



St Joseph's College Physical Education
and Sports Precinct Project:
Aboriginal Cultural Heritage
Due Diligence Assessment

FINAL REPORT

Prepared for Bloompark Consulting Services on behalf of St Joseph's College

23 August 2018

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Contents

Glossary	i
Summary	ii
1 Introduction	1
1.1 Project background	1
1.2 Location of the study area	2
1.3 Planning approvals.....	2
1.4 Scope of the assessment.....	2
2 Desktop assessment	5
2.1 Landscape context.....	5
2.2 Geology, soils and landforms	5
2.3 Flora and fauna	11
3 Aboriginal context	12
3.1 Ethnohistory and contact history.....	12
3.2 Regional context	12
3.3 Local context.....	13
3.3.1 Identified Aboriginal archaeological sites	13
3.3.2 Predictive statements	16
4 Archaeological survey	18
4.1 Archaeological survey aims.....	18
4.2 Survey methods	18
4.3 Constraints to the survey	18
4.4 Visibility.....	19
4.5 Exposure.....	19
4.6 Disturbances.....	19
4.7 Survey results and discussion	22
5 Conclusions and recommendations	25
5.1 Conclusions.....	25
5.2 Recommendations	25
References	28
Appendices	30
Appendix 1 AHIMS search results	31

Tables

Table 1 Glenorie soil landscape characteristics (Chapman and Murphy 1989, p.68 – 71)	6
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Table 2	AHIMS sites within the vicinity study area.....	14
Table 3	Aboriginal site prediction statements.....	16

Figures

Figure 1	Location of the study area in a regional context.....	3
Figure 2	Study area detail	4
Figure 3	Geological units within the vicinity of the study area	8
Figure 4	Soil landscapes in the vicinity of the study area.....	9
Figure 5	Hydrology in the vicinity of the study area.....	10
Figure 6	AHIMS sites within the vicinity of the study area	15
Figure 7	Survey results	24
Figure 8	Due diligence flow chart	27

Plates

Plate 1	Diagram showing Strahler stream order (Ritter et al 1995, p. 151).	6
Plate 2	South facing view of grassed mound believed to be the previous location of a former water feature in the north-eastern corner of the study area	19
Plate 3	North facing view of landscaped gardens in north-western corner of the study area	20
Plate 4	North facing view of boundary of north-western corner of the study area showing presence of services, evidence of landscaping and introduced topsoils, and areas of exposure	20
Plate 5	East facing view of the north-western corner of the study area where the healey gym has been proposed showing landscaped garden and chapel statue.....	21
Plate 6	South facing view of sports courts in south-eastern corner of the study area.....	21
Plate 7	East facing view of driveway, modern buildings and parking in south-eastern corner of the study area	22

Glossary

AHIMS	Aboriginal Heritage Information Management System
DCP	Development Control Plan
Due diligence code	<i>Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales</i> (DECCW 2010)
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
GSV	Ground Surface Visibility
ICOMOS	International Council on Monuments and Sites
LEP	Local Environment Plan
LGA	Local Government Area
NPW Act	<i>National Parks and Wildlife Act 1974</i>
NSW	New South Wales
OEH	NSW Office of Environment and Heritage
PAD	Potential Archaeological Deposit
PESPP	Physical Education and Sports Precinct Project
SSD	State Significant Development
Study area	The area of impact for the proposed works
The Code	<i>The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW</i> (DECCW 2010)

Summary

Biosis Pty Ltd was commissioned by Bloompark Consulting Services on behalf of St Joseph's College to undertake an Aboriginal cultural heritage due diligence assessment for the Physical Education and Sports Precinct Project (PESPP), State Significant Development (SSD) No. 8970, located at St Joseph's College, Hunters Hill, New South Wales (NSW).

An assessment in accordance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (DECCW 2010a) has been undertaken for the study area in order to inform responsibilities with regards to Aboriginal cultural heritage in the area. In addition to the basic tasks required for a due diligence assessment, an extended background review, as well as an archaeological survey in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010b) (the code) was conducted, in order adequately map areas of high, moderate and low archaeological sensitivity.

Background research included a search of the Aboriginal Heritage Information Management System (AHIMS) database and a review of regional and local archaeological survey reports to assess the potential for Aboriginal heritage values or items to be present within the study area. The AHIMS search identified 88 Aboriginal archaeological sites within a 2 kilometre radius of the search area. Of the 88 sites identified, none were located within the study area. Previous surveys within the local and regional areas and their findings were also reviewed as part of this assessment. The results of the previous surveys along with a review of the geology, hydrology and soil landscape characteristics of the study area have been examined to provide a series of predictive statements of the study area's archaeological potential.

A field survey of the study area was carried out on 21 February 2018, attended by James Cole, Archaeologist and Charlotte Allen, Research Assistant. The survey targeted areas which would be impacted by the proposed development. High ground surface visibility and exposure in areas which had not been heavily developed aided in the effectiveness of the survey. No Aboriginal heritage items were identified during the field survey. The surveyed areas were determined to be highly disturbed as a result of landscaping and past and present development of sports and schooling facilities. The overall archaeological sensitivity of the areas proposed for impact was assessed as low.

The following management recommendations have been developed relevant to the study area and influenced by:

- predicted impacts to Aboriginal cultural heritage
- the planning approvals framework
- current best conservation practise, widely considered to include:
 - Ethos of the Australia International Council on Monuments and Sites (ICOMOS) Burra Charter (2013)
 - The code.

Prior to any impacts occurring within the study area, the following is recommended:

Recommendation 1: No further archaeological assessment is required

No further archaeological work is required in the areas proposed for development due to being assessed as having low archaeological potential.

Recommendation 2: Discovery of Unanticipated Aboriginal Objects

All Aboriginal objects and Places are protected under the *National Parks and Wildlife Act 1974* (NPW Act). It is an offence to knowingly disturb an Aboriginal site without a consent permit issued by the Office of Environment and Heritage (OEH). Should any Aboriginal objects be encountered during works associated with this proposal, works must cease in the vicinity and the find should not be moved until assessed by a qualified archaeologist. If the find is determined to be an Aboriginal object the archaeologist will provide further recommendations. These may include notifying the OEH and Aboriginal stakeholders.

Recommendation 3: Discovery of Aboriginal Ancestral Remains

Aboriginal ancestral remains may be found in a variety of landscapes in NSW, including middens and sandy or soft sedimentary soils. If any suspected human remains are discovered during any activity you must:

1. immediately cease all work at that location and not further move or disturb the remains
2. notify the NSW Police and OEH's Environmental Line on 131 555 as soon as practicable and provide details of the remains and their location
3. not recommence work at that location unless authorised in writing by OEH.

1 Introduction

1.1 Project background

Biosis Pty Ltd was commissioned by Bloompark Consulting Services on behalf of St Joseph's College to undertake an Aboriginal cultural heritage due diligence assessment for the Physical Education and Sports Precinct Project (PESPP), State Significant Development (SSD) No. 8970, located at St Joseph's College, Hunters Hill, NSW (Figure 1 and Figure 2), referred to as the 'study area' herein. The project is comprised of the following:

- Demolition of the following existing buildings (which are not heritage significant) near the intersection of Luke Street and Gladesville Road:
 - College Shop
 - Healy Gym and Maintenance Workshop
 - Outdoor Sports Courts
 - Workshop/Storage and Shed.
- Construction of the Physical Education and Sports Precinct Project (PESPP) comprising the following facilities:
 - Lower Ground Floor: New car parking, maintenance workshops, storage, offices, amenities etc. A net increase of 55 car parking spaces is proposed (85 new spaces to be provided in the SCP basement less 30 at grade spaces to be removed)
 - Ground floor: Three indoor sports courts, amenities, kitchen and entry lobbies
 - First Floor: Void over sports courts, bench seating (180 seats), staff facilities, two general learning areas and foyer
 - Driveway entry to the PESPP (no new vehicular cross overs)
 - Landscaping and tree removal/replacement.
- Construction of a new single storey building to accommodate the relocated Healy Gym in the north-western corner of the site near the intersection of Mary Street and Mark Street.
- New kiosk substation and landscaping in the north-eastern corner of the site
- Use of the completed works as an educational establishment.
- Staging which would facilitate completion of the PESPP in up to two stages (noting that the entire project may be completed in one stage).

The proposed development will be assessed in accordance with Part 4 of the *Environmental Planning and Assessment Act 1979 NSW* (EP&A Act).

An assessment in accordance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (DECCW 2010a) has been undertaken for the study area in order to inform responsibilities with regards to Aboriginal cultural heritage in the area. In addition to the basic tasks required for a due diligence assessment, an extended background review, as well as an archaeological survey in accordance with the code was conducted, in order adequately map areas of high, moderate and low archaeological sensitivity.

1.2 Location of the study area

The study area is located on Mark Street (Lot 2, DP 527024), in the suburb of Hunters Hill, within Hunters Hill Local Government Area (LGA), Parish of Hunters Hill, County of Cumberland (Figure 1). It encompasses 7.3 hectares of private land. It is currently zoned SP2 – Infrastructure: Educational Establishment.

1.3 Planning approvals

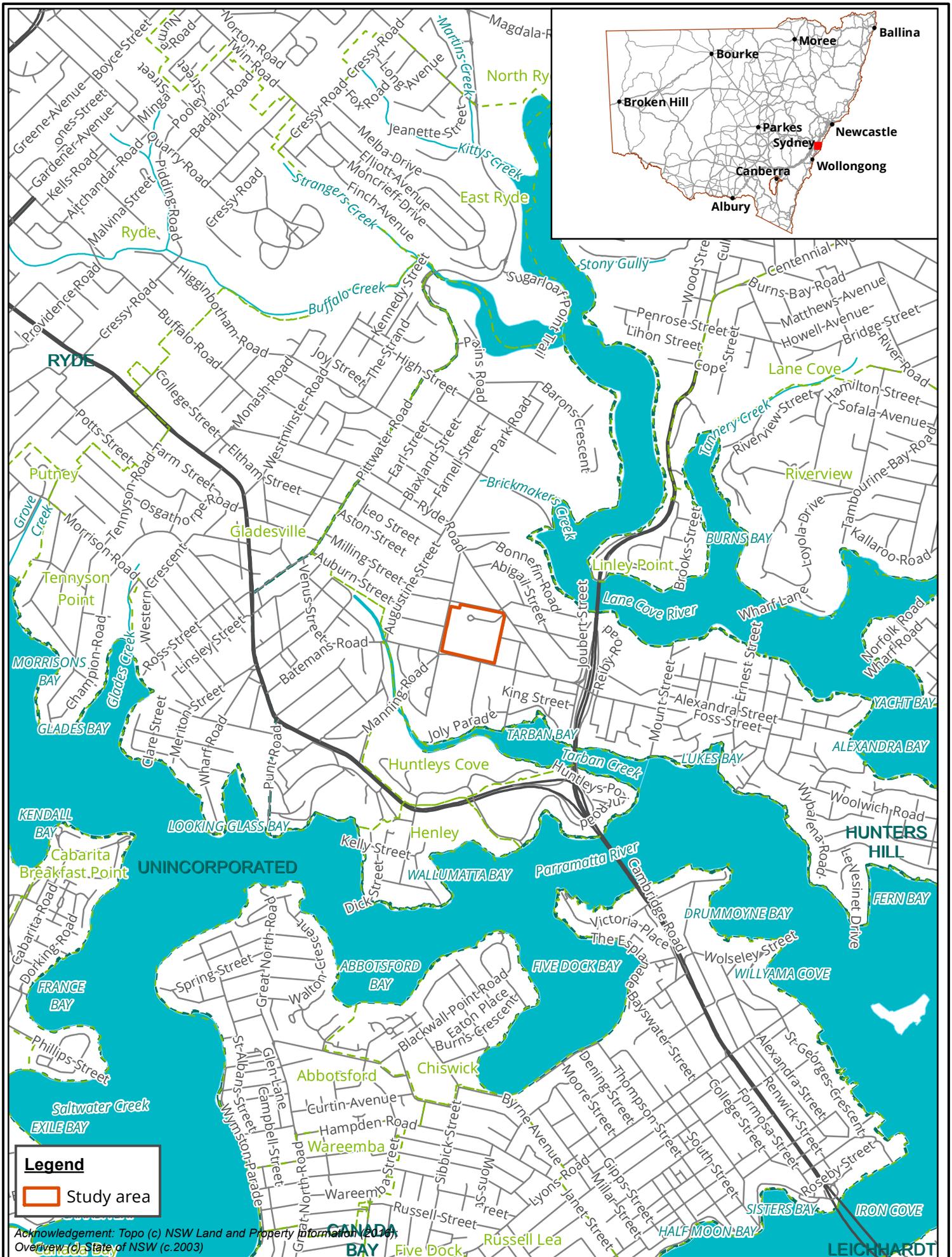
The proposed development will be assessed against Part 4 of the EP&A Act. Other relevant legislation and planning instruments that will inform the assessment include:

- *National Parks and Wildlife Act 1974* (NSW) (NPW Act)
- *National Parks and Wildlife Amendment Act 2010* (NSW)
- *Hunters Hill Local Environmental Plan 2012* (LEP)
- *Hunter Hill Consolidated Development Control Plan 2013* (DCP)

1.4 Scope of the assessment

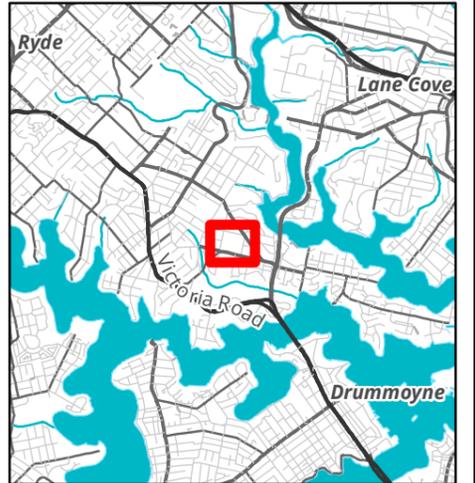
The following is a summary of the major objectives of the assessment:

- Conduct background research in order to recognise any identifiable trends in site distribution and location, including a search of the AHIMS.
- Undertake archaeological survey as per Requirement 5 of the Code, with particular focus on landforms with high potential for heritage places within the study area, as identified through background research.
- Record and assess sites identified during the survey in compliance with the guidelines endorsed by the OEH.
- Determine levels of archaeological and cultural significance of the study area.
- Make recommendations to mitigate and manage any cultural heritage values identified within the study area.



Acknowledgement: Topo (c) NSW Land and Property Information (2016),
 Overview (c) State of NSW (c. 2003)

Figure 1: Location of the study area in a regional context



Legend

 Study area

Figure 2: Study area detail

0 10 20 30 40 50


Metres
 Scale: 1:1,800 @ A3
 Coordinate System: GDA 1994 NSW Lambert



Albury, Ballarat, Melbourne,
 Newcastle, Sydney, Wangaratta & Wollongong

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 Date: 19 February 2018,
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2 Desktop assessment

A brief desktop assessment has been undertaken to review existing archaeological studies for the study area and surrounding region. This information has been synthesised to develop some Aboriginal site predictive statements for the study area and identify known Aboriginal sites and/or Places recorded in the study area. This desktop assessment has been prepared in accordance with requirements 1 to 4 of the code.

2.1 Landscape context

Hunters Hill is a leafy sandstone peninsula that stretches from Pittwater Road to Onions Point, at the confluence of the Lane Cove and Parramatta Rivers. The topography consists of undulating to low rolling hills on Wianamatta Group shales with convex narrow ridges and hill crests that grade into moderately incised sideslopes. This landscape has been extensively cleared.

2.2 Geology, soils and landforms

The study area is located within the Wianamatta Group formation, in both the Ashfield Shale and Hawkesbury Sandstone formations. The Ashfield Shale contains dark-grey to black claystone-siltstone and fine sandstone - siltstone laminate. Artefact sites are common across the Ashfield Shale formation, there is the potential for archaeological deposits to occur. The Hawkesbury Sandstone formation consists of fairly friable medium to coarse grained quartz sandstone with some shale and laminate lenses. It weathers cavernously to form overhangs, which occur in a range of topographic locations. It also occurs as flat topped outcrops (platforms of varying sizes) and boulders, mainly on ridge tops but also along the sides of gullies and in valley bottoms (McDonald 2008, p. 6). The presence of sandstone cropping in areas of the Hawkesbury Sandstone formation gives rise to the potential for site types such as rock shelters and engraving sites.

The nearest watercourse to the study area consist of a second order creek, known as Tarban Creek, that is a tributary of the Parramatta River, located approximately 400 metres to the south-west. The nearest perennial river appears to be the Lane Cove River, located approximately 350 meters to the north-east of the study area.

Stream order is recognised as a factor which assists the development of predictive modelling in Sydney Basin Aboriginal archaeology, and has seen extensive use in the Sydney region, most notably by Jo McDonald Cultural Heritage Management (JMCHM 2000, 2005a, 2005b, 2006, 2008). Predictive models which have been developed for the region have a tendency to favour higher order streams as the locations of campsites, as they would have been more likely to provide a stable source of water, and by extension other resources which would have been used by Aboriginal groups.

The stream order system used for this assessment was originally developed by Strahler in 1952 (Strahler 1964). It functions by adding two streams of equal order at their confluence to form a higher order stream, as shown in Plate 1. As stream order increases, so does the likelihood that the stream would be a perennial source of water.

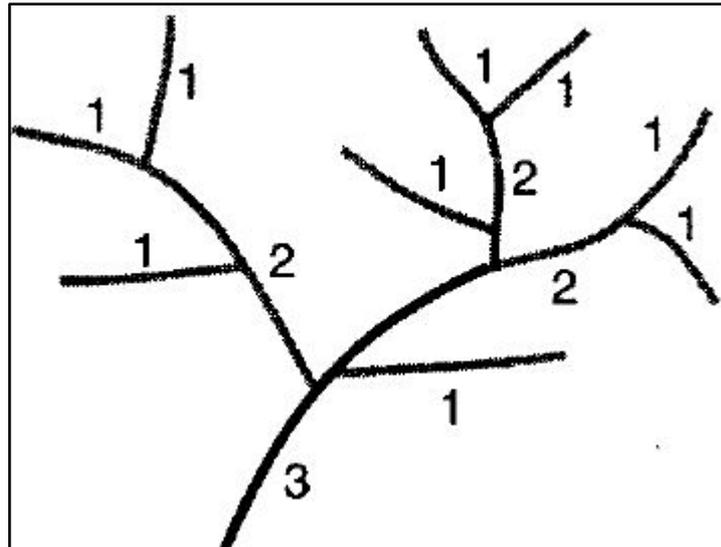


Plate 1 Diagram showing Strahler stream order (Ritter et al 1995, p. 151).

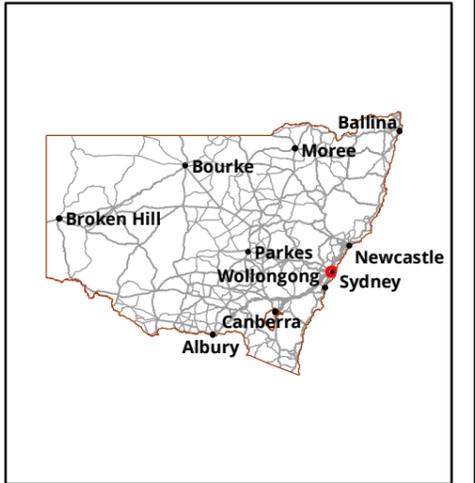
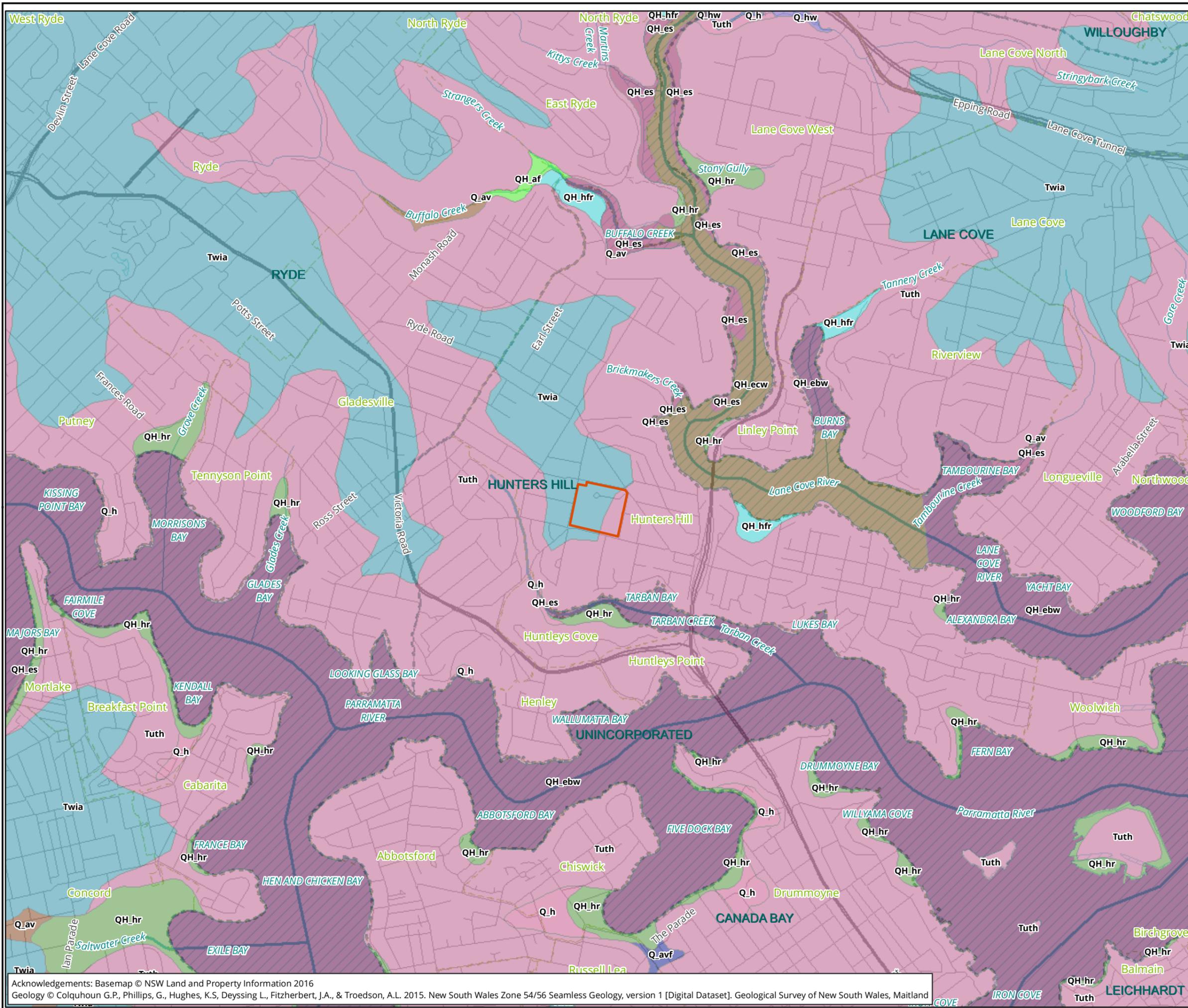
Soil landscapes have distinct morphological and topological characteristics that result in specific archaeological potential. Because they are defined by a combination of soils, topography, vegetation and weathering conditions, soil landscapes are essentially terrain units that provide a useful way to summarise archaeological potential and exposure.

The study area is located within an erosional landscape, the Glenorie soil landscape. The Glenorie soil landscape has shallow to moderately deep soils (<100 centimetres), and is present on undulating to low hills overlying Wianamatta Group shales. This landscape is characterised by convex narrow ridges and hillcrests, moderately inclined side slopes, and narrow drainage lines. Local relief is between 50–80 metres. The soil characteristic of the Glenorie soil landscape are summarised in Table 1.

Table 1 Glenorie soil landscape characteristics (Chapman and Murphy 1989, p.68 – 71)

Soil Material	Description
Friable dark brown loam (gn1)	Consists of friable loam, to silty loam, or silty clay loam which occurs as a topsoil (A1 horizon). Peds are commonly sub-angular blocky to polyhedral, 2–10 mm in size and are rough faced and porous. May become hardsetting when compacted and dry. Colour is usually dark brown (10 YR 3/3), but can range from brownish-black (7.5 YR 2/2) to brown (10 YR 4/4).
Hardsetting brown clay loam (gn2)	Consists of clayey loam to fine sandy clay loam occurring as an A2 horizon. Peds, when present, are sub-angular blocky, 10–50 mm in size, and are rough faced and porous. Colour is usually brown (7.5 YR 4/4), but may range from dull yellowish-brown (10 YR 5/4) to reddish-brown (5 YR 4/6).
Whole coloured, reddish brown, strongly pedal clay (gn3)	Medium clay with a strongly pedal structure, which occurs as subsoil (B horizon). It also has a smooth-faced, dense ped fabric. Peds are usually sub-angular blocky or polyhedral, and range in size from 5–20 mm. Colour is usually reddish-brown (5 YR 4/6), but can range from bright reddish brown (2.5 YR 4/8) to dull yellowish-brown (10 YR 5/4).

Soil Material	Description
Mottled grey plastic clay (gn4)	Mottled, heavy clay with a strongly pedal structure. It has a dense, smooth ped fabric and also occurs as a deep subsoil. The peds are usually sub-angular blocky, 10–20 mm in size, and are smooth faced and dense. Colour is typically pale grey (5 YR 7/1), but also ranges from light reddish-grey (2.5YR 7/1) to brownish grey (7.5 6/1).
Brownish-grey plastic silty clay (gn5)	Plastic silty clay, occurring as subsoil (B horizon), with apedal massive structure. This material is moderately sticky and very plastic when moist. Colour is typically dark brown (10 YR 3/3).



Legend

Study area

Geological Units

- Q_av - Alluvial valley deposits
- Q_avf - Alluvial fan deposits
- Q_h - Anthropogenic deposits
- Q_hw - Anthropogenic stored water, deposits
- QH_af - Alluvial floodplain deposits
- QH_ebw - Estuarine basin and bay (subaqueous)
- QH_ecw - Estuarine channel deposits (subaqueous)
- QH_es - Estuarine swamp
- QH_hfr - Anthropogenic deposits-Fill on Quaternary deposits
- QH_hr - Anthropogenic deposits-Reclaimed estuarine areas
- Tuth - Hawkesbury Sandstone
- Twia - Ashfield Shale

Figure 3: Geological units within the vicinity of the study area

0 200 400 600 800 1,000

Metres

Scale: 1:20,000 @ A3

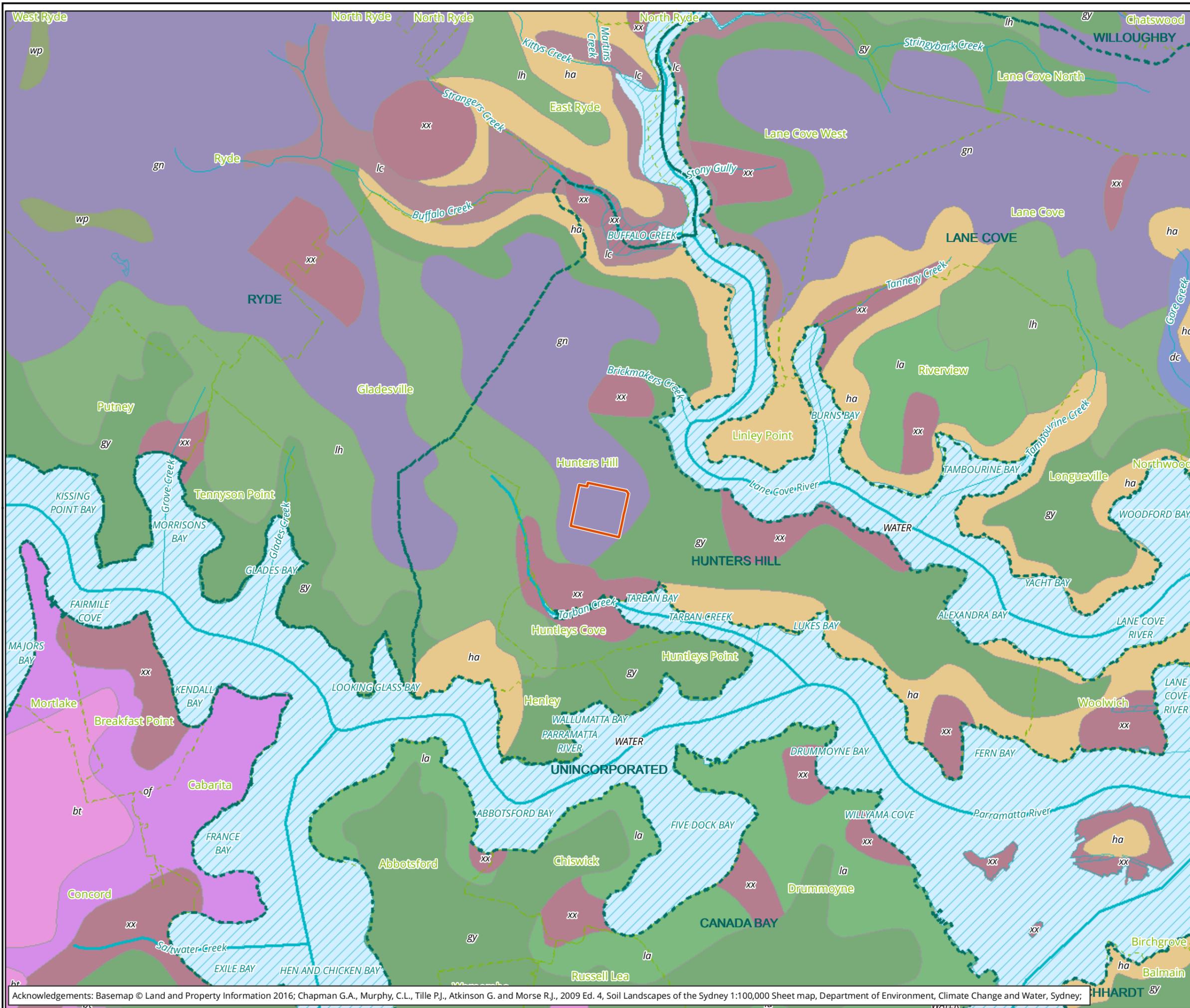
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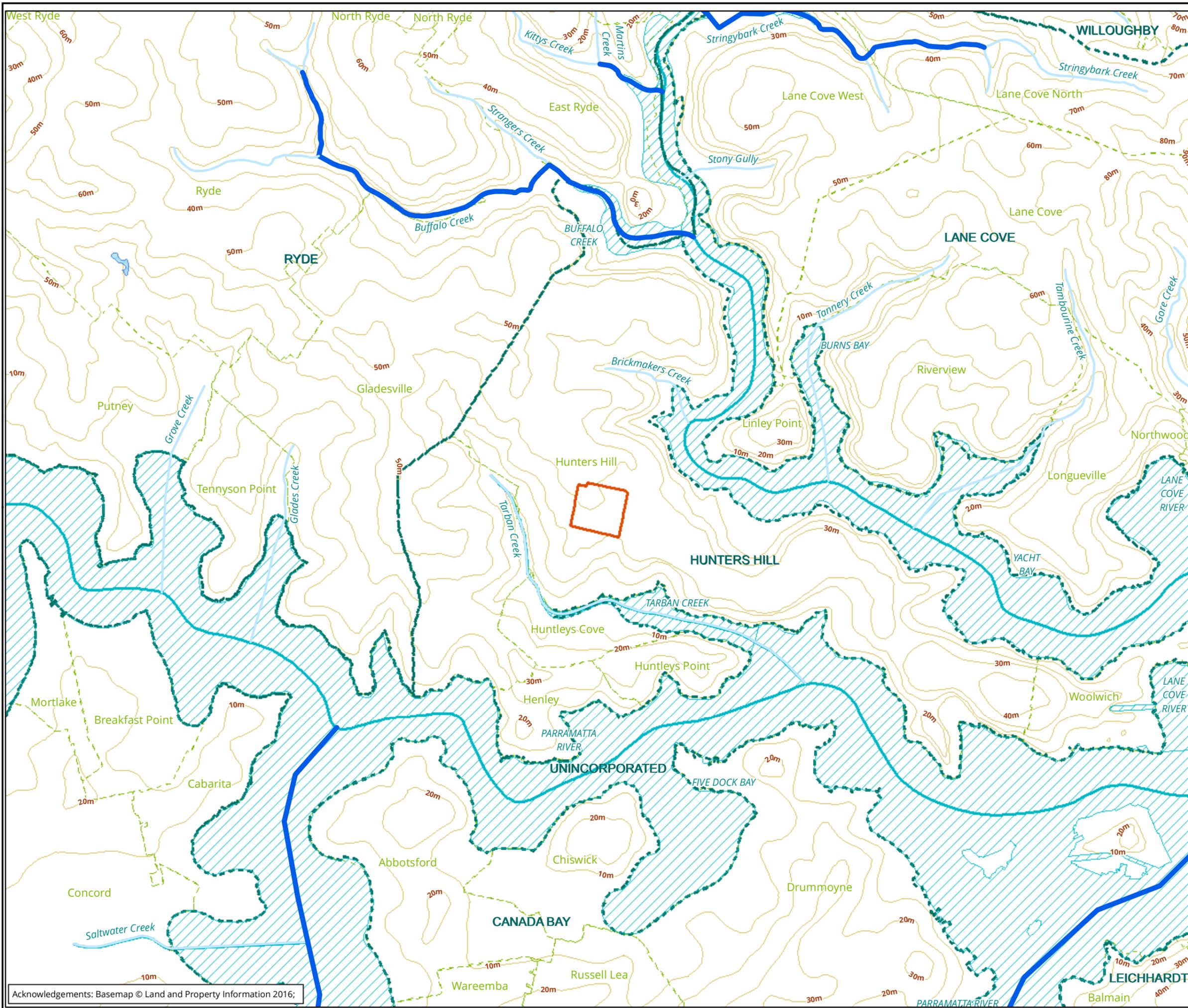
- Study area
- Soil Landscape units**
- bt - BLACKTOWN
- dc - DEEP CREEK
- gn - GLENORIE
- gy - GYMEA
- ha - HAWKESBURY
- la - LAMBERT
- lc - LANE COVE
- lh - LUCAS HEIGHTS
- of - OXFORD FALLS
- WATER - WATER
- wp - WEST PENNANT HILLS
- xx - DISTURBED TERRAIN

Figure 4: Soil landscapes in the vicinity of the study

0 200 400 600 800 1,000
 Metres
 Scale: 1:20,000 @ A3
 Coordinate System: GDA 1994 NSW Lambert



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Legend

- Study area
- Waterbody area
- Watercourse
- Perennial River

Creeklines Strahler Order

- 1
- 2

Figure 5: Hydrology in the vicinity of the study area

0 200 400 600 800 1,000
Metres
Scale: 1:20,000 @ A3
Coordinate System: GDA 1994 NSW Lambert

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2.3 Flora and fauna

The Aboriginal sites planning study for Lane Cove River State Recreation Area (NPWS 1990), located north to north-west of the study area, lists a number of resources available in the area that would have been used by Aboriginal groups.

The Sydney Basin would have generally provided a number of resources used by Aboriginal inhabitants. The wider region includes distinct ecological zones, including open forest and open woodland, with riparian vegetation extending along many of the water courses. Each ecological zone hosts a different array of floral and faunal species, many of which would have been utilised according to seasonal availability. Aboriginal inhabitants of the region would have had access to a wide range of avian, terrestrial and aquatic fauna and repeated firing of vegetation would have opened up areas of foliage allowing ease of access through and between different resource zones.

Flora resources in the vicinity of the study area included: banksia, black wattle, blueberry ash, bracken, cabbage palm, figs, geebung, grass tree, blue gum, forest red gum, grey gum, lillypilly, mountain devil, native cherry, native grape, native raspberry, rock orchid, and paper bark (NPWS 1990, p. 5).

Plant resources were used in a variety of ways. Fibres were twisted into string, which was used for many purposes, including the weaving of nets, baskets and fishing lines. String was also used for personal adornment. Bark was used in the provision of shelter; a large sheet of bark being propped against a stick to form a gunyah (Attenbrow 2002).

Useful faunal resources included: bream, catfish, eels, flathead, mullet, snapper, tailor, whiting, goanna, bandicoot, echidna, fruit bat, koala, brushtail possum, ringtail possum, and swamp wallaby. This diversity of native species would have provided a useful source of food to local Aboriginal groups.

As well as being important food sources, animal products were also used for tool making and fashioning a myriad of utilitarian and ceremonial items. For example, tail sinews are known to have been used to make fastening cord, while 'bone points', which would have functioned as awls or piercers, are often an abundant part of the archaeological record. Animals such as Brush-tailed Possums were highly prized for their fur, with possum skin cloaks worn fastened over one shoulder and under the other (Attenbrow 2002).

3 Aboriginal context

3.1 Ethnohistory and contact history

Land within the study area was originally occupied by the Wallumedegal clan, and was called *Wallumetta*. The Wallumedegal clan formed a part of the larger Darug language group. The name Wallumedegal (or Wallumattagal) was derived from *wallumai*, the snapper fish, and *matta*, a word used to describe a place, usually associated with water, as with Parramatta and Cabramatta (Smith 2017). Wallumedegal territory followed the north bank of the Parramatta River from the Lane Cove River in the east, to Parramatta at the head of the river to the west. The northern boundary was the Lane Cove River and the northern neighbours were the Cameragal or spear clan. Further east, the Cadigal, a harbour-dwelling clan, occupied the present Eastern Suburbs and City of Sydney, from Inner South Head to Darling Harbour. The areas to the north were occupied by the Kuring-gai people (NPWS 1998, p. 25).

Ethnographic sources in the vicinity of the study area have mostly focused on the activities of the Kuring-gai clan, with most observations focusing on their fishing practices, noting that the majority of their diet consisted of fish (NPWS 1990, p. 13). Although the archaeological record would suggest that Aboriginal groups mostly relied on rock shelters as sites for habitation, early observations by Tench and Bellinghausen (NPWS 1990, pp. 16-17) show that bark huts and wind breaks were utilised for camp sites, with rock shelters being more heavily relied on in poor weather.

The Wallumedegal lived primarily on fish and shellfish, supplementing their diet when necessary with vegetables, marsupials, birds and grubs. They were also frequently observed firing the scrub both to facilitate access to the foreshore and to flush out game. Very little is known of their social structure and religious beliefs (Smith 2017). The negative effects of European settlement in the 1780s and 1790s were quickly felt by local groups. Limited food supplies led to competition between settlers and local Aboriginal groups for what resources existed, and the difficulties caused by this were compounded by a smallpox epidemic in 1789 (Beecroft-Cheltenham History Group 1995, p. 13-18).

3.2 Regional context

The study area falls within the Sydney Basin. Aboriginal occupation in this region dates back well into the Pleistocene period (i.e. before 10,000 years ago). This evidence comes from radiocarbon dates retrieved from excavated sites such as Shaw's Creek K2 (14,700 years before present [BP]) (Attenbrow 2002, p. 18) and George & Charles Street Parramatta (circa (c.) 25,000-30,000 BP) (JMCHM 2005b).

Attenbrow (1990) undertook an investigation titled "The Port Jackson Archaeological Project" for the Australian Museum. The purpose of this report was to improve upon the existing literature about Aboriginal life as previous work had focused on historical accounts and not utilised the archaeological record. The report was broken into two stages; stage 1 involved site recording and survey, and stage 2 utilised excavation of selected sites.

The project found that many middens and deposits were still able to be located within the Port Jackson landscape despite the development and expansion of Sydney and its surrounding suburbs. The survey relocated and recorded 112 sites with middens and deposits. The report concludes that there are more unregistered sites that had not been reported.

3.3 Local context

NPWS (1990) completed an assessment which consisted of background research and a survey carried out to record the 'Aboriginal carvings and areas' in the Lane Cove River State Recreation Area (NPWS 1990, p. 1). The predictive modelling undertaken for this study identified the coastal margins of the area as the likely location of shell midden deposits, occurring in both open contexts and rock shelters. Areas where the underlying geology consists of shales were considered the locations where campsites, Potential Archaeological Deposit (PAD), quarries and scarred trees would occur, with it being noted that due to extensive vegetation clearance scarred trees are unlikely to be identified. Areas overlying the Hawkesbury Sandstone were the likely locations of rock shelters, art sites, rock engravings, and grinding grooves (NPWS 1990, pp. 30-34).

The survey relocated three previously recorded sites, identified seven new sites, and noted five potential habitation sites. The three relocated sites were all rock engravings. Two newly recorded sites were rock engravings, and five were middens. The five potential habitation sites were all rock shelters with PADs. It was recommended that all sites be managed appropriately, and in some cases be subject to further investigation. These sites are located outside of the study area and the area of disturbance associated with the project.

HLA-Envirosciences (2003) undertook archaeological subsurface testing at Eden Gardens, Macquarie Park, NSW. The testing program consisted of nine test pits excavated along two transects, each pit measuring 50 by 50 centimeters. The purpose of the excavations was to establish the nature of soil profiles across the study area, and to clear sandstone outcropping in a controlled manner to identify potential engravings.

Test excavations encountered disturbance across all test pits. In one pit, a quartz artefact was identified along with one potential artefact. There was European material present at a greater depth in this pit however, suggesting that the artefact was in a disturbed context. No other artefacts were identified, and no engravings were identified on the sandstone outcrop. It was recommended that a Consent to Destroy for the area be sought, with no requirement for further investigation. These sites are located outside of the study area and the area of disturbance associated with the project.

Aboriginal Heritage Office (2011) completed a broad planning study for Aboriginal heritage in the City of Ryde Local Government Area (LGA). The purpose of the study was to identify, access, and re-record all Aboriginal sites located in the City of Ryde, to provide a planning document for conserving cultural values, and to provide a schedule for conservation works.

An initial search undertaken of the AHIMS register identified a total of 118 sites in the LGA. The Aboriginal Heritage Office discounted any sites which had been recorded twice, or site cards which did not provide enough information to be relocated. After this revision of AHIMS sites, it was concluded that 56 sites were recorded in the City of Ryde, most of which were rock shelters and middens. The LGA was divided into three Sections: Area 1 – Lane Cove River (containing the majority of the study area), Area 2 – Central Plateau (containing a small portion of the study area), and Area 3 – Parramatta River. Area 1 was dominated by rock shelters, engravings, and grinding grooves. Area 2 contained a single artefact scatter. The report recommended a program for staff education take place to enable workers to identify and avoid Aboriginal sites, and regular monitoring of sites in the LGA was to be undertaken to ensure that Aboriginal sites were appropriately managed.

3.3.1 Identified Aboriginal archaeological sites

An extensive search of the AHIMS database was conducted on 01 August 2018 (Client service ID: 361435). The search identified 87 Aboriginal archaeological sites within a 2 kilometre search area, centred on the proposed study area (Appendix 1 and Table 2). None of these registered sites are located *within* the study area (Figure 6). The mapping coordinates recorded for these sites were checked for consistency with their descriptions and location on maps from Aboriginal heritage reports where available. These descriptions and maps were relied where notable discrepancies occurred.

It should be noted that the AHIMS database reflects Aboriginal sites that have been officially recorded and included on the list. Large areas of NSW have not been subject to systematic, archaeological survey; hence AHIMS listings may reflect previous survey patterns and should not be considered a complete list of Aboriginal sites within a given area.

Table 2 AHIMS sites within the vicinity study area

Site type	Occurrences	Frequency (%)
Shelter with Midden – shell, artefact	34	39
Midden – shell, artefact	14	16
Midden, open campsite – shell, artefact	8	9
Shelter with Deposit - artefact	6	7
Shelter with Art – art (pigment or engraved)	5	6
Shelter with art, midden – shell, artefact, art (pigment or engraved)	4	5
Axe Grinding Groove – grinding groove	4	5
Rock Engraving – art (pigment or engraved)	3	3
Open Camp Site – artefact	2	2
Shell	2	2
Burial/s, midden – shell, artefact, burial	1	1
Burial/s, Midden, Open campsite – artefact, shell, burial	1	1
Shelter with art, deposit – artefact, art (pigment or engraved)	1	1
Habitation structure	1	1
PAD, shell	1	1
Total	87	100.00%

A simple analysis of the Aboriginal cultural heritage sites registered within 2km of the study area indicates that the dominant site type is artefact scatter, representing 28.45% (n=66), with Shell closely following with 26.29% (n=61). Shelter with Midden and Midden were representative of 15.95% and 8.19% respectively (n=37 and n=8.19). All the sites were located within close proximity to reliable sources of water or within areas of relevant sandstone outcrops for grinding grooves and overhang development (shelters with art/deposit).

3.3.2 Predictive statements

A series of statements been formulated to broadly predict the type and character of Aboriginal cultural heritage sites likely to exist throughout the study area and where they are more likely to be located.

This model is based on:

- local and regional site distribution in relation to landform features identified within the study area
- consideration of site type, raw material types and site densities likely to be present within the study area
- findings of the ethnohistorical research on the potential for material traces to present within the study area
- potential Aboriginal use of natural resources present or once present within the study area
- consideration of the temporal and spatial relationships of sites within the study area and surrounding region.

Based on this information, a predictive model has been developed, indicating the site types most likely to be encountered during the survey and subsequent sub-surface investigations across the present study area (Table 3). The definition of each site type is described firstly, followed by the predicted likelihood of this site type occurring within the study area.

Table 3 Aboriginal site prediction statements

Site type	Site description	Potential
Flaked stone artefact scatters and isolated artefacts	Artefact scatter sites can range from high-density concentrations of flaked stone and ground stone artefacts to sparse, low-density 'background' scatters and isolated finds.	Moderate: Stone artefact sites have been previously recorded in the region on level, well-drained topographies in close proximity to reliable sources of fresh water. Though the study area is located within close proximity to water resources, the potential for artefacts to be present within the study area is assessed as moderate due to the level of disturbance within the study area.
Shell middens	Deposits of shells accumulated over either singular large resource gathering events or over longer periods of time.	Low: Shell midden sites have been recorded within the vicinity of the study area adjacent to watercourses. There is a low potential for shell middens to be located in the study area as no watercourses are located within the study area.
Quarries	Raw stone material procurement sites.	Low: There is no record of any quarries being within or surrounding the study area.
Potential Archaeological Deposits (PADs)	Potential sub surface deposits of cultural material.	Moderate: PADs have been previously recorded in the region within soil deposits with underlying shale. PADs have the potential to be present within areas adjacent to water courses or on high points in undisturbed landforms.

Site type	Site description	Potential
Modified trees	Trees with cultural modifications	Low: Due to extensive vegetation clearance only a small number of mature native trees have survived. The potential for scarred trees to occur is therefore assessed as low.
Grinding grooves	Grooves created in stone platforms through ground stone tool manufacture.	Nil: No suitable horizontal sandstone outcrops are present within the study area.
Burials	Aboriginal burial sites.	Low: Aboriginal burial sites are generally situated within deep, soft sediments, caves or hollow trees. Areas of deep sandy deposits will have the potential for Aboriginal burials.
Rock shelters with art and / or deposit	Rock shelter sites include rock overhangs, shelters or caves, and generally occur on, or next to, moderate to steeply sloping ground characterised by cliff lines and escarpments. These naturally formed features may contain rock art, stone artefacts or midden deposits and may also be associated with grinding grooves.	Nil: The sites will only occur where suitable sandstone exposures or overhangs possessing sufficient sheltered space exist.
Aboriginal ceremony and dreaming sites	Such sites are often intangible places and features and are identified through oral histories, ethnohistoric data, or Aboriginal informants.	Low: There are currently no recorded mythological stories for the study area.
Post-contact sites	These are sites relating to the shared history of Aboriginal and non-Aboriginal people of an area and may include places such as missions, massacre sites, post-contact camp sites and buildings associated with post-contact Aboriginal use.	Low: There are no post-contact sites previously recorded in the study area and historical sources do not identify one.
Aboriginal places	Aboriginal places may not contain any 'archaeological' indicators of a site, but are nonetheless important to Aboriginal people. They may be places of cultural, spiritual or historic significance. Often they are places tied to community history and may include natural features (such as swimming and fishing holes), places where Aboriginal political events commenced or particular buildings.	Low: There are currently no recorded Aboriginal historical associations for the study area.

4 Archaeological survey

An archaeological survey of the areas of proposed works within the study area was undertaken on 21 February 2018, attended by James Cole, Archaeologist and Charlotte Allen, Research Assistant. The survey sampling strategy, methodology and a discussion of results are provided below.

4.1 Archaeological survey aims

The principle aims of the survey were to:

- undertake a systematic survey of the study area targeting areas with the potential for Aboriginal heritage
- identify and record Aboriginal archaeological sites visible on the ground surface
- identify and record areas of Aboriginal archaeological and cultural sensitivity.

4.2 Survey methods

The survey was conducted on foot. Recording during the survey followed the archaeological survey requirements of the Code and industry best practice methodology. Information that recorded during the survey included:

- Aboriginal objects or sites present in the study area during the survey
- survey coverage
- any resources that may have potentially have been exploited by Aboriginal people
- landform elements, distinguishable areas of land approximately 40m across or with a 20m radius (CSIRO 2009)
- photographs of the site indicating landform
- ground surface visibility (GSV) and areas of exposure
- observable past or present disturbances to the landscape from human or animal activities
- Aboriginal artefacts, culturally modified trees or any other Aboriginal sites.

Where possible, the identification of natural soil deposits within the study area was undertaken. Photographs and recording techniques were incorporated into the survey including representative photographs of survey units, landform, vegetation coverage, GSV and the recording of soil information for each survey unit were possible. Any potential Aboriginal objects observed during the survey were documented and photographed. The location of Aboriginal cultural heritage and points marking the boundary of the landform elements were recorded using a hand-held Global Positioning System and the Map Grid of Australia (94) coordinate system.

4.3 Constraints to the survey

With any archaeological survey there are several factors that influence the effectiveness (the likelihood of finding sites) of the survey. The factors that contributed most to the effectiveness of the survey within the

study area were primarily the presence of areas of exposure in portions of that study area that were not occupied by schooling and sporting facilities or infrastructure.

4.4 Visibility

In most archaeological reports and guidelines visibility refers to ground surface visibility (GSV), and is usually a percentage estimate of the ground surface that is visible and allowing for the detection of (usually stone) artefacts that may be present on the ground surface (DECCW 2010b). In areas that had not been paved over or built upon, the ground surface visibility was 100%.

4.5 Exposure

Exposure refers to the geomorphic conditions of the local landform being surveyed, and attempts to describe the relationship between those conditions and the likelihood the prevailing conditions provide for the exposure of (buried) archaeological materials. Whilst also usually expressed as a percentage estimate, exposure is different to visibility in that it is in part a summation of geomorphic processes, rather than a simple observation of the ground surface (Burke and Smith 2004, p. 79, DECCW 2010b). Overall, the study area displayed areas of exposure around 35%, in areas where landscaping and garden patience works had been consistently carried out.

4.6 Disturbances

Disturbances associated with recent human activity are prevalent in the study area and cover large sections of the study areas surface. Various schooling and sporting facilities, and roads for access and parking have been constructed within the study area. The clearance of vegetation for development, landscaping, fencing and the supply of services have also occurred throughout the study area and have cause varying levels of disturbance to soils.



Plate 2 South facing view of grassed mound believed to be the previous location of a former water feature in the north-eastern corner of the study area



Plate 3 North facing view of landscaped gardens in north-western corner of the study area



Plate 4 North facing view of boundary of north-western corner of the study area showing presence of services, evidence of landscaping and introduced topsoils, and areas of exposure



Plate 5 East facing view of the north-western corner of the study area where the healey gym has been proposed showing landscaped garden and chapel statue



Plate 6 South facing view of sports courts in south-eastern corner of the study area



Plate 7 East facing view of driveway, modern buildings and parking in south-eastern corner of the study area

4.7 Survey results and discussion

The archaeological survey consisted of one meandering transect which targeted areas proposed for development within study area. No Aboriginal heritage sites were identified during the survey. The survey area consisted of the grounds of St Joseph's College which features residential, educational and administrative buildings, landscaped gardens, driveways, parking, pathways and sports facilities, located throughout the entire study area. It has been generally used for educational facilities, and prior to that, small scale farming activities. The study area is located on a gradual slope which has been modified in some areas by terracing.

The areas inspected were those that will be impacted by the proposed works in the south-eastern, north-eastern and north-western corners of the study area. Plate 2 to Plate 7 demonstrate the current setting and level of development in the areas of impact within the study area.

The north-eastern corner consists of a landscaped gentle slope, with landscaped gardens, a driveway, street lamps, and fencing to the east (Plate 2). A fountain and statue feature are also present at the time of survey within a grassed area adjacent to the parking spaces, as is a grassed mound; which is likely the location for a former water feature, and has since been backfilled and subject to landscaping. The area is bordered by the heritage-listed boundary wall on its eastern side. Ground surface visibility within this portion of the study area was high, and areas of exposure aided in the site inspection.

The north-western corner of the study area is set within a landscaped area featuring open grass, garden beds, and a chapel statue, surrounded by educational, religious and administrative buildings. The area is bordered by the heritage-listed boundary wall on its western side. Areas of exposure revealed topsoils which have been introduced for landscaping purposes.

The south-eastern corner of the study area has been heavily developed. Large portions of this area are dominated by sports courts (Plate 6), driveways, and modern buildings (Plate 7) which would have heavily disturbed natural soil deposits that may be present underneath the current infrastructure.

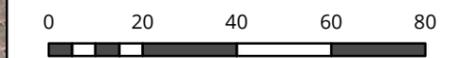
The likelihood of subsurface deposits being intact is assessed as low due to the highly disturbed context of the study area which has been heavily developed.



Legend

- Study area
- ★ Buildings/Structures
- Area of Archaeological potential within proposed development areas**
- Low Potential

Figure 7: Survey result



Metres
 Scale: 1:1,500 @ A3
 Coordinate System: GDA 1994 NSW Lambert



Albury, Ballarat, Melbourne,
 Newcastle, Sydney, Wangaratta & Wollongong

5 Conclusions and recommendations

5.1 Conclusions

The archaeological sensitivity of the areas proposed for impact has been determined as low. While the presence of a low undulating hills landform may be considered an area potentially suitable for occupation, the surrounding convex narrow ridges, hill crests and moderately incised sideslopes, as well as the shallow erosional soils associated with the Glenorie soil landscape and the distance to water suggest that the study area may not have been ideal for continuous occupation. The majority of identified AHIMS sites in the vicinity of the study area are located in close proximity to water and marine resources, with few present in areas of similar characteristics to the study area. Furthermore, there are high levels of development and ground disturbance in the areas of proposed works, which was confirmed during the field survey; no Aboriginal heritage items were identified during the survey. Further assessment is therefore not required, as per the Due Diligence Flow Chart (Figure 8).

5.2 Recommendations

The following management recommendations have been developed relevant to the study area and influenced by:

- predicted impacts to Aboriginal cultural heritage
- the planning approvals framework
- current best conservation practise, widely considered to include:
 - Ethos of the Australia ICOMOS Burra Charter (2013)
 - The code.

Prior to any impacts occurring within the study area, the following is recommended:

Recommendation 1: No further archaeological assessment is required

No further archaeological work is required in the areas proposed for development due to being assessed as having low archaeological potential.

Recommendation 2: Discovery of Unanticipated Aboriginal Objects

All Aboriginal objects and Places are protected under the NPW Act. It is an offence to knowingly disturb an Aboriginal site without a consent permit issued by the OEH. Should any Aboriginal objects be encountered during works associated with this proposal, works must cease in the vicinity and the find should not be moved until assessed by a qualified archaeologist. If the find is determined to be an Aboriginal object the archaeologist will provide further recommendations. These may include notifying the OEH and Aboriginal stakeholders.

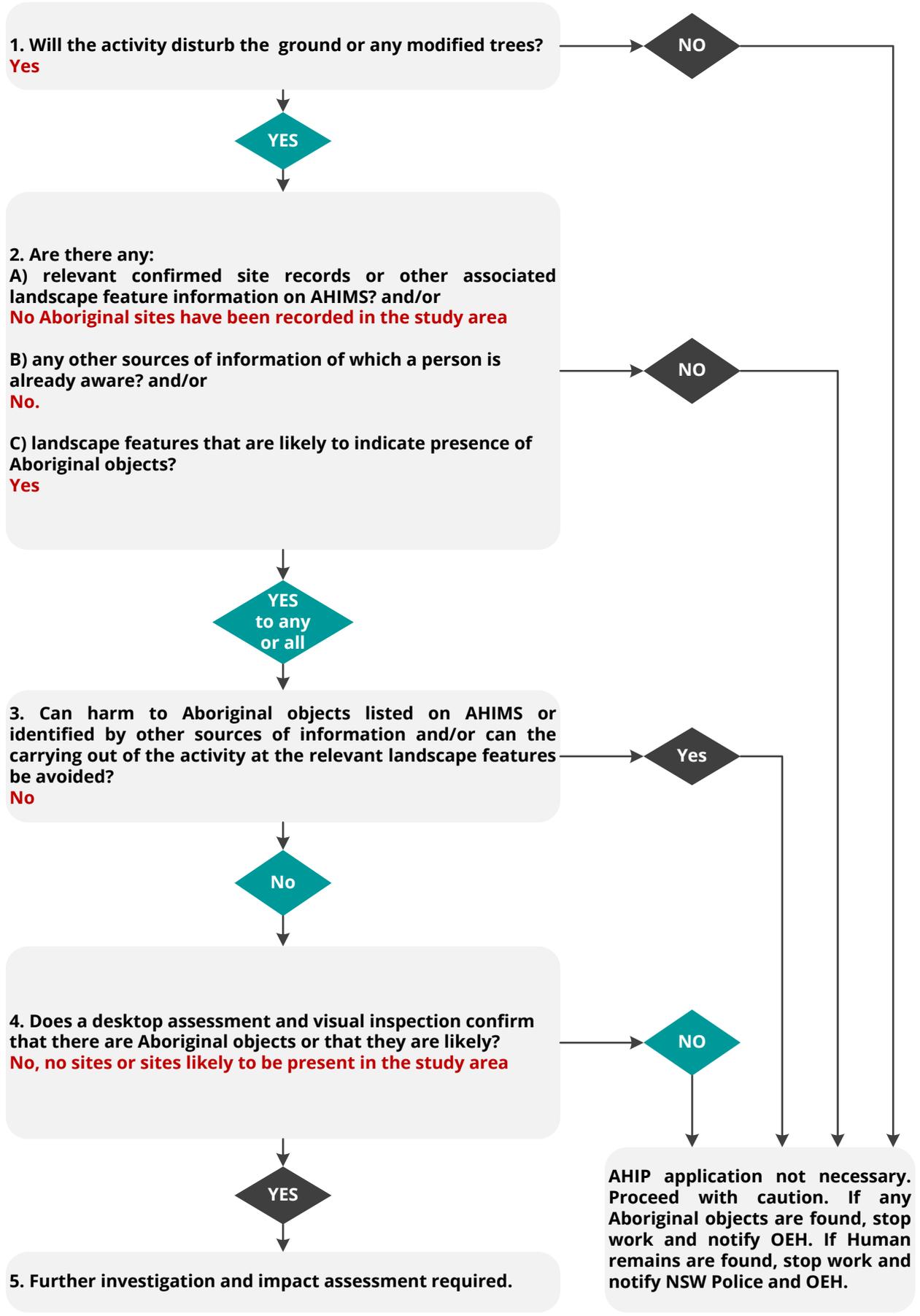
Recommendation 3: Discovery of Aboriginal Ancestral Remains

Aboriginal ancestral remains may be found in a variety of landscapes in NSW, including middens and sandy or soft sedimentary soils. If any suspected human remains are discovered during any activity you must:

1. immediately cease all work at that location and not further move or disturb the remains

-
2. notify the NSW Police and OEH's Environmental Line on 131 555 as soon as practicable and provide details of the remains and their location
 3. not recommence work at that location unless authorised in writing by OEH.

Due Diligence Process



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Appendices

Appendix 1 AHIMS search results

This Appendix is not to be made public.

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-2275	Blackman Park 1;	AGD	56	328310	6256780	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider					<u>Permits</u>		
45-6-2276	Blackman Park 2;	AGD	56	328560	6256780	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider					<u>Permits</u>		
45-6-2277	Blackman Park 3;	AGD	56	328450	6256560	Closed site	Valid	Shell : -, Artefact : -, Art (Pigment or Engraved) : -	Shelter with Art, Shelter with Midden	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider					<u>Permits</u>		
45-6-2288	Walumetta Bay 2; Henley;	AGD	56	327690	6253660	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider					<u>Permits</u>		
45-6-2296	Lovetts Reserve 3; Lane Cove West;	AGD	56	328310	6256310	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider					<u>Permits</u>		
45-6-2297	Lovetts Reserve 1; Lane Cove West;	AGD	56	328190	6256410	Open site	Valid	Shell : -, Artefact : -	Midden	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider					<u>Permits</u>		
45-6-2298	Lovetts Reserve 2; Lane Cove West;	GDA	56	328304	6256630	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider					<u>Permits</u>		
45-6-1829	Bonnefin Road 1;	AGD	56	328140	6255020	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1390
	<u>Contact</u>	<u>Recorders</u>	Val Attenbrow					<u>Permits</u>		
45-6-1810	Buffalo Creek 3;	AGD	56	327660	6256220	Closed site	Valid	Artefact : -	Shelter with Deposit	
	<u>Contact</u>	<u>Recorders</u>	Val Attenbrow, E Turvey					<u>Permits</u>		
45-6-1823	BPW Major A.;	AGD	56	328400	6255620	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1390
	<u>Contact</u>	<u>Recorders</u>	Val Attenbrow, E Turvey					<u>Permits</u>		
45-6-0989	Gladesville; Ryde 018	GDA	56	327224	6257020	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	102489
	<u>Contact</u>	<u>Recorders</u>	Mr. R Taplin, Aboriginal Heritage Office					<u>Permits</u>		
45-6-2972	Betts Park 2	AGD	56	328110	6253750	Open site	Valid	Shell : -		
	<u>Contact</u>	<u>Recorders</u>	Michael Guider					<u>Permits</u>		
45-6-1827	Tarban Creek Minor; Gladesville Hospital; (duplicate copy of 45-6-1944 & 45-6-0974)	AGD	56	328050	6254100	Open site	Valid	Shell : -, Artefact : -	Midden	1390
	<u>Contact</u>	<u>Recorders</u>	Val Attenbrow, K Perrin					<u>Permits</u>		

Report generated by AHIMS Web Service on 01/08/2018 for Samantha Keats for the following area at Datum : GDA, Zone : 56, Eastings : 326489 - 328966, Northings : 6253038 - 6256888 with a Buffer of 200 meters. Additional Info : Archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 88

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

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-3191	64A High Street Hunters Hill	GDA	56	327659	6256312	Closed site	Not a Site	Habitation Structure :-		
	Contact	Recorders	Doctor.Alan Williams					Permits		
45-6-0535	Quarantine Park	AGD	56	326210	6252970	Open site	Not a Site	Earth Mound : -	Not an Aboriginal Site	1308,1809
	Contact	Recorders	Val Attenbrow,Val Attenbrow,Laura-Jane Smith					Permits		
45-6-2506	Tarban Ck;RC 4;	AGD	56	327400	6254430	Closed site	Valid	Artefact : -	Shelter with Deposit	
	Contact	Recorders	Mary Dallas Consulting Archaeologists,Paul Gorecki					Permits		
45-6-2148	Just Definate Cave Boronia Park RYDE 024	GDA	56	326954	6256540	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1809,1911,102489
	Contact	Recorders	Val Attenbrow,Aboriginal Heritage Office					Permits		
45-6-0266	Chiswick;Drummoyne;	AGD	56	327674	6252823	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	Contact	Recorders	Michael Guider					Permits		
45-6-2057	Sugarloaf 1 RYDE 017	GDA	56	327959	6256850	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1809,102489
	Contact	Recorders	Michael Guider,Aboriginal Heritage Office					Permits		
45-6-2058	Sugarloaf 2	AGD	56	327890	6256670	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1809
	Contact	Recorders	Michael Guider					Permits	624	
45-6-2059	Sugarloaf 3	AGD	56	327950	6256610	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1809
	Contact	Recorders	Michael Guider					Permits		
45-6-0616	Boronia Park;Hunter's Hill;	AGD	56	328345	6255946	Closed site	Valid	Shell : -, Artefact : -, Art (Pigment or Engraved) : -	Shelter with Art,Shelter with Midden	1390
	Contact	Recorders	Val Attenbrow,E Turvey					Permits		
45-6-1903	Looking Glass PT; RYDE 227	GDA	56	326589	6253850	Open site	Valid	Artefact : -, Shell : -	Midden,Open Camp Site	102489
	Contact	Recorders	Michael Guider,Aboriginal Heritage Office					Permits		
45-6-1904	Looking Glass PT; RYDE 226	GDA	56	326564	6253825	Open site	Valid	Shell : -, Artefact : -	Midden	102489
	Contact	Recorders	Michael Guider,Aboriginal Heritage Office					Permits		
45-6-1812	Sea Street;	AGD	56	328830	6254750	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	1390
	Contact	Recorders	Val Attenbrow					Permits		
45-6-1813	Villa Floridiana;	AGD	56	328850	6254770	Open site	Valid	Artefact : -, Shell : -, Burial : -	Burial/s,Midden,Open Camp Site	1390
	Contact	Recorders	Val Attenbrow					Permits		

Report generated by AHIMS Web Service on 01/08/2018 for Samantha Keats for the following area at Datum :GDA, Zone : 56, Eastings : 326489 - 328966, Northings : 6253038 - 6256888 with a Buffer of 200 meters. Additional Info : Archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 88

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-1815	L-Shaped Shelter;	AGD	56	328190	6255380	Closed site	Valid	Artefact : -	Shelter with Deposit	1390
	<u>Contact</u>									
45-6-1816	ST Patrick's Day Midden;	AGD	56	328340	6256050	Open site	Valid	Artefact : -, Shell : -	Midden,Open Camp Site	1390
	<u>Contact</u>									
45-6-1817	Mottled Ceiling Shelter;	AGD	56	328150	6255400	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1390
	<u>Contact</u>									
45-6-1818	BPW Minor A.;	AGD	56	328220	6256130	Open site	Valid	Artefact : -, Shell : -	Midden,Open Camp Site	1390
	<u>Contact</u>									
45-6-1819	BPW Minor B.;	AGD	56	328270	6256090	Open site	Valid	Artefact : -, Shell : -	Midden,Open Camp Site	1390
	<u>Contact</u>									
45-6-1110	Gladesville;(duplicate copy of 45-6-1949)	AGD	56	328479	6253753	Open site	Valid	Shell : -, Artefact : -	Midden	1390
	<u>Contact</u>									
45-6-0617	Fig tree bridge 1;Gladesville;	GDA	56	328669	6255510	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1809
	<u>Contact</u>									
45-6-1418	Boronia Park Public School;	AGD	56	327300	6255900	Open site	Valid	Artefact : -	Open Camp Site	1390
	<u>Contact</u>									
45-6-0567	Abbotsford, Five Dock	AGD	56	326680	6253270	Open site	Valid	Shell : -, Artefact : -, Burial : -	Burial/s,Midden	1340
	<u>Contact</u>									
45-6-1141	Fig Tree Bay;Abbotsford;Peppermint Tree Cave;	AGD	56	327115	6253361	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	
	<u>Contact</u>									
45-6-1142	Abbotsford;Kangaroo Feet Cave;	AGD	56	326670	6252712	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	
	<u>Contact</u>									
45-6-2574	Buffalo Creek; RYDE 022	GDA	56	327214	6256755	Closed site	Valid	Artefact : -	Shelter with Deposit	102489
	<u>Contact</u>									
45-6-2575	Strangers Creek; RYDE 020	GDA	56	327239	6257010	Closed site	Valid	Artefact : -	Shelter with Deposit	102489
	<u>Contact</u>									
45-6-2576	Field of Mars; RYDE 021	GDA	56	327314	6256880	Open site	Valid	Shell : -, Artefact : -	Midden	102489
	<u>Contact</u>									

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-1154	Boronia Park;	AGD	56	328621	6255860	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	1390
	Contact									
	Recorders			ASRSYS						
45-6-1155	Fig Tree Bridge;	AGD	56	328454	6255033	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	1390
	Contact									
	Recorders			ASRSYS						
45-6-1930	Gladesville Reserve 2;	AGD	56	327890	6253610	Open site	Valid	Shell : -, Artefact : -	Midden	
	Contact									
	Recorders			Michael Guider						
45-6-1931	Gladesville Wharf Cave;	AGD	56	327970	6253630	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	Contact									
	Recorders			Michael Guider						
45-6-1932	Banjo Patterson Park;Looking Glass Bay; RYDE 228	GDA	56	326674	6254060	Open site	Valid	Artefact : -, Shell : -	Midden,Open Camp Site	102489
	Contact									
	Recorders			Val Attenbrow,Michael Guider,Aboriginal Heritage Office						
45-6-1933	Bedlam Point Cave;	AGD	56	326820	6253690	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	Contact									
	Recorders			Margrit Koettig,Michael Guider						
45-6-1941	Tarban Creek 1;	AGD	56	328350	6254080	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	Contact									
	Recorders			Michael Guider						
45-6-1942	Tarban Creek 2;	AGD	56	328340	6254090	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	Contact									
	Recorders			Michael Guider						
45-6-1943	Tarban Creek 5;	AGD	56	328050	6254110	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	Contact									
	Recorders			Michael Guider						
45-6-1945	Tarban Creek 7;	AGD	56	327630	6254210	Open site	Valid	Artefact : -, Shell : -	Midden,Open Camp Site	
	Contact									
	Recorders			Michael Guider						
45-6-1948	Betts Park Cave 1;	AGD	56	328050	6253710	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	Contact									
	Recorders			Michael Guider						
45-6-1950	Betts Park 3;	AGD	56	328110	6253810	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	Contact									
	Recorders			Michael Guider						
45-6-1951	Tarban Creek 3;	AGD	56	328210	6254110	Open site	Valid	Artefact : -, Shell : -	Midden,Open Camp Site	
	Contact									
	Recorders			Michael Guider						

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-0763	Fig Tree Bridge;Linley Point;	GDA	56	328749	6255550	Closed site	Valid	Shell : -, Artefact : -, Art (Pigment or Engraved) : -	Shelter with Art,Shelter with Midden	1809
	Contact	Recorders	Val Attenbrow,Laura-Jane Smith					Permits		
45-6-0931	Boronia Park, Ryde 019	GDA	56	327234	6257010	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	102489
	Contact	Recorders	Charles.D Power,Aboriginal Heritage Office					Permits		
45-6-1952	Tarban Creek 4;	AGD	56	328110	6254110	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	Contact	Recorders	Michael Guider					Permits		
45-6-1956	Five Dock Bay Cave	AGD	56	328430	6253220	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	Contact	Recorders	Michael Guider					Permits		
45-6-0900	Boronia Park;Hunters Hill;	AGD	56	328445	6255490	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1390
	Contact	Recorders	ASRSYS					Permits		
45-6-1966	Burns Bay 1;	GDA	56	329079	6255720	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	Contact	Recorders	Michael Guider					Permits		
45-6-1967	Burns Bay 2;	GDA	56	329119	6255605	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	Contact	Recorders	Michael Guider					Permits		
45-6-1968	Burns Bay 3;	AGD	56	329020	6255430	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	Contact	Recorders	Michael Guider					Permits		
45-6-1048	Gladesville;	AGD	56	328173	6255394	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	1390
	Contact	Recorders	ASRSYS					Permits		
45-6-0974	Tarban Creek;(duplicate copy of 45-6-1827 & 45-6-1944)	AGD	56	328384	6253935	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1390
	Contact	Recorders	Mr.R Taplin					Permits		
45-6-1688	Ferdinand St Reserve;	AGD	56	328930	6254800	Closed site	Valid	Artefact : -, Art (Pigment or Engraved) : -	Shelter with Art,Shelter with Deposit	1390
	Contact	Recorders	Val Attenbrow					Permits		
45-6-1689	Barons Crescent;	AGD	56	328150	6256130	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	Contact	Recorders	M Hawthorne					Permits		
45-6-1690	Barons Crescent;	AGD	56	328110	6256200	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	M Hawthorne					Permits		
45-6-1691	Buffalo Creek;	AGD	56	328000	6256270	Open site	Valid	Shell : -, Artefact : -	Midden	1390
	Contact	Recorders	M Hawthorne					Permits		
45-6-1820	Above Big Red Shield	AGD	56	328140	6256090	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	1390
	Contact	Recorders	Val Attenbrow					Permits		
45-6-1821	The Causeway;	AGD	56	328360	6255900	Open site	Valid	Artefact : -, Shell : -	Midden,Open Camp Site	1390
	Contact	Recorders	Val Attenbrow,E Turvey					Permits		
45-6-1822	Large Red Ants Shelter;	AGD	56	328410	6255670	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1390
	Contact	Recorders	Val Attenbrow,E Turvey					Permits		
45-6-1824	BPW Major B.;	AGD	56	328400	6255570	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1390
	Contact	Recorders	Val Attenbrow,E Turvey					Permits		
45-6-1825	BPW Minor C.;	AGD	56	328000	6255490	Open site	Valid	Shell : -, Artefact : -	Midden	1390
	Contact	Recorders	Val Attenbrow,E Turvey					Permits		
45-6-1826	Swains 1913;Betts Park;(duplicate copy oof 45-6-1949)	AGD	56	328030	6253680	Open site	Valid	Shell : -, Artefact : -	Midden	1390
	Contact	Recorders	Val Attenbrow,K Perrin					Permits		
45-6-1830	Wallumetta Bay "A".;	AGD	56	327800	6253650	Open site	Valid	Shell : -, Artefact : -	Midden	1390
	Contact	Recorders	Val Attenbrow					Permits		
45-6-1831	Wallumetta Bay "A";Gladesville Reserve 1;Henley;(duplicate copy of 45-6-1929)	AGD	56	327790	6253660	Open site	Valid	Artefact : -	Open Camp Site	1390
	Contact	Recorders	Val Attenbrow,Michael Guider					Permits		
45-6-0982	Gladesville	AGD	56	328354	6255489	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1390
	Contact	Recorders	Val Attenbrow					Permits		
45-6-0983	Gladesville	AGD	56	328354	6255489	Open site	Valid	Shell : -, Artefact : -	Midden	1390
	Contact	Recorders	Val Attenbrow,E Turvey,Mr.R Taplin					Permits		
45-6-0984	Gladesville;	AGD	56	328354	6255489	Open site	Valid	Shell : -, Artefact : -	Midden	1390
	Contact	Recorders	Val Attenbrow,E Turvey,Mr.R Taplin					Permits		
45-6-0985	Gladesville;	AGD	56	328436	6255948	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1390
	Contact	Recorders	Mr.R Taplin					Permits		
45-6-0987	Gladesville;	AGD	56	328345	6255946	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1390
	Contact	Recorders	Val Attenbrow,E Turvey,Mr.R Taplin					Permits		
45-6-0988	Gladesville;	AGD	56	327978	6256030	Open site	Valid	Shell : -, Artefact : -	Midden	1390

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Val Attenbrow,E Turvey,Mr.R Taplin					Permits		
45-6-0990	Gladesville; The Boulders Cave, RYDE 023	GDA	56	327134	6256730	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	102489
	Contact	Recorders	Mr.R Taplin,Aboriginal Heritage Office					Permits		
45-6-0991	Gladesville;Ryde 025	GDA	56	326304	6256780	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	102489
	Contact	Recorders	Mr.R Taplin,Aboriginal Heritage Office					Permits		
45-6-1684	Valeries Site;Near Boat Shed;	AGD	56	328990	6254840	Open site	Valid	Shell : -, Artefact : -	Midden	1390
	Contact	Recorders	Val Attenbrow					Permits		
45-6-1687	Ferdinand St Reserve;	AGD	56	328930	6254800	Closed site	Valid	Artefact : -	Shelter with Deposit	1390
	Contact	Recorders	Val Attenbrow					Permits		
45-6-1597	Lane Cove;	AGD	56	328807	6255680	Closed site	Valid	Shell : -, Artefact : -, Art (Pigment or Engraved) : -	Shelter with Art,Shelter with Midden	
	Contact	Recorders	Aboriginal Heritage Office					Permits		
45-6-3094	Linley Point Shelter 1 LCC105	GDA	56	328840	6255910	Open site	Valid	Potential Archaeological Deposit (PAD) : 1, Shell : 1		
	Contact	Recorders	Aboriginal Heritage Office					Permits		
45-6-3359	Wharf Road Shell Midden 01 (WR-SHL01)	GDA	56	326585	6253885	Open site	Valid	Shell : -		
	Contact	Recorders	Artefact - Cultural Heritage Management ,Artefact - Cultural Heritage Management					Permits		

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