scotchey's Creek, that flows north-east into the Nepean River.

Former Land Use and Disturbance

The area surrounding and within the Subject Area has undergone a significant amount of disturbance since European occupation began in the early-mid 19th century.

Land use within the Subject Area has been dominated by pastoral practices and residential development; the majority of the broader changes/impacts observed have occurred primarily as a consequence of European land management strategies.

On view of historic aerials it is evident that the Subject Area has been impacted by a range of features, including:

- Historic land clearance;
- Light industrial practices (i.e. garden nursery);
- Dam; and,
- Construction of shopping precinct and petrol station.

Previous Assessments within the Subject Area

Biosis (2014) prepared an Aboriginal Due Diligence Assessment for the proposed rezoning for a residential subdivision and an expansion of the existing shopping centre. The Department of Planning and Infrastructure has issued a Gateway Determination for the proposal. Section 117 Directions under Direction 2.3 Heritage Conservation requires that an Aboriginal Archaeological and Cultural Heritage Assessment be undertaken. As the level of assessment was not specified within the Direction 2.3, and that there are no identified sites within the Subject Area, Biosis determined that Due Diligence Assessment was considered to be adequate for the proposed re-zoning purposes.

Biosis stated that the "soil landscapes present within the east of the Project Area would have determined the preservation of the archaeological material"; however, considering the fact that the soils are erosional and very shallow, it is likely that any possible cultural material would have been eroded and displaced, and it is unlikely that sub-surface archaeological deposits are present. Therefore, although two landforms drainage depression and hill crest are considered as having some archaeological sensitivity, soils characteristics affect the archaeological potential for the cultural material to be preserved (Biosis, 2014).

No Aboriginal objects were identified during the field survey undertaken by Biosis; and the Subject Area was assessed as having low potential for archaeological deposits to be present.

PROPOSED WORKS

Proposed Development Works

The Subject Area is currently zoned as RU2 Rural Landscape and B1 Neighbourhood Centre under Wollondilly Local Environmental Plan 2011 (LEP). The Proponent has proposed that the Subject Area be



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rezoned as a mixture of R2 Low Density Residential, R3 Medium Density Residential, B2 Local Centre, B4 Mixed Use, and E4 Environmental Management.

Proposed Cultural Heritage Assessment Works

Based upon advice received from WSC and the Office of Environment and Heritage, it was determined that a comprehensive Aboriginal Cultural Heritage Assessment (ACHAR) will be prepared in *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010a) (Code of Practice).

As part of preparing the ACHAR to inform the proposed rezoning of the Subject Area, it was decided that a consultation process in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW 2010b) would be undertaken.

Preparation of the ACHAR will comprise background research, review of previous archaeological studies in the area, preparation of a predictive model for Aboriginal occupation within the Subject Area, analysis and discussion of the results of the field survey, and management recommendations based on conclusions drawn from the investigation.

Timeline

The Proponent is in the process of preparing a Development Application (DA) for the proposed rezoning.

The table below outlines an expected timeline of works for the project, including approximate dates for field survey and release of documentation. The table also provides information about points at which RAPs will be given the opportunity to provide feedback on the project, or information regarding cultural significance. It should be noted that dates provided here are an estimate only, and are subject to change based on discussion with the proponent and community groups. KAS will notify RAPs of definite dates for fieldwork and document delivery as they become available.

Activity/Document	Expected Date	Opportunity for RAP Involvement	Deadline for RAP Submissions
Field Survey	19 th January 2017	Potential for participation in fieldwork	N/A
Delivery of Draft Report	6 th February 2017	Comments on findings and cultural significance	6 th March 2017
Delivery of Final Report	13 th March 2017	N/A	N/A

These dates are only estimated and may be subject to change.

Next Phase

The next phase of the project is the field survey of the Subject Area.

If you have any comments that you would like to be considered as part of conducting the field survey, please let us know by **COB 13th January 2017**.

If you have any questions about any aspect of this letter, please contact me on (02) 4627 8622.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'L. G.' or similar.



P.O. Box 440,
Picton NSW 2571

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W. www.kayandel.com

Lance Syme

Principal

B Arts (Arch/Paleo), Grad Dip (Heritage Conservation)

Full Member International Council on Monuments and Sites (M.ICOMOS)

Expert Member International Committee on Archaeological Heritage Management

Registered Cultural Heritage Advisor





P.O. Box 440,
Picton NSW 2571

T. +61 (0)2 4627 8622

F. +61 (0)2 4605 0815

W. www.kayandel.com

References

Biosis, 2014, *Aboriginal Due Diligence Assessment: North Silverdale Re-zoning*. Prepared for Site Plus Pty Ltd.

DECCW, 2010a, *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*, Department of Environment, Climate Change and Water NSW, Sydney South.

DECCW 2010b, *Aboriginal Cultural Heritage Consultation Requirements for Proponents*, Department of Environment, Climate Change and Water NSW, Sydney South, April 2010.



Sydney

Melbourne

5

Brisbane

Perth

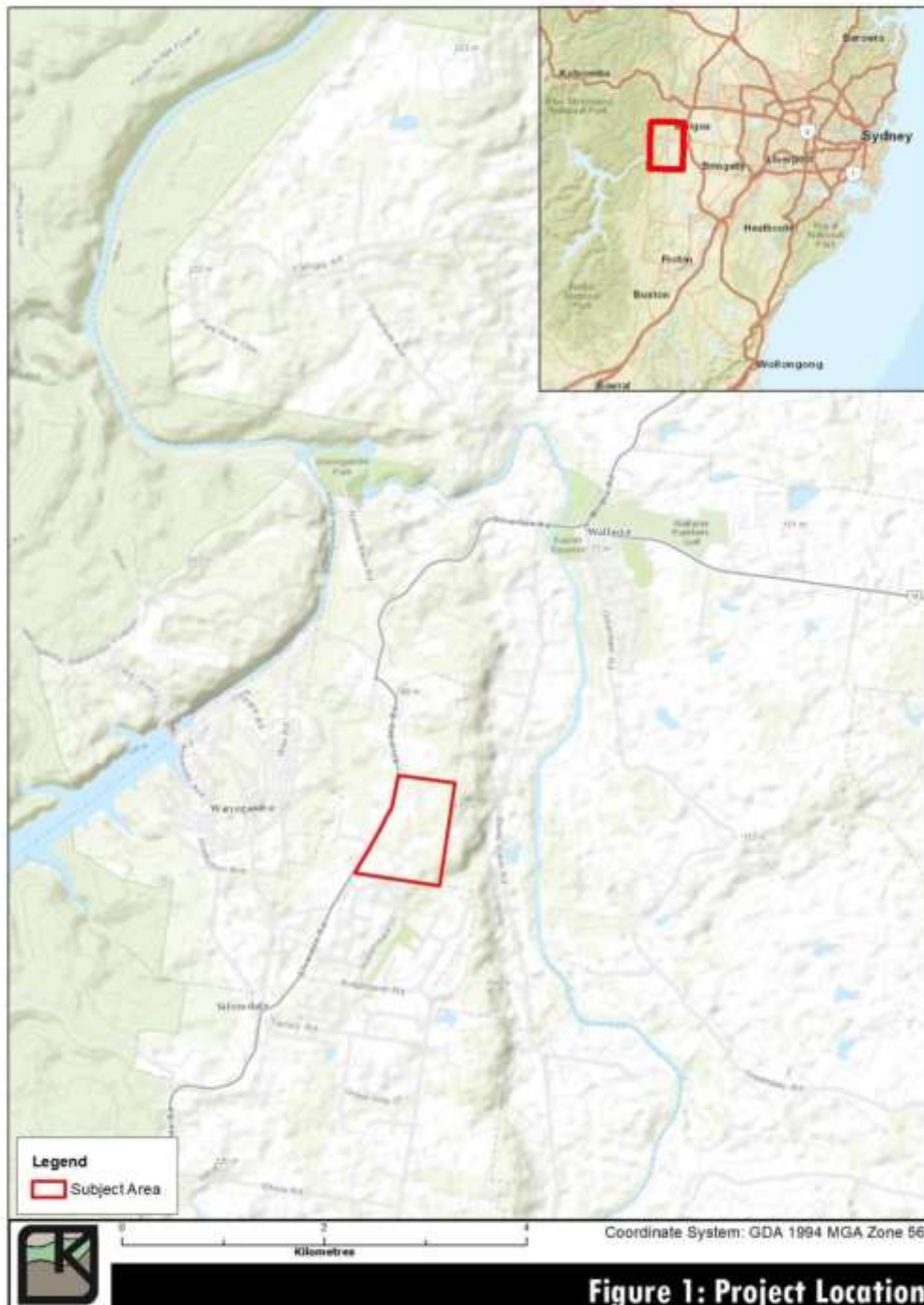


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Sydney

Melbourne

Brisbane

Perth



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Sydney

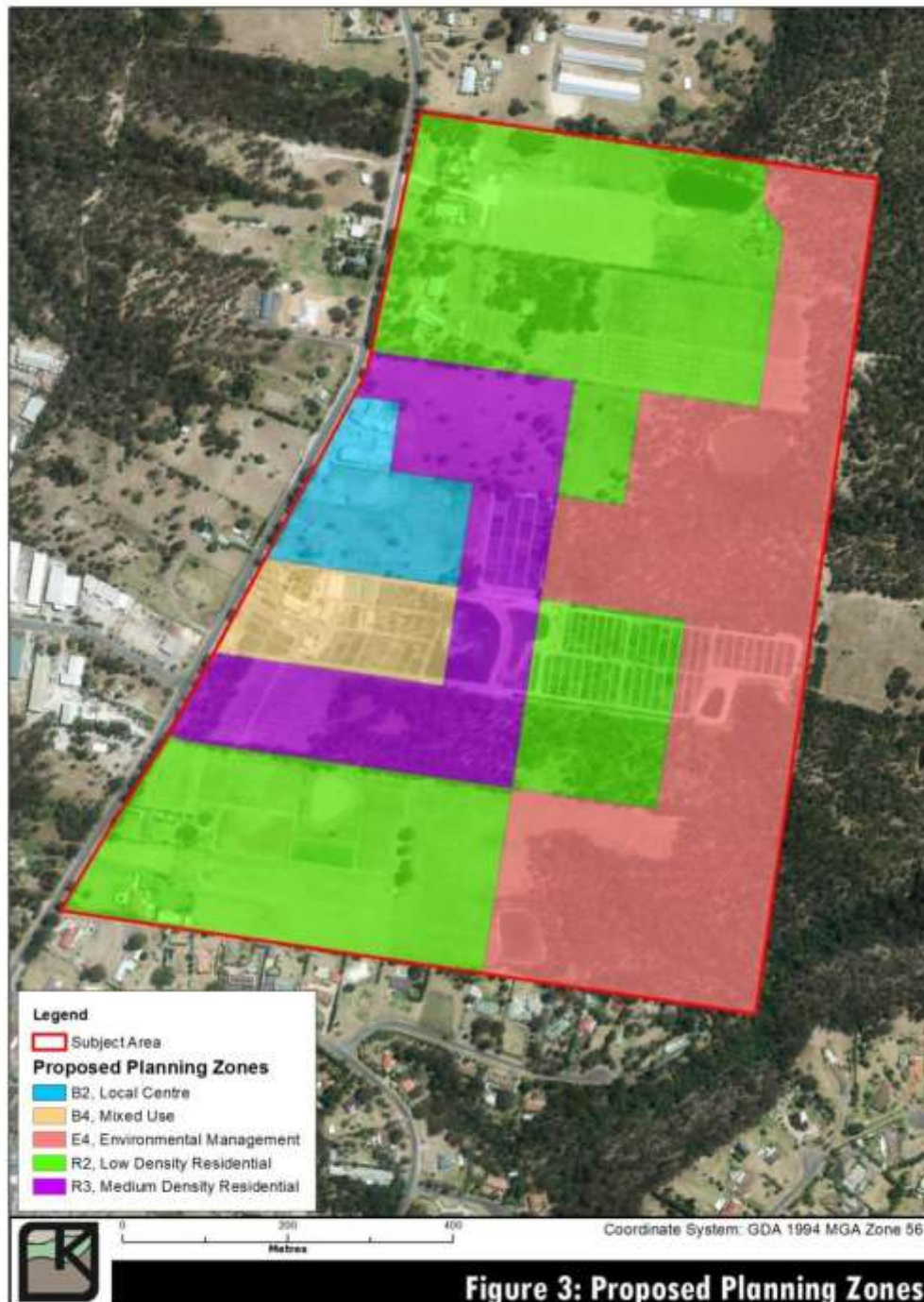
Melbourne

Brisbane

Perth



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APPENDIX XIII. RAP COMMENTS - COMBINED STAGE 2/STAGE 3 DOCUMENT

From: WIDESCOPE . <widescope.group@live.com> Sent: Wed 21/12/2016 7:38 AM
To: Kristen Kerr
Cc:
Subject: RE: Stages 2 and 3 documentation for North Silverdale Rezoning

Hi Kristen,
I have read through and I am satisfied with the methodology for stage 2 and 3 North Silverdale Rezoning project

I would like to be considered for the field survey, I am a Knowledge holder with many years experience in cultural surveying and hold a cultural connection to country
Regards
Steven Hickey

From: [Kristen Kerr](#)
Sent: Friday, 16 December 2016 4:49 PM
To: [WIDESCOPE.](#)
Subject: Stages 2 and 3 documentation for North Silverdale Rezoning

Hi,

Please find attached the Stage 2 and 3 documentation in respect to the North Silverdale Rezoning.

If you have any comments regarding this methodology, please let us know by COB **13th January 2017**.

Please do not hesitate to contact us if you have any questions.

Regards,

Kristen Kerr


KAYANDEL
ARCHAEOLOGICAL SERVICES
SYDNEY MELBOURNE BRISBANE PERTH
PO Box 440, Picton NSW 2571
Tel. +61 (0)2 4627 8622 Fax. +61 (0)2 4605 0815
Please consider the environment when printing this email.



Aboriginal Archaeology Service
INC: 1400988
P O Box 6283 Rouse Hill NSW 2155
Mobile: 0490 126 040
Email: aas.info@bigpond.com

Date: 3rd January 2017

RE: Proposed Rezoning of Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634,
Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP
1092447, Silverdale Road, Silverdale

Hi Lance,

Aboriginal Archaeology Service Inc. agrees with the proposed methodology for the
above project and would like to be involved in further consultation including the field
survey.

Regards

Andrew Williams
aas.info@bigpond.com

Thank You For Your Business

Pollowan Phillip Khan
78 Forbes Street
Emu Plains NSW 2750
09/01/2017
mobile: 0434545982

Kayandel Archaeological Services
PO Box 440
Picton NSW 2571



Dear Kristen Kerr

Thank you for Stage 2 and 3 documentation and Methodology for North Silverdale Rezoning. I have read your report and am happy with it and all your recommendations and we are looking forwards to be involved and be working with you and your team on this project.
Regards Philip Khan *PK*

As a Senior Aboriginal person who has for the past forty of so years (40) actively participated in the Protection of Aboriginal Cultural Heritage throughout the Sydney Basin ,and particularly throughout Western Sydney , I,on behalf of the Kamilaroi Yankuntjatjara- working group, wish to provide to you my organisation, registration of interest.

Information in my registration of Interest:

1. I am a Senior Aboriginal and Principal of the Kamilaroi -Yankuntjatjara Working Group, and all Aboriginal entity (ABN33979702507).
2. I prefer communicating by, Mail, Telephone, and; and I am, the Principal, person to contact, and;
My contact details are:
Phillip Khan
78 Forbes Street, Emu Plains NSW 2750
Mobile 043 4545 982 email philipkhan.acn@live.com.au
3. I wish to be involved and participate in all levels of consultation/project involvement. I wish to attend all meetings, and, participate in available field work; and would receive a copy of the report.
4. I attach to this letter a copy of Kamilaroi- Yankuntjatjara Working Group's; GIO Public Liability Insurance; GIO Workers Compensation Certificate.

Should you wish me to provide further information, please do not hesitate to contact me on 0434545982.

Yours Sincerely, *PK*

Pollowan Phillip Khan



**DARUG LAND
OBSERVATIONS PTY LTD
ABN 27 602 765 453**

EMAIL: DARUGLANDOBSERVATIONS@GMAIL.COM
PO BOX 571 PLUMPTON NSW 2761
MOBILE: 0420 591 138 / 0413 687 279

21st December 2016

Ref: 4171-2016

Kristen Kerr
Kayandel Archaeological Services
PO BOX 440
PICTON NSW 2571

Dear Kristen,

**RE: PROPOSED REZONING of LOT 2 DP 519533, LOT 6 DP 1086325, LOT
A DP 161634, LOTS 7, 10 & 11 DP 38123, LOTS 121 & 122 DP 747833,
and LOTS 199 & 200 DP 1092447-SILVERDALE ROAD, SILVERDALE**

Stage 2 - Presentation of Information about the Proposed Project and

Stage 3 - Gathering Information about Cultural Significance

Darug Land Observations Pty Ltd has reviewed the project information for the proposed rezoning of Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833, and Lots 199 & 200 DP 1092447 and supports the methodology for the proposed subject area to be rezoned as a mixture of R2 Low Density Residential, R3 Medium Density Residential, B2 Local Centre, B4 Mixed Use, and E4 Environmental Management at Silverdale Road, in Silverdale.

Darug Land Observations Pty Ltd would like to receive a copy of the Section 90 Aboriginal Heritage Impact Permit (AHIP).

Furthermore, Darug Land Observations Pty Ltd would be involved in the monitoring of the topsoil removal and all other form of works to be carried out on the site.

Yours sincerely,

Jamie Workman
Darug Land Observations Pty Ltd

Uncle Gordon Workman
Darug Elder

APPENDIX XIV. AHIMS RESULTS



Office of
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AHIMS Web Services (AWS) Search Result

Purchase Order/Reference : North Silverdale

Client Service ID : 253766

Kayandel Archaeological Services

PO Box 440 15 Henry Street

Picton New South Wales 2571

Attention: Lance Syme

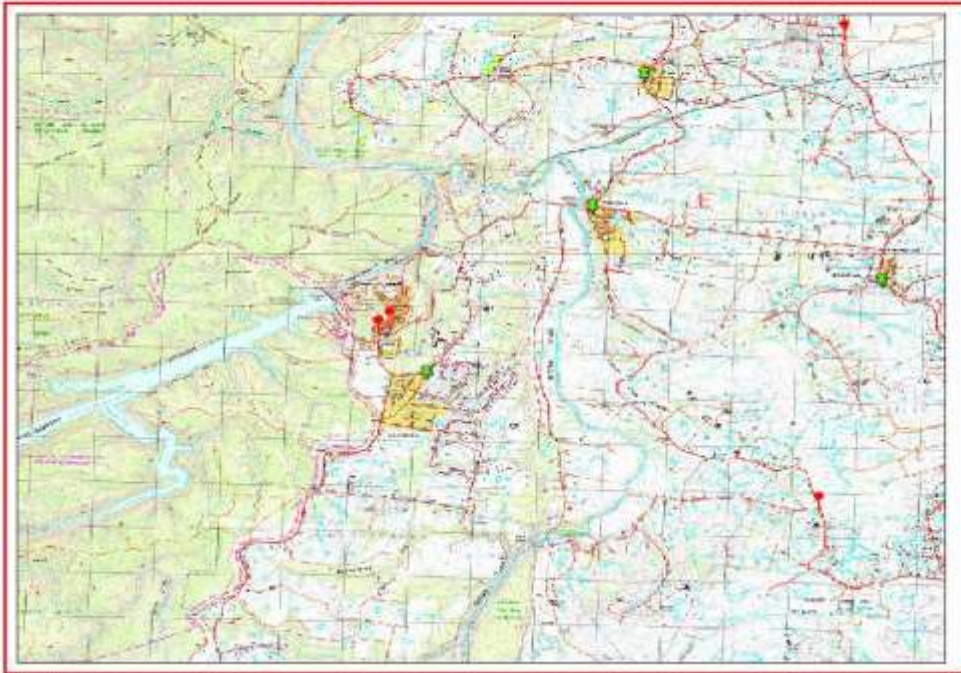
Email: lance.syme@kayandel.com.au

Date: 11 November 2016

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 274045 - 286045, Northings : 6241283 - 6253283 with a Buffer of 1000 meters, conducted by Lance Syme on 11 November 2016.

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



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

101	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette](http://www.nsw.gov.au/gazette) (<http://www.nsw.gov.au/gazette>) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not to be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister.
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings.
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.



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AHIMS Web Services (AWS) Extensive search - Site list report

Your Ref/PO Number : North Silverdale

Client Service ID : 253766

SiteID	SiteName	Datum	Zone	Eastings	Northings	Context	Site Status	SiteFeatures	SiteTypes	Remarks
45-5-2618	B 32	AGD	56	286370	6246560	Open site	Valid	Artefact :-		
	Contact Gandangara LALC	Recorders	Navin Officer Heritage Consultants Pty Ltd							
	Contact	Recorders	Mary Dallas Consulting Archaeologists							
45-5-0854	BB10;	AGD	56	279420	6240970	Open site	Valid	Artefact :-	Open Camp Site	235
	Contact	Recorders	Mary Dallas Consulting Archaeologists							
45-5-3940	Greendale ISF 1-4	GDA	56	284669	6245048	Open site	Valid	Artefact : 1		102028
	Contact	Recorders	Streat Archaeological Services							
45-5-2499	RC 13 - "Roscrea 13"	AGD	56	283890	6250660	Open site	Valid	Artefact :-	Isolated Find	
	Contact	Recorders	Doctor Jo McDonald, Stephanie Garling							
45-5-2500	RC 12 - "Roscrea 12"	AGD	56	283820	6250850	Open site	Valid	Artefact :-	Open Camp Site	
	Contact	Recorders	Doctor Jo McDonald, Stephanie Garling							
45-5-2503	RC 9 - "Roscrea 9"	AGD	56	283870	6251600	Open site	Valid	Artefact :-	Open Camp Site	
	Contact	Recorders	Doctor Jo McDonald, Stephanie Garling							
45-5-2504	RC 8 - "Roscrea 8"	AGD	56	284100	6251880	Open site	Valid	Artefact :-	Open Camp Site	
	Contact	Recorders	Stephanie Garling							
45-5-2505	RC 7 - "Roscrea 7"	AGD	56	284230	6250620	Open site	Valid	Artefact :-	Open Camp Site	
	Contact	Recorders	Doctor Jo McDonald, Stephanie Garling							
45-5-2506	RC 6 - "Roscrea 6"	AGD	56	284130	6250740	Open site	Valid	Artefact :-	Isolated Find	
	Contact	Recorders	Doctor Jo McDonald, Stephanie Garling							
45-5-2508	RC 4 - "Roscrea 4"	AGD	56	284030	6250980	Open site	Valid	Artefact :-	Open Camp Site	
	Contact	Recorders	Doctor Jo McDonald, Stephanie Garling							
45-5-2509	RC 3 - "Roscrea 3"	AGD	56	284250	6251190	Open site	Valid	Artefact :-	Open Camp Site	
	Contact	Recorders	Doctor Jo McDonald, Stephanie Garling							
45-5-2510	RC 2 - "Roscrea 2"	AGD	56	284340	6252070	Open site	Valid	Artefact :-	Open Camp Site	
	Contact	Recorders	Doctor Jo McDonald, Stephanie Garling							
45-5-2511	RC 1 - "Roscrea 1"	AGD	56	284290	6252080	Open site	Valid	Artefact :-	Open Camp Site	
	Contact	Recorders	Doctor Jo McDonald, Stephanie Garling							
45-5-0409	Mulgoa Mulgoa 2	AGD	56	282580	6253300	Open site	Valid	Artefact :-	Open Camp Site	371,522,1018
	Contact	Recorders	Jim Koben							
45-5-0978	Bushrangers Creek 1	AGD	56	279550	6242750	Closed site	Valid	Artefact :- , Art (Pigment or Engraved) :-	Shelter with Art, Shelter with Deposit	2950
	Contact	Recorders	Kerry Navin, Doctor Susan McIntyre-Tamwoy							
45-5-0979	Bushrangers Creek 2	AGD	56	279380	6242730	Open site	Valid	Artefact :-	Open Camp Site	2950
	Contact	Recorders	Kerry Navin, Doctor Susan McIntyre-Tamwoy							

Report generated by AHIMS Web Service on 11/11/2016 for Lance Syme for the following area at Datum :GDA, Zone : 56, Eastings : 274045 - 286045, Northings : 6241283 - 6253283 with a Buffer of 1000 meters. Additional Info : Archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 101

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AHIMS Web Services (AWS) Extensive search - Site list report

Your Ref/PO Number : North Silverdale

Client Service ID : 253766

SiteID	SiteName	Datum	Zone	Eastings	Northings	Context	Site Status	SiteFeatures	SiteTypes	Remarks
45-5-0983	GPAD 1;	AGD	56	279100	6247900	Closed site	Valid	Artefact :-	Shelter with Deposit	
	Contact							Permits		
45-5-0984	PAD 2;	AGD	56	279100	6247800	Closed site	Valid	Artefact :-	Shelter with Deposit	
	Contact							Permits		
45-5-0985	PAD 3;	AGD	56	279200	6247800	Closed site	Valid	Artefact :-	Shelter with Deposit	
	Contact							Permits		
45-5-0986	PAD 4;	AGD	56	279300	6247800	Closed site	Valid	Artefact :-	Shelter with Deposit	
	Contact							Permits		
45-5-0987	WAL 1;	AGD	56	281100	6249900	Closed site	Valid	Artefact :-	Shelter with Deposit	
	Contact							Permits		
45-5-0988	WAL 2;	AGD	56	283500	6249900	Open site	Valid	Artefact :-	Isolated Find	
	Contact							Permits		
45-5-2349	Jerry's Ck 1;	AGD	56	281940	6250800	Open site	Valid	Artefact :-	Open Camp Site	
	Contact							Permits		
45-5-2350	Jerry's Ck 2 (JC2);	AGD	56	281980	6250720	Open site	Valid	Artefact :-	Open Camp Site	
	Contact							Permits		
45-5-2351	Jerry's Ck 3 (JC3);	AGD	56	281800	6250450	Open site	Valid	Artefact :-	Open Camp Site	
	Contact							Permits		
45-5-0845	BB1;	AGD	56	281680	6242500	Open site	Valid	Artefact :-	Open Camp Site	235
	Contact							Permits		
45-5-0846	BB2;	AGD	56	280370	6242730	Closed site	Valid	Artefact :- , Art (Pigment or Engraved) :-	Shelter with Art, Shelter with Deposit	235
	Contact							Permits		
45-5-0847	BB3;	AGD	56	280300	6242720	Closed site	Valid	Art (Pigment or Engraved) :-	Shelter with Art	235
	Contact							Permits		
45-5-0848	BB4;	AGD	56	280350	6241660	Closed site	Valid	Art (Pigment or Engraved) :-	Shelter with Art	235
	Contact							Permits		
45-5-0849	BB5;	AGD	56	280320	6241430	Open site	Valid	Grinding Groove :-	Axe Grinding Groove	235
	Contact							Permits		

Report generated by AHIMS Web Service on 11/11/2016 for Lance Syme for the following area at Datum :GDA, Zone : 56, Eastings : 274045 - 286045, Northings : 6241283 - 6253283 with a Buffer of 1000 meters. Additional Info : Archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 101

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AHIMS Web Services (AWS) Extensive search - Site list report

Your Ref/PO Number : North Silverdale

Client Service ID : 253766

SiteID	SiteName	Datum	Zone	Eastings	Northings	Context	Site Status	SiteFeatures	SiteTypes	Remarks
45-5-0093	Machin's Saddle The Oaks	AGD	56	275612	6253914	Open site	Valid	Artefact :-	Open Camp Site	
	Contact	Recorders	John Gallard					Permits		
45-5-0097	Machin's Saddle Glenbrook Mt Henry	AGD	56	276196	6252096	Open site	Valid	Artefact :-	Open Camp Site	
	Contact	Recorders	John Gallard					Permits		
45-5-0099	Machin's Saddle Glenbrook Mt Henry	AGD	56	276743	6252198	Open site	Valid	Artefact :-	Open Camp Site	
	Contact	Recorders	John Gallard					Permits		
45-5-0101	Forest Hill Creek; Werombi;	AGD	56	277100	6240200	Closed site	Valid	Art (Pigment or Engraved) :-	Shelter with Art	
	Contact	Recorders	J Buhr					Permits		
45-5-0129	Forest Hill(duplicate copy of 45-5-232)	AGD	56	277200	6240100	Closed site	Valid	Artefact :-	Shelter with Deposit	325
	Contact	Recorders	Ms Laila Haglund					Permits		
45-5-0735	Fairlight Park 7	AGD	56	279330	6251870	Open site	Valid	Grinding Groove :-	Axe Grinding Groove	
	Contact	Recorders	Jim Kohen					Permits		
45-5-0606	Winbourne WB/1	AGD	56	281480	6251780	Open site	Valid	Artefact :-	Open Camp Site	1234
	Contact	Recorders	Jim Kohen					Permits		
45-5-0608	Winbourne 3 WB/3	AGD	56	281360	6251590	Open site	Valid	Artefact :-	Open Camp Site	1234
	Contact	Recorders	Jim Kohen					Permits		
45-5-0609	Winbourne 5 WB/5	AGD	56	280980	6251600	Open site	Valid	Artefact :-	Open Camp Site	1234
	Contact	Recorders	Jim Kohen					Permits		
45-5-0610	Winbourne 6 WB/6	AGD	56	280980	6251600	Open site	Valid	Artefact :-	Open Camp Site	1234
	Contact	Recorders	Jim Kohen					Permits		
45-5-0535	Bents Basin 17 Bents Basin SRA	AGD	56	279880	6240900	Open site	Valid	Grinding Groove :-	Axe Grinding Groove	1018,1223
	Contact	Recorders	Jim Kohen					Permits		
45-5-0611	Winbourne 7 WB/7;	AGD	56	280930	6251500	Open site	Valid	Artefact :-	Open Camp Site	1234
	Contact	Recorders	Jim Kohen					Permits		
45-5-0612	Winbourne 8 WB/8;	AGD	56	280880	6251650	Open site	Valid	Grinding Groove :-	Axe Grinding Groove	1234
	Contact	Recorders	Jim Kohen					Permits		
45-5-0613	Winbourne 9 WB/9;	AGD	56	280830	6251750	Closed site	Valid	Artefact :- , Art (Pigment or Engraved) :-	Shelter with Art, Shelter with Deposit	1234
	Contact	Recorders	Jim Kohen					Permits		
45-5-0614	Winbourne 10 WB/10;	AGD	56	281490	6251550	Open site	Valid	Artefact :-	Open Camp Site	1234
	Contact	Recorders	Jim Kohen					Permits		

Report generated by AHIMS Web Service on 11/11/2016 for Lance Syme for the following area at Datum :GDA, Zone : 56, Eastings : 274045 - 286045, Northings : 6241283 - 6253283 with a Buffer of 1000 meters. Additional Info : Archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 101

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AHIMS Web Services (AWS) Extensive search - Site list report

Your Ref/PO Number : North Silverdale

Client Service ID : 253766

SiteID	SiteName	Datum	Zone	Eastings	Northings	Context	Site Status	SiteFeatures	SiteTypes	Remarks
45-5-0638	Folley Creek	AGD	56	277900	6247500	Closed site	Valid	Art (Pigment or Engraved) :-	Shelter with Art	
	Contact	Recorders	T Young					Permits		
45-5-0234	Greenedale,	AGD	56	282800	6245600	Open site	Valid	Modified Tree (Carved or Scarred) :-	Carved Tree	
	Contact	Recorders	David Bell					Permits		
45-5-0834	Restriction applied. Please contact ahims@environment.nsw.gov.au.					Open site	Valid			235,1223
	Contact	Recorders	R Williams					Permits		
45-5-0736	Fairlight Park 6	AGD	56	279380	6252050	Open site	Valid	Artefact :-	Open Camp Site	
	Contact	Recorders	Jim Kohen					Permits		
45-5-2501	RC 11 - "Roscrea 11"	AGD	56	283810	6251070	Open site	Valid	Artefact :-	Isolated Find	
	Contact	Recorders	Doctor Jo McDonald, Stephanie Garling					Permits		
45-5-3436	St Thomas Isolated Artefact 2 (STC 1A 2)	GDA	56	282976	6253924	Open site	Valid	Artefact : 1		
	Contact	Recorders	Ms.Gretta Logue					Permits		
45-5-3406	stc as 4	GDA	56	283022	6254108	Open site	Valid	Artefact :-		
	Contact	Recorders	Ms.Gretta Logue					Permits		
45-5-3407	stc as 5	GDA	56	283128	6254071	Open site	Valid	Artefact :-		
	Contact	Recorders	Ms.Gretta Logue					Permits		
45-5-3408	stc ia 1	GDA	56	283135	6254242	Open site	Valid	Artefact :-		
	Contact	Recorders	Ms.Gretta Logue					Permits		
45-5-3399	St Thomas Church Isolated Artefact 2 (STC 1A 2)	GDA	56	282976	6253924	Open site	Valid	Artefact : 1		
	Contact	Recorders	Ms.Gretta Logue					Permits		
45-5-3401	St Thomas Church Artefact Scatter 2 (STC AS 2)	GDA	56	283000	6254196	Open site	Valid	Artefact : 6		
	Contact	Recorders	Ms.Gretta Logue					Permits		
45-5-3402	St Thomas Church Artefact Scatter 3 (STC AS 3)	GDA	56	283062	6254213	Open site	Valid	Artefact : 11		
	Contact	Recorders	Ms.Gretta Logue					Permits		
45-5-3403	St Thomas Church Artefact Scatter 4 (STC AS 4)	GDA	56	283022	6254108	Open site	Valid	Artefact : 3		
	Contact	Recorders	Ms.Gretta Logue					Permits		
45-5-3404	St Thomas Church Artefact Scatter 5 (STC AS 5)	GDA	56	283128	6254071	Open site	Valid	Artefact : 3		
	Contact	Recorders	Ms.Gretta Logue					Permits		
45-5-3405	St Thomas Church Isolated Artefact 1 (STC 1A 1)	GDA	56	283135	6254242	Open site	Valid	Artefact : 1		
	Contact	Recorders	Ms.Gretta Logue					Permits		
45-5-0094	Machin's Saddle The Oaks	AGD	56	275893	6253554	Open site	Valid	Artefact :-	Open Camp Site	
	Contact	Recorders	John Gallard					Permits		

Report generated by AHIMS Web Service on 11/11/2016 for Lance Syme for the following area at Datum :GDA, Zone : 56, Eastings : 274045 - 286045, Northings : 6241283 - 6253283 with a Buffer of 1000 meters. Additional Info : Archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 101

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AHIMS Web Services (AWS) Extensive search - Site list report

Your Ref/PO Number : North Silverdale

Client Service ID : 253766

SiteID	SiteName	Datum	Zone	Eastings	Northings	Context	Site Status	SiteFeatures	SiteTypes	Records
45-5-3627	WW01	GDA	56	280870	6250810	Open site	Valid	Art (Pigment or Engraved) : -		101640
	<u>Contact</u>					<u>Recorders</u>	Australian Museum Consulting (AM Consulting)	<u>Permits</u>	3099	
45-5-4207	Production Ave Grinding Grooves 1	GDA	56	278876	6247392	Open site	Valid	Grinding Groove : 1		
	<u>Contact</u>					<u>Recorders</u>	Mary Dallas Consulting Archaeologists	<u>Permits</u>		
45-5-2507	RC 5 - "Roscrea 5"	AGD	56	284180	6250790	Open site	Valid	Artefact : -	Isolated Find	
	<u>Contact</u>					<u>Recorders</u>	Doctor Jo McDonald, Stephanie Garling	<u>Permits</u>		
45-5-0006	Silverdale,	AGD	56	278200	6246800	Open site	Valid	Artefact : -	Open Camp Site	
	<u>Contact</u>					<u>Recorders</u>	Ann Jelinek	<u>Permits</u>		
45-5-3172	WP1, Wollondilly	AGD	56	279338	6250669	Open site	Valid	Artefact : 1		
	<u>Contact</u> T Russell					<u>Recorders</u>	Ms Fiona Leslie	<u>Permits</u>		
45-5-3173	WP2, Wollondilly	AGD	56	279370	6250706	Open site	Valid	Artefact : 7		
	<u>Contact</u> T Russell					<u>Recorders</u>	Ms Fiona Leslie	<u>Permits</u>		
45-5-3174	WP3, Wollondilly	AGD	56	279283	6250729	Open site	Valid	Artefact : 26		
	<u>Contact</u> T Russell					<u>Recorders</u>	Ms Fiona Leslie	<u>Permits</u>		
45-5-3175	WP4 and PAD	AGD	56	279097	6250914	Open site	Valid	Artefact : 29		
	<u>Contact</u> T Russell					<u>Recorders</u>	Ms Fiona Leslie	<u>Permits</u>		
45-5-3103	Silverdale Road 1	AGD	56	281150	6250100	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	<u>Contact</u> T Russell					<u>Recorders</u>	Emma Lees	<u>Permits</u>		
45-5-3166	SAF-1	AGD	56	278297	6246344	Open site	Valid	Artefact : 5		
	<u>Contact</u> T Russell					<u>Recorders</u>	Stedinger Associates	<u>Permits</u>		
45-5-3240	Fernhill Mulgoa 5	AGD	56	282771	6253885	Open site	Valid	Artefact : 27		
	<u>Contact</u> Searle					<u>Recorders</u>	Austral Archaeology Pty Ltd	<u>Permits</u>		
45-5-3241	Fernhill Mulgoa 6	AGD	56	282687	6253763	Open site	Valid	Artefact : 23		
	<u>Contact</u> Searle					<u>Recorders</u>	Austral Archaeology Pty Ltd	<u>Permits</u>		
45-5-3242	Fernhill Mulgoa 7	AGD	56	282562	6253723	Open site	Valid	Artefact : 3		
	<u>Contact</u> Searle					<u>Recorders</u>	Austral Archaeology Pty Ltd	<u>Permits</u>		
45-5-3243	Fernhill Mulgoa 8	AGD	56	282380	6253773	Open site	Valid	Artefact : 3		
	<u>Contact</u> Searle					<u>Recorders</u>	Austral Archaeology Pty Ltd	<u>Permits</u>		
45-5-3229	Fernhill Mulgoa Site 11	AGD	56	282286	6253733	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u> Searle					<u>Recorders</u>	Austral Archaeology Pty Ltd	<u>Permits</u>		

Report generated by AHIMS Web Service on 11/11/2016 for Lance Syme for the following area at Datum :GDA, Zone : 56, Eastings : 274045 - 286045, Northings : 6241283 - 6253283 with a Buffer of 1000 meters. Additional Info : Archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 101

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AHIMS Web Services (AWS) Extensive search - Site list report

Your Ref/PO Number : North Silverdale

Client Service ID : 253766

SiteID	SiteName	Datum	Zone	Eastings	Northings	Context	Site Status	SiteFeatures	SiteTypes	Remarks
45-5-3230	Fernhill Mulgoa Site 12	AGD	56	282491	6253700	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	Contact Searle	Recorders	Austral Archaeology Pty Ltd							
45-5-3244	Fernhill Mulgoa 9	AGD	56	282186	6253658	Open site	Valid	Artefact : 4		
	Contact Searle	Recorders	Austral Archaeology Pty Ltd							
45-5-3098	Greendale Road 1	AGD	56	281900	6248820	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact T Russell	Recorders	Emma Lees							
45-5-3806	OS 2	AGD	56	286575	6252169	Open site	Valid	Artefact : 2		
	Contact	Recorders	Ms.Mary Dallas							
45-5-4354	MC-OS-01	GDA	56	278824	6246786	Open site	Valid	Artefact : 1		
	Contact	Recorders	Kayandel Archaeological Services							
45-5-4778	TNR APT 12	GDA	56	285626	6253649	Open site	Valid	Artefact : -		
	Contact	Recorders	Kelleher Nightingale Consulting Pty Ltd,Mr.Benjamin Anderson							
45-5-4779	TNR APT 13	GDA	56	286413	6252059	Open site	Valid	Artefact : -		
	Contact	Recorders	Kelleher Nightingale Consulting Pty Ltd,Mr.Benjamin Anderson							
45-5-4780	TNR APT 11	GDA	56	285725	6254062	Open site	Valid	Artefact : -		
	Contact	Recorders	Kelleher Nightingale Consulting Pty Ltd,Mr.Benjamin Anderson							
45-5-4783	TNR APT 18	GDA	56	286462	6249630	Open site	Valid	Artefact : -		
	Contact	Recorders	Kelleher Nightingale Consulting Pty Ltd,Mr.Benjamin Anderson							
45-5-4786	TNR APT 14	GDA	56	286758	6251468	Open site	Valid	Artefact : -		
	Contact	Recorders	Kelleher Nightingale Consulting Pty Ltd,Mr.Benjamin Anderson							
45-5-4788	TNR APT 15	GDA	56	286985	6250420	Open site	Valid	Artefact : -		
	Contact	Recorders	Kelleher Nightingale Consulting Pty Ltd,Mr.Benjamin Anderson							
45-5-4791	TNR APT 25	GDA	56	286670	6247693	Open site	Valid	Artefact : -		
	Contact	Recorders	Kelleher Nightingale Consulting Pty Ltd,Mr.Benjamin Anderson							
45-5-4794	TNR APT 23	GDA	56	286651	6248317	Open site	Valid	Artefact : -		
	Contact	Recorders	Kelleher Nightingale Consulting Pty Ltd,Mr.Benjamin Anderson							
45-5-4795	TNR APT 24	GDA	56	286659	6247884	Open site	Valid	Artefact : -		
	Contact	Recorders	Kelleher Nightingale Consulting Pty Ltd,Mr.Benjamin Anderson							
45-5-4796	TNR APT 16	GDA	56	287012	6250214	Open site	Valid	Artefact : -		
	Contact	Recorders	Kelleher Nightingale Consulting Pty Ltd,Mr.Benjamin Anderson							
45-5-4808	TNR IF 04	GDA	56	287033	6250644	Open site	Valid	Artefact : -		
	Contact	Recorders	Kelleher Nightingale Consulting Pty Ltd,Mr.Benjamin Anderson							

Report generated by AHIMS Web Service on 11/11/2016 for Lance Syme for the following area at Datum :GDA, Zone : 56, Eastings : 274045 - 286045, Northings : 6241283 - 6253283 with a Buffer of 1000 meters. Additional Info : Archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 101

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Office of
Environment
& Heritage

AHIMS Web Services (AWS) Extensive search - Site list report

Your Ref/PO Number : North Silverdale

Client Service ID : 253766

SiteID	SiteName	Datum	Zone	Eastings	Northings	Context	Site Status	SiteFeatures	SiteTypes	Records
45-5-4797	TNR AFT 30	GDA	56	286542	6246079	Open site	Valid	Artefact :-		
	Contact	Recorders	Kelleher Nightingale Consulting Pty Ltd, Mr Benjamin Anderson					Permits		
45-5-4798	TNR AFT 26	GDA	56	286556	6247586	Open site	Valid	Artefact :-		
	Contact	Recorders	Kelleher Nightingale Consulting Pty Ltd, Mr Benjamin Anderson					Permits		
45-5-4799	TNR AFT 27	GDA	56	286144	6247445	Open site	Valid	Artefact :-		
	Contact	Recorders	Kelleher Nightingale Consulting Pty Ltd, Mr Benjamin Anderson					Permits		
45-5-4800	TNR AFT 28	GDA	56	286488	6247279	Open site	Valid	Artefact :-		
	Contact	Recorders	Kelleher Nightingale Consulting Pty Ltd, Mr Benjamin Anderson					Permits		
45-5-4801	TNR AFT 29	GDA	56	286073	6246387	Open site	Valid	Artefact :-		
	Contact	Recorders	Kelleher Nightingale Consulting Pty Ltd, Mr Benjamin Anderson					Permits		
45-5-4802	TNR AFT 31	GDA	56	286316	6246234	Open site	Valid	Artefact :-		
	Contact	Recorders	Kelleher Nightingale Consulting Pty Ltd, Mr Benjamin Anderson					Permits		
45-5-4735	MC-OS-02	GDA	56	278147	6246490	Open site	Valid	Artefact : 1		
	Contact	Recorders	Kayandel Archaeological Services					Permits		
45-5-4736	MC-OS-03	GDA	56	278488	6246516	Open site	Valid	Artefact : 1		
	Contact	Recorders	Kayandel Archaeological Services					Permits		
45-5-4776	Littlefields Road 1	AGD	56	282850	6253210	Open site	Valid	Artefact : 15		103567
	Contact	Recorders	Helen Brayshaw					Permits		

Report generated by AHIMS Web Service on 11/11/2016 for Lance Syme for the following area at Datum :GDA, Zone : 56, Eastings : 274045 - 286045, Northings : 6241283 - 6253283 with a Buffer of 1000 meters. Additional Info : Archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 101

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APPENDIX XV. RAP COMMENTS - ACHAR



**Proposed North Silverdale Rezoning,
Silverdale Road, Silverdale
Wollondilly Shire LGA, NSW
Aboriginal Cultural Heritage Assessment Report**

Kayandel Archaeological Services
Att: Lance Symes
Po Box 440
PICTON NSW 2571
www.kayandel.com
info@kayandel.com.au

16/05/2017

Dear Lance,

Tharawal Local Aboriginal Land Council agree with the recommendations and conclusions stated in the Aboriginal Cultural Heritage Assessment report conducted by Kayandel Archaeological Services.

Yours in Unity

Denise Ezzy
Personal Assistant to the CEO
Tharawal Local Aboriginal Land Council
220 West Parade
Couridjah NSW 2571
T: (02) 46810059 F: (02) 46810688 M: 0434740929
informationofficer@tharawal.com.au



Site: 220 West Parade, COURIDJAH NSW 2572
Mailing address: PO BOX 245, THIRLMERE NSW
Website: www.tharawal.com.au
Facebook page: www.facebook.com/Tharawal-Local-Aboriginal-Land-Council
Phone Enquiries: 02 4681 0059
Facsimile: 02 4681 0866

Cubbitch Barta Native Title Claimants
Aboriginal Corporation
55 Nightingale Road,
PHEASANTS NEST. N.S.W. 2574

Kayandel Archaeological Service,
P.O. Box 440,
PICTON. N.S.W. 2571.

Dear Lance,

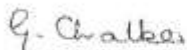
RE: NORTH SILVERDALE
REZONING

Thank you for the opportunity of commenting on the DRAFT ACHAR for the rezoning of North Silverdale.

I would just like to make a few comments as follows;

1. The ridge line that runs North to South is an old Aboriginal walking track and is a separation of the water catchments, with one side of Silverdale Road, the water flowing to the West, and the other the water flows to the East. Both flows eventually running to the North into the Nepean River catchment.
2. I also note that the site recorded as SDIF02 is situated on one of the spur lines heading in an easterly direction off Silverdale Road.
3. Even SDIF 01 is possibly, although it is harder to tell also on the spur line further to the northern end of the project area.
4. The Silverdale Road ridgeline would have been used for travellers to move through different groups, and certainly there would have been occasions for people to camp whilst enroute.
5. I agree with the recommendations that have been made as part of the ACHAR.

Yours faithfully,



Glenda Chalker

Phone/Fax 0246841129 0427218425

kgchalker@bigpond.com

Pollowan Phillip Khan
78 Forbes Street
Emu Plains NSW 2750
22/04/2017
mobile: 0434545982

Kayandel Archaeological Services
PO Box 440
Picton NSW 2571



Dear Kristen Kerr

Thank you for the Draft Aboriginal Cultural Heritage Assessment Report for North Silverdale Rezoning. I have read your report and am happy with it and all your recommendations and we are looking forwards to be involved and be working with you and your team on this project.
Regards Phillip Khan *PK*

As a Senior Aboriginal person who has for the past forty of so years (40) actively participated in the Protection of Aboriginal Cultural Heritage throughout the Sydney Basin ,and particularly throughout Western Sydney , I, on behalf of the Kamilaroi Yankuntjatjara- working group, wish to provide to you my organisation, registration of interest.

Information in my registration of interest:

1. I am a Senior Aboriginal and Principal of the Kamilaroi -Yankuntjatjara Working Group, and all Aboriginal entity (ABN33979702507).
2. I prefer communicating by, Mail, Telephone, and; and I am, the Principal, person to contact, and;
My contact details are:
Phillip Khan
78 Forbes Street, Emu Plains NSW 2750
Mobile 043 4545 982 email philpkhan.acn@live.com.au
3. I wish to be involved and participate in all levels of consultation/project involvement. I wish to attend all meetings, and, participate in available field work; and would receive a copy of the report.
4. I attach to this letter a copy of Kamilaroi- Yankuntjatjara Working Group's; GIO Public Liability Insurance; GIO Workers Compensation Certificate.

Should you wish me to provide further information, please do not hesitate to contact me on 0434545982.

Yours Sincerely,
PK
Pollowan Phillip Khan

From: Info
To: Kristen Kerr; Lance Syme
Cc:
Subject: FW: 4171-2016: North Silverdale Rezoning.

Sent: Sun 23/04/2017 8:33 AM

From: Andrew Williams
Sent: Saturday, April 22, 2017 10:33:24 PM (UTC+00:00) Monrovia, Reykjavik
To: Info
Subject: Re: 4171-2016: North Silverdale Rezoning.

Dear Lance Syme
I write to inform you that AAS read your review on the above project and consider it to true and accurate.

Sent from [Mail](#) for Windows 10

From: WIDESCOPE . <widescope.group@live.com>
To: Kristen Kerr
Cc:
Subject: RE: North Silverdale rezoning

Sent: Fri 28/04/2017 3:14 PM

To Kirsten Kerr.

I have been sent a copy of the Draft Aboriginal Cultural Heritage Assessment report for North Silverdale NSW, Rezoning

I Steven Hickey seek to endorse the ACHA

Regards Steven Hickey RAP

From: [Kristen Kerr](#)
Sent: Tuesday, 18 April 2017 11:14 AM
To: widescope.group@live.com
Cc: [Natalie Stiles](#)
Subject: North Silverdale rezoning

Hi,

Please find attached the Draft Aboriginal Cultural Heritage Assessment report for North Silverdale Rezoning.

If you have any comments regarding this draft ACHAR, please provide them by COB **16th May 2017**.

Regards,

Kristen Kerr

From: Caraboree Aboriginal Corporation <caraboreecorp@bigpond.com>
To: Kristen Kerr
Cc:
Subject: Re: North Silverdale Rezoning

Sent: Wed 10/05/2017 3:24 PM

Hi Kristen
We see no problems.

Kind regards
Marilyn Carroll-Johnson
Director CAC

On 10 May 2017, at 2:21 pm, Kristen Kerr <Kristen.Kerr@kayandel.com.au> wrote:

Hi

Just checking project records for North Silverdale Rezoning and noticed we haven't received any comments from you as yet. Please note that comments are due by 16th May 2017, as we intend to finalise the report on the 17th May 2017.

Kind regards,

Kristen Kerr
<[image001.jpg](#)>
PO Box 440, Picton NSW 2571
Tel. +61 (0)2 4627 8622 Fax. +61 (0)2 4605 0815
[Please consider the environment when printing this email.](#)

This email and all attachments are confidential. For further important information about emails sent to or from Kayandel or if you have received this email in error, please refer to www.kayandel.com.au/emaildisclaimer.html



**DARUG LAND
OBSERVATIONS PTY LTD
ABN 27 602 765 453**

EMAIL: DARUGLANDOBSERVATIONS@GMAIL.COM
PO BOX 571 PLUMPTON NSW 2761
MOBILE: 0420 591 138 / 0413 687 279

11th May, 2017

Kristen Kerr
Kayandal Archaeological Services
PO Box 440
PICTON NSW 2571

Dear Kristen,

**RE: PROPOSED NORTH SILVERDALE REZONING,
SILVERDALE ROAD, SILVERDALE, NSW**

Aboriginal Cultural Heritage Assessment Report

Darug Land Observations Pty Ltd has reviewed the draft Aboriginal Cultural Heritage Assessment, and supports the methodology for the proposed North Silverdale Rezoning of Lot 2 DP 519533, Lot 6 DP 1086325, Lot A DP 161634, Lots 7, 10 & 11 DP 38123, Lots 121 & 122 DP 747833 and Lots 199 & 200 DP 1092447 located in Silverdale Road, in Silverdale, to be rezoned as a mixture of low and medium density residential, local centre, mixed use and environmental management.

Darug Land Observations Pty Ltd would like to receive a copy of the Section 90 Aboriginal Heritage Impact Permit (AHIP).

Furthermore, Darug Land Observations Pty Ltd would be involved in the monitoring of the topsoil removal, test excavations and all other form of works to be carried out on the site.

Yours sincerely,

Jamie Workman
Darug Land Observations Pty Ltd

Uncle Gordon Workman
Darug Elder

APPENDIX XVI. ARTEFACT RECORDING METHODOLOGY

Artefact identification

Stone artefacts were identified using technical criteria based on stone fracture mechanics, as described by Speth (1972), Cotterell and Kamminga (1987), Wright (1983) and Holdaway and Stern (2004).

A flake was a piece of stone which was struck from a larger rock. The larger rock (called a core) may have been rested on the ground, rested on an anvil, or held in one hand to stabilise it (Figure 17). The angle between the top of the core (its striking platform) and the side from which flakes were struck was usually less than 90°, as it was very difficult to detach flakes from cores where the angle was more than 90°. Force was applied to the platform with a hammer stone. Hammer stones showed distinctive pitting from such percussive use (Wright 1983:120).

Flakes showed specific technical features (Figure 18). Essentially, a flake had a platform, a point of impact (force application), a Hertzian cone, and a bulb of percussion. Some flakes also showed lines resulting from shear fracture, a bulbar scar (also called erraillure scar) and ripple marks (Speth 1972:35). Sometimes the platforms on flakes were crushed during knapping (Holdaway and Stern 2004:120). These features were more or less pronounced, depending on the quality of the stone material, the hardness of the hammer relative to the stone, and whether an anvil was used and the manner of its use.

Bipolar flaking was used where the angle of the striking platform and the sides of the core was 90° or greater, and was often used to flake small cores and pebbles. In bipolar flaking the core was placed on another rock (called an anvil) and hit so that the force was directed down through the rock and rebounded off the anvil, to split the core into smaller pieces (Figure 19). The resulting flakes and core showed crushing at the end which was struck by the hammer stone and at the end which was in contact with the anvil. The bipolar flakes had sheared or compressed bulbs of percussion (Cotterell and Kamminga 1987:688, 698-700).

Cores and flakes were sometimes broken, either during flaking or afterwards by trampling, burning or by some other force. If the side or end of a flake was broken the artefact was classified as a proximal broken flake (Figure 20). Sometimes only a fragment or piece of a flake was found (e.g. a distal or medial piece) and these were classified as flake fragments. Flakes broken longitudinally through their centres were classified as cone-split broken flakes, distinguishing between left and right halves. Flaked pieces showed signs of flaking but could not be oriented towards a point of force application. Some artefacts were so broken that only heat shatter surfaces remained. Occasionally, some heat shatters had remnant flaked surfaces, indicating that they derived from broken artefacts.

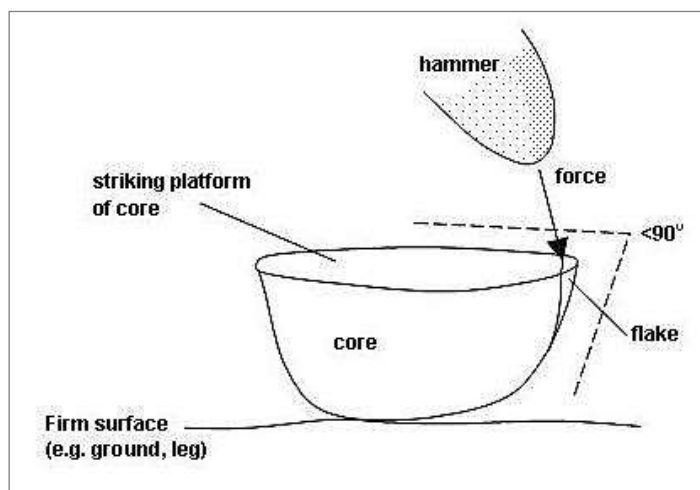


Figure 17: A potential core (Wright 1983:120).

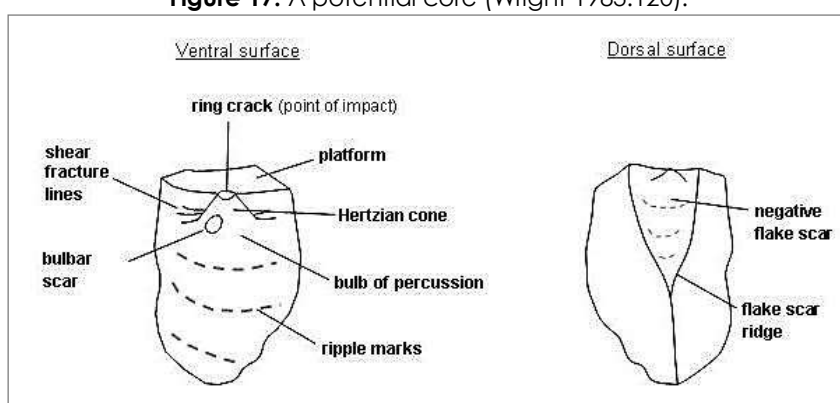


Figure 18: General features of a flake (after Speth 1972).

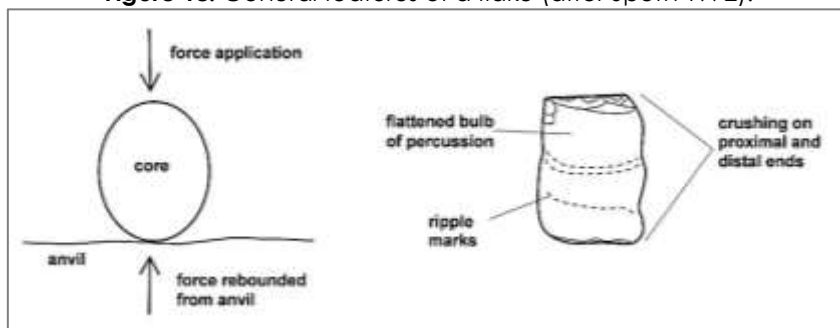


Figure 19: Bipolar flaking technique and bipolar flake.

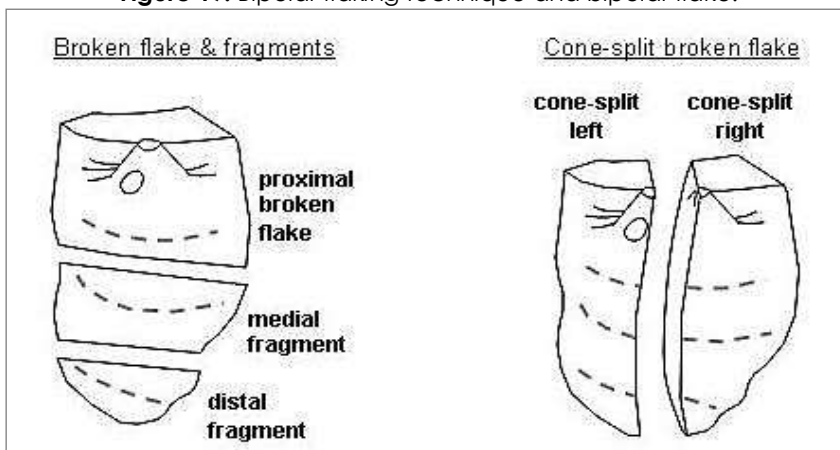


Figure 20: Flake breakage.

Artefact recording

The artefacts were recorded according to the categories set out on the AHIMS site recording form, as required by Requirements 19 and 26 of the *Code of Practice for Archaeological Investigation on Aboriginal Objects in New South Wales* (DECCW 2010b). Some difficulties were encountered with the AHIMS form as the drop-down nature of the form allowed only certain types/categories to be used, and technical categories relating to flake platforms and flake cross-section were not defined. Consequently, the terms used for this analysis are described below, and some additional information was recorded. Artefact data was entered into Microsoft's Access relational database programme for analysis.

Provenance data

The pit and spit were recorded.

Record No: Each record in the database was assigned a number, automatically by the computer program, to assist with management of the database and to refer to specific artefacts if required.

Count: The number of artefacts in each record (usually, but not always, one).

Raw material data

Raw material type. The potential options included those on the AHIMS site form with the addition of silicified tuff, silicified wood, and "unidentified":

- ☛ Basalt. A fine-grained volcanic rock, usually grey to black, with plagioclase feldspar, iron-rich minerals and with less than 20% quartz. May contain vesicles (formed from dissolved gases). It was not often used for artefacts (e.g. Binns and McBryde 1972; Corkill 2005);
- ☛ Chert. Fine-grained siliceous sedimentary rock formed from an accumulation of siliceous micro-organisms or through the replacement (impregnation) of a rock by siliceous fluids (Holdaway and Stern 2004:21);
- ☛ FGS – other fine-grained siliceous rocks. These were of unknown origin but potentially included very siliceous volcanic rocks;
- ☛ Quartz. Rock consists predominantly of silicon dioxide. It is usually white, but may be translucent to clear, or it may be grey, pink, orange or red depending on impurities. In the Sydney region, quartz occurred as pebbles, and often included flaws formed by crystal surfaces or fractures which probably occurred during transport in streams;
- ☛ Silcrete. An indurated soil duricrust, formed when silica cemented soil sediments. On the Cumberland Plain it occurred as cobbles and pebbles in palaeo-channels of presumed Tertiary age and in younger gravels eroded from these. It occurs in the St Marys Formation, the Rickabys Creek Gravels and Cranebrook Formation (Corkill 1999). It was usually yellow or grey in colour, and changed to orange, pink, red or black when heated (Corkill 1997); and
- ☛ Silicified wood, petrified wood, fossil wood. The original wood structure was replaced by silica in solution.

Cortex. An estimate of the extent of cortex on the dorsal and platform surfaces. Although not required on the AHIMS artefact form this variable contributed to information on the nature of stone resources and/or stage of reduction.

Size and weight

Maximum size. The maximum size of artefacts along their longest dimension, recorded in millimetres. This measure differed from oriented length, width and thickness (Figure 21).

Oriented length, width and thickness. For flakes, length was measured from the point of force application along the percussion axis to the distal end of the flake, width was measured at right-angles to this and at the midpoint of oriented length, and thickness was measured at the intersection of length and width (Figure 21). Flaked pieces and heat shatters with remnant flaked surfaces were oriented as if they were rectangular blocks and measured accordingly. Measures for broken artefacts were entered in brackets.

Weight. Weight was recorded for each artefact to the nearest 0.1g.

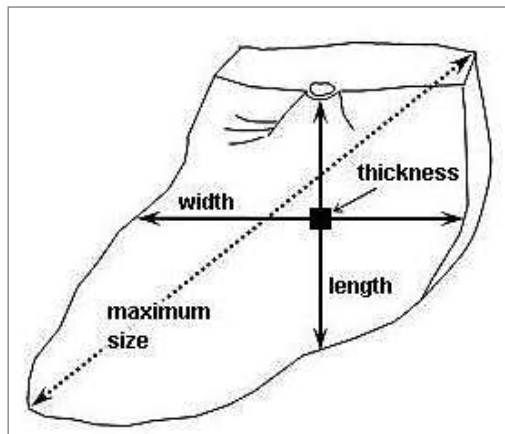


Figure 21: Flake measurements.

Artefact categories

The category field highlighted artefacts with modification or grouped categories of debitage. Potential categories were:

- ☛ Anvil. A rock with pitted damage on a flat surface from use as a base plate in bipolar flaking or breakage of other hard materials.
- ☛ Backed artefact. An artefact, usually less than 5cm in size, with steep blunting retouch along one or more margins. Backing was sometimes formed by bipolar flaking. The backed margin was usually, but not always, opposite a sharp margin. Backing was used to shape the artefact, unlike other types of tool retouch which were used to modify the working edge (see below).
- ☛ Bipolar core or debitage. This category highlighted bipolar artefacts. A flaked artefact which had crushing on proximal and distal ends (where both were present), and a flattened bulb of percussion (Figure 19). The crushing and flattening of the bulb occurred because force was applied at the proximal end and rebounded through an anvil on which the distal end was rested (Cotterell and Kamminga 1987).
- ☛ Core (a flake producer, functioning as a raw material supply). A piece of stone used to produce flakes. Cores had one or more whole or remnant flake scars more than 1cm in size, indicating removal of flakes large enough to have been used as tools. The piece of stone may have originally been a cobble, a flake, a heat shatter or a naturally broken rock (after Gorman 1992:156). Cores were artefacts with negative flake scars only, or where

flakes were reduced as cores, the negative scars intercepted (were more recent in reduction than) the ventral surface of the flake used as the core.

- ✎ Hammer. A rock with pitted damage on one or more ends, from having been used to flake stone or other hard materials.
- ✎ Hatchet. A rock with a flaked or ground edge along a short margin, used for chopping. Flat surfaces often also have pitting from anvil use.
- ✎ Heat shatter. A piece of stone which had predominantly crenated surfaces and/or pitted scars. If flake scars or surfaces were present those surfaces occurred earlier in the reduction sequence than the heat shatter surfaces. Heat shatters which were retouched or flaked as cores were recorded as retouched artefacts or cores, because the negative scars were more recent in the reduction sequence than the heat shatter surfaces.
- ✎ FF/FP Debitage. This category grouped medial and distal flake fragments, and flaked pieces (see Type below).
- ✎ Indeterminate. Items of the same stone types as other artefacts, which did not show features diagnostic of flaking, heat breakage or crenated fracture, but from their context were likely to have had an Aboriginal origin. Indeterminate items may have been of poor quality stone which did not retain diagnostic features, items coated with manganese or other concretions, or indeterminate for some other reason.
- ✎ Platform Debitage. This category grouped flakes, proximal broken flakes and cone-split broken flakes (see Type below).
- ✎ Possible Usewear. Artefacts showing edge chipping, rounding, polish or striations. This was identified macroscopically, with the aid of a hand lens.
- ✎ Retouched artefact. The negative scars from flaking were more recent in the reduction sequence than the artefact being retouched. Retouch scars were usually struck from or intercepted with the ventral surface of a flake. Scars removed during core preparation prior to flake detachment (e.g. platform faceting or ridge-straightening) occurred on the dorsal surfaces or ridges of flakes and these artefacts were NOT recorded as retouched artefacts. Flake scars on retouched artefacts were generally too small for the retouching flakes themselves to have been used as tools (e.g. <1cm in size). Retouched artefacts could potentially have been core or tool blanks, failed cores or tools, practice items or broken fragments of cores or tools. Tools could have had various types of retouch (see below).
- ✎ Tool edge type. Tool edge types were described by Holdaway and Stern (2004:157-168, 236-274). Edges may have been straight, concave or convex in shape, and retouch may have been step, scalar, notched, dentate or serrate (Figure 22). Step retouch consisted of short flake scars with step terminations. Scalar retouch consisted of flake scars which invaded a surface. Step and scalar retouch were typical of scrapers. Notches were formed by removal of a relatively wide deep flake and could have occurred singly or as multiple notches on an artefact. Cuspate retouch (Witter 1992) was a large notch utilised to rejuvenate a tool edge. Dentate retouch was formed by regularly spaced teeth with notches wider than the teeth. Serrate retouch consisted of continuous fine teeth, normally triangular in outline separated by tiny notches.

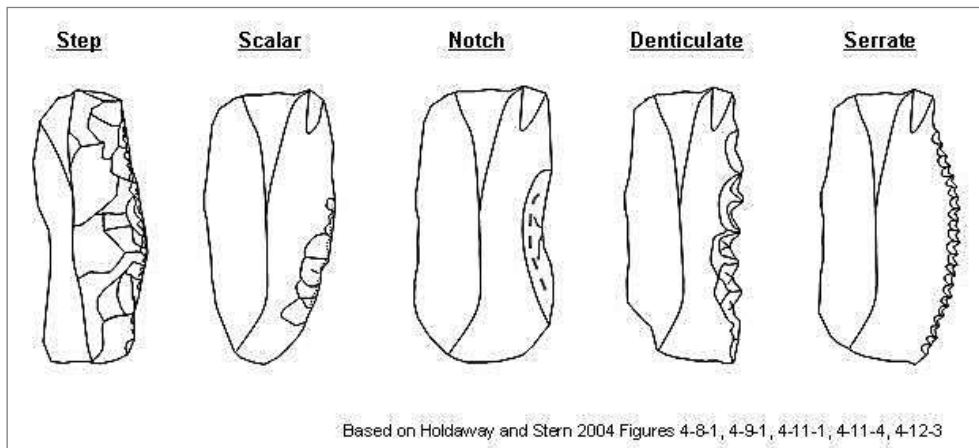


Figure 22: Types of tool retouch

Types

This field summarized the reduction and breakage of stone. The identification of flakes, proximal broken flakes, flake fragments and flaked pieces was made by reference to the technical descriptions and breakage of flakes given by Cotterell and Kamminga (1987), Holdaway and Stern (2004) and Speth (1972) (see above and Figure 20). Type recorded the type of unmodified artefact, or what type of artefact was modified to make a core or tool. For example, a hatchet (axe) may have originally been a cobble, then flaked and/or edge-ground, or a core may have been a large flake before being itself knapped. The type list included:

- ☛ Cobble. A rock more than 6.4cm in size.
- ☛ Flake. An artefact with a platform (unless crushed during flaking), a point of impact (force application), a Hertzian cone, and a bulb of percussion. Flakes may also have shown lines resulting from shear fracture, a bulbar scar (also called erailure scar) and ripple marks (Speth 1972:35) (Figure 18). These features were more or less pronounced, depending on the quality of the stone material, the hardness of the hammer relative to the stone, and whether an anvil was used and the manner of its use.
- ☛ Proximal broken flake. The proximal end of a flake. It had a platform, point of force application, and bulbar surface, usually with ripple marks but one or more margins were broken (Figure 20).
- ☛ CSBF/L, CSBF/R. Cone-split broken flake, left or right half. A broken flake, split vertically along its long axis, often through or close to its point of force application, bisecting the platform (Figure 20).
- ☛ Flake fragment. A piece of a flake not having a platform, but having an identifiable ventral surface. Medial or distal fragments were noted (Figure 20).
- ☛ Flaked piece. An artefact which had been flaked but which could not be oriented towards a particular point of force application. The surfaces showed signs of flaking such as lines from shear fracture and/or ripple marks.
- ☛ Pebble. A rock less than 6.4cm in size.

Cores

Additional information was recorded for cores to show how they were flaked (Baker 1992). 'Flaking pattern' was the pattern of flake removals evident on cores. The categories recorded here were unifacial, bifacial (alternating), asymmetric (including faceting) and bipolar (Figure 23).

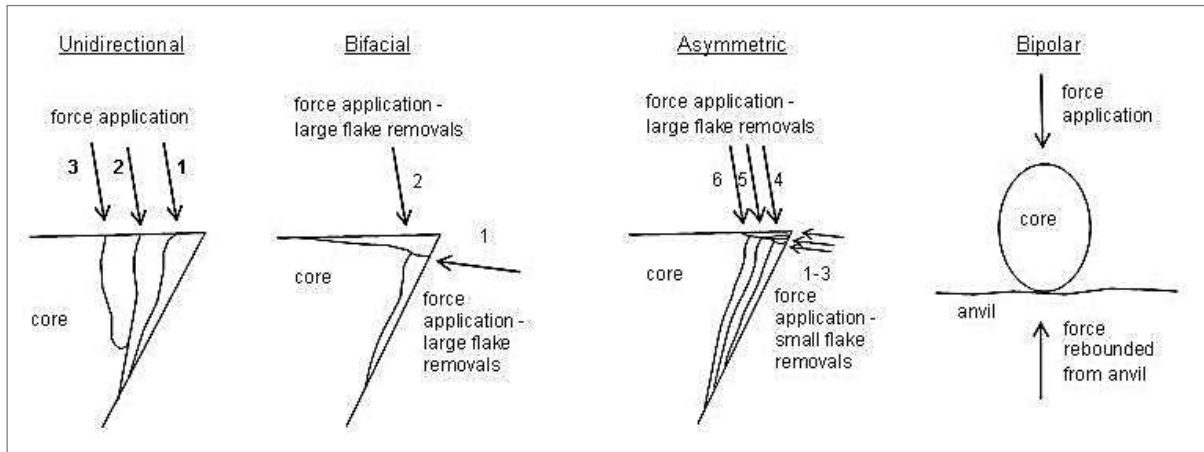


Figure 23: Core flaking patterns

Unidirectional flaking: Reduction proceeded in one direction from a platform. Cores may have been rotated, showing reduction from multiple faces but the force was applied in only one direction to remove flakes potentially large enough for use as tools (although small flakes may also have been removed, e.g. to trim the platform). Flake platforms from unidirectional flaking variously had cortical, plain, ridged or focal platforms (see below).

Bifacial flaking: Relatively large-sized flakes (potentially useable as tools) were struck from the two faces of a platform edge. A bifacial pattern of removals made use of the bulbar scar from one flake removal to give a lower platform angle for a flake removed from the alternate face of the platform edge (Witter 1992:31).

Asymmetric flaking: Small flakes in the form of core preparation and platform faceting were removed from the platform surface, then larger flakes were struck from that prepared surface. This technique included platform faceting and was associated with backed artefact production (Baker 1992; Hiscock 1993).

Bipolar: The core was rested on an anvil and force applied to it an angle close to 90°, towards the core's contact with the anvil (see Figure 19). Force passed through the core and bounced back from the anvil. The resulting flakes and core showed crushing at the end which was struck by the hammer and at the end which was in contact with the anvil (Cotterell and Kamminga 1987:688, 698-700).

Flake shape

Flakes were laid on graph paper with their platforms oriented parallel to the horizontal lines and shape was recorded (Figure 24):

- Wider than long ($W > L$),
- Length equals width ($L = W$),
- Longer than wide ($L > W$), and

- 🐾 Elongate (El) - flakes twice as long as they were wide, or more than twice as long as wide.

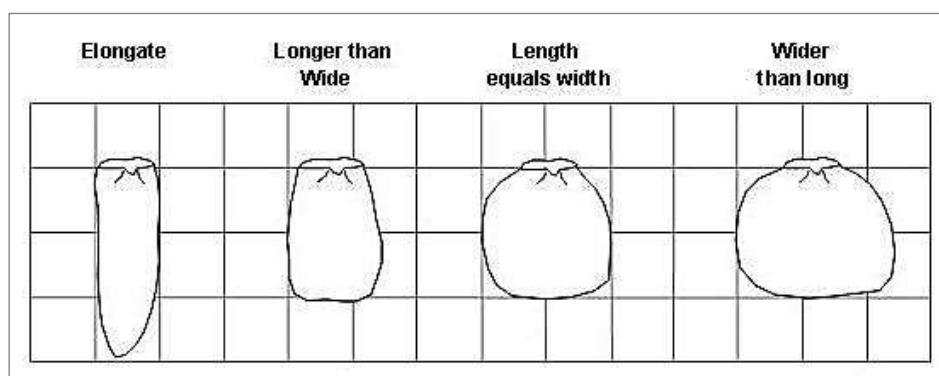


Figure 24: Flake shape

Flake platform

Several types of flake platforms were recorded on flakes and broken flakes more than 1 cm in size (Figure 25). These types have been used for artefact recording on the Cumberland Plain for many years and were used during the current study to be compatible with existing data, particularly as the AHIMS form does not include definitions.

The AHIMS artefact recording form included two fields for debitage platforms, being 'Platform Surface' and 'Platform Type'. The field 'Platform Surface' included the following options: Cortex, Flake scar, More than one flake scar, Faceted, Ground, Indeterminate, Bipolar. The field 'Platform Type' included the following options: Wide, Focal, Shattered, Indeterminate, Bipolar. The AHIMS options may be equivalent to the platform types described here, as shown on Table 12.

- 🐾 Cortex. Platform surface covered entirely with cortex.
- 🐾 Plain. Platform surface consisting of a smooth surface.
- 🐾 Ridged. Platform surface had a ridge formed by a remnant margin of a flake formerly struck across the core.
- 🐾 Scarred. Platform had one or a few flake scars, the points of force showing that they were initiated from blows struck on the dorsal edge of the platform surface.
- 🐾 Faceted. Platform had many tiny flake scars on it, also initiated from the dorsal edge of the platform.
- 🐾 Focal. Very small platforms, equal to or less than twice the area of the ring crack.
- 🐾 Partly crushed or crushed. Platform partly or wholly crushed during knapping.
- 🐾 Bipolar. A bipolar artefact.

Platform types Recorded Here	AHIMS Platform Surface	AHIMS Platform Type
Cortex	Cortex	Wide
Plain	Flake scar	Wide
Ridged	Flake scar	Wide
Scarred	More than one flake scar	Wide
Faceted	Faceted	Wide
Focal	Indeterminate	Focal
Crushed or partly crushed	Indeterminate	Shattered
Bipolar	Bipolar	Bipolar

Table 12: Platform types recorded here and equivalence to AHIMS form.

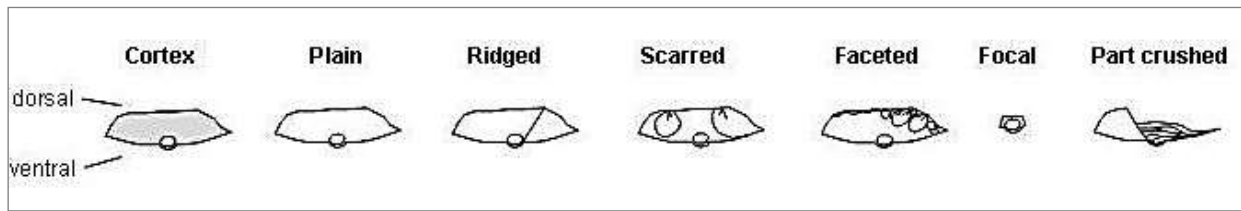


Figure 25: Flake platforms. Shows surface of platforms.

Flake terminations

Several types of flake terminations were recorded on flakes and distal flake fragments (Figure 26).

- ✎ Feather. The termination tapered to a thin end.
- ✎ Hinge. The termination formed a rounded end.
- ✎ Step. The termination formed an abrupt, often right-angle, break. Finials were sometimes present, extending from the dorsal face of the termination.
- ✎ Plunging (also called outrepasse). The termination removed the distal end (bottom) of a core.

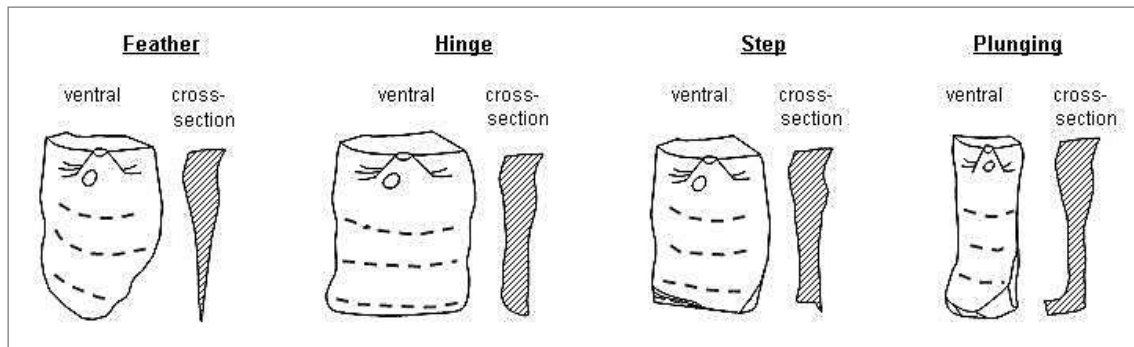


Figure 26: Flake Terminations.

Flake cross-section

A set of flake cross-sections similar to those listed on the AHIMS site form were described by Koettig (1994 Vol 5:9). Koettig's categories were redefined here to meet more closely the choices on the AHIMS site form (Figure 27). They were:

- ✎ High angle/strong ridge;
- ✎ High angle/weak ridge;
- ✎ Low angle/weak ridge;
- ✎ Low angle/strong ridge; and
- ✎ Irregular was not described by Koettig (1994).

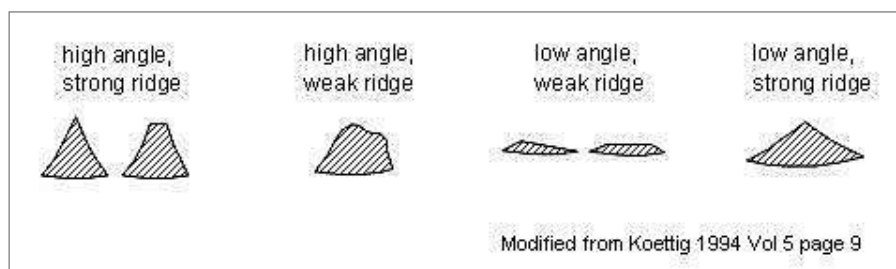


Figure 27: Flake cross-section.