



INGLESIDE PRECINCT

Aboriginal Heritage Assessment

Prepared for Department of Planning and Environment,
Pittwater Council and UrbanGrowth NSW

Pittwater Local Government Area

PUBLIC RELEASE VERSION

May 2016

Ref. 1306

KELLEHER NIGHTINGALE CONSULTING PTY LTD
Archaeological and Heritage Management
ACN 120 187 671

Level 10, 25 Bligh Street
SYDNEY NSW 2000

Document Information

Project Name	Ingleside Precinct: Aboriginal Heritage Assessment
Project Number	1306
Version	PUBLIC RELEASE VERSION
Status	Final Draft
Revision	5.3
Client Name	Department of Planning & Environment, Pittwater Council and UrbanGrowth NSW
Recipient	Liz Gonzalez, Team Leader, Greenfield Housing, Department of Planning & Environment
Issue Date	27 May 2016
Prepared by	Dr Matthew Kelleher; Alison Nightingale; Mark Rawson; Cristany Milicich; Ben Anderson
Approved by	Dr Matthew Kelleher; Alison Nightingale

Ingleside Precinct: Aboriginal Heritage Assessment

Portions of this document have been censored for reason of confidentiality to protect sensitive cultural information.

Executive Summary

The Department of Planning and Environment, in partnership with Pittwater Council and UrbanGrowth NSW, has undertaken a Precinct Planning process for the Ingleside Precinct in north east Sydney, NSW. The Precinct Planning process includes assessment of Aboriginal cultural heritage, in consultation with Stakeholder Aboriginal Communities, to identify and assess Aboriginal cultural heritage items and values within the Precinct to be considered in planning for the future development of the area.

Assessment was based on the established Precinct Assessment Method for Aboriginal Cultural Heritage in the Sydney Growth Centres, as well as requirements of the Office of Environment and Heritage. Background research and targeted archaeological field survey identified 25 Aboriginal archaeological sites recorded in the Precinct. The majority of these were rock engraving sites, with a smaller number of grinding groove sites and a rock shelter with art and archaeological deposit.

All sites have been identified to be of high Aboriginal cultural heritage significance. The shelter with art and deposit has been identified as having particular Aboriginal cultural heritage value. Stakeholder Aboriginal Communities have expressed a strong attachment to the sites and the Ingleside Precinct is significant to the local Aboriginal community.

The assessment recommended that all sites be avoided by any future development within the Precinct.

As a result of the Ingleside Precinct Planning process, 15 (60%) of the recorded Aboriginal sites within the Precinct are proposed to be conserved according to the draft Plan, being situated within land proposed for 'Environmental Conservation' or 'National Park'. All 15 are rock marking sites (rock engravings and grinding grooves). The sites are of high Aboriginal cultural heritage significance, important to the local Aboriginal community and worthy of conservation. Conservation of the identified Aboriginal heritage sites within the proposed 'Environmental Conservation' and 'National Park' areas represents a positive outcome for Aboriginal cultural heritage. Future development within the precinct should ensure these sites remain conserved and any future activities within these land use areas should avoid impact to Aboriginal heritage.

Despite the planned avoidance of most of the identified sites, rezoning of the Precinct according to the draft Plan may allow for potential future development impact to four Aboriginal heritage sites (16%). Two are within proposed 'Houses' land use and two within proposed 'Low Rise Apartments / Townhouse' land use. All are rock marking sites, including two rock engravings, one engraving and grinding groove site and a grinding groove site. Three of the four sites were not able to be relocated for the study, two recorded on properties which were not able to be accessed and one likely destroyed. The site locations for these three sites remain unverified and further investigation would be required prior to any activities in the vicinity of the AHIMS registered site locations. One site (45-6-0072) was located within a future road reserve within a residential area. The sites are of high Aboriginal cultural heritage significance and worthy of conservation. It is recommended these sites be avoided by any future development within these land use areas. Given these types of sites are fixed points in the landscape and usually have clearly defined boundaries, informed and sympathetic development should be able to conserve the sites and their context (e.g. entire rock platform). Further detailed impact assessment, Aboriginal community consultation and development of specific heritage management measures would be required at the detailed development layout stage. If the sites cannot be avoided by future development layouts, then an Aboriginal Heritage Impact Permit (AHIP) under section 90 of the *National Parks and Wildlife Act 1974* would be required prior to any activities that may harm Aboriginal objects.

Six of the identified Aboriginal archaeological sites (24%) were situated in the Proposed Mona Vale Road Corridor. These included five rock engraving sites and a shelter with art and deposit. The sites are of high Aboriginal cultural heritage significance, important to the local Aboriginal community and worthy of conservation. These sites will be considered by Roads and Maritime Services (RMS) as part of the Mona Vale Road upgrade project and will not be considered as part of this Precinct Planning process. RMS has modified future detailed road design to avoid these significant sites.

The Aboriginal heritage assessment and community consultation also identified that there is a likelihood of further Aboriginal heritage sites, of similar types to those identified through the assessment, being situated within the Precinct. Archaeological sensitivity of the Precinct is strongly linked to geology. Aboriginal rock engravings, grinding grooves and rock shelter sites can occur where there are suitable sandstone outcrops and overhangs.

Aboriginal objects (archaeological sites) are protected and regulated under the *National Parks and Wildlife Act 1974*. It is an offence to harm an Aboriginal object without appropriate approval. An AHIP is required for any activity which will harm an Aboriginal object. *Pittwater Local Environmental Plan 2014* also aims to conserve Pittwater's Aboriginal heritage and includes requirements for obtaining development consent which may impact on Aboriginal heritage.

Further assessment and continued consultation with registered Aboriginal stakeholders would be required where proposed activities may harm Aboriginal objects or Aboriginal places.

Pittwater and Northern Beaches Councils

In May 2016 Pittwater Council was merged into a new body, the Northern Beaches Council. As this report was prepared prior to these changes, it makes reference to the former council. The plans and strategies of the former council continue to apply to the former local government area until the new council prepares its own plans and strategies.

Contents

CONTENTS	III
FIGURES	IV
TABLES	IV
1 INTRODUCTION	1
2 ABORIGINAL STAKEHOLDER CONSULTATION AND PARTICIPATION	2
2.1 STAKEHOLDER IDENTIFICATION AND CONSULTATION PROCESS	2
2.3 IDENTIFIED ABORIGINAL CULTURAL HERITAGE VALUES.....	3
2.4 RECOMMENDATIONS FOR CONSERVATION OF ABORIGINAL HERITAGE	3
3 ETHNOGRAPHIC AND HISTORICAL CONTEXT	4
3.1 CONTEMPORARY CULTURAL ASSOCIATIONS.....	6
4 REGISTER SEARCHES AND PREVIOUS ARCHAEOLOGICAL WORK	7
4.1 DATABASE SEARCH (AHIMS)	7
4.2 DISCUSSION OF AHIMS SEARCH RESULTS	7
4.3 OTHER HERITAGE REGISTERS AND DATABASE SEARCHES.....	9
4.4 PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS.....	11
5 LANDSCAPE CONTEXT	16
5.1 GEOLOGY, SOILS AND LANDFORM	16
6 SITE PREDICTIONS	18
7 FIELD METHODS	19
7.1 SURVEY COVERAGE	19
8 IDENTIFIED ABORIGINAL CULTURAL HERITAGE SITES IN THE PRECINCT	22
8.1 SUMMARY OF FINDINGS	22
8.2 SITE DESCRIPTIONS	25
9 SIGNIFICANCE ASSESSMENT	50
9.1 ASSESSMENT CRITERIA	50
9.2 STATEMENT OF SIGNIFICANCE	52
10 LEGISLATION AND MANAGEMENT PRINCIPLES	54
10.1 LEGISLATIVE CONSIDERATIONS	54
10.2 MANAGEMENT PRINCIPLES	55
11 DRAFT PLAN AND POTENTIAL IMPACT ON ABORIGINAL CULTURAL HERITAGE	56
11.1 POTENTIAL IMPACT OF THE DRAFT PLAN ON ABORIGINAL HERITAGE	64
12 MANAGEMENT RECOMMENDATIONS	67
12.1 CONSERVATION OF ABORIGINAL HERITAGE	67
12.2 FURTHER INVESTIGATION OF ABORIGINAL HERITAGE.....	67
12.3 ABORIGINAL HERITAGE DUE DILIGENCE	68
12.4 DEVELOPMENT CONTROLS FOR ABORIGINAL HERITAGE	68
REFERENCES	70
APPENDIX A ADVERTISEMENT FOR REGISTRATION OF INTEREST	72

Figures

Figure 1. Ingleside Precinct location (source: NSW Department of Planning and Environment).....	1
Figure 2. Previously recorded sites (AHIMS search results).....	8
Figure 3. Aboriginal heritage listed sites and places.....	10
Figure 4. Engravings at 45-6-0827 – not in relative positions and not to scale (Campbell 1899)	11
Figure 5. Plan of site 45-6-1228 - Whale Rock (KNC 2011:18)	13
Figure 6. Engravings at 45-6-0071	14
Figure 7. Engravings at 45-6-3024/45-6-3101 (previously 45-6-0071 “Area B”, Koettig 1981)	14
Figure 8. “Lizard” motif at 45-6-2528.....	15
Figure 9. Geology of Ingleside Precinct and surrounds	17
Figure 10. Soil landscapes of Ingleside Precinct and surrounds	17
Figure 11. Aboriginal archaeological sites in the Precinct	23
Figure 12. Narrabeen Parish portion map, 1888. Position of Jones' house marked. (Source: JCIS 2012:47).....	29
Figure 13. Excerpt of Narrabeen Parish Map, 1886, showing two branches of McCarrs Creek.....	30
Figure 14. Precinct significance rankings	51
Figure 15. Aboriginal heritage sites in the Precinct, according to DP&E significance rankings.....	53
Figure 16. Ingleside Precinct draft Plan (source: NSW Department of Planning and Environment)	57
Figure 17. Draft Plan with Aboriginal archaeological sites according to site types	58
Figure 18. Draft Plan with Aboriginal archaeological sites according to significance ranking	59

Tables

Table 1. Site types and context from OEH AHIMS database search.....	7
Table 2. Summary of Aboriginal archaeological sites in Ingleside Precinct.....	24
Table 3. Potential impact of draft Plan on identified items of Aboriginal cultural heritage	60
Table 4. Conserved Aboriginal sites	64
Table 5. Potentially impacted Aboriginal sites.....	65
Table 6. Aboriginal sites being considered by Mona Vale Road upgrade project (avoided by detailed design)	66
Table 7. Suggested Aboriginal heritage development objectives and controls for Ingleside Precinct	69

1 Introduction

The Department of Planning and Environment (DP&E), in partnership with Pittwater Council and UrbanGrowth NSW, is undertaking a Precinct planning project for land at Ingleside, referred to as Ingleside Precinct, within the Pittwater Local Government Area (LGA).

The Precinct is located in the north western corner of the LGA and comprises 700 hectares of land, with approximately one third owned by the NSW Government. It borders Ku-ring-gai Chase and Garigal National Parks, Warriewood Escarpment and Ingleside Chase Reserve. The suburbs of Bayview and Elanora Heights are located to the north and south. The main roads into Ingleside are Mona Vale Road and Powderworks Road. The location of the Ingleside Precinct, also known as Ingleside Release Area, (the “study area”) is shown on Figure 1.

The Precinct Planning process aims to determine the future urban development potential of a possible land release area, taking into account the environment, economic viability, housing types, community consultation and infrastructure needs. Investigation of these factors early in the planning process allows the establishment of planning controls that will enable development consistent with this potential.

Planning for the Ingleside Precinct was modelled on the Precinct planning approach used in the Growth Centres. Precinct planning involves detailed investigations into appropriate land use options, physical environmental constraints and infrastructure requirements. Environmental and urban form assessments were undertaken to inform considerations of rezoning of the land as well as potential future development layouts within Ingleside.

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

The assessment of Aboriginal heritage as part of the Precinct Planning process represents an opportunity to consider Aboriginal cultural heritage sites, places and values early in the planning process for Ingleside. Aboriginal heritage has been considered during all stages of the Precinct Planning process, helping to inform the development of the indicative layout plan for the Precinct.

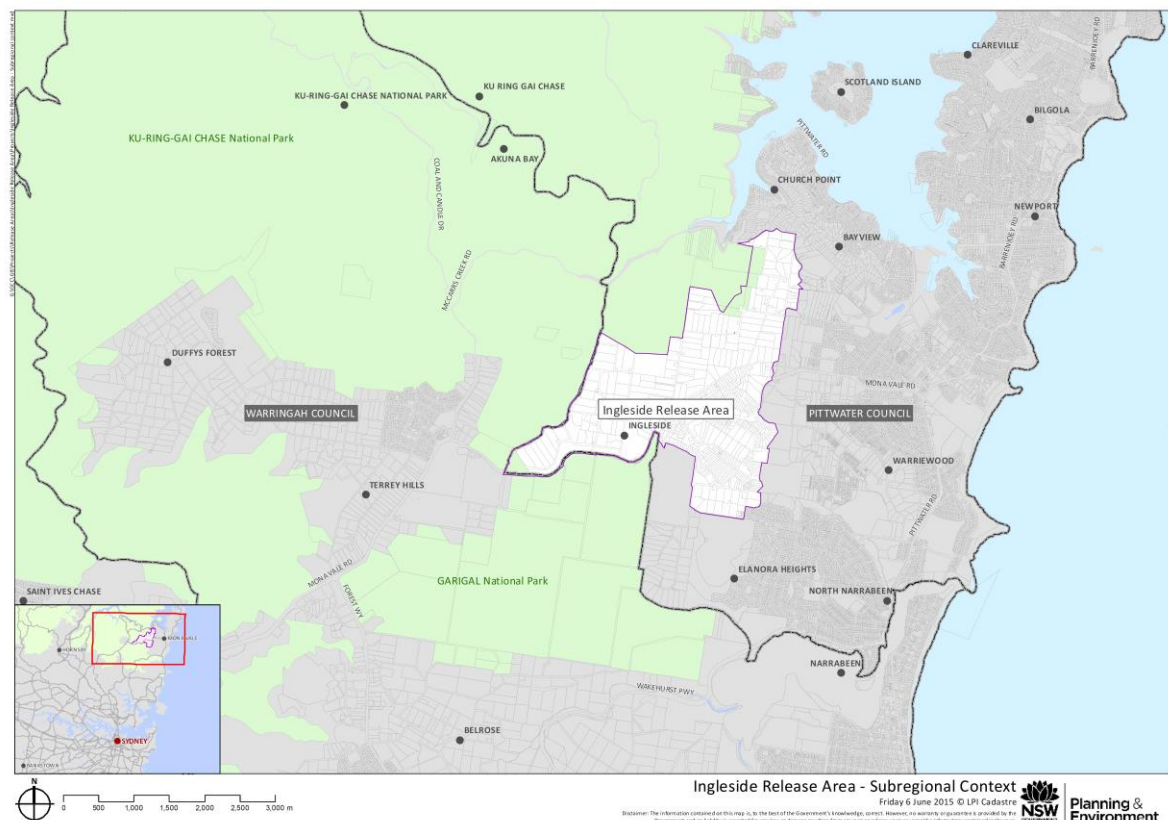


Figure 1. Ingleside Precinct location (source: NSW Department of Planning and Environment)

2 Aboriginal Stakeholder Consultation and Participation

2.1 Stakeholder identification and consultation process

The assessment was undertaken in consultation and with participation of registered Aboriginal stakeholders for the Precinct. Consultation with Aboriginal stakeholders is essential for identifying the Aboriginal cultural heritage sites, values, constraints and opportunities for the Precinct.

The aim of consultation is to ensure all registered stakeholders have an opportunity to find out about the potential future development of Ingleside and provide input into the planning process including rezoning, detailed planning and management of Aboriginal heritage.

Identification of Aboriginal stakeholders for the Ingleside Precinct was undertaken in accordance with the DP&E *Protocol for Aboriginal Stakeholder Involvement in the Assessment of Aboriginal Heritage in the Sydney Growth Centres* and the OEH *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (OEH 2010). The notification and advertisement process was undertaken according to OEH requirements. A copy of the advertisement is attached in Appendix A.

Nine Aboriginal stakeholder groups and individuals registered their interest in a consultation process regarding the Ingleside Precinct. Registered Aboriginal stakeholders are listed in the table below:

Registered Aboriginal stakeholders	Awabakal and Guringai People Native Title Claimants
	Darug Aboriginal Cultural Heritage Assessments
	Darug Land Observations
	Guringai Tribal Link Aboriginal Corporation
	Metropolitan Local Aboriginal Land Council
	Tocomwall Pty Ltd
	Andrew Williams
	Shane Williams
	Tony Williams

Registered stakeholders were contacted and information about the project and assessment methodology was provided. A 28 day review period was provided for the methodology, with stakeholders invited to provide comment and suggestions. Following the closure of the review period, a report presenting the available background information and assessing knowledge gaps requiring attention was prepared. The report was provided to registered Aboriginal stakeholders for review, with a 28 day review period during which stakeholders were invited to provide input and comment.

Registered Aboriginal stakeholders were subsequently invited to attend field visits to the study area, during which an archaeological survey would be undertaken to identify Aboriginal sites and cultural heritage values in partnership with the Aboriginal community. Individually registered Aboriginal stakeholders and representatives from each registered stakeholder organisation attended the field visits and took part in the survey. Following the conclusion of the survey, stakeholders were invited to provide their own assessments of the Aboriginal cultural heritage values identified within Ingleside Precinct.

Cultural information has been gathered as part of the assessment. Information provided and authorised for inclusion in the report has been presented here. The report has been provided to Aboriginal stakeholders for a 28 day review and comment period.

The Aboriginal Heritage Office (AHO), heritage advisors to Pittwater Council, was also contacted at the commencement of the project. AHO information regarding sites in the Ingleside Precinct has been referenced in this assessment, where publically available or as authorised for use in this report.

2.3 Identified Aboriginal cultural heritage values

Metropolitan Local Aboriginal Land Council (MLALC) provided comment following the field visit (dated 22 April 2014) in which it was noted that:

All exposed sandstone was seen within the assessment area [and] Aboriginal Engravings or Relics or Cultural Material was [both] found and re-recorded within the Aboriginal Site Assessment study Area of Ingleside Precinct, Mona Vale NSW.

A comprehensive report received from Tony Williams (dated 30 April 2014) affirmed his family links to and personal history within the Ingleside area and expressed satisfaction with the assessment methodology, noting that:

the assessment methodology employed by Kelleher Nightingale Consulting Pty Ltd was quite thorough considering the impairments faced with out of date GPS coordinates and the out dated site cards. The area to cover was a large land mass but it was able to be narrowed down to the most important areas of significant where new sites were discovered.

In addition, Tony Williams provided a summary of survey findings and site condition of identified sites, stating that:

the previous survey was completed in 1980's had been carried out and some of the GPS positioning was not quite accurate other sites were discovered. The existing site was well weather and in some places nearly none existent. Other sites were in good condition and have been protected from the weather.

Recommendations provided following the field visit included the following:

I strongly recommend to the department of lands and Pittwater council to put in place an Aboriginal Heritage plan to protect the sites for future generations. The cave [redacted] with the orca hand [previously recorded site 45-6-1616] needs to be protected as matter urgency as this is one of the only sites in the Sydney basin which has such significant.

A number of stakeholders also provided verbal comments throughout the precinct planning process, expressing the significance of the Aboriginal heritage of the precinct and how important it is to conserve these sites. There was also concern expressed regarding the precinct planning process if Aboriginal sites would be impacted by future development of the precinct, especially if harmed en masse such as on other precinct-wide Aboriginal heritage impact permits.

Consultation revealed the Precinct and the Ingleside area is significant to the local Aboriginal community and incorporating these values into the Precinct planning will be important.

The consultation process with registered Aboriginal stakeholders is ongoing. Comments received following the Aboriginal community review of the draft report and the draft Plan for the Precinct will be integrated in the final document.

2.4 Recommendations for conservation of Aboriginal heritage

Throughout the consultation process, registered Aboriginal stakeholders have stated that:

1. the Aboriginal heritage sites and values of the Ingleside Precinct are highly significant and important
2. identified Aboriginal sites should be conserved, and
3. the legislative process should be followed for future development activities.

The Aboriginal heritage assessment recommends conservation of all identified Aboriginal heritage sites in the Precinct. Aboriginal stakeholders have been consulted and support the conservation of Aboriginal sites. The Precinct Planning process has sought to conserve Aboriginal heritage within the development layout plan. Should future development potentially impact on Aboriginal objects or Aboriginal places a separate stand-alone consultation process would be required to support an application for an Aboriginal heritage impact permit (AHIP). The consultation process is required by NSW legislation *National Parks and Wildlife Act 1974* and must be in accordance with the *National Parks and Wildlife Regulation 2009* and the *OEH Aboriginal cultural heritage consultation requirements for proponents 2010*.

3 Ethnographic and Historical Context

Aboriginal settlement history of Australia stretches back thousands of years, with information from Aboriginal community consultation, oral histories, the archaeological record and historical documents contributing to an understanding of the past. Colonial exploration of the Sydney area and the letters and diaries of British officers provide early observations on the way of life, customs, activities and material culture of Aboriginal people in the area at that time. Within three years of arrival, the British had explored a large part of the Sydney region, including visits to Broken Bay, Botany Bay, Rose Hill (Parramatta), Prospect Hill and overland to the Nepean, Hawkesbury and Georges Rivers – essentially across most of the Cumberland Plain as well as extensive travels up and down the coast.

Early after his arrival at Port Jackson in 1788, Governor Arthur Phillip explored Brisbane Water and Cowan Creek to the north and west of the study area, meeting in a friendly manner with local Aboriginal people (NSW National Parks and Wildlife Service 1996). Later that year, Phillip and his party travelled overland to Pittwater and back, walking along Aboriginal tracks and exploring the southern shores of Pittwater and around McCarrs Creek, near the study area. During these explorations they documented their meetings with Aboriginal people in various areas, describing them as separate 'tribes' associated with particular areas of land. Rather than separate 'tribes', it is more likely these groups comprised small local clans of extended family groups, forming larger land-using bands linked through marriage and communal participation in subsistence gathering activities (Attenbrow 2002:22, Brook and Kohen 1991:2).

None of the British observations from the late 18th and early 19th Century make reference to any name for the different dialects or wider language groups that they noted (Attenbrow 2002:33). The various names offered by the early chroniclers are not always clear if they are referring to a language, a small group within a particular area, or a wider group of people to which smaller groups belonged. Early references to the people living between Port Jackson and Broken Bay include Garigal/Caregal as the name of "a man, or a tribe, who resided to the northward"; "the man's name was Caregal [and] he lived at, or near Broken-Bay" (Phillip, in Hunter 1793[1968]:465 (in Attenbrow 2002)), Gamaragal or Cammeragal/Cam-mer-ray-gal on the north side of Port Jackson, extending north towards Broken Bay, and Guringai/Kuringai along the coast. The Guringai/Kuringai group was described by John Fraser in 1892 as stretching between Port Macquarie in the north to Bulli in the south, and as far inland as the Great Dividing Range. He described the Kuringai tribe as including several sub-tribes who shared closely related languages similar to that spoken around Port Macquarie, which Fraser called Awabakal, from the Aboriginal name of Awaba for Lake Macquarie. The name Kuringai was from the word *kuri*, the Awaba word for 'men'.

The linguist Arthur Capell's work in the 1960s further developed the idea that the Kuringai/Guringai language group ought to be considered separately from the by then established Sydney region groupings of Darug, Dharawal, Darginung, Gundungurra and Awaba. Capell described the Guringai area beginning to the north of Port Jackson, between the Lane Cove River and the coast, and extending as far north as Tuggerah Lake where it merged into Awaba (Attenbrow 2002:33). Early colonial records, however, do not indicate that a different language was spoken to the north of Port Jackson. Attenbrow proposes that the language spoken on the north shore was the same as, or very similar to, the coastal dialect of Darug spoken on the Sydney Peninsula (2002:34).

While early recordings of Aboriginal names are not always clear in terms of whether they referred to individuals, family groups, larger clan groups, languages or areas, in general, language and dialect boundaries are often blurred lines, regardless of the accuracy of historical and colonial observations. Even where dialect was clearly different, Aboriginal people could and did communicate. Captain Tench observed when two Aboriginal men from the coast conversed with an Aboriginal man further inland "they conversed on a par and understood each other perfectly, yet they spoke different dialects of the same language; many of the most common and necessary words used in life bearing no similitude and others being slightly different" (Tench 1793:122). It is likely that several languages were spoken in each larger area and the 'boundaries' of these shifted as groups of people moved around the landscape. The rapid pace of change to Aboriginal communities and their way of life after the arrival of the British also contributes to the difficulty of drawing precise lines. In the northern coastal region of Sydney, as well as Guringai (or Attenbrow's 'coastal Darug'), other common languages would likely have been Darkingung and to the west, the 'inland' Darug dialect.

As well as language differences, the British also noted a difference between the subsistence activities and dialect of Aboriginal people along the coast compared with those further inland on the Cumberland Plain. An obvious subsistence focus was the marine and estuarine resources of the nearby shoreline and areas along the lower reaches of creeks were "much frequented by the coast natives; for the wooded sides of the ridges ... abound with various animals, and the waters below afford a plentiful supply of oysters and other shell-fish" (Govett 1836). Fishing took place both from rock platforms near the shore and from bark canoes and was undertaken by both men and women using spears, lines with shell or bone hooks and nets, with chewed shellfish or discarded fish for bait. According to British observations, these canoes were constructed and used on an 'as-needed' basis. Govett's (1836) description of the fabrication process states that:

“A sheet of bark is cut from a tree about twelve feet [4 metres] in length, and heated over a fire, until it warps, and becomes capable of being bent into the proper shape. The two extremities are then tapered off, bent upwards, and fastened by strong bandages. Two strong sticks are generally placed crossways at either end, to keep it in shape, and thus a boat is formed. The native women as well as the men manage these simple canoes very dexterously, and their position when in them is kneeling, so that with a small piece of bark in either hand, or their wummerah, they are able to guide them, and glide along with silent facility. [...] They never, that I have heard of, venture out to sea in these canoes, though they frequently cross the widest parts of rivers in them with security, and use them mostly in fishing excursions.”

While early European observations of fish species used by Aboriginal people vary widely, archaeological excavation of a midden site at Angophora Reserve on the nearby Barrenjoey Peninsula indicates that people in the local area were catching and eating upwards of 17 fish species including snapper, bream, wrasse, blue groper, catfish and flathead, as well as various shellfish including rock oyster, whelk, hairy mussel and a number of cockle species. Visitors to Broken Bay also noted that ‘craw-fish’, lobsters and crayfish were eaten by the local inhabitants. Marine mammals also occasionally formed part of the diet, with historical evidence indicating that beached whales were eaten and large groups of people gathered to share the resources offered by the carcass (Attenbrow 2002:66).

Historical accounts place a somewhat disproportionate emphasis on the marine and estuarine components of the coastal Aboriginal diet, expressing the initial belief that “the food of the Natives was entirely fish” (Bradley 1788, in Attenbrow 2002), when in fact Aboriginal people used their intimate knowledge of their environment to source a wide variety of foodstuffs and other resources from the land as well as the sea. The wetlands around Warriewood and the Narrabeen Lagoon would have provided another diverse resource base. Terrestrial food resources included kangaroos, wallabies, possums, fruit bats, bush rats, gliders, bandicoots and echidna. A variety of bird and reptile species were also eaten, along with insects/grubs and produce such as bush honey. Bradley (1788) noted that “they lay wait for the Kangaroo [sic] & Birds, many of the trees are notch’d that has not had a Canoe taken from them from which I suppose they get into these Trees to seek or wait for any thing that may come in their way”. Plants also formed an important component of the Aboriginal diet, although the type of plants eaten and at which time of year varied around Sydney based on differing vegetation communities. Plant foods included the roots and rhizomes of orchids and ferns, native yams, leaves, fruits and nectar and, around Pittwater at Broken Bay near Ingleside, the burrawang (*Macrozamia communalis*). The burrawang seeds are highly poisonous and require long preparation including pounding and soaking or placement in running water before they can be consumed, as some of the early settlers discovered to their cost. Nonetheless, being starchy, it was highly nutritious and Aboriginal people were skilled in leaching out the toxins to make it safe to eat. The various micro-environments of the Northern Beaches and hinterland provided a wide range of resources and were likely used by Aboriginal groups year-round.

The expanding settlements of the colonists led to severe changes in the Aboriginal way of life. The loss of traditional lands and access to various resources, conflict with the new arrivals and the spread of diseases such as smallpox and measles contributed to drastic population decline amongst Sydney’s original inhabitants. Within two years of the arrival of the First Fleet, a second expedition Governor Phillip made to Broken Bay was met with less friendliness than the first, and the party saw evidence that smallpox had badly affected the local population, with human remains seen in rock hollows along the harbour (Attenbrow 2002). Ongoing change led to an environment of uncertainty – previously abundant resources were either taken directly by the settlers, destroyed to make way for farms and townships, or had their traditional access cut off. Many groups and individuals moved away from their traditional areas and other people from further afield moved into the Sydney region. Conflict with settlers in areas such as the upper Hawkesbury displaced people who had been living on the land for generations and many moved into the Pittwater area. Skirmishes were also recorded in the Pittwater area during 1805. While many of these Aboriginal people had again moved away by the 1840s, a few were reported as still living along the western foreshores of Pittwater and in Ku-ring-gai Chase in 1900 (NSW NPWS 1996).

One of those who moved south was a man known as Bungaree, who was born north of Broken Bay. He sailed on exploratory missions with Matthew Flinders and Phillip Parker King, acting as an intermediary and interpreter. Becoming well known and well respected by the colonists, he eventually settled in the Sydney region around 1814. In 1815 Bungaree and a group of 16 Aboriginal families were established at an Aboriginal farming settlement on the lower north shore of Port Jackson. It is likely that the Aboriginal people who lived on the farm were also from the Broken Bay area, or from the Guringai language group. The farm was established by Governor Macquarie in an attempt to integrate Aboriginal people into a European way of life and establish more sedentary habits. The experiment provided mixed results, with the huts built by the Governor gradually falling into disuse as the people resumed their traditional way of life moving around the countryside, although Bungaree maintained a presence on the land and sold peaches from his garden there. The huts were rebuilt again in 1822 and a fishing boat and net were given to the group, but the settlement slowly fell into disuse again (Attenbrow 2002:107).

Bungaree was styled as ‘King of the Broken Bay Tribe’ by the British, and referred to as a ‘chief’, which is how the British often addressed those individuals with whom they communicated and interacted the most. However, the status of many of these ‘chiefs’ within their own communities was not always clear. The individuals referred to as ‘chiefs’ by the British were not necessarily group elders or other people that the community recognised as having

authority to speak for them, or play important roles in ceremonial activities (Attenbrow 2002:61). Nonetheless, the influence of Bungaree and his extended family was felt to some degree over a large area between Broken Bay and Port Jackson.

Aboriginal people moved throughout the landscape for a variety of reasons. Some of these were related to resource procurement and seasonal availability of food and raw materials in different areas, while some were related to social interactions such as initiation rites, exchanges and other ceremonial activities. British observations of an initiation ceremony that took place at Farm Cove in 1795 are well documented, with observers noting that many of the people attending had travelled some distance to do so (Attenbrow 2002:131). While the ceremony was conducted on the southern side of Port Jackson, a major ceremonial role was taken by the Gamaragal, who generally lived between Port Jackson and Broken Bay. For the Farm Cove ceremony, Gamaragal men acted as *karadji*. *Karadji* were a group of men considered powerful and occasionally dangerous, taking a principal role in initiations and other ceremonies and providing healing through various procedures when required (Attenbrow 2002:60).

British observations on Aboriginal spiritual and ceremonial life were extremely limited in the first century of settlement, with only relatively brief descriptions of beliefs, rituals and ceremonial rites ever recorded. As Attenbrow (2002:126) notes, “the British colonists obviously understood very little about the original inhabitants’ complex belief system, which was quite different to that of Europeans”. The relationship between Aboriginal people, their landscape and their spiritual beliefs was poorly documented. Beginning in the 1870s, later authors such as the Rev. William Ridley, AW Howitt and RH Mathews provided more detailed observances and information on belief systems and ceremonial life but by that stage a large body of ritual knowledge may have already been lost to the devastating effects of European settlement. The Rev. Lancelot Threlkeld, living near Port Macquarie, also recorded some of the Awabakal beliefs regarding supernatural beings inhabiting their country. This information provides but a brief outline of a rich and complex spiritual life, especially considering that Aboriginal people may have chosen not to share certain aspects and information with those who were un-initiated or otherwise not in an appropriate position to receive the knowledge.

The association between ceremonial or spiritual activities and Aboriginal art was also a later point of interest. While members of the First Fleet made some limited observations of the prolific rock engraving sites around the Sydney region, it was not until later that more focused studies took place. Governor Phillip noted in a letter in 1788 that during his travels around Port Jackson, Botany Bay and Broken Bay he had seen many engravings of “men, shields, and fish roughly cut on the rocks; and on top of a mountain I saw the figure of a man in the attitude they put themselves in when they are going to dance” as well as a “large lizard”. White and Tench add in their own writings that they also saw engraved figures of canoes and birds. Later observations by GF Angas and WR Govett in the 19th century described engravings from Port Hacking to Broken Bay. Angas in particular was intrigued by the engravings and sought to discover their meaning and significance to Aboriginal people in the Sydney area. Queen Gooseberry, Bungaree’s widow, then the eldest person remaining amongst her group, was asked by Angas about the engravings around Sydney’s north shore. She initially expressed reluctance to discuss their significance, maintaining that “such places were all *koradjee* ground, or ‘priests’ ground’ and that she must not visit them” (Attenbrow 2002:135). The supernatural associations Gooseberry held with the engravings made her reluctant to visit them as “too much dabble-dabble walk about” and that mystic dances and/or festivals were held at the sites, as well as fights and other dances. For this reason, the engravings were not regular sites of habitation. Attenbrow (2002:135) infers that the various rites referred to by Gooseberry were conducted by *koradjee* at the sites, including initiation ceremonies when other people would visit them. The Ingleside area contains numerous rock engraving sites with various motifs and it is possible they were used by Aboriginal people in this way. The traditional and spiritual associations of Aboriginal people with such ceremonial areas remain present in the contemporary Aboriginal community, with the engraving sites providing a direct physical link with the landscape and with their heritage.

3.1 Contemporary cultural associations

Aboriginal culture and cultural heritage is dynamic and continues to evolve in contemporary times. While the ethnohistorical and historical record may be limited in some areas, there is no denying the strong contemporary cultural associations that Aboriginal people and groups hold for the landscape. The nature of these contemporary associations in regard to the current Ingleside study area has been explored as part of this study. It is the aim of the consultation process to illuminate the way in which Aboriginal people relate to the Ingleside area today, based on their own traditional affiliations, identities and cultural histories.

The consultation process to date has identified a number of people who have indicated their interest in Ingleside and the presence of a recognised Native Title Claim in the northern portion of the study area demonstrates the tangible link that members of the contemporary Aboriginal community retain to the land. Aboriginal cultural heritage values identified during the consultation process enriches our understanding of the area.

4 Register Searches and Previous Archaeological Work

4.1 Database search (AHIMS)

A search of the OEH Aboriginal Heritage Information Management System (AHIMS) was conducted on 25 November 2013 to identify any registered (known) Aboriginal sites within or adjacent to the Ingleside Precinct, as well as to determine the type and distribution of recorded sites in the area. The AHIMS database search was conducted within the following coordinates (GDA):

336210E to 341460E
6269890N to 6275030N
Number of sites registered on the AHIMS database: 67

The distribution of registered Aboriginal sites within these coordinates is shown on Figure 2. Frequencies of site features within the AHIMS database search area are summarised in Table 1 below.

Table 1. Site types and context from OEH AHIMS database search

Site Context	Site Features	Number	Frequency
Open	Art (Pigment or Engraved)	44*	65.5%
	Art (Pigment or Engraved); Grinding Groove	2	3.0%
	Art (Pigment or Engraved); Water Hole	1**	1.5%
	Grinding Groove	2	3.0%
	Grinding Groove; Water Hole	1	1.5%
	Shell; Artefact	3	1.5%
	Potential Archaeological Deposit (PAD)	1	4.5%
Closed	Art (Pigment or Engraved)	3	4.5%
	Art (Pigment or Engraved); Artefact	1	1.5%
	Art (Pigment or Engraved); Artefact; Shell	1	1.5%
	Artefact	2	3.0%
	Artefact; Shell	1	1.5%
	Artefact; Shell; Burial	1	1.5%
	Shell	3	1.5%
	Potential Archaeological Deposit (PAD)	1	4.5%
Total		67	100%

*45-6-1229 not a site, **45-6-1381 not a site

4.2 Discussion of AHIMS search results

The frequency and diversity of registered Aboriginal archaeological sites within the AHIMS search area demonstrates that the Ingleside Precinct and surrounds have retained material evidence of varied Aboriginal landscape use. As well as determining if there are any registered (known) sites within a given area, an AHIMS search also helps to characterise local archaeology by illustrating the distribution of sites within the local landscape. Results from the AHIMS database search divide archaeological sites into two contexts: open, meaning existing in an open landscape context, and closed, meaning associated with a rock shelter.

AHIMS search results indicated the predominance of art sites occurring in open contexts (65.5% of sites), all of which are described on AHIMS as 'rock engravings' as opposed to pigment art. Engraving sites occur on outcroppings of suitable rock in a variety of topographic contexts but are more common along ridge tops and in other areas of elevated ground. The underlying geology of the study area is conducive to the creation of engraving sites, being composed of Hawkesbury sandstone (see Chapter 5). In two cases, these art sites were also associated with grinding grooves. Two instances of grinding grooves alone are also recorded. One grinding groove site was also recorded in association with a water hole. Two sites featuring artefact/s and shell (i.e. midden sites) were also recorded in open context. One potential archaeological deposit (PAD) without surface archaeological material has also been recorded.

Two entries in the AHIMS register were subsequently determined to not be Aboriginal archaeological sites: 45-6-1229 listed as an engraving site in open context and 45-6-1381 listed as an engraving site in open context featuring a water hole. Additionally, site 45-6-0095 was not an archaeological site but rather the site card was an amalgamation of several separately registered sites. Koettig's (1993) Ingleside study recommended the site record be deleted. The non-site AHIMS listings were not further considered for the Precinct Planning process.

Map removed from public document.

Figure 2. Previously recorded sites (AHIMS search results)

A number of archaeological sites are also recorded in rockshelters within and around the study area (closed context sites). The most common closed context sites are shelters with art (4.5%) and shelters with shell (i.e. midden deposit, 4.5%). Two shelters with artefactual deposit alone are also recorded. Shelters with combinations of these features are also recorded. One recorded shelter contains artefact/s, shell deposit and also has a burial recorded within. One shelter with potential archaeological deposit has also been recorded. The range of site types and features indicated in the AHIMS search results illustrate the rich archaeological resource in around the study area, with many and varied manifestations of past Aboriginal people's presence and use of the environment and natural resources of the region.

4.3 Other heritage registers and database searches

In addition to the search conducted on AHIMS, other sources of information including heritage registers and lists were also searched for known Aboriginal heritage in the vicinity of the Ingleside Precinct. These included:

- Pittwater Local Environmental Plan 1993 (now repealed)
- Pittwater Local Environmental Plan 2014
- State Heritage Register and State Heritage Inventory
- Sydney Water Heritage Register
- Commonwealth Heritage List
- National Heritage List
- Australian Heritage Database
- Australian Heritage Places Inventory
- Historic Heritage Information Management System (HHIMS).

Four heritage items and one archaeological site are listed within the study area on the Pittwater Local Environmental Plan (LEP) 2014. The heritage items and the archaeological site are not Aboriginal sites, relating rather to the historic heritage of the Ingleside area.

The Ku-ring-gai Chase National Park, along with Lion, Long and Spectacle Island Nature Reserves, is a listed place on the National Heritage List (Place ID 105817). The National Heritage List is Australia's list of natural, historic and Indigenous places of outstanding significance to the nation. Places are listed and protected under the *Environment Protection and Biodiversity Conservation Act 1999*. The Place was included in the National Heritage List on 15th December 2006 by Special Gazette of the Commonwealth of Australia (No. S226). The listing specifically relates to the Natural Heritage and biodiversity values of the Place, as specified in the Schedule attached to the gazettal notice. While the Park's Aboriginal cultural heritage values are not specifically included in the listing criteria, the presence of Aboriginal sites was noted and forms a key component of the National Park's value to the community. The National Heritage Database record for the place notes that:

"Extensive evidence of Aboriginal use and occupation occurs in the place, with over 800 sites or locations with physical evidence of Aboriginal use recorded. Shell middens along the foreshore are the most common type of evidence recorded. Other evidence includes rock engravings and paintings, grinding grooves, stone arrangements, burials and occupation sites. No systematic survey has been undertaken across the park, and it is likely that additional sites occur within the park".

Two portions of Ku-ring-gai Chase National Park fall within the Precinct (see Figure 3). The AHIMS heritage register search showed that Aboriginal archaeological sites are situated in the portion of the Park in the southwest margin of the Precinct, off Mona Vale Road. There were no known (identified) Aboriginal archaeological sites on AHIMS in the northern portion off Cicada Glen Road. Aboriginal objects (sites) within the portions of the National Heritage Listed place are protected and regulated under the *National Parks and Wildlife Act 1974*. While the listed place is not in itself an Aboriginal heritage item, the Aboriginal archaeological sites within the portions of the Place are included in this assessment.

Map removed from public document.

Figure 3. Aboriginal heritage listed sites and places

4.4 Previous archaeological investigations

Early interest in Aboriginal archaeological features of the Ingleside area and surrounds was demonstrated by W.D. Campbell, a government surveyor who made a study of Aboriginal rock engravings around Sydney in the late 19th century. His detailed diagrams and descriptions of the engravings were published in *Memoirs of the Geological Survey of New South Wales* in 1899 and formed a starting point for further archaeological studies in the 20th century. During a series of surveys undertaken between 1940 and 1960, F.D. McCarthy of the Australian Museum relocated many of Campbell's site recordings and provided updates on condition, location and composition of the sites in his *Records of the Rock Engravings of the Sydney District* (McCarthy 1954). McCarthy (1983) also recorded a series of previously unidentified sites in the area, chiefly rock engravings.

In the 1980s and 1990s, a number of systematic archaeological surveys were conducted in the vicinity of Ingleside Precinct. One of the earliest of these was an archaeological survey conducted on a three hectare property [REDACTED] in the south east of the current study area. Investigation took place ahead of [REDACTED] land recontouring for an active recreation space by Warringah Shire Council (Byrne 1984). Rock engraving site 45-6-0827 (originally recorded by Campbell) was relocated during the survey, [REDACTED]. The AHIMS coordinates registered for this site place it [REDACTED] within Garigal National Park. The distinctive nature and arrangement of the engravings (see Figure 4, Plates 1 and 2) allowed positive identification of the site as 45-6-0827 despite the incorrect coordinate location. This site, based on maps and various descriptions of the site's location, therefore appears to be located within Ingleside Precinct. Despite the previous confirmations of this site's location [REDACTED] by various subsequent recorders, the location data does not appear to have been updated as the site is not included in the AHIMS search results.

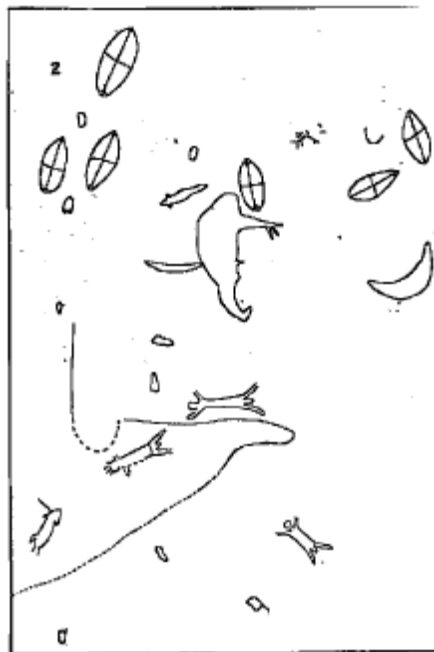


Figure 4. Engravings at 45-6-0827 – not in relative positions and not to scale (Campbell 1899)



Plate 1. Engravings at site 45-6-0827
(photo from AHIMS site card)



Plate 2. Engravings at site 45-6-0827
(photo from AHIMS site card)

Site 45-6-0038 was also identified during the survey, with an additional recording of a pair of small engraved ovals and two short parallel lines were identified on one of the large sandstone exposures [REDACTED] south east of site 45-6-0827. The site was assessed as displaying low archaeological and cultural significance (Byrne 1984). A section 90 consent was subsequently issued for site 45-6-0038 (Permit # 450012) and the site card was updated to note the site was destroyed in 1991. The site is still listed as 'valid' on the AHIMS database.

The Garigal National Park, south of the current study area, was subject to an archaeological study for the NPWS (Gunn 1992). The area investigated during the project included an area of 900 hectares to the south west of the Ingleside Precinct, including the majority of the Deep Creek catchment area and the lower valley of Middle Creek to the south. The study aimed to relocate previously recorded sites within the National Park and survey a sample of the terrain to search for previously unrecorded sites. The majority of previously identified sites consisted of rock engravings recorded decades earlier by Campbell and the distribution of known sites throughout the study area suggested the majority of the Park had been previously investigated, albeit in a non-systematic way.

The survey concentrated on relocating a proportion of the previously recorded sites to check the reliability of existing records and also aimed to identify any unrecorded sites, particularly open artefact scatters and shelters with deposit, as these site types were considered unlikely to have been discerned by previous (often amateur) recorders. In total, 17 sites were located – 12 previously recorded and five new recordings. New recordings included two shelters with art, two shelters with archaeological deposit and one engraving site. An additional 23 sites were known to have been previously recorded within the Park but the location of eight of these was considered unreliable and in need of further investigation. It was confirmed during the survey that site 45-6-0827 was not located in the Park. All sites identified in the Park were located on either the ridge top or slope landforms, with none located along the creeklines and drainage flats. The author noted the many inconsistencies and errors present in the AHIMS database which hindered relocation of some previously recorded sites (Gunn 1992:26).

A proposal by the then Department of Main Roads to widen a portion of Mona Vale Road led to an archaeological survey of a 50-200m wide corridor of land along the existing road alignment between McCarrs Creek Road and Alan Street (Koettig 1981). The survey identified one previously recorded shelter with art (45-6-1616), which contained a series of hand stencils. Subsequent inspections of the site (in 1987 and again a decade later, see Dallas 1997) also noted the presence of artefactual deposit beneath the dripline. Three quartz artefacts were identified. The site was considered to be in good condition and relatively undisturbed, with only a small amount of modern charcoal and chalk graffiti.

A number of additional, previously unidentified engravings at known archaeological sites were also recorded. The author noted that even though the study area had been investigated several times in the past, the lack of a systematic survey meant that sites remained to be found, even in a narrow corridor of land. In particular, an additional engraving was identified at previously recorded site 45-6-0071 [REDACTED] and a new series of engravings was identified [REDACTED]. The newly identified engravings [REDACTED] included an anthropomorphic figure and an unidentified figure, described as a 'ghost' (see Figure 7, Plate 4). These engravings were described as "Area B" of existing site 45-6-0071 and not registered separately on AHIMS.

A further proposal to upgrade Mona Vale Road between McCarrs Creek Road and Powderworks Road prompted further archaeological survey (KNC 2011, 2015). Two sites were confirmed within the study area of the proposed road upgrade (site 45-6-1228 and newly recorded site MVRW 1). Site 45-6-1228, known as 'Whale Rock' is a group of rock engravings on a sandstone platform [REDACTED]. Site MVRW 1 was an engraved oval motif on a sandstone bench [REDACTED]. The road upgrade was designed to ensure the sites were conserved.

Archaeological survey was carried out for a proposed sewer line between the suburbs of Terrey Hills and Mona Vale, passing through Ingleside (Corkill 1990). The study area generally followed the alignment of Mona Vale Road, however several sections of work were proposed for undeveloped bushland areas. Previously recorded rock engraving sites 45-6-0071, 45-6-0072, 45-6-1278 and 45-6-1617 were relocated during the survey but were not located in the proposed impact area of the project. No new sites were identified. It was noted that ground surface visibility was minimal (Corkill 1990:7). Further investigation of the same study area took place in 1993, related to proposed installation of fiberoptic telecommunications cables (Oakley 1993). The proposed cable route followed the same corridor as was investigated in the Corkill study and no new sites were identified.

Further north, a section of Mona Vale Road was investigated ahead of a proposed road upgrade (Oakley 1998). Archaeological field survey confirmed the presence of previously recorded site 45-6-0071 [REDACTED]. Recorded by Sim in 1964, the motifs originally listed on the site card – recorded as two echidnas, three ovals and one possible snake patterned with transverse lines (see Figure 7, Plate 3) were partially relocated. The ovals and a further unidentified figure recorded by Koettig in 1981 were not visible at the time. The engravings described by Koettig (1981) as "Area B" of existing site 45-6-0071, [REDACTED], were relocated and found to be within an area to be impacted by the proposed works. Redesign of the road project avoided impact to the site.

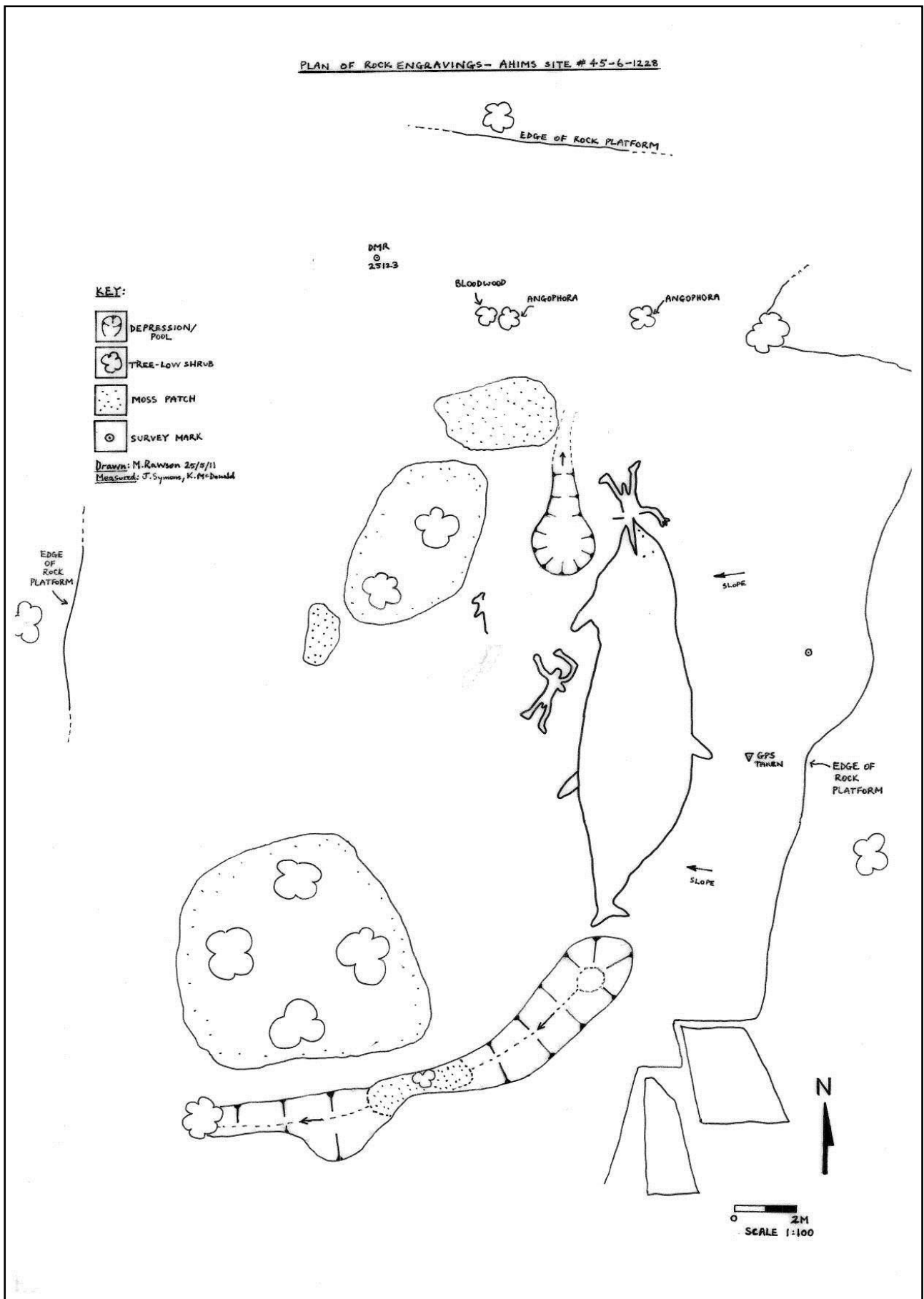


Figure 5. Plan of site 45-6-1228 - Whale Rock (KNC 2011:18)



Figure 6. Engravings at 45-6-0071
(diagram from Sim 1965:287)



Plate 3. Patterned "snake" visible above depression
in the rock, 45-6-0071

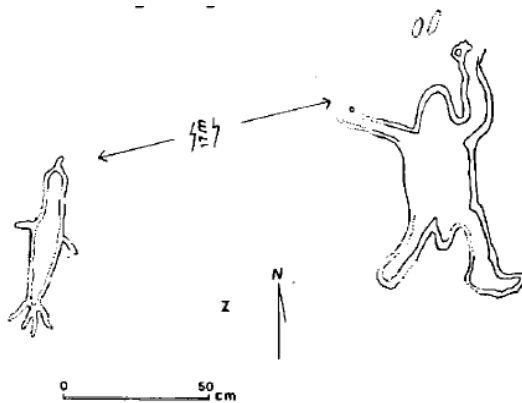


Figure 7. Engravings at 45-6-3024/45-6-3101 (previously
45-6-0071 "Area B", Koettig 1981)

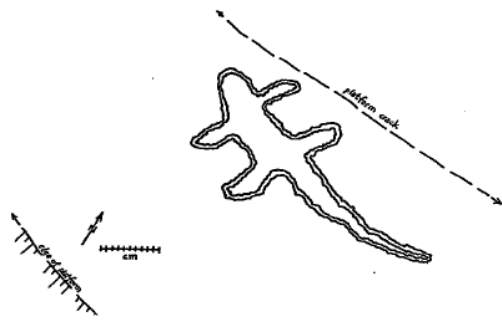


Plate 4. Human figure at 45-6-3024/45-6-3101

Ongoing archaeological recording by the Aboriginal Heritage Office (AHO), in association with Pittwater Council, has resulted in the registration of engravings on AHIMS as sites 45-6-3024 and 45-6-3101. Examination of the site cards and location data suggests these may be duplicate entries and further investigation was needed. The AHO also confirmed that the Church Point Shelter with Midden site (AHIMS 45-6-0812; AHO ref. PITT095) was not located within the precinct. This rockshelter with midden was identified in 1978, described as a small shelter (1.9m high x 3m long) in a honeycombed sandstone overhang. The site card documented that "relics to a depth of 1m [were] excavated" and included stone flakes, various shellfish species and charcoal. Site condition was described as "not so good", with the surrounding area largely destroyed by development and subdivision. More detailed recording or a report of the excavation results was sought during the Step 1 phase of investigation however the AHIMS registrar has advised that no other details or reports pertaining to the excavation of this site are available. The registered AHIMS coordinates placed the site near the northern boundary of the Ingleside Precinct. The registered location of the site was inspected during the field survey however the site was not relocated. An area to the north has been subdivided and developed and based on the location description provided on the site card, it was likely the shelter was located further to the north, closer to Church Point as indicated by the site name. The AHO confirmed these findings with their investigations and advised the site was not located within the precinct.

Survey was also carried out in 1995 for a proposed gas pipeline route along Mona Vale Road between Forest Way, Terrey Hills and Beaconsfield Street, Newport (Navin Officer 1995). Seven engraving sites and one midden site had previously been recorded within the study corridor, however the survey was unable to relocate three of these due to incorrect coordinates registered on AHIMS. Two previously unrecorded sites, both rock engravings, were identified during the field survey (45-6-2520 and 45-6-2528).

The single motif at 45-6-2528 was described as a “splayed quadruped with a tail, and broad rounded head, [...] consistent with a lizard motif type” (Navin Officer 1995:22) (see Figure 8, Plate 5). Site 45-6-2520 displayed two figurative motifs that were outlined by unjoined linear pits. It was considered probable that the pits were formed with a metal tool (likely a chisel) indicating the markings dated to the historical period. The site was, however, considered possibly Aboriginal in origin as the “form and shape of the motifs [...] appear to be consistent with Aboriginal schemas” (Navin Officer 1995:22).



**Figure 8. “Lizard” motif at 45-6-2528
(from Navin Officer 1995:28)**



Plate 5. “Lizard” motif at 45-6-2528

Archaeological investigation related specifically to potential future land releases at Warriewood/Ingleside has also been conducted. In 1993, an Aboriginal heritage assessment was carried out for the Warriewood/Ingleside Release Area, which included the current Ingleside Precinct (Koettig 1993). The aim of the study was to assess land within the release area in order to develop planning guidelines and management strategies for Aboriginal heritage that may be affected by future development plans. Koettig noted that at least 11 and possibly 12 Aboriginal sites had been previously recorded within the Release Area. The majority of these were rock engraving sites (68%) which were located along ridgetops. It was considered that the low proportion of shelter sites (21%) in the Release Area was unrepresentative, probably related to historic recording bias (i.e. over-emphasis on engraving sites) and also access difficulties along the heavily vegetated slopes and creeklines. Five previously recorded sites could not be relocated at the time of her study and two had been destroyed. In one location a previously recorded engraving was not relocated, but other unrecorded motifs were found at that location. She noted that the range of motifs present in the area were typical of types recorded at other sites around the Sydney area and wider region, with some exceptions such as the patterned snake motif at site 45-6-0071, which was considered very unusual (Koettig 1993:28).

The Release Area was considered likely to contain a large number of unrecorded sites, particularly shelters with occupation deposit and/or art. It was recommended that a representative sample of sites be preserved in the Release Area and that consideration of site location should be included in any future development plans for the area. Any sites likely to be destroyed by future development were recommended to be investigated archaeologically ahead of any disturbance. Where feasible, it was also suggested existing sites undergo mitigation and management works to halt further deterioration. Areas considered to have suffered only low to moderate disturbance and retaining archaeological potential were recommended to be subject to more intensive survey ahead of development.

An Aboriginal heritage assessment conducted by Kayandel in 2008 also covered the Ingleside Land Release Area, an area broadly the same as the current study area. The assessment included an archaeological field survey, which failed to relocate a number of previously recorded sites due to incorrect coordinates or access restrictions.

Many of the professional archaeological investigations discussed in this chapter have noted difficulties in relocating previously recorded sites in the Ingleside area, mainly due to coordinates listed on AHIMS or location references to landmarks that no longer exist. In many cases where sites *have* been relocated, new coordinates have either not been supplied to AHIMS or have not been updated on the database and site records. Regardless of discrepancies in site recording, however, it is clear that the Ingleside area contains many Aboriginal archaeological sites, with the continued possibility of identifying new sites even in areas that have been subject to previous assessment. The identification and recording of rock engravings in particular is influenced by light quality and angle of illumination, with shallower motifs sometimes only readily visible in certain lighting conditions. The quantity and nature of known sites and the outcomes of previous archaeological investigations in the study area indicate that the landscape of Ingleside is one rich in both archaeological and cultural meaning.

5 Landscape Context

5.1 Geology, soils and landform

The Ingleside Precinct is located on the north eastern margin of the Hornsby Plateau, a major physiographic region of the Sydney Basin. The Sydney Basin is a large geological feature that stretches from Batemans Bay to Newcastle and west to Lithgow. The formation of the basin began between 300 to 250 million years ago when river deltas gradually replaced the ocean that had extended as far west as Lithgow (Pickett and Alder 1997). The oldest, Permian layers of the Sydney Basin consist of marine, alluvial and deltaic deposits that include shales and mudstone overlain by Coal Measures. By the Triassic period the basin consisted of a large coastal plain, with deposits from this period divided into three main groups, the Narrabeen Group, Hawkesbury Sandstone and the Wianamatta Group (Clark and Jones 1991, Pickett and Alder 1997). The Hornsby Plateau is a broad, dissected elevated plateau of Hawkesbury Sandstone capped in places by shales of the Wianamatta Group. Ingleside is located immediately west of the Warriewood escarpment, forming the edge of the Hornsby Plateau which drops down to the low undulating Erina Hills of Sydney's Northern Beaches. The tide-dominated drowned valley estuary of Pittwater is located approximately 700m north east of the northern Ingleside Precinct boundary, with the McCarrs Creek tributary inlet approximately 300m to the north west.

Underlying geology of the Ingleside Precinct is dominated by Hawkesbury Sandstone (Rh), a mostly medium to coarse grained lithic sandstone with minor shale and laminate lenses (Figure 9). To the east of Ingleside Precinct, the hills of the Northern Beaches consist of interbedded laminate, shale and quartz of the older Garie Formation of the Narrabeen Group (Rnn). Occasional deposits of Hawkesbury Sandstone exist along elevated ridgelines, while Quaternary alluvial and estuarine sediments of silty to peaty quartz sand, silt and clay (Qha) underlie areas of lower elevation. Man-made fill (mf) is also present in areas close to the foreshore.

Topography within the local area is varied, consisting of broad convex ridgetops, relatively flat elevated plateaux and moderate to steep sideslopes above narrow convex valleys containing minor order drainage lines. Broader hanging valleys with lower gradient slopes also abut the main ridgeline and spurs. The Ingleside Precinct study area generally includes ridgetops, plateaux and upper slopes, as well as an area of sideslope and creek valley around Mullet Creek between Mona Vale Road and Powderworks Road. Ridgelines tend to run north-south or to the north east. The main ridgeline (followed in the south west by Mona Vale Road, then Lane Cove Road and Walter Road) forms the watershed between the McCarrs Creek catchment to the north (including Cicada Glen Creek and Wirreanda Creek), the Deep Creek catchment in Garigal National Park south west of Mona Vale Road and the Narrabeen Lakes catchment (including Mullet Creek and the headwaters of Narrabeen Creek).

A number of soil landscapes exist in the study area as a result of the many geomorphological processes acting on the underlying topography and geology (Figure 10). The high points of the study area are generally characterised by the shallow erosional Lambert soil landscape, typical of the convex ridges and coastal headlands of the Hornsby Plateau (Chapman and Murphy 1989). Lambert soils are prone to severe erosion, with rock outcrop approaching 50%. A small amount of the deeper Gynea soils (also erosional) are present in the northern portion of the Ingleside Precinct, where gradient is less steep. Localised rock outcrop and low broken scarps are common.

Adjacent to the ridgetops, residual Somersby soils are present on the low rises and low gradient surfaces of the deeply weathered sandstone plateaux. Rock outcrop is generally absent and soils are moderately deep to deep with laterite gravels. These soils are associated with areas of relatively gentle topography. Where gradient is increased, colluvially derived Hawkesbury soils are present on the steeper portions of upper slopes and sideslopes of the many ridgelines. This shallow soil type consists of loose, coarse quartz sand and sandy clay loam subject to severe sheet erosion, gully erosion, mass movement and rock falls. Rock outcropping of underlying sandstone is above 50%. Rocky horizontal benches, broken scarps and boulders are common on sideslopes.

The fluvial Oxford Falls soil landscape is present within the elevated hanging valleys of the study area. Localised areas of rock outcrop on broad benches and broken scarps are common on the gentle slopes above the wide valley floors. Soils are moderately deep to deep deposits of loose loamy and clayey sands. Soils are generally stable where vegetative cover has been maintained. Hanging valleys containing this soil type are often poorly drained and swampy.

The presence and survivability of archaeological objects in the study area is closely tied to topography and soil landscape. While archaeological objects can be found anywhere, open artefact scatters and isolated finds in open landscape contexts are unlikely to have been conserved in situ due to erosion and soil movement. Surface rock outcropping allows for the creation of rock engravings, while benched outcropping on sideslopes and resulting sandstone overhang is conducive to the formation of rockshelters. Artefactual deposit is likely to survive almost exclusively in the closed environmental context of rockshelters, where material may accumulate and remain relatively undisturbed.

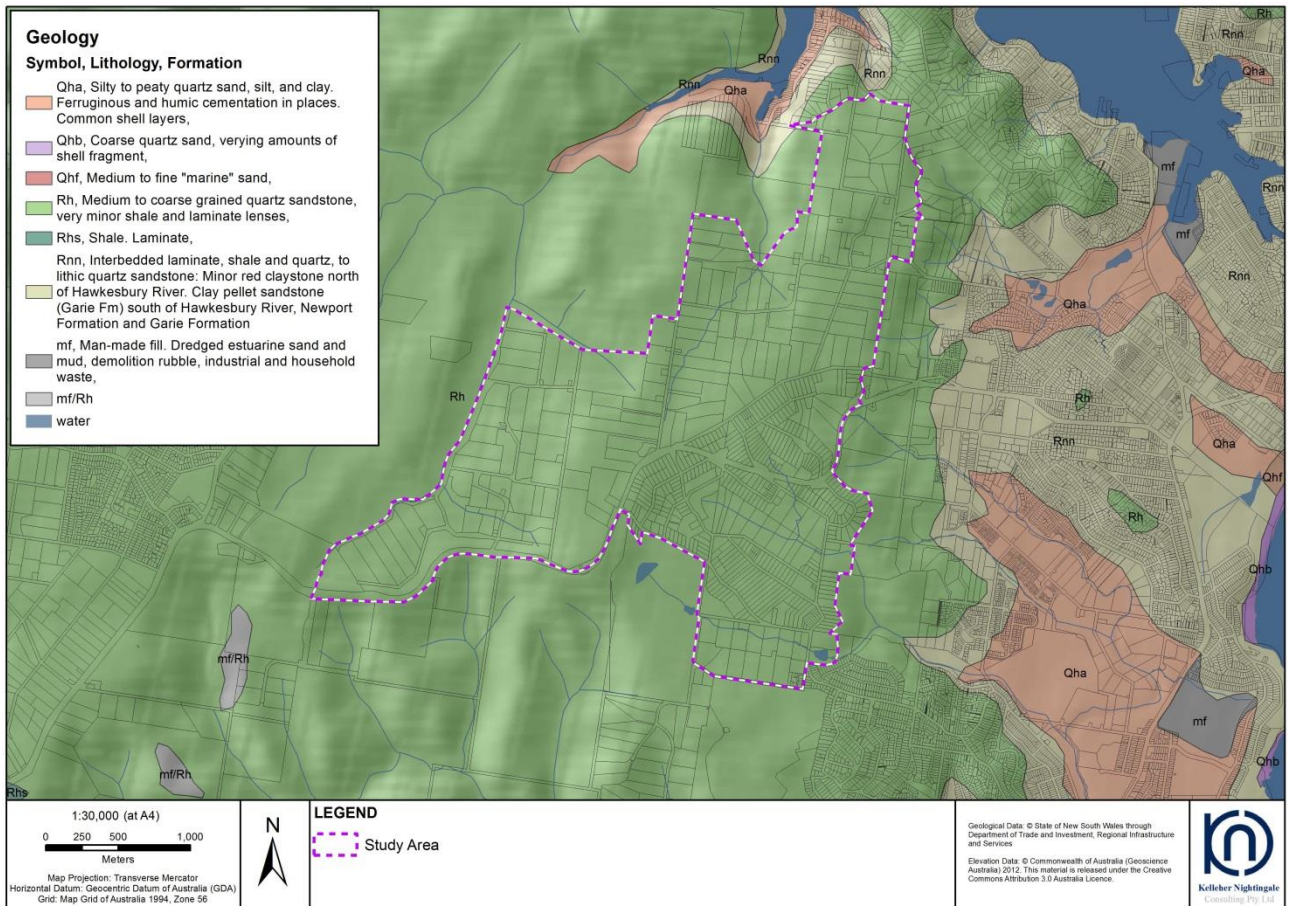


Figure 9. Geology of Ingleside Precinct and surrounds

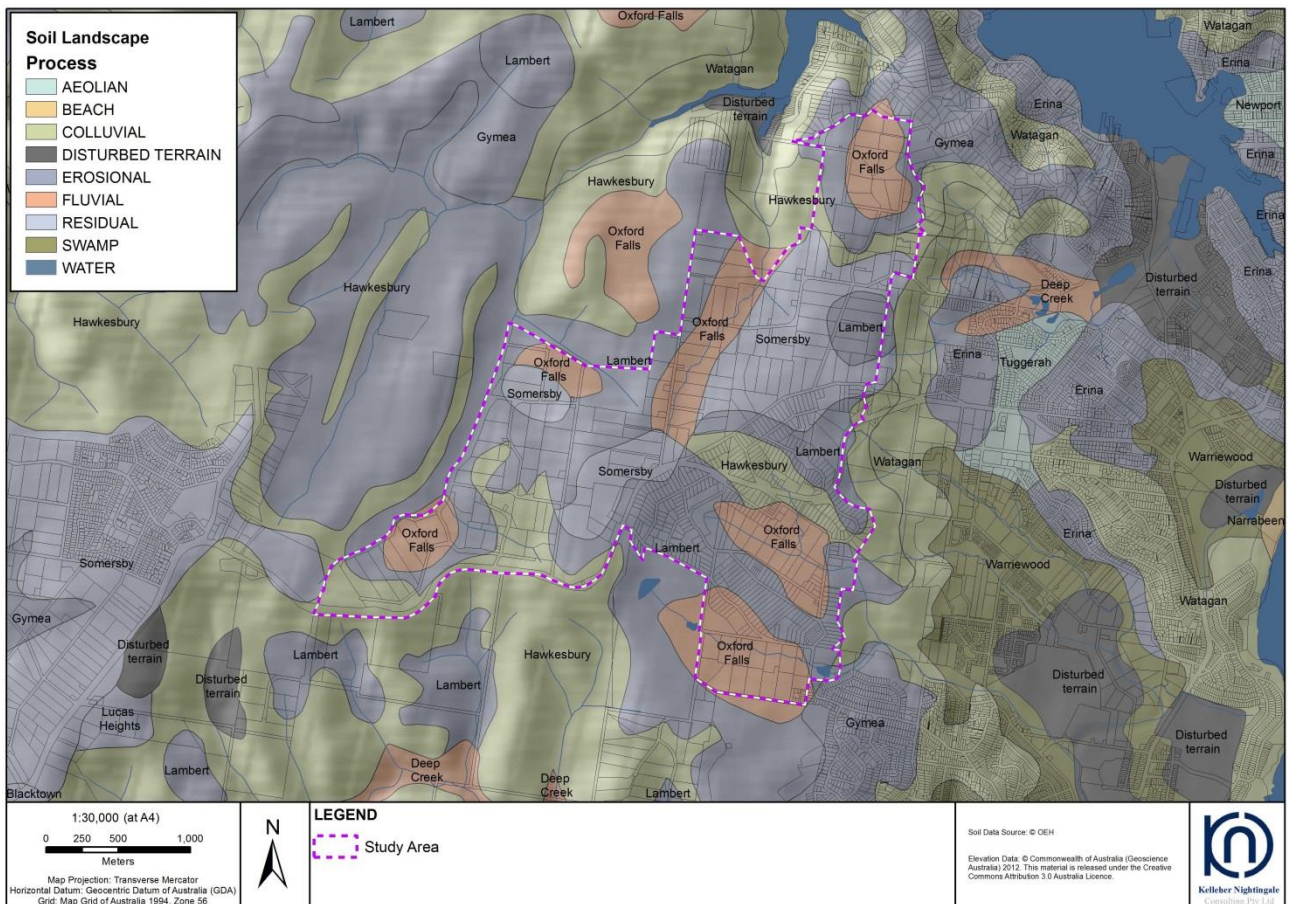


Figure 10. Soil landscapes of Ingleside Precinct and surrounds

6 Site Predictions

Previous archaeological investigations, ethnohistorical and historical background and an analysis of the landscape context of an area all provide data that assists in formulating predictions of expected site types and distribution within Ingleside Precinct. Many of the discussions regarding the distribution of archaeological material in the region around Ingleside focus on a combination of suitable geology and low disturbance. The underlying Hawkesbury sandstone geology of the area is conducive to the formation of rockshelters and this site type is well represented among previously recorded sites in the wider region. Shelters containing art, archaeological deposit or a mixture of both are numerous to the north and east of the study area. Deposit containing midden material becomes more frequent towards the coast, as do open context middens, reflecting the exploitation of marine resources in these areas.

Artefacts identified in archaeological deposits in the local area are predominantly quartz, presumably sourced locally from occurrences in the Hawkesbury sandstone. Quartzite, chert and mudstone artefacts have also been identified. Preservation of archaeological deposit in open contexts (i.e. artefact scatters and isolated finds) is relatively rare in the region. This is partially due to environmental conditions unfavourable to their survival such as steep slopes and erosional soils, but may also relate to the generally easy availability of rockshelters in areas of Hawkesbury sandstone. Environmental contexts that would have been more favourable to preservation of open context sites such as flat ridge tops and plateaux with more stable residual soil landscapes were however the focus for initial European settlement of the region and have a longer history of European disturbance.

The Hawkesbury sandstone also outcrops as benches and slabs which can provide flat or gently sloping surfaces suitable for engraving sites and grinding grooves. Grinding grooves occur on suitable sandstone outcrops that also offer a source of water, whether within or adjacent to creeklines or due to seepage and collection on the rock surface after periods of rain. Engraving sites are the most commonly identified site type in the wider region and occur widely across the ridge and spurs above tributaries draining to Narrabeen Creek and McCarrs Creek. Previous investigations of the area have noted issues of exposure and visibility, with suitable slabs partially buried or heavily vegetated and the possibility exists that further engravings are located in these areas.

Various resources that would have been valued by Aboriginal people are present within Ingleside Precinct, including various native plant and animal species, sources of fresh water, good views over the surrounding countryside from the main ridgeline and spurs, exposed sandstone for grinding grooves and engravings, rock shelters suitable for use as campsites and an elevated ridge corridor allowing easier transit between the coast and the hinterland further west. Aboriginal community consultation for the current project has also identified that these resources remain significant to the contemporary Aboriginal community and form part of their cultural heritage. Significant heritage values have also been identified within Ku-ring-gai Chase National Park and Garigal National Park, with two parts of the listed heritage item overlapping the Ingleside Precinct in the north west and south west. Based on the regional and local context outlined in the preceding sections, several predictions may be made about the nature of the archaeology that may be expected in the study area.

- Archaeological sites are likely to consist of rock engravings on exposed level, relatively smooth sandstone platforms, in both ridge crest and slope contexts.
- Rock shelter sites are likely to occur where suitable overhangs have formed in the local sandstone bedrock. Overhangs are more likely to occur on the steeper slopes of a ridgeline, but may also form beneath outcrops in flat to gently sloping crest contexts.
- Shelters may contain engraved or painted art executed in charcoal or ochre, and may contain archaeological deposit where disturbance to the shelter floor has been limited and some depth of sediment exists.
- Open artefact scatters and/or isolated finds are unlikely. Archaeological deposit is more likely to have been preserved in closed context rock shelter sites.
- Midden sites are unlikely given the distance from the coast or other significant bodies of water, but may exist in proximity to larger creeklines on the borders of the Precinct.
- Grinding grooves may exist on sandstone outcroppings that occur in proximity to creeklines or collect water after rain.
- Clearance of original vegetation and increasing urbanisation along the ridgeline lessens the likelihood of identifying culturally modified trees, but old growth trees may be present in the more heavily vegetated parts of the study area and have the potential to display scars of Aboriginal origin.
- Archaeological sites are more likely to be identified in areas that have been subject to less intensive disturbance. Conversely, identification of open context sites may be aided by some measure of ground disturbance where this has increased the visibility and exposure of archaeological material.
- It can be expected that locally derived quartz will be the most commonly encountered artefact raw material.

7 Field Methods

Field survey was carried out over several occasions in early 2014. All registered Aboriginal stakeholders were invited to participate in the field visits and archaeological survey. The survey team included Adam Madden (MLALC), Tracey Howie (Awabakal and Guringai Native Title Group), Kyle Howie and Laurie Bimson (Guringai Tribal Link Aboriginal Corporation), Paul Goddard and Gordon Workman (DLO), Jennifer Norfolk (Tocomwall), Tony Williams, Shane Williams and Andrew Williams (individuals), Dr Matthew Kelleher, Mark Rawson and Stirling Smith of KNC.

Terrain across the Precinct was characterised by broad convex ridgetops, relatively flat elevated plateaux and moderate to steep sideslopes above narrow convex valleys containing minor order drainage lines. Ridgelines tended to run north-south or to the north east, with the main ridgeline within the study area described by the alignment of Mona Vale Road in the south west, then Lane Cove Road and Walter Road to the north east. The majority of historical and contemporary land use and development, including road construction, has occurred along this ridgetop and side spurs. While these parts of the study area have been mostly cleared of vegetation, large parts of the wider Ingleside area remain undeveloped and retain thick bushland.

Field survey was carried out on publically accessible lands and government-owned lands within the precinct as well as on a number of private properties for which permission to access was granted for the study. All survey areas were accessed and inspected on foot. The location of each survey area was documented on an aerial map, with observations made during the inspection documented by the survey team. Each survey area was photographed and an assessment made of archaeological potential based on the location of identified sites, landform and disturbance.

Based on the obtrusive (i.e. readily visible) context of known sites in the Precinct, particular attention was paid to areas of outcropping sandstone and these were closely inspected for rock engravings and grinding grooves, while overhangs and shelters were inspected for the presence of art and archaeological deposit. Thick vegetation limited ground surface visibility for the majority of the study area, however open context sites were expected to be rare and this is not considered a particular limitation to effective survey coverage of the Ingleside Precinct.

The survey team was equipped with aerial maps showing the boundaries of the study area and the location of previously recorded sites. A core aim of the field survey was to relocate and confirm (where possible) the location of previously recorded sites listed on the AHIMS database, as the Step 1 background review and gap analysis investigations determined that gross inaccuracies appeared to be present in the registered coordinates of older sites. Where sites were relocated, a new GPS recording was taken and observations on site condition and the accuracy of AHIMS data were made. All recordings were made in GDA94 using a handheld GPS unit.

New site recordings were also completed for previously unidentified sites. Location data, site descriptions, relation to other known sites and field sketches were recorded and photographs taken. AHIMS Site Recording Forms for newly identified sites will be submitted to the AHIMS Registrar for inclusion on AHIMS in accordance with section 89A of the *National Parks and Wildlife Act 1974*. Updated location data for previously recorded sites will also be made available to the AHIMS registrar so that existing site records may be updated.

Results of the field survey, along with a description of all Aboriginal archaeological sites identified within the Ingleside Precinct, are described in section 8.

7.1 Survey coverage

Overall ground surface visibility across the study area was low, primarily limited to vehicle tracks and small erosion scours. Primary ground cover in developed and residential areas of the Precinct consisted of short, dense grass species in the form of lawns and occasional paddocks. Widespread tree clearance has taken place across the developed areas of the main ridgeline and side spurs, and along various service easements throughout the study area. Side slopes and other undeveloped areas were heavily vegetated, with thick brush. Large blocks of native bushland and sandstone heath vegetation occur in the Precinct, as well as areas of thick regrowth which occasionally hampered effective movement through the study area. Low ground surface exposure and low visibility was an impediment to the identification of open context artefact scatters or isolated finds, but these site types were not considered likely to occur within the Precinct and low ground surface exposure is not considered a particular limitation to the survey coverage.

Sandstone exposures were frequent, reflecting the underlying geology and topography of the study area. Each exposure encountered by the survey team was closely inspected for rock engravings or grinding grooves, especially in the vicinity of previously recorded sites. Survey coverage of sandstone exposures was good, generally limited only by leaf litter and encroaching vegetation at platform margins. Exposures were generally readily visible despite thick surrounding bush land in some cases. Larger exposures were identified on aerial photographs and then relocated and inspected in the field.



Plate 6. Large dissected sandstone outcrops in east of study area, north of Mona Vale Road



Plate 7. Modern ground disturbance around private properties



Plate 8. Resource Storage Facility north of Powderworks Road - highly disturbed



Plate 9. Moss colonies and vegetation on large outcrop south of McLean Street

Where the underlying sandstone had weathered to form overhangs suitable for shelter use, these were examined for evidence of art and/or archaeological deposit. Overhangs were frequent beneath the large benched sandstone outcrops just off the main ridgeline, particularly in the eastern portion of the study area, but none were found to contain any evidence of Aboriginal use. The majority of the overhangs were small and displayed a honeycomb weathering pattern and soft eroding sandstone weathering to a soft white powder, with walls not suited to the creation or preservation of art. Remnant panels and intact parts of the rock walls were closely inspected but no art or archaeological deposit was identified.

Larger, more suitable overhangs were encountered to the west of a creekline forming part of the headwaters of Narrabeen Creek, in the eastern portion of the study area but the shelters were found to be damp, with dripping water and were likely unappealing as a camp location. The beds of all the creeklines encountered were closely inspected for grinding grooves but none were observed. Grinding grooves were instead found to occur in similar contexts to engraving sites, atop exposed sandstone platforms and generally in association with potholes or shallow rock pools that would retain water, rather than in association with running water or creeklines.



Plate 10. Sandstone bed of creekline forming part of headwaters of Narrabeen Creek



Plate 11. Large overhang with no art or occupation deposit



Plate 12. Sandstone outcrops on ridge east of Walter Road



Plate 13. View east to ocean from ridge, west of Walter Road

The two chief landforms in the study area consisted of ridge (including side spurs) and slope (ranging from gentle to moderate-steep gradient). Visibility on the ridge landform was good, in regards to the obstructive site types (i.e. rock engravings and shelters) predicted for the study area. Outcrops were readily visible and generally accessible to the survey team, despite the thick vegetation in the northern and eastern part of the study area. The majority of development in the area has also taken place along the ridge landform, increasing visibility due to vegetation clearance. Visibility was lower on the more heavily vegetated slopes, particularly those located above drainage lines. Rock outcrops with pooled or surface water also hosted colonies of moss and other vegetation, restricting exposure of the rock surface

The two chief limitations to survey coverage were restricted access to several private lots where the property owners denied access and the survey conditions themselves. The highly weathered and faint nature of a number of rock art engravings makes them difficult to see in direct or overhead light. Oblique lighting increases the chance of detecting very faint engravings, as their grooves are visually enhanced by the shadows created by oblique lighting. It is probable that other very faint undetected rock engravings exist but were not able to be discerned during the survey due to poor light conditions. Nonetheless, the identification of several previously unrecorded sites and the positive re-identification of several very weathered previously recorded sites suggest that survey detection levels were adequate. Where specific properties were not able to be surveyed, an assessment of archaeological potential may be made based on the presence or absence of previously recorded sites, an evaluation of landform context and likely disturbance and a visual assessment from the property boundary. Access restrictions to particular properties during the survey are not considered to have significantly diminished survey coverage of Ingleside Precinct. Further investigation of these properties would be warranted.

8 Identified Aboriginal Cultural Heritage Sites in the Precinct

8.1 Summary of findings

Based on the findings of background information gathering, archaeological survey and consultation with registered Aboriginal stakeholders:

- 25 Aboriginal archaeological sites have been identified in the Ingleside Precinct. These include:
 - 20 previously recorded (AHIMS registered) Aboriginal sites, and
 - 5 newly identified sites recorded during site inspection.

Identified sites predominantly consist of rock engravings, with smaller numbers of grinding groove sites and a rock shelter with art and archaeological deposit. Recorded sites include:

- 20 rock engraving sites (80% of recorded sites)
- 2 engraving and grinding groove sites (8% of recorded sites)
- 2 grinding groove sites, one of which had an associated water hole (8% of recorded sites) and
- 1 shelter with art and deposit (4% of recorded sites).

The location of identified Aboriginal cultural heritage sites and listed heritage items in the Precinct is shown on Figure 11.

Archaeological field survey relocated and confirmed 13 sites and documented five previously unrecorded sites within the Precinct. The remaining seven AHIMS registered sites were not identified, with a number documented as having likely been destroyed or property access was not provided for the study. Sites in the Ingleside Precinct are listed in Table 2 with site descriptions presented in section 8.2 following.

Map removed from public document.

Figure 11. Aboriginal archaeological sites in the Precinct

Table 2. Summary of Aboriginal archaeological sites in Ingleside Precinct

AHIMS Site ID	Site Name	Site Type	AHIMS Coordinates	Updated Coordinates
45-6-0038	McLean Street Ingleside	Engraving	[REDACTED]	
45-6-0071	Foley's Hill Ingleside Group 144	Engraving	[REDACTED]	[REDACTED]
45-6-0072	Foley's Hill; Ingleside; Group 144	Engraving	[REDACTED]	[REDACTED]
45-6-0100	Sugarloaf Hill, Foley's Hill 1	Engraving	[REDACTED]	
45-6-0101	Sugarloaf Hill, Foley's Hill 2 (Cow and Old Man with Hat)	Engraving	[REDACTED]	
45-6-0107	Terrey Hills; Group 46	Engraving; Grinding Groove	[REDACTED]	
45-6-0826	Foleys Hill	Engraving	[REDACTED]	[REDACTED]
45-6-0828	Foleys Hill; Ingleside	Engraving	[REDACTED]	[REDACTED]
45-6-0844	Foleys Hill	Engraving; Grinding Groove	[REDACTED]	
45-6-0869	Foleys Hill	Grinding Groove; Water Hole (Well)	[REDACTED]	
45-6-1117	Foleys Hill	Engraving	[REDACTED]	[REDACTED]
45-6-1228	Pitt Water Trig; Tumbledown-dick Hill; Whale Rock	Engraving	[REDACTED]	[REDACTED]
45-6-1388	Foleys Hill	Engraving	[REDACTED]	[REDACTED]
45-6-1417	Ingleside; Cabbage Tree Rd	Engraving	[REDACTED]	
45-6-1616	Mona Vale Road	Shelter with art and deposit	[REDACTED]	[REDACTED]
45-6-1617	Tumble-down-dick	Engraving	[REDACTED]	[REDACTED]
45-6-2520	Ingleside Rd 1	Engraving	[REDACTED]	[REDACTED]
45-6-2528	Lane Cove Road 1	Engraving	[REDACTED]	[REDACTED]
45-6-2596 (duplicate 45-6-0827)	AB-1 (Foleys Hill; Ingleside)	Engraving	[REDACTED]	[REDACTED]
45-6-3024 (duplicate 45-6-3101)	Foley's Hill, Ingleside, Group 144 - PITT 110	Engraving	[REDACTED]	[REDACTED]
45-6-3212	MVRW 1	Engraving	New recording	[REDACTED]
45-6-3211	Ingleside 1	Grinding groove	New recording	[REDACTED]
45-6-3210	Ingleside 2	Engraving	New recording	[REDACTED]
45-6-3208	Ingleside 3	Engraving	New recording	[REDACTED]
45-6-3209	Ingleside 4	Engraving	New recording	[REDACTED]

8.2 Site descriptions

AHIMS Number:	45-6-0038
Site Name:	McLean Street Ingleside
Site Type:	Engraving
AHIMS Site Coordinates:	[REDACTED]
Landform:	Low ridge spur
Site Condition:	Destroyed
Map:	See Figure 11

This rock engraving site consisted of two badly weathered engraved ovals and two distinct engraved lines, located on a sandstone exposure atop a low spur [REDACTED]. The site was located during archaeological survey [REDACTED] (Byrne 1984). The site was located in close proximity to the large engraving site recorded as 45-6-0827/45-6-2596 (duplicate entry). The engravings recorded at 45-6-0038 likely originally formed part of the engraving complex on these platforms.

Although AHIMS search results list the site as “valid”, the site card records that a Section 90 consent (Permit ID 450012) was issued in 1988 and an update to the site card in 1991 described the site’s condition as “totally destroyed”.

AHIMS Number:	45-6-0071
Site Name:	Foley's Hill Ingleside Group 144
Site Type:	Engraving
AHIMS Site Coordinates:	[REDACTED]
Updated Site Coordinates:	[REDACTED]
Landform:	Slope
Site Condition:	Fair to weathered
Map:	See Figure 11

Recorded by Ian Sim in 1964, this site was a series of engravings located on sandstone outcropping on a slope [REDACTED]. Registered with AHIMS are three ovals, two echidnas and an indeterminate object, later described by Koettig (1981) as a patterned snake. Revisitation of the site in 1981 and again in 1993 noted that the snake was in good condition, while the echidnas and ovals were clear, but obviously weathering.

This site was relocated during field survey. The registered AHIMS coordinate location is incorrect, placing the site within the road corridor of Mona Vale Road. The site was confirmed to be located on a rock platform north of the road, [REDACTED]. The engravings are located on the eastern side of the platform.

The “patterned snake” described by Koettig was still very clear although partly covered by leaf mulch. The two echidnas were still visible but were highly weathered and faint, while the three ovals were mostly faded and very difficult to relocate during survey light conditions (late morning). The damage from “bulldozer tracks” recorded on the site card was no longer visible over the engravings. This emphasized the extent of weathering overall. [REDACTED]. No recent graffiti was observed.

Plate removed from public document.

Plate 17. View north west showing rock platform containing 45-6-0071



Plate 18. "Patterned snake" outlined in wool (at left) and right of scale (at right) at 45-6-0071



Plate 19. Echidna engraving (very faint) (at left) and outlined in wool (at right) at 45-6-0071

AHIMS Number: 45-6-0072
Site Name: Foley's Hill Ingleside Group 144
Site Type: Engraving
AHIMS Site Coordinates: [REDACTED]
Updated Site Coordinates: [REDACTED]
Landform: Slope
Site Condition: Fair to weathered
Map: See Figure 11

Recorded at the same time as 45-6-0071 by Sim, this engraving was described as being located [REDACTED] on a small sloping surface of a rock outcrop [REDACTED]. The engraved figure was described as a snake about 7 feet in length. Relocation of the site by the Aboriginal Heritage Office in 2007 confirmed the site location [REDACTED]. The current coordinate listed on AHIMS reflects Sim's original recording.

The site was relocated during the survey, on a sandstone rock outcrop in the heavily vegetated area [REDACTED]. The sandstone platform measured approximately 30m x 10m, [REDACTED]. The engraving was oriented on a north-south axis and consisted of two parallel lines tapering inwards at each end to form a pointed ellipse. The 'head' of the figure appeared to be located at the northern end. The southern end of the figure was difficult to discern and appeared to merge with the natural weathering line present on this part of the platform. Estimated length of the visible figure was 180cm, with the width of the centre of the figure measuring 21cm. The engraving depth was shallow and the figure was highly weathered. The remainder of the rock platform was searched but no other engravings were observed.



Engraving at site 45-6-0072 (from Sim 1965:Sheet 2)



Plate 20. Engraved figure at left of rangepole at 45-6-0072 (highly weathered). Photo facing north east



Plate 21. 45-6-0072 looking north west



Plate 22. 45-6-0072 looking south east

AHIMS Number: 45-6-0100
Site Name: Sugarloaf Hill, Foley's Hill 1
Site Type: Engraving
AHIMS Site Coordinates: [REDACTED]
Landform: Slope
Site Condition: Unknown – likely destroyed
Map: See Figure 11

This was an engraving site recorded by Campbell (1899) as being located “about 20 feet north of the road fence and two chains above the top of the zigzag in the road” on Sugarloaf Hill, in Portion 83 of Narrabeen Parish. The engraving was a single linear pecked and ground figure interpreted as a snake. The registered coordinates of the site do not match the description of its location. Numerous studies (Koettig 1981, Corkill 1990, Navin Officer 1995, KNC 2011) have been unable to relocate this site and its current condition and whereabouts are unknown.

During the field survey, an unsuccessful attempt was made to relocate this site on the northern side of Mona Vale Road [REDACTED]. It is possible the site was destroyed during widening of Mona Vale Road and that it may have been located on the northern edge of the road close to the Baha’i Temple.

This conclusion was based on the assumption that Campbell’s reference to “Sugarloaf Hill” in 1899, was the same location as today’s Baha’i Temple, as indicated on early parish maps. The “zig-zag” in the road was on the western approach to Sugarloaf Hill, with the eastern boundary of Portion 83 marked by the present-day location of Addison Road. The historic alignment of the present-day Mona Vale Road along the base of Portion 83 was much narrower and with fewer graduated turns than it displays today. Several realignments and road widening have likely encroached to at least two chains (approximately 40m) north of the historic alignment, within Portion 83 where the site is described.

This site could not be relocated based on recorded information and is considered likely to have been destroyed.

AHIMS Number: 45-6-0101
Site Name: Sugarloaf Hill, Foley's Hill 2 (Cow and Old Man with Hat)
Site Type: Engraving
AHIMS Site Coordinates: [REDACTED]
Landform: Slope
Site Condition: Unknown
Map: See Figure 11

This was an engraving site recorded by Campbell (1899) on a small outcrop of sandstone on Sugarloaf Hill, two and ¼ chains south of the fence opposite Spring Cottage. Campbell was informed by a Mr Jones, who formerly lived there that the engraving depicted a human figure, with later additions in the form of a cocked hat and cow added to the platform by Mr Jones' son.



Engraving at site 45-6-0101 (from Campbell 1899: Plate XII, Figure 8)

The site location indicated by the AHIMS coordinates has been inspected during a number of previous archaeological investigations in the area but the engraving has not been relocated, with the AHIMS coordinates found to be incorrect (Navin Officer 1995). An investigation by KNC in 2011 noted that a pre-1970 development plan of Mona Vale Road prepared by the Department of Main Roads (DMR) placed the site approximately 500m south west of the registered coordinate location. Inspection of the location shown on the DMR plan did not relocate the site (KNC 2011).

Further study by JCIS Consultants in 2012 during an historic heritage study of the area identified the lands formerly owned by Jones, to the north of Mona Vale Road. The Narrabeen Parish Plan shows that Jones owned Portion 63, north of the location of the present-day Baha'i temple, and had a house (presumably Spring Cottage) north east of the intersection with Powderworks Road. A distance of two and ¼ chains (approximately 55m) south from the boundary fence opposite the house would place the site beneath a paved carpark west of Baha'i Temple Way.

Numerous attempts have recently been made to locate the site as part of this study as well as for the Mona Vale Road upgrade project (KNC 2014). The difficulty of interpreting the site location description based on modern landscape features means this site was not relocated during the field survey but may be located within Baha'i Temple grounds, either extant and concealed by vegetation or destroyed by development.

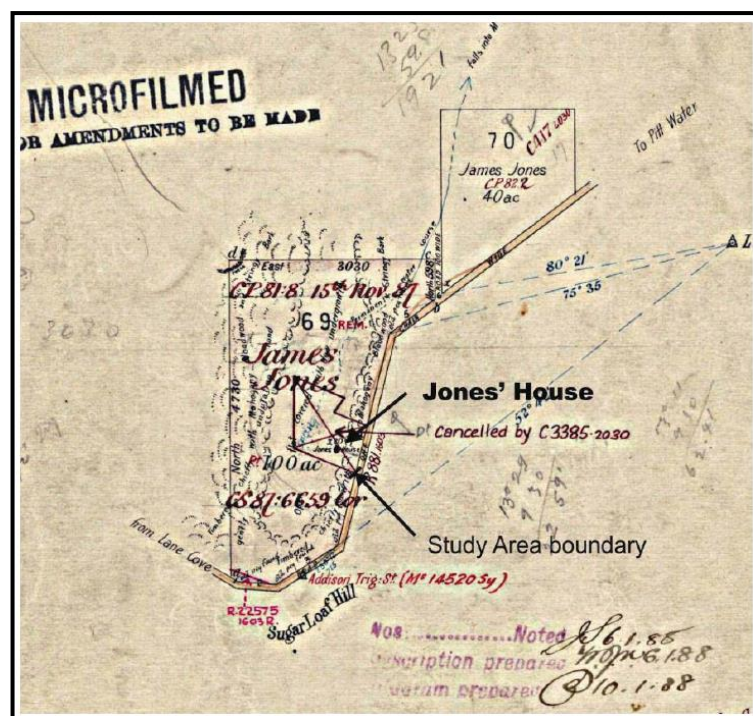


Figure 12. Narrabeen Parish portion map, 1888. Position of Jones' house marked. (Source: JCIS 2012:47)

AHIMS Number: 45-6-0107
Site Name: Terrey Hills; Group 46;
Site Type: Engraving; Grinding Groove
AHIMS Site Coordinates: [REDACTED]
Landform: Open depression - creekbed
Site Condition: Unknown
Map: See Figure 11

Recorded by McCarthy in 1946, this site comprised a group of pecked and ground engravings located in the bed of the creek forming the “western arm of McCarrs Creek” (McCarthy 1954). The engravings were located between two potholes in the creek bottom and consisted of a school of at least six fish “swimming into the smaller pothole”. A human figure (possibly a pregnant female) was also present. Seven grinding grooves were also adjacent to one of the potholes.

The AHIMS coordinate location of this site places it close to Wirreanda Creek, at the south western boundary of Ingleside Precinct. McCarthy also stated the site is [REDACTED] east of site 45-6-1228 (Whale Rock), which would place it within the bed of Wirreanda Creek.

Further background research has identified that Wirreanda Creek was formerly also named McCarrs Creek, forming the ‘western arm’ or ‘right hand branch’ of that waterway, as evidenced by an excerpt of the 1905 Narrabeen Parish Map (5th edition). Based on this information, it is likely the site is located in the bed of Wirreanda Creek on the boundary of the Ingleside Precinct study area. The site was not included among those Koettig located in the (then) Warriewood/Ingleside Release Area, which encompasses the whole of the current study area. Inspection of the creek line during the field survey did not relocate the site; however, the southern portion of the creek corridor falls outside the Ingleside Precinct, in an area of Ku-ring-gai National Park, and given this site location, it is not within the study area. Further investigation would be warranted if this area was to be potentially affected by future development.

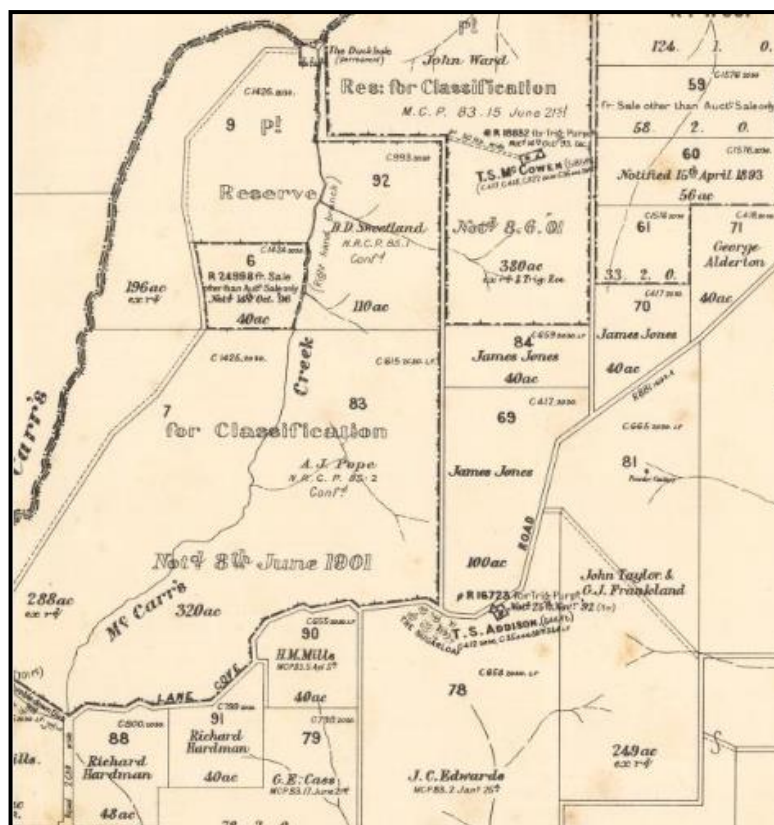


Figure 13. Excerpt of Narrabeen Parish Map, 1886, showing two branches of McCarrs Creek. Image from National Library of Australia (digital collection, accessed May 2014)

AHIMS Number:	45-6-0826
Site Name:	Foleys Hill
Site Type:	Engraving
AHIMS Site Coordinates:	[REDACTED]
Updated Site Coordinates:	[REDACTED]
Landform:	Ridge spur
Site Condition:	Good
Map:	See Figure 11

This rock engraving site was originally recorded by Campbell in 1899, located on an iron-stained sandstone outcrop on a ridge spur [REDACTED]. Four engravings were depicted, "...four men, the largest man holding a fish in his left hand, and a boomerang is below the right arm" (Campbell 1899:33). At the time of the original recording and during subsequent relocations, site condition was described as good with the figures "clearly cut".

The site was relocated during the current survey and the registered AHIMS coordinates were found to be incorrect, [REDACTED]. The site itself was found to be well-preserved with no graffiti or disturbance. The platform containing the engravings was very well hidden by thick scrub. The two northern-most figures had their legs partly obscured by vegetation and leaf litter had encroached over the platform but both were relocated. The two southern figures, including the man holding the fish, were clear and in good condition. While the engravings were all clearly defined, the platform is subject to water seepage across its surface, as the platform is located along an intermittent drainage line which has stained the platform.

There is evidence the site is being actively and sympathetically managed: at the time of the site visit it appeared that mulch had recently been cleared back and branches sawn from trees encroaching on the northern set of engravings. Apart from this, the site is unlikely to be subject to visitation from the public, being hard to locate due to low visibility in thick scrub.



Plate 23. Detail of engravings at 45-6-0826 (photo from site record)



Plate 24. Two southern figures at 45-6-0826



Plate 25. Northern figure at 45-6-0826, above scale



Plate 26. Detail of southern figure at 45-6-0826

AHIMS Number:	45-6-0828
Site Name:	Foleys Hill; Ingleside
Site Type:	Engraving
AHIMS Site Coordinates:	[REDACTED]
Updated Site Coordinates:	[REDACTED] (cicada) [REDACTED] (macropod)
Landform:	Ridge
Site Condition:	Fair (cicada) to weathered (macropod)
Map:	See Figure 11

This site was located on the same ridge spur as 45-6-0826 and consisted of three engravings on the [REDACTED] outcrop capping the spur. One of the engravings, a cicada, was documented by Campbell in 1899. Two further engravings have since been documented at the location; a lightly cut kangaroo with punctures showing and an indeterminate fragment which “if linked with the natural pattern of the rock, may be a kangaroo”. The engravings, though still reasonably clear, showed signs of weathering when documented in 1978 on an AHIMS site card.

This site was relocated during the current survey. The registered AHIMS coordinate was found to be incorrect, [REDACTED].

The engraving of a “cicada...on the western edge of the outcrop” was in fair condition with deep wide grooves apart from the tail, at north western end, that became a little indistinct. The “cicada” did not seem to have been interfered with and there was no graffiti observed.

The engraving of a “kangaroo, in a shallow rain-pool, 24 paces 45° from the cicada” was found to be in poor condition. The rock surface was degraded and the engraving very faint and indistinct. The north eastern end was also covered by moss. Only some faint lines were identified and it was very difficult to delineate the entire motif. The “fragment in another rain-pool, 16 paces 80° from the kangaroo” was not successfully relocated.



Plate 27. Cicada engraving at 45-6-0828



Plate 28. Partial macropod at 45-6-0828 (very faint)



Plate 29. [REDACTED] across shallow rain pool containing partial macropod (right of scale)

AHIMS Number: 45-6-0844
Site Name: Foleys Hill
Site Type: Engraving; Grinding Groove
AHIMS Site Coordinates: [REDACTED]
Updated Site Coordinates: Not relocated – no access consent
Landform: Ridge/slope
Site Condition: Unknown – likely destroyed
Map: See Figure 11

This site was recorded on a small rock ledge of Hawkesbury sandstone [REDACTED], on a gently sloping portion of the main ridgeline with a north westerly aspect and extensive views over Ku-ring-gai Chase to the north. Three mundoes were recorded in association with a single grinding groove, located four inches from a small pothole in the rock surface. It was noted that the rock ledge had seepage running over the surface during wet weather. The engravings were described as being in fair condition in 1977.

Access consent to this property was not provided for the current field survey investigation and the location of this site has not been verified. Koettig noted in 1993 that “they are where it is likely to be located is probably underneath a recent development, house and extensive landscaping. Bob Conroy (NPWS Ranger) who submitted the site card was unable to remember its exact location”. Koettig recorded the site as destroyed and made no further management recommendation. Further investigation would be required.

AHIMS Number: 45-6-0869
Site Name: Foleys Hill
Site Type: Grinding Groove; Water Hole (Well)
AHIMS Site Coordinates: [REDACTED]
Updated Site Coordinates: Not relocated – no access consent
Landform: Ridge/slope
Site Condition: Unknown
Map: See Figure 11

This site record describes the site as consisting of three grinding grooves and a water hole located on large, rounded outcrops of Hawkesbury Sandstone on a gentle slope [REDACTED]. The grinding grooves were located adjacent to natural hollows in the rock that would retain water after rain. The water hole was approximately 2 feet x 3 feet in size and appeared to be a natural hole that had been enlarged, with pit marks on the floor, walls and edges of the hole. Site condition was described as good but slightly weathered. Koettig “thoroughly inspected” the recorded location of the site during the 1993 Warriewood/Ingleside Release Area project but did not relocate the grooves. Koettig noted the grooves were “recorded from memory by a local resident”.

[REDACTED]. The AHIMS registered coordinate appears to be some 30m in error, [REDACTED]. Access to this property was not available for the current survey, meaning no precise update on site location or condition could be made at this time. Further investigation would be required.

AHIMS Number: 45-6-1117
Site Name: Foleys Hill
Site Type: Engraving
AHIMS Site Coordinates: [REDACTED]
Updated Site Coordinates: [REDACTED]
Landform: Ridge spur/slope
Site Condition: Unknown
Map: See Figure 11

This engraving site was located on a sandstone outcrop [REDACTED]. An engraving of a macropod was identified on the outcrop, described as readily visible and in good condition apart from the “vague hind leg region”. [REDACTED]. An additional page on the AHIMS site card described a second figure at this location, recorded by Rosemary Taplin in 1979. She described “a shield like figure with a distinct waisting at its n-e end, and 52 feet away a small circle with a short, slightly curved line attached to it – not quite like the letter “q”.” Taplin noted that her recordings seemed like “very few carvings for such a large exposure”. The portion of the site card detailing the macropod engraving made no mention of the other figures observed by Taplin. The rock outcrop [REDACTED] was extensively searched during the field survey but none of the previously recorded engravings described at 45-6-1117 were relocated. One previously unrecorded site, Ingleside 2, was identified on the same outcrop [REDACTED].

AHIMS Number:	45-6-1228
Site Name:	Pitt Water Trig; Tumbledown-dick Hill; Whale Rock
Site Type:	Engraving
AHIMS Site Coordinates:	[REDACTED]
Updated Site Coordinates:	[REDACTED]
Landform:	Ridge crest
Site Condition:	Fair
Map:	See Figure 11

This site consisted of a cluster of engravings on a single rock surface [REDACTED] originally documented by Campbell (1899) and subsequently visited by McCarthy (1954) who documented additional engravings across the platform. The rock platform was located in a ridge crest context with wide district views to both the south and north. The ridge crest landform the site was located on ran east-west and formed a watershed between the McCarrs Creek catchment that runs into Pittwater to the north and the Deep Creek catchment that runs into Narrabeen Lake to the south. The headwaters of those drainage systems formed on either side of the ridge crest, with the nearest watercourse being a 1st order tributary [REDACTED].

[REDACTED] The total area of rock surface measured approximately 35m north-south and 30m east-west. The engravings were located across the more undulating eastern half of the platform.

Site inspections identified previously recorded motifs including a large whale or shark, two human figures and a partial macropod. Additional engravings recorded by McCarthy were not relocated. A few regrowth trees were noted across the northern half of the rock surface in 2011, including Bloodwood, Smooth-barked Apple, White Scribbly Gums, Casuarinas and Banksias around the margins of the rock platform. The 'whale' engraving was found to be in good condition. The human figure recorded to the west of the whale ('man holding a club') showed evidence of light scratches over the engravings, likely an attempt at regrooving. No other graffiti or disturbance to the platform was observed.



Plate 30. Human figure at 45-6-1228



Plate 31. Whale/shark and partial human figure at 45-6-1228



Plate 32. Detail of right arm and club showing evidence of light scratch marks in grooves

AHIMS Number: 45-6-1388
Site Name: Foleys Hill
Site Type: Engraving
AHIMS Site Coordinates: [REDACTED]
Updated Site Coordinates: [REDACTED]
Landform: Slope
Site Condition: Unknown
Map: See Figure 11

This engraving site was recorded by A. Heath in 1978. [REDACTED]. Motifs present were “a 7’ x 3’ fish motif, a half circle and possible other engravings”, present on a rock outcrop associated with a sandstone cliff line, according to the AHIMS site card. Navin Officer attempted to relocate the site in 1995 and noted that there was a discrepancy between the registered coordinates, [REDACTED]. It was concluded that the AHIMS coordinates were incorrect, likely as a result of the original grid reference being changed from imperial to metric.

Koettig inspected the platform containing the engraving during her 1993 study and did not relocate it, despite the fact that “the rock surface is smooth and extensive... a very ‘suitable’ location for engravings to be present”. It was recommended that if any development or change in landuse was proposed for the area, more intensive survey including night lighting would be required.

An attempt was made to relocate this engraving on the extensive rock outcrops [REDACTED] during the field survey. The “...southern most out crop...”, matching the shape and dimensions described on the site plan, was successfully located [REDACTED], however the engravings described on the site card were not observed despite a thorough search. It was noted that the original site recording for 45-6-1388 stated that the grooves of the engraving were “worn and old” and the site may have weathered to the point that it can no longer be discerned without special lighting. The AHO confirmed the location of the platform and the incorrect AHIMS coordinates.

AHIMS Number: 45-6-1417
Site Name: Ingleside; Cabbage Tree Rd;
Site Type: Engraving
AHIMS Site Coordinates: [REDACTED]
Landform: Ridge crest
Site Condition: Unknown – likely destroyed
Map: See Figure 11

This site location was added to the AHIMS register based on a letter received, stating that the writer had been “told by Michael Walker of Sydney Uni that Mr Blackett had engravings of a shield and an emu near his house”. The site card noted that a letter was sent to Mr Blackett (the property owner) in November 1981 with no reply and that the District Office was to follow up. The site card offers no further information and it appears the existence, nature and precise location of this site were never confirmed in the field.

During Koettig’s 1993 investigation of the study area, she was informed that the site had been destroyed by a local resident and recommended that no further action or site management was required. The site was not relocated during the current survey and is likely destroyed, as per Koettig.

AHIMS Number:	45-6-1616
Site Name:	Mona Vale Road
Site Type:	Shelter with Art and Deposit
AHIMS Site Coordinates:	[REDACTED]
Updated Site Coordinates:	[REDACTED]
Landform:	Slope immediately below ridge
Site Condition:	Good
Map:	See Figure 11

This site was a rockshelter with art and archaeological deposit, originally recorded by Koettig (1981) and subsequently by McDonald (1987) as part of the Sydney Basin Rock Art Project, and revisited by Dallas (1997). The shelter was located [REDACTED] below the edge of a sandstone outcrop capping the knoll at the end of a ridge, and measured approximately 4m long x 2.5m deep x 2m high. Ten complete and partial red hand stencils and three quartz artefacts were recorded and the site was described as being in excellent condition. Dallas also noted that "red lichen on walls may be obscuring more stencils". The site was relocated during the current survey, close to its recorded location. Registered AHIMS coordinates are slightly incorrect, [REDACTED]. The present inspection found twelve red hand stencils, both complete and partial, including at least two partial child hand stencils.

The red hand stencils are in good condition and do not appear to have faded significantly since previous inspections. The slight variation in stencil count made by the different recorders is most likely due to the subjective nature of interpretation rather than any changes in site condition. During the present inspection, slightly faded charcoal graffiti was observed over the central and left sections of the panel including the names "V.?G. CAMPSIE", "MC" (both upper-centre panel), "W.B. LAKEMBA" (lower-centre panel) and "A...?" (left panel). Most of this graffiti was noted during earlier recordings and appears on site card photographs and previous sketches of the motifs present at the site. The lack of additional graffiti since previous recordings is most likely because the shelter has remained fairly well hidden by forest understory or lantana, however, a recent fire has made the shelter [REDACTED] more vulnerable to disturbance.

Plate removed from public document.



Plate 34. Survey personnel examining 45-6-1616, looking south east



Plate 35. Art panel at 45-6-1616



Plate 36. Detail of stencil art at 45-6-1616

AHIMS Number: 45-6-1617
Site Name: Tumble-down-dick
Site Type: Engraving
AHIMS Site Coordinates: [REDACTED]
Updated Site Coordinates: [REDACTED]
Landform: Slope
Site Condition: Weathered
Map: See Figure 11

This engraving site was located [REDACTED] on the eastern side of a wide gully, [REDACTED]. A single engraved "female" figure, very weathered, was located on a large expanse of sandstone on the gully slope.

While the registered AHIMS coordinate places the site outside of the Ingleside Precinct boundary, the location description on the site card suggested it may have been within it. Given the uncertainty of older site recordings on AHIMS it was attempted to relocate this site in the field to determine its true location.

The site was successfully relocated and found to be located within the Ingleside Precinct study area, [REDACTED]. The registered AHIMS coordinates were found to be incorrect [REDACTED].

The engraving at the site was found to be highly weathered and the full outline was hard to discern in the flat light survey conditions. No graffiti or other disturbance to the platform was evident.



Plate 37. View to east showing location of engraving at 45-6-1617 (above scale)

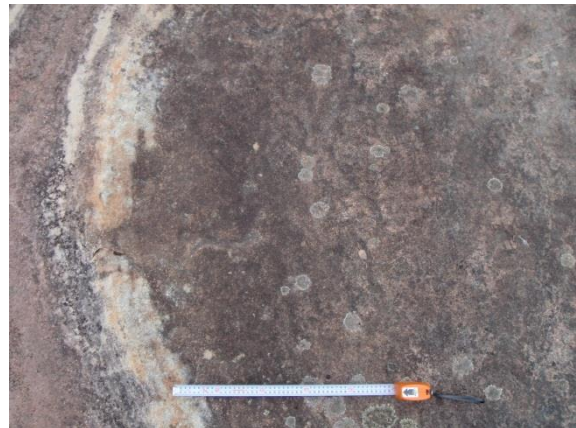


Plate 38. View south showing detail of engraving in flat light

AHIMS Number: 45-6-2520
Site Name: Ingleside Rd 1
Site Type: Engraving
AHIMS Site Coordinates: [REDACTED]
Updated Site Coordinates: [REDACTED]
Landform: Ridge
Site Condition: Weathered
Map: See Figure 11

This rock engraving site was located during an archaeological survey [REDACTED], on a sandstone platform approximately 6.5m long x 7.5m wide. The platform [REDACTED] displayed two motifs engraved with a narrow rectangular edge. The recorders (Navin Officer 1995) noted that the depth, 'v' cross-section length and edge of the engravings suggested use of a metal tool, possibly a chisel, indicating a historical engraving event. Although not definitively of Aboriginal origin, the engravings were registered as a site as the "form and shape of the motifs... [was] consistent with Aboriginal schemas" (Navin Officer 1995:22). The site card noted the condition of the engravings was poor, with the 'rock surface detaching'.

This site was relocated during the current survey. The registered AHIMS coordinate was found to be incorrect, [REDACTED].

An updated GPS recording has been taken for this site and will be submitted to the AHIMS registrar.

The rock platform containing the engravings had been encroached upon slightly by vegetation and leaf litter, making relocation difficult. [REDACTED]. The engravings were still exposed and not under vegetation.

The western linear engraving was found to be faded but mostly as described in the site card. The eastern circular engraving was badly spalling and had developed some new cracks and broken away slightly on the south eastern edge. The north western side of the circular engraving, however, was mostly as illustrated in the site card although appeared slightly weathered. No graffiti was observed on the platform.



Plate 39. View east showing engraving platform (tape positioned alongside western linear engraving)



Plate 40. View north, showing eastern circular engraving and exfoliation on the south-western edge

AHIMS Number: 45-6-2528
Site Name: Lane Cove Road 1
Site Type: Engraving
AHIMS Site Coordinates: [REDACTED]
Updated Site Coordinates: [REDACTED]
Landform: Ridge
Site Condition: Fair
Map: See Figure 11

This engraving site was identified during the same archaeological survey as site 45-6-2520 (Navin Officer 1995). The engraving was located 30cm from the downslope edge of a sandstone platform [REDACTED]. The site contained one motif of a splayed quadruped ('lizard'), with distinct grooves.

The site was relocated during the current field survey, [REDACTED] in agreement with the site location directions as recorded on the site card. The engraving is more weathered than when documented in 1995, especially the northern hind leg, but overall condition was fair with the majority of the engraving easily discernable.



Plate 41. 'Lizard' engraving at 45-6-2528 showing edge of platform to left. Photo oriented north west

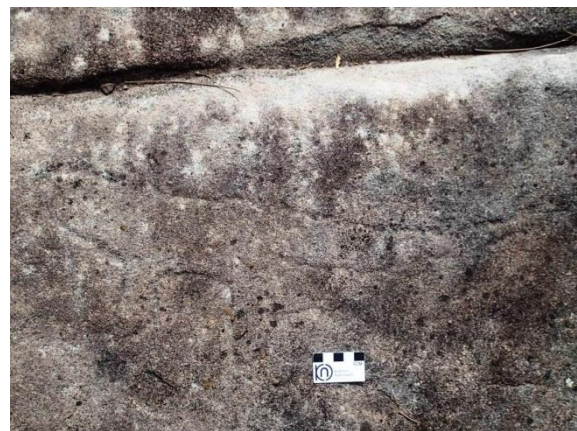


Plate 42. Detail of engraving at 45-6-2528. Scale = 50mm, photo oriented north east



Plate 43. Survey personnel on platform at 45-6-2528. Engraving at left of GPS in foreground. Photo facing north

AHIMS Number:	45-6-2596 (duplicate of 45-6-0827)
Site Name:	AB-1 (Foleys Hill; Ingleside)
Site Type:	Engraving
AHIMS Site Coordinates:	[REDACTED]
Updated Site Coordinates:	[REDACTED]
Landform:	Ridge
Site Condition:	Good, some engravings weathered
Map:	See Figure 11

This site was described as a group of engravings located on a large rock platform [REDACTED]. An area of 10m x 15m included engravings of “different types of shield, clubs, mundoes, an emu, also unknown crescent shaped objects” (AHIMS site card). Condition of the site was described as generally intact but with some carvings hard to discern due to minor damage.

Photos appended to the site card suggest it may be a duplicate recording of site 45-6-0827, which AHIMS coordinates erroneously place within the Garigal National Park [REDACTED]. Numerous recorders have determined the location of site 45-6-0827 [REDACTED], in the vicinity of this recording. Survey also confirmed this is the same as 45-6-0827 (which is erroneously located) and is a duplicate recording.

Field survey relocated this site [REDACTED]. Most of the engravings appeared unchanged from the description on the site card of 1997 and are in fair condition and all still visible. Lightly scratched graffiti, as recent as “2013” and “2014”, covered large sections of the platform including some minor graffiti over the “shield” engravings on the north-western edge. Most of this graffiti did not appear to have caused too much damage to the motifs but it is likely to reoccur. Evidence recorded by Boleyn in 1997 of “...scratching damage, possibly caused by earthmoving machinery...” over a shield motif was still noticeable during the present inspection on the north-western edge of the platform.



Plate 44. Emu and shield motifs at 45-6-2596

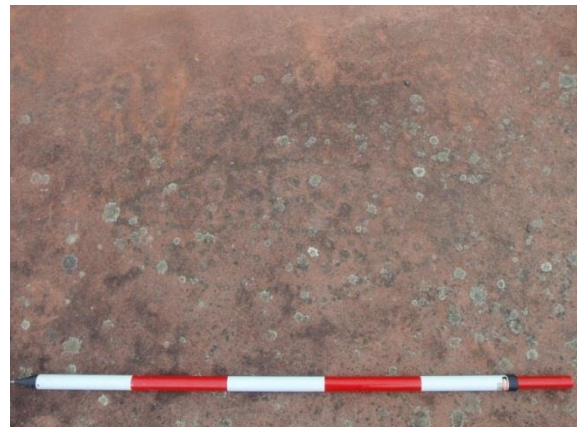


Plate 45. Pecked shield motif at 45-6-2596



Plate 46. Graffiti at site 45-6-2596



Plate 47. Looking south west across platform at 45-6-2596

AHIMS Number: 45-6-3024 (duplicate of 45-6-3101)
Site Name: Foley's Hill, Ingleside, Group 144 - PITT 110
Site Type: Engraving
AHIMS Site Coordinates: [REDACTED]
Updated Site Coordinates: [REDACTED] (human figure / '1st engraving')
 [REDACTED] ('ghost' / '2nd engraving' / penguin)
Landform: Ridge
Site Condition: Fair
Map: See Figure 11

This recording comprises two engravings originally recorded by Koettig (1981), [REDACTED] opposite previously recorded site 45-6-0071. Initially these engravings were included as "Area B" of site 45-6-0071; however, these additional engravings [REDACTED] do not appear to be appended to the site card for 45-6-0071.

The engravings included a human figure ('1st engraving') and a second unidentified form ('2nd engraving'), described by Koettig as a 'ghost'. An engraving site fitting this description and location was recorded by the Aboriginal Heritage Office in 2007 and registered on AHIMS with a new site number to differentiate it from 45-6-0071 [REDACTED]. Two separate entries have been created on the AHIMS database for this site, with 45-6-3024 and 45-6-3101 both referring to the same site.

The site was relocated during the current field survey. New updated GPS recordings were taken for the two figures. The '1st engraving' was in fair condition and all still visible, proving quite easy to relocate. Only a thin layer of leaf litter covered the southern portion of the engraving and no damage or graffiti was observed. The '2nd engraving' proved more difficult to locate as it was partly obscured by leaf mulch and although the grooves were less clearly defined than the '1st engraving', it was in fair condition and all still visible as in Koettig's 1981 plan.

The present inspection found that the '2nd engraving' was 14m west of the '1st engraving', not 17m as described in the site card. [REDACTED]. During the present inspection it was interpreted as a penguin, orientated N-S [REDACTED]. It appeared to have a beak and petrel fins angled backwards as if swimming. Vegetation and leaf mulch are encroaching on this western section of the platform and so further monitoring may be required to prevent it being covered in the future. No graffiti was present near the "2nd engraving".

Plate removed from public document.

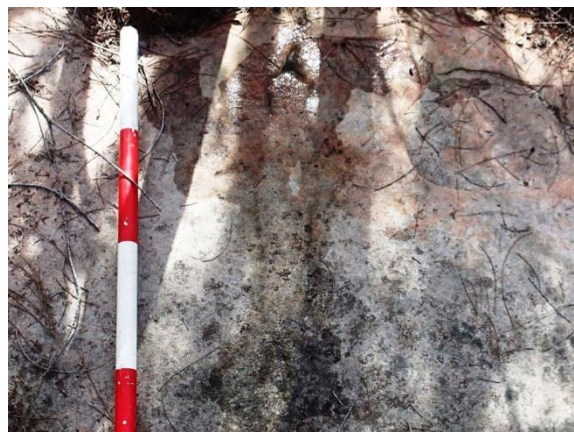


Plate 48. View north east showing 1st engraving in foreground. Rock platform of site 45-6-0071 visible [REDACTED]

Plate 49. View east of 2nd engraving, with figure's 'head' at top

AHIMS Number: 45-6-3101 (duplicate of 45-6-3024)
Site Name: Foley's Hill, Ingleside Pitt 110
 This recording appears to be a duplicate of 45-6-3024. The information for this site on AHIMS was the Aboriginal Heritage Office recording for 45-6-3024.

Site Name:	MVRW 1
AHIMS Number:	45-6-3212
Site Type:	Engraving
Site Coordinates:	[REDACTED]
Landform:	Creekline
Site Condition:	Good
Map:	See Figure 11

Site MVRW 1 was identified during recent investigations for Mona Vale Road. The site comprised a single rock engraving [REDACTED]. The engraving consisted of a ground oval measuring 18.5 x 10.5 cm that was situated close to the edge of a narrow sandstone bench. The engraved motif was relatively clear and appeared unaffected by encroaching vegetation on sandstone platform

MVRW 1 was in good condition and the isolation of the motif is relatively uncommon in the local and regional area. MVRW 1 was assessed as being of high significance.



Plate 50. Site MVRW 1



Plate 51. Detail of engraving at site MVRW 1

Site Name:	Ingleside 1
AHIMS Number:	45-6-3211
Site Type:	Grinding Groove
Site Coordinates:	[REDACTED]
Landform:	Ridge
Site Condition:	Highly weathered
Map:	See Figure 11

Ingleside 1 consisted of a single grinding groove located atop a long dissected cliffline of outcropping sandstone platforms in a vegetated area [REDACTED]. The groove was located on a platform measuring approximately 8m x 12m. A shallow pothole measuring approximately 45cm in diameter was positioned on the northern end of the platform, with the groove located immediately north west of the pothole. A second pothole measuring approximately 60cm in diameter was located to the north west, on the edge of the platform.

The grinding groove was oriented on a north east to south west axis. Groove dimensions were 25cm long x 7cm wide x 0.6cm deep. The grinding groove was very shallow and observed to be highly weathered.



Plate 52. Grinding groove below pothole at Ingleside 1



Plate 53. Grinding groove visible as pale line to right of dark lichen patch



Plate 54. Ingleside 1 looking south east



Plate 55. Ingleside 1 looking north east

Site Name:	Ingleside 2
AHIMS Number:	45-6-3210
Site Type:	Engraving
Site Coordinates:	[REDACTED]
Landform:	Ridge
Site Condition:	Weathered
Map:	See Figure 11

Ingleside 2 was an engraving located on a sandstone platform in an area of heath scrub [REDACTED]. The platform is part of a long chain of outcrops measuring approximately 200m in length, running north west to south east [REDACTED]. Previously recorded site 45-6-1117 is registered as being located on this same platform. Site 45-6-1117 was not relocated during the survey, but one previously unrecorded engraving was identified approximately 90m to the north west of 45-6-1117's registered location.

This new recording, Ingleside 2, consists of a single quadruped motif (possibly a lizard) with four splayed legs and a long tail, located at the tessellated north western end of the platform. The 'head' of the figure is oriented north north east. To the west is a water-stained seepage channel running down a gentle slope to the steeper platform edge where the sandstone exposure terminates. To the east are views to the ocean.

The figure measures 75cm long from nose to tail, with a body width of 10cm and a maximum width of 26cm between its back legs. The engraving is faint and weathered.

Plate removed from public document.



Plate 57. Ingleside 2 facing south east. Engraving above scale. Ocean visible in background



Plate 58. Tessellated platform at Ingleside 2, facing north east



Plate 59. Engraving at Ingleside 2, to right of scale. Head pointing up

Site Name: Ingleside 3
AHIMS Number: 45-6-3208
Site Type: Engraving
Site Coordinates: [REDACTED]
Landform: Slope
Site Condition: Fair to weathered
Map: See Figure 11

Ingleside 3 was a previously unrecorded engraving site, located on an exposed sandstone platform in an area of very thick scrub bush [REDACTED]. The platform containing the site was the westernmost of three exposures in this property, [REDACTED]. The platform measured approximately 19m long x 9m wide. The site consists of three engraved motifs: two elongate ovals and one possible catfish/eel motif. Recorded dimensions of the three engravings are presented below.

<i>Motif</i>	<i>Length</i>	<i>Width (at midpoint)</i>
Elongate Oval (1)	136cm	46cm
Elongate Oval (2)	161cm	45cm
Catfish / Eel (3)	147cm	48cm



Plate 60. Eastern elongate oval engraving (1) at Ingleside 3

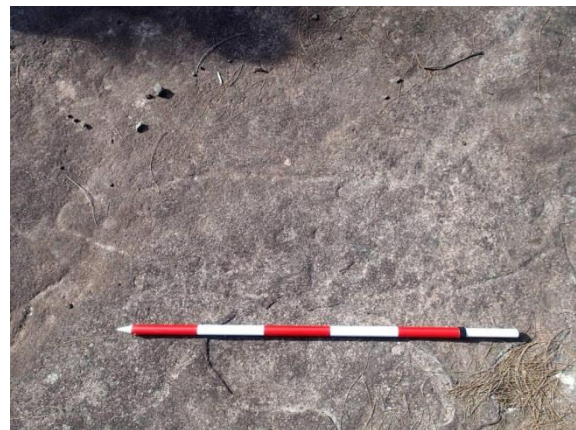


Plate 61. Western elongate oval engraving (2) at Ingleside 3



Plate 62. Catfish/eel engraving (3) at Ingleside 3. 'Fins' visible within water patches. Elongate oval engraving at right



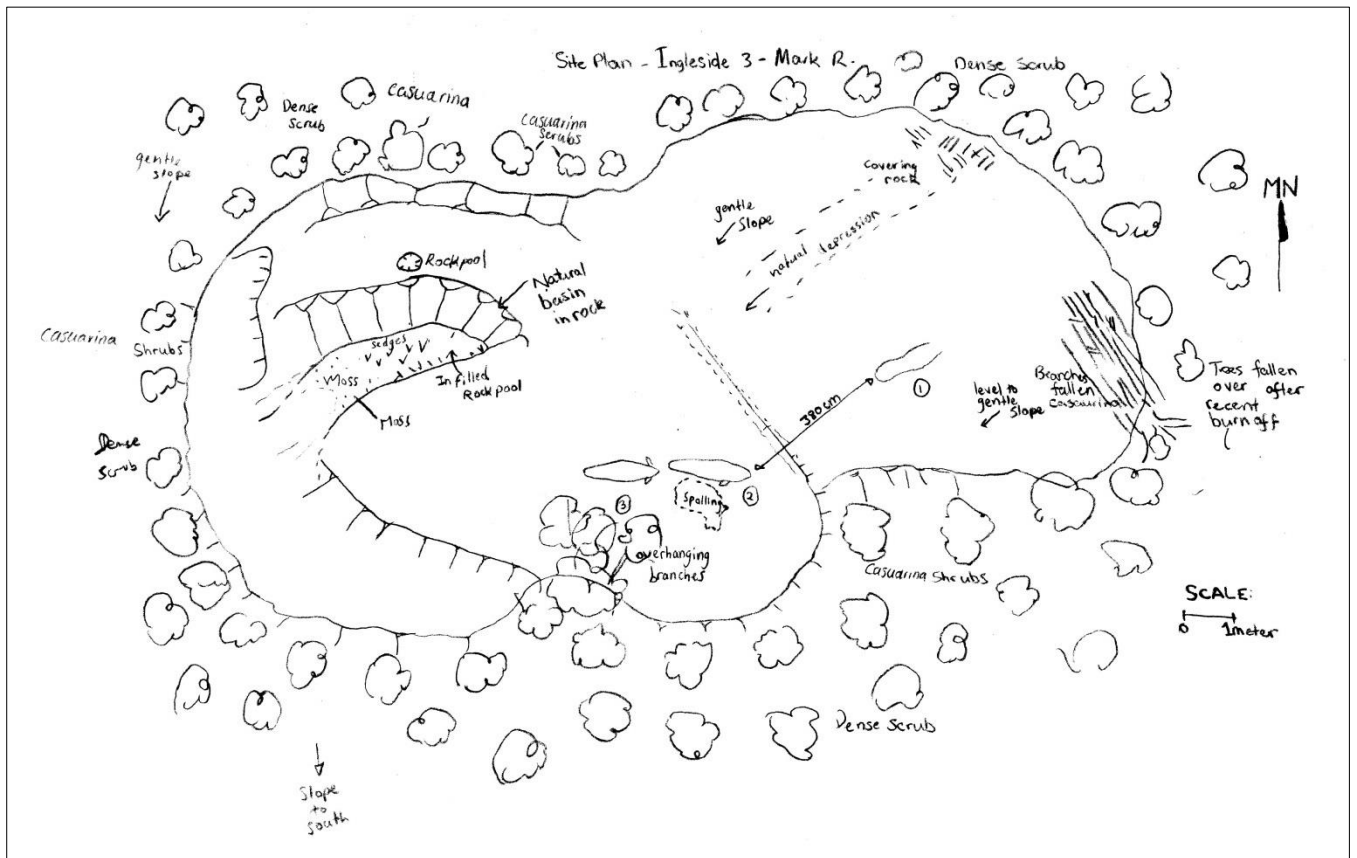
Plate 63. Western engravings at Ingleside 3. Photo looking west



Plate 64. Looking east across Ingleside 3. Engravings (2) and (3) to left of scale, engraving (1) to left of blue board at rear



Plate 65. Looking west across Ingleside 3. Engraving (1) at right of blue board, engraving (2) and (3) at left of survey personnel at rear



Site Plan – Ingleside 3

Site Name:	Ingleside 4
AHIMS Number:	45-6-3209
Site Type:	Engraving
Site Coordinates:	[REDACTED] ('snake' and 'stingray') [REDACTED] ('shield')
Landform:	Ridge
Site Condition:	Weathered
Map:	See Figure 11

Ingleside 4 was a group of engravings spread across two exposed sandstone platforms [REDACTED]. The engravings were identified atop a sandstone ridge running approximately north-south [REDACTED]. Beneath the ridgeline, a number of overhangs face east. On the ridge top there were numerous large, flat sandstone exposures. The northernmost engravings were located on the top of the ridge near a large, shallow rock pool. From the exposure there were clear views to the ocean towards the east. The southernmost engraving was located on a smaller exposure along the same ridgeline but further to the south west.

The northern series of engravings consisted of a linear motif, interpreted as a snake, and a circular motif, interpreted as a stingray. The engravings were located on a large exposure measuring 25m long (north-south) by 16m wide (east-west). The platform surface was weathered and some parts of the engravings were faint and hard to discern. Some natural banding of the rock surface was evident, caused by weathering of iron-rich laminations in the sandstone.

The southern engraving was present on a separate outcrop and consisted of an oval motif interpreted as a shield. The engraving is aligned north east to south west and located in the centre of the platform. The exposure containing this engraving is along a track used by mountain bikes and it is evident bikes ride across the platform contributing to degradation of the rock surface. The outcrop is surrounded by low scrub but views to the ocean can be seen to the east. Recorded dimensions for the engravings at Ingleside 4 are presented below.

<i>Motif</i>	<i>Length</i>	<i>Width (at midpoint)</i>
'Snake'	400cm	15cm
'Stingray'	38cm	31cm
'Shield'	80cm	26cm



Plate 66. 'Stingray' motif at Ingleside 4



Plate 67. Northern end of 'snake' motif at Ingleside 4, below and right of scale



Plate 68. Looking south across northern platform of Ingleside 4. 'Stingray' motif to right of survey personnel in foreground, 'snake' to right of scale in midground. Shallow rock pool visible in centre

Plate removed from public document.

Plate 69. Looking west to ridgetop platform of Ingleside 4, [REDACTED]



Plate 70. Southern 'shield' engraving at Ingleside 4, above scale



Plate 71. Looking north across southern platform at Ingleside 4. 'Shield' engraving in centre of platform

9 Significance Assessment

9.1 Assessment criteria

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

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

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

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

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

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

The DP&E Precinct assessment method for Aboriginal cultural heritage also establishes a process for ranking cultural heritage values in the Precinct based on the *Burra Charter* criteria. The process is based on identifying cultural heritage values and ranking them from exceptional value to no value (if any) to assist in making decisions about the future development layout of the Precinct. The assessment criteria are based on established criteria established by the NSW Heritage Office, based on addressing the *Burra Charter* criteria. These criteria are:

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

These criteria involve the assessment of both the cultural and scientific significance of a place or area, in that they incorporate both archaeological or scientific significance and the importance and values placed on these areas by the Aboriginal community. Based on this concept, a significance ranking system was developed for Sydney Growth Centre Precincts (see Figure 14).





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

Figure 14. Precinct significance rankings

9.2 Statement of significance

Background research and targeted archaeological field survey has revealed 28 archaeological sites recorded in the Precinct. Over 80% of these sites were rock engraving sites, with a smaller number of grinding groove sites and rock shelters with art and/or archaeological deposit. The Precinct also contained two areas of overlap with the National Heritage Listed Ku-ring-gai Chase National Park.

Archaeological sensitivity of the Precinct is strongly linked to geology. Aboriginal rock engravings, grinding grooves and rock shelter sites occur where there are suitable sandstone outcrops and overhangs. Open scatters of artefacts are less prevalent in sandstone geology, with no artefact scatters having been recorded in the Precinct.

Engraving sites occur widely in Ingleside Precinct and the generally low levels of development have preserved some of the landscape connectivity between them. Several site contexts are further enhanced by the surrounding native vegetation and still extant views to the ocean or other prominent landscape features such as Sugarloaf Hill.

When considered both individually and as a body, the engraving sites display demonstrable value in their ability to express the Aboriginal cultural landscape still present within Ingleside Precinct. The Aboriginal cultural heritage and history of the region is displayed physically through these sites. The weathered condition of a number of engravings and the presence of graffiti or other minor damage does not detract from the Aboriginal cultural heritage significance expressed in these sites.

One shelter site occurs in the Ingleside Precinct: a shelter with art and deposit. The shelter demonstrates a differing landscape use on the fringes of the main ridgeline than is expressed by the engraving sites or grinding grooves present in a similar environmental context. The shelter with art and deposit has been identified by Aboriginal stakeholders as having particular Aboriginal cultural heritage value. Existing graffiti and disturbance to the shelter is relatively minor and does not detract from its cultural heritage significance, with the art remaining in good condition.

Grinding groove sites also occur within the Ingleside Precinct. Grinding grooves can be isolated sites or found in association with recorded engraving sites. These features express the Aboriginal cultural heritage values of the region by marking the actual places people worked in the past.

All Aboriginal sites within the Ingleside Precinct are significant and worthy of conservation. Rock marking sites (engravings, paintings and grinding grooves) are fixed points in the landscape and represent hard connections with the past. Conservation of as many Aboriginal sites as possible is a desirable outcome of the planning process. The spatially discrete nature of Aboriginal archaeological sites which occur in the Ingleside Precinct have the ability to be conserved more readily within detailed development layouts given they usually have clearly defined boundaries.

In relation to the Precinct assessment method, the identified Aboriginal cultural heritage sites in Ingleside Precinct are of **high significance**, relating to:

- i. Being rare examples of types of sites in the region;
- ii. Expressing the Aboriginal cultural heritage, history and stories of the region;
- iii. Identified importance to the local Aboriginal community, important to the identity and culture of the contemporary Aboriginal community;
- iv. The existing disturbance and evidence of change does not detract from the Aboriginal cultural heritage significance of the sites or places and
- v. The loss or unsympathetic or further disturbance or change would likely diminish the Aboriginal cultural heritage significance of the Precinct and the community cultural identity of the registered Aboriginal communities associated with the Precinct.

Figure 15 shows identified sites according to the DP&E significance rankings. All sites have high significance.

Map removed from public document.

Figure 15. Aboriginal heritage sites in the Precinct, according to DP&E significance rankings

10 Legislation and Management Principles

10.1 Legislative considerations

Legislative considerations relating to Aboriginal heritage apply to the Ingleside Precinct on two levels:

- 1) State level, through the *National Parks and Wildlife Act 1974* and
- 2) Local level, through the *Pittwater Local Environmental Plan 2014*.

National Parks and Wildlife Act 1974

The *National Parks and Wildlife Act 1974* (NPW Act) is the primary statutory control dealing with Aboriginal heritage in New South Wales. Items of Aboriginal heritage (Aboriginal objects) or Aboriginal places (declared under section 84) are protected and regulated under the NPW Act. Under the Act, an “Aboriginal object” is defined as “any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains”. As such, Aboriginal objects are confined to physical evidence and are commonly referred to as Aboriginal sites.

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

Aboriginal objects and Aboriginal places are protected under section 86 of the Act. It is an offence to harm or desecrate an Aboriginal object, either knowingly [section 86 (1)] or unknowingly [section 86 (2)]. It is an offence to harm or desecrate an Aboriginal place [section 86 (4)]. There are offences and penalties relating to harm to, or desecration of, an Aboriginal object or declared Aboriginal place. Harm includes to destroy, deface, damage or move. Penalties are tiered according to offences, which include:

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

Under section 87 (1) it is a defence to a prosecution for an offence under section 86 (1), (2) or (4) if “(a) the harm or desecration concerned was authorised by an Aboriginal heritage impact permit, and (b) the conditions to which that Aboriginal heritage impact permit was subject were not contravened”. Section 87 (2) of the Act provides a defence against prosecution under section 86 (2) if “the defendant exercised due diligence to determine whether the act or omission constituting the alleged offence would harm an Aboriginal object and reasonably determined that no Aboriginal object would be harmed”. This defence appears to specifically relate to Aboriginal objects.

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

Under section 90 (1) of the Act “the Director-General may issue an Aboriginal heritage impact permit”. The regulation of Aboriginal heritage impact permits is provided in Part 6 Division 2 of the Act (sections 90 to 90R). An Aboriginal heritage impact permit (AHIP) is required for any activity which will harm an Aboriginal object or Aboriginal place.

Pittwater Local Environmental Plan 2014

The *Pittwater Local Environmental Plan 2014* (also referred to as Pittwater LEP 2014) is the statutory planning instrument that establishes what forms of development and landuse are permissible and/or prohibited on all land within the Pittwater Local Government Area. Along with a number of aims to control development, the environment and social amenity of the Pittwater area, Pittwater LEP 2014 also aims to conserve Pittwater’s Aboriginal heritage. This includes Aboriginal objects and Aboriginal places of heritage significance.

The LEP defines *Aboriginal object* to have the same meaning as defined by the NPW Act. *Aboriginal place of heritage significance* is defined as an area of land, the general location of which is identified in an Aboriginal heritage study adopted by the Council after public exhibition and that may be shown on the associated Heritage Map, that is (a) the site of one or more Aboriginal objects or a place that has the physical remains of pre-European occupation by, or is of contemporary significance to, the Aboriginal people. It may (but need not) include items and remnants of the

occupation of the land by Aboriginal people, such as burial places, engraving sites, rock art, midden deposits, scarred and sacred trees and sharpening grooves, or (b) a natural Aboriginal sacred site or other sacred feature. It includes natural features such as creeks or mountains of long-standing cultural significance, as well as initiation, ceremonial or story places or areas of more contemporary cultural significance, and may include (but is not limited to) places that are declared under section 84 of the *National Parks and Wildlife Act 1974* to be Aboriginal places for the purposes of that Act. The LEP defines *archaeological site* as a place that contains one or more relics and *heritage item* as a building, work, place, relic, tree, object or archaeological site the location and nature of which is described in Schedule 5. No Aboriginal sites are currently listed on Schedule 5 of the LEP within Ingleside Precinct.

According to clause 5.10(2) development consent is required for demolishing or moving an Aboriginal object, disturbing or excavating an archaeological site while 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, disturbing or excavating an Aboriginal place of heritage significance, erecting a building on land on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance, or subdividing land on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance.

The LEP outlines a number of instances when development consent is not required, including where the applicant has notified the consent authority of the proposed development and the consent authority has advised the applicant in writing before any work is carried out that it is satisfied that the proposed development is of a minor nature or is for the maintenance of the heritage item, Aboriginal object, Aboriginal place of heritage significance or archaeological site, and would not adversely affect the heritage significance of the heritage item, Aboriginal object, Aboriginal place, archaeological site or heritage conservation area (clause 5.10(3)).

In relation to Aboriginal places of heritage significance, clause 5.10(8) requires that the consent authority must, before granting consent under this clause to the carrying out of development in an Aboriginal place of heritage significance consider the effect of the proposed development on the heritage significance of the place and any Aboriginal object known or reasonably likely to be located at the place by means of an adequate investigation and assessment (which may involve consideration of a heritage impact statement), and notify the local Aboriginal communities, in writing or in such other manner as may be appropriate, about the application and take into consideration any response received within 28 days after the notice is sent.

Clause 5.10(10) provides for conservation incentives in that the consent authority may grant consent to development for any purpose of a building that is a heritage item or of the land on which such a building is erected, or for any purpose on an Aboriginal place of heritage significance, even though development for that purpose would otherwise not be allowed by this Plan, if the consent authority is satisfied that:

- (a) the conservation of the heritage item or Aboriginal place of heritage significance is facilitated by the granting of consent, and
- (b) the proposed development is in accordance with a heritage management document that has been approved by the consent authority, and
- (c) the consent to the proposed development would require that all necessary conservation work identified in the heritage management document is carried out, and
- (d) the proposed development would not adversely affect the heritage significance of the heritage item, including its setting, or the heritage significance of the Aboriginal place of heritage significance, and
- (e) the proposed development would not have any significant adverse effect on the amenity of the surrounding area.

10.2 Management principles

Overarching principles for the management of Aboriginal cultural heritage are focussed on the conservation of objects, places or features of cultural value within the landscape, including places, objects and features of significance to Aboriginal people and places of scientific (archaeological) significance.

While there are statutory controls to ensure that Aboriginal objects (sites) are protected and/or regulated, the Aboriginal cultural heritage assessment process is designed to ensure that places or features of cultural value within the landscape and of significance to Aboriginal people are conserved in addition to the sites and objects. In general, it can be recommended to:

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

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

11 Draft Plan and Potential Impact on Aboriginal Cultural Heritage

A draft Plan has been developed by the Department of Planning and Environment, Pittwater Council, UrbanGrowth NSW and the Precinct master planners (Cox Richardson), to identify the future land use and development controls for the Precinct. The draft Plan was prepared in consideration of all factors investigated throughout the Precinct Planning process, including:

- land ownership and urban interface
- social infrastructure and schools
- community facilities and open space
- land capability, landscape and contamination
- traffic and access
- infrastructure servicing
- biodiversity, riparian corridors and bushfire risk
- flooding and water cycle management
- economic viability
- employment and retail, and
- heritage.

Preparation of the draft Plan and planned conservation of Aboriginal heritage

The draft plan was prepared in consideration of the identified Aboriginal sites within the precinct and their high archaeological and cultural significance. The Department and Council were committed to conserving Aboriginal heritage where possible, with the majority of recorded sites being contained within land proposed for conservation.

In summary:

- 15 sites (60%) have been conserved by the Plan.
- 6 sites (24%) are located within the proposed Mona Vale Road upgrade corridor and being considered as part of the road upgrade project. RMS has modified future detailed road design to avoid these sites (KNC 2015, 2014).
- 4 sites (16%) are within areas identified for residential development.

The draft Plan is shown on Figure 16. Aboriginal archaeological sites have been overlain on the draft Plan according to site type and significance ranking (Figures 17 and 18 respectively). Site specific impacts according to the draft Plan are outlined in Table 3 following.

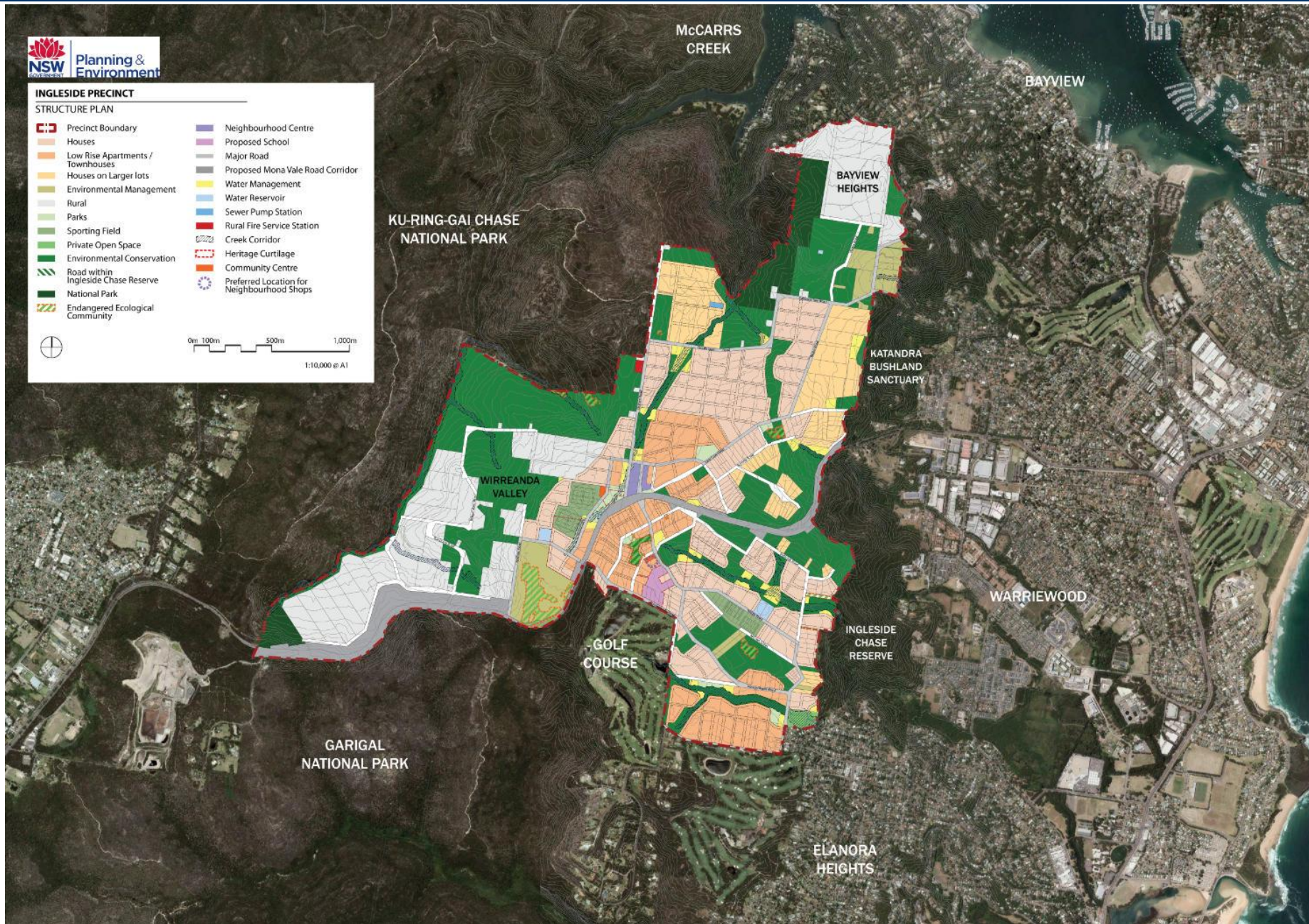


Figure 16. Ingleside Precinct draft Plan (source: NSW Department of Planning and Environment)

Map removed from public document.

Figure 17. Draft Plan with Aboriginal archaeological sites according to site types

Map removed from public document.

Figure 18. Draft Plan with Aboriginal archaeological sites according to significance ranking

Table 3. Potential impact of draft Plan on identified items of Aboriginal cultural heritage

AHIMS Site ID	Site Name	Site Type	Significance	Impact assessment	Proposed draft Plan Land Use	Comments and Recommendations
45-6-0038	McLean Street Ingleside	Engraving	High	Not impacted	Environmental Conservation	Site not relocated (AHIMS site record suggests site has been destroyed under a section 90 consent however the site is still listed on the AHIMS register). Registered site location retained within proposed 'Environmental Conservation' land use. Due diligence assessment recommended for any activities within the Environmental Conservation land use area to ensure no harm to Aboriginal objects.
45-6-0071	Foley's Hill Ingleside Group 144	Engraving	High	Not impacted	Environmental Conservation	Site relocated and confirmed within the Precinct. Updated site coordinates provided to AHIMS. Site retained within proposed 'Environmental Conservation' land use. Due diligence assessment recommended for any activities within the Environmental Conservation land use area to ensure no harm to Aboriginal objects.
45-6-0072	Foley's Hill; Ingleside; Group 144	Engraving	High	Impacted (according to the draft Plan, but should be avoided in detailed design)	Low Rise Apartments / Townhouse (within future road reserve)	Site relocated and confirmed within the Precinct. Updated site coordinates provided to AHIMS. Recommend site be avoided by detailed development planning. The rock engraving site is located on the margin of the residential area in an area which is proposed to be a road reserve (towards the edge of the reserve) to allow for conservation of the site within the road reserve. Further investigation (impact assessment) would be required during the detailed investigations for the future design/development application for the road or development within the residential area. It is recommended the site be avoided by future development (an AHIP would be required prior to any development or activity which may harm an Aboriginal object).
45-6-0100	Sugarloaf Hill, Foley's Hill 1	Engraving	High	Potentially impacted	Proposed Mona Vale Road Corridor	The site will be considered by Roads and Maritime Services (RMS) as part of the Mona Vale Road upgrade project and will not be considered further as part of this Precinct Planning process.
45-6-0101	Sugarloaf Hill, Foley's Hill 2 (Cow and Old Man with Hat)	Engraving	High	Potentially impacted	Proposed Mona Vale Road Corridor	The site will be considered by RMS as part of the Mona Vale Road upgrade project and will not be considered further as part of this Precinct Planning process.
45-6-0107	Terrey Hills; Group 46	Engraving; Grinding Groove	High	Not impacted	National Park	Site not relocated (based on location description and field inspection, site may be located on the boundary of the Precinct). Registered site location retained within 'National Park' land use. Due diligence assessment recommended for any activities within the National Park land use area to ensure no harm to Aboriginal objects.

AHIMS Site ID	Site Name	Site Type	Significance	Impact assessment	Proposed draft Plan Land Use	Comments and Recommendations
45-6-0826	Foleys Hill	Engraving	High	Not impacted	Environmental Conservation (within mapped Endangered Ecological Community)	Site relocated and confirmed within Precinct. Updated coordinates provided to AHIMS. Site retained within proposed 'Environmental Conservation' land use. Due diligence assessment recommended for any activities within the Environmental Conservation land use area to ensure no harm to Aboriginal objects.
45-6-0828	Foleys Hill; Ingleside	Engraving	High	Not impacted	Environmental Conservation	Site relocated and confirmed within Precinct. Updated coordinates provided to AHIMS. Site retained within proposed 'Environmental Conservation' land use. Due diligence assessment recommended for any activities within the Environmental Conservation land use area to ensure no harm to Aboriginal objects.
45-6-0844	Foleys Hill	Engraving; Grinding Groove	High	Impacted	Low Rise Apartments / Townhouse	Site not relocated – no access granted to the property. [Note that previous investigation of the Precinct (Koettig 1993) stated the site had been destroyed by development]. Due diligence assessment recommended prior to any activities which have the potential to harm the Aboriginal object. Site should be avoided by development impacts.
45-6-0869	Foleys Hill	Grinding Groove; Water Hole (Well)	High	Impacted	Houses	Site not relocated – no access to the property. [Note that previous investigation of the Precinct (Koettig 1993) was also unable to relocate this site]. Due diligence assessment recommended prior to any activities which have the potential to harm the Aboriginal object. Site should be avoided by development impacts.
45-6-1117	Foleys Hill	Engraving	High	Not impacted	Environmental Conservation	Platform relocated but engravings not observed, probably too faint. Updated coordinates of rock platform (site location) provided to AHIMS. Site retained within proposed 'Environmental Conservation' land use. Due diligence assessment recommended for any activities within the Environmental Conservation land use area to ensure no harm to Aboriginal objects.
45-6-1228	Pitt Water Trig; Tumbledown-dick Hill; Whale Rock	Engraving	High	Potentially impacted	Proposed Mona Vale Road Corridor	The site will be considered by RMS as part of the Mona Vale Road upgrade project and will not be considered further as part of this Precinct Planning process.
45-6-1388	Foleys Hill	Engraving	High	Not impacted	Environmental Conservation	Platform relocated but engravings not observed, probably too faint. Updated coordinates of rock platform (site location) provided to AHIMS. Site retained within proposed 'Environmental Conservation' land use. (AHO confirmed site location within land identified for conservation). Due diligence assessment recommended for any activities within the Environmental Conservation land use area to ensure no harm to Aboriginal objects.

AHIMS Site ID	Site Name	Site Type	Significance	Impact assessment	Proposed draft Plan Land Use	Comments and Recommendations
45-6-1417	Ingleside; Cabbage Tree Rd	Engraving	High	Impacted	Houses	Site not relocated. Previous investigation of the Precinct (Koettig 1993) stated the site had been destroyed, however the site is still listed on the AHIMS register. Due diligence assessment recommended prior to any activities which have the potential to harm the Aboriginal object. Site should be avoided by development impacts.
45-6-1616	Mona Vale Road	Shelter with art and deposit	High	Potentially impacted	Proposed Mona Vale Road Corridor	The site will be considered by RMS as part of the Mona Vale Road upgrade project and will not be considered further as part of this Precinct Planning process.
45-6-1617	Tumble-down-dick	Engraving	High	Not impacted	National Park	Site relocated and confirmed within Precinct. Updated coordinates provided to AHIMS. Site retained within 'National Park' land use. Due diligence assessment recommended for any activities within the National Park land use area to ensure no harm to Aboriginal objects.
45-6-2520	Ingleside Rd 1	Engraving	High	Not impacted	Environmental Conservation	Site relocated and confirmed within Precinct. Updated coordinates provided to AHIMS. Site retained within proposed 'Environmental Conservation' land use. Due diligence assessment recommended for any activities within the Environmental Conservation land use area to ensure no harm to Aboriginal objects.
45-6-2528	Lane Cove Road 1	Engraving	High	Not impacted	Environmental Conservation	Site relocated and confirmed within Precinct. Updated coordinates provided to AHIMS. Site retained within proposed 'Environmental Conservation' land use. Due diligence assessment recommended for any activities within the Environmental Conservation land use area to ensure no harm to Aboriginal objects.
45-6-2596 (45-6-0827, duplicate entry)	AB-1 (Foleys Hill; Ingleside)	Engraving	High	Not impacted	Environmental Conservation (within mapped Endangered Ecological Community)	Site relocated and confirmed within Precinct. Updated coordinates provided to AHIMS. Site retained within proposed 'Environmental Conservation' land use. Due diligence assessment recommended for any activities within the Environmental Conservation land use area to ensure no harm to Aboriginal objects.
45-6-3024 (45-6-3101, duplicate entry)	Foley's Hill, Ingleside, Group 144 - PITT 110 (Foleys Hill, Ingleside Pitt 110)	Engraving	High	Potentially impacted	Proposed Mona Vale Road Corridor	The site will be considered by RMS as part of the Mona Vale Road upgrade project and will not be considered further as part of this Precinct Planning process.
45-6-3212	MVRW 1	Engraving	High	Potentially impacted	Proposed Mona Vale Road Corridor	The site was recorded as part of the RMS Mona Vale Road upgrade project. The site will be considered by RMS as part of the road upgrade project and will not be considered further as part of this Precinct Planning process.

AHIMS Site ID	Site Name	Site Type	Significance	Impact assessment	Proposed draft Plan Land Use	Comments and Recommendations
45-6-3211	Ingleside 1	Grinding groove	High	Not impacted	Environmental Conservation	Newly recorded site within the Precinct. Site record submitted to OEH for inclusion on AHIMS database. Site retained within proposed 'Environmental Conservation' land use. Due diligence assessment recommended for any activities within the Environmental Conservation land use area to ensure no harm to Aboriginal objects.
45-6-3210	Ingleside 2	Engraving	High	Not impacted	Environmental Conservation	Newly recorded site within the Precinct. Site record submitted to OEH for inclusion on AHIMS database. Site retained within proposed 'Environmental Conservation' land use. Due diligence assessment recommended for any activities within the Environmental Conservation land use area to ensure no harm to Aboriginal objects.
45-6-3208	Ingleside 3	Engraving	High	Not impacted	Environmental Conservation	Newly recorded site within the Precinct. Site record submitted to OEH for inclusion on AHIMS database. Site retained within proposed 'Environmental Conservation' land use. Due diligence assessment recommended for any activities within the Environmental Conservation land use area to ensure no harm to Aboriginal objects.
45-6-3209	Ingleside 4	Engraving	High	Not impacted	Environmental Conservation	Newly recorded site within the Precinct. Site record submitted to OEH for inclusion on AHIMS database. Site retained within proposed 'Environmental Conservation' land use. Due diligence assessment recommended for any activities within the Environmental Conservation land use area to ensure no harm to Aboriginal objects.

11.1 Potential impact of the draft Plan on Aboriginal heritage

All Aboriginal archaeological sites within the Precinct are of high significance, in terms of both their archaeological and cultural heritage values, and worthy of conservation.

Throughout the Precinct Planning process it was recommended the development of the draft Plan avoid harm to Aboriginal objects where possible, which has been reflected in the layout plan. However, some Aboriginal archaeological sites are situated within developable land according to the resultant draft Plan and would require further detailed planning and management measures to avoid harm to Aboriginal objects.

Review of the draft Plan in relation to the Aboriginal cultural heritage findings showed that:

- 15 sites (60%) have been conserved by the Plan.
- 6 sites (24%) are located within the proposed Mona Vale Road upgrade corridor and being considered as part of the road upgrade project. Impact avoidance has been recommended for these sites. RMS has modified future detailed road design to avoid these significant sites (KNC 2015, 2014).
- 4 sites (16%) are within areas identified for residential development.

11.1.1 Conserved Aboriginal heritage sites

Fifteen (60%) of the recorded Aboriginal sites within the Precinct are proposed to be conserved, being situated within land proposed for 'Environmental Conservation' or 'National Park':

- 13 sites (52%) within proposed 'Environmental Conservation' land
- 2 sites (8%) within 'National Park' land.

All 15 sites are rock marking sites, including rock engravings and grinding grooves. The sites are of high Aboriginal cultural heritage significance, important to the local Aboriginal community and worthy of conservation.

Conservation of the identified Aboriginal heritage sites within the proposed 'Environmental Conservation' and 'National Park' land use areas represents a positive outcome for Aboriginal cultural heritage. Any future activities within these land use areas should avoid impact to Aboriginal heritage.

The 15 sites conserved by the draft Plan are listed in Table 4.

Table 4. Conserved Aboriginal sites

Site	Site type	Significance	Draft Plan land use
45-6-0038	Engraving	High	Environmental Conservation
45-6-0071	Engraving	High	Environmental Conservation
45-6-0107	Engraving; Grinding Groove	High	National Park
45-6-0826	Engraving	High	Environmental Conservation
45-6-0828	Engraving	High	Environmental Conservation
45-6-1117	Engraving	High	Environmental Conservation
45-6-1388	Engraving	High	Environmental Conservation
45-6-1617	Engraving	High	National Park
45-6-2520	Engraving	High	Environmental Conservation
45-6-2528	Engraving	High	Environmental Conservation
45-6-2596 / 45-6-0827	Engraving	High	Environmental Conservation (in an area of Endangered Ecological Community)
Ingleside 1 (45-6-3211)	Grinding Groove	High	Environmental Conservation
Ingleside 2 (45-6-3210)	Engraving	High	Environmental Conservation
Ingleside 3 (45-6-3208)	Engraving	High	Environmental Conservation
Ingleside 4 (45-6-3209)	Engraving	High	Environmental Conservation

11.1.2 Potentially impacted Aboriginal heritage sites

Despite the planned conservation of 60% of identified sites, rezoning of the Precinct according to the draft Plan may allow for potential future development impact to four Aboriginal heritage sites (16%), including:

- 2 sites (8%) within the proposed 'Houses' land use area. Of these:
 - Site 45-6-0869 was not able to be accessed for the study as permission to access the property was not provided - the location of this site is unverified.
 - Site 45-6-1417 was not able to be relocated, with the AHIMS record noting it has likely been destroyed.
 - Further investigation would be required for these sites prior to any development in the vicinity of the AHIMS registered site locations.
- 2 sites (8%) within the proposed 'Low Rise Apartments / Townhouse' land use area. Of these:
 - Site 45-6-0072 is located on the margin of the residential area in an area which is proposed to be a road reserve (towards the edge of the reserve) to allow for conservation of the site within the road reserve. Further investigation (impact assessment) would be required during the detailed investigations for the future design/development application for the road or development within the residential area. It is recommended the site be avoided by future development (an AHIP would be required prior to any development or activity which may harm an Aboriginal object).
 - Site 45-6-0844 was not able to be relocated for the study as permission to access the property was not provided so its location is unverified. Further investigation would be required.

All four potentially impacted sites are rock marking sites, including rock engravings and grinding grooves. The sites are of high Aboriginal cultural heritage significance, important to the local Aboriginal community and worthy of conservation.

It is recommended these sites be avoided by any future development within these land use areas. Loss of these significant sites would be a negative effect of rezoning on Aboriginal heritage, however informed and sympathetic development should be able to conserve these sites. Given these types of sites are fixed points in the landscape and usually have clearly defined boundaries, it is achievable that these sites could be avoided through informed and sympathetic detailed design of any future development proposals within these areas. Further detailed impact assessment, Aboriginal community consultation and development of specific heritage management measures would be required at the detailed development layout stage. If the sites cannot be avoided by future development layouts, then an Aboriginal Heritage Impact Permit (AHIP) under section 90 of the *National Parks and Wildlife Act 1974* would be required prior to any activities that may harm Aboriginal objects. However it should be noted that AHIPs are not commonly issued for rock engravings or grinding groove sites.

The 4 sites potentially impacted by the draft Plan, requiring further investigation and recommended for conservation in detailed design for any future development activities, are listed in Table 5.

Table 5. Potentially impacted Aboriginal sites

Site	Site type	Significance	Draft Plan land use
45-6-0072	Engraving	High	Low Rise Apartments / Townhouse (future road reserve)
45-6-0844	Engraving; Grinding Groove	High	Low Rise Apartments / Townhouse
45-6-0869	Grinding Groove; Water Hole (Well)	High	Houses
45-6-1417	Engraving	High	Houses

11.1.3 Aboriginal sites within proposed Mona Vale Road upgrade corridor

Six of the identified Aboriginal sites (24%) were situated in the Proposed Mona Vale Road Corridor. These included five rock engraving sites and a shelter with art and deposit. The sites are of high Aboriginal cultural heritage significance, important to the local Aboriginal community and worthy of conservation.

These sites will be considered by Roads and Maritime Services (RMS) as part of the Mona Vale Road upgrade project and will not be considered as part of this Precinct Planning process. Impact avoidance has been recommended for these sites. RMS has modified future detailed road design to avoid these significant sites (KNC 2015, 2014).

Table 6. Aboriginal sites being considered by Mona Vale Road upgrade project (avoided by detailed design)

Site	Site type	Significance	Draft Plan land use
45-6-0100	Engraving	High	Proposed Mona Vale Road Corridor
45-6-0101	Engraving	High	Proposed Mona Vale Road Corridor
45-6-1228	Engraving	High	Proposed Mona Vale Road Corridor
45-6-1616	Shelter with art and deposit	High	Proposed Mona Vale Road Corridor
45-6-3024 / 45-6-3101	Engraving	High	Proposed Mona Vale Road Corridor
MVRW 1 (45-6-3212)	Engraving	High	Proposed Mona Vale Road Corridor

11.1.4 Potential unidentified Aboriginal sites within the precinct

It is likely that additional Aboriginal heritage sites of similar types to those identified through the assessment occur in the Precinct (e.g. currently obscured by vegetation or within properties which were not able to be accessed for the study).

Archaeological sensitivity of the Precinct is strongly linked to geology. Aboriginal rock engravings, grinding grooves and rock shelter sites can occur where there are suitable sandstone outcrops and overhangs.

The Aboriginal heritage of the Precinct is significant and should be conserved wherever possible. Further assessment in accordance with legislative requirements (e.g. due diligence) would be required for any activities within the Precinct which have the potential to harm Aboriginal heritage.

The results of the Ingleside Precinct Indigenous Heritage Assessment can be used as a guide for future development in the area. It provides a baseline level of information to assist in development planning and due diligence assessment.

12 Management Recommendations

Investigations identified 25 Aboriginal heritage sites (Aboriginal objects) within Ingleside Precinct. These were all rock marking sites, including rock engravings, grinding grooves and a shelter site with art and archaeological deposit.

All identified Aboriginal heritage sites were assessed to be of high significance in terms of both their archaeological and Aboriginal cultural heritage values, in accordance with the Precinct Planning process.

Further Aboriginal heritage sites of similar types to those identified through the assessment likely occur in the Precinct, such as in heavily vegetated areas or in private properties which were not accessible for this study. Archaeological sensitivity of the Precinct is strongly linked to geology. Aboriginal rock engravings, grinding grooves and rock shelter sites can occur where there are suitable sandstone outcrops and overhangs.

The Aboriginal heritage of the Precinct is significant and should be conserved wherever possible. Aboriginal heritage conservation within the Precinct can be achieved with appropriate identification, recognition and planning through due diligence and development controls.

12.1 Conservation of Aboriginal heritage

Fifteen (60%) Aboriginal sites within the Precinct are conserved according to the draft Plan, being situated within land proposed for 'Environmental Conservation' or 'National Park'. All are rock marking sites, including 13 rock engraving sites, one engraving and grinding groove site and a grinding groove site. The sites are of high Aboriginal cultural heritage significance and have been conserved by the precinct plan, representing a positive heritage outcome. Future development within the precinct should ensure these sites remain conserved.

Any activities within the 'Environmental Conservation' lands or 'National Park' lands should ensure the sites are not affected. Aboriginal heritage should be addressed when considering any activities in these areas (e.g. maintenance activities, bush regeneration, hazard reduction, recreational activities, placement of walking tracks, vehicle movements). Aboriginal heritage provisions should be included in any Plan of Management prepared for the Environmental Conservation or National Park land use areas within the Precinct. Due diligence assessment should be carried out for any proposed activities within these areas to ensure there is no harm to Aboriginal objects and Aboriginal places.

In summary, it is recommended that:

- Future development within the precinct should ensure these sites remain conserved.
- Any activities within these land use areas should avoid impact to Aboriginal heritage.

12.2 Further investigation of Aboriginal heritage

The draft Plan may allow for potential future development impact to four Aboriginal heritage sites (16%), two within proposed 'Houses' land use and two within proposed 'Low Rise Apartments / Townhouse' land use. All are rock marking sites, including two rock engravings, one engraving and grinding groove site and a grinding groove site.

Three of the four sites were not able to be relocated for the study, two being located on properties which were not able to be accessed and one likely to have been destroyed. The site locations for these three sites remain unverified and further investigation would be required prior to any activities in the vicinity of the AHIMS registered site locations. One site (45-6-0072) was relocated by the study and has been recommended for further consideration and avoidance for future development activities within this proposed land use area (road reserve/residential development).

The sites are of high Aboriginal cultural heritage significance and worthy of conservation. It is recommended these sites be avoided by any future development within these land use areas. Given these types of sites are fixed points in the landscape and usually have clearly defined boundaries, informed and sympathetic development should be able to conserve the sites and their context (e.g. entire rock platform).

Further detailed impact assessment, Aboriginal community consultation and development of specific heritage management measures would be required at the detailed development layout stage.

In summary it is recommended that:

- Site 45-6-0072 be conserved within the future road reserve and avoided by development of the residential land use area.

- Further investigation (site inspection) would be required to verify site locations which were not able to be accessed for the study.
- Further detailed impact assessment, Aboriginal community consultation and development of specific heritage management measures would be required at the detailed development layout stage.
- Aboriginal sites should be conserved wherever possible within future development lands through informed and sympathetic development layouts. Conservation should aim to conserve the site and its surrounding context (e.g. the rock platform not only the engravings or grinding grooves).

12.3 Aboriginal heritage due diligence

It is likely that additional Aboriginal heritage sites of similar types to those identified through the assessment occur in the Precinct. Archaeological sensitivity of the Precinct is strongly linked to geology. Aboriginal rock engravings, grinding grooves and rock shelter sites can occur where there are suitable sandstone outcrops and overhangs.

Aboriginal objects (Aboriginal archaeological sites) are protected and regulated under Part 6 of the *National Parks and Wildlife Act 1974* (NPW Act).

The proposed rezoning of Ingleside Precinct according to the draft Plan may allow for future activities which have the potential to harm Aboriginal objects by allowing for future development according to the new land use permissions. Post-rezoning, further investigation and specifically impact assessment would be required prior to any development or activity which may harm an Aboriginal object.

In the first instance, the process outlined in the OEH *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* should be followed to reasonably determine whether or not Aboriginal objects will be harmed by an activity, whether further investigation is warranted and whether the activity requires an AHIP application.

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

Future development planning should take into account the location of identified Aboriginal heritage sites in the Precinct as well as the identified heritage values of the Precinct to ensure appropriate development of the lands. AHIPs are not commonly issued for the types of sites identified in the Precinct (i.e. rock engravings, grinding grooves and shelters with art and/or archaeological deposit) and future detailed planning should aim to conserve these sites.

Further investigation and impact assessment should include Aboriginal community consultation with Registered Aboriginal Stakeholders.

In summary, it is recommended that:

- Any future development activities within the precinct should follow the legislative process to appropriately assess Aboriginal heritage.
- Current requirements and guidelines applicable for completing due diligence, assessment and consultation for Aboriginal heritage include the OEH:
 - Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*
 - Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*
 - Aboriginal cultural heritage consultation requirements for proponents 2010*
 - Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW*
 - Applying for an Aboriginal Heritage Impact Permit: Guide for applicants.*

12.4 Development controls for Aboriginal heritage

Pittwater Local Environmental Plan 2014 also includes provisions for the protection and recognition of the area's Aboriginal cultural heritage values and assets. To support the heritage provisions of the LEP, Council is committed to preparing development objectives and controls for the Precinct, which include Aboriginal heritage. The Development Control Plan (DCP) should aim to protect and conserve the Aboriginal heritage of the Ingleside Precinct.

The Precinct's heritage includes Aboriginal archaeological sites which help to connect past and contemporary communities. The Aboriginal heritage of Ingleside Precinct is of high Aboriginal cultural heritage significance and it is important to conserve and recognise these heritage values.

The main aim of identifying heritage items and conservation areas is to ensure the significance of the items is recognised and maintained. This does not necessarily mean that development potential is limited or cannot occur, especially within urban areas, but that any changes to land use or development proposals should consider and respect any identified heritage sites or significance.

Aboriginal heritage assessment should form part of the site analysis/environmental assessment undertaken to support any development application (DA) made to Council. The site analysis should:

- Investigate the property and its surroundings to identify the location of on-site and nearby Aboriginal heritage items (archaeological sites) or areas of potential Aboriginal cultural heritage significance;
- Assess how future development would relate to the Aboriginal heritage on the property and its immediate surroundings; and
- Produce a design which minimises negative effects on Aboriginal heritage.

The site analysis for Aboriginal heritage should follow the due diligence process outlined by the Code of Practice. If the due diligence assessment reasonably concludes that Aboriginal objects would not be harmed, the proposed activity can proceed with caution. (Note that if Aboriginal objects are later found when carrying out the activity, work affecting those Aboriginal objects must stop and an AHIP sought before any harm to those known objects).

If the due diligence assessment concludes that there are Aboriginal objects or that they are likely and that they would be harmed by the proposed development activities, then further investigation and impact assessment would be required. This may include a detailed Aboriginal archaeological assessment in accordance with the OEH *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*. If, after this detailed investigation and impact assessment, it is determined that harm to an Aboriginal object is unavoidable then an AHIP application must be made. An Aboriginal cultural heritage assessment report and Aboriginal community consultation in accordance with the *National Parks and Wildlife Regulation 2009, Aboriginal cultural heritage consultation requirements for proponents 2010* and *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* is required to support an AHIP application. An AHIP is required prior to any activity which may harm an Aboriginal object or Aboriginal place.

An Aboriginal Heritage Management Plan is recommended for any Aboriginal sites being retained within development areas or for land within a conservation area. Aboriginal heritage provisions should be included in any Plan of Management prepared for the Environmental Conservation or National Park land use areas within the Precinct.

Development objectives and controls for consideration in a DCP for the Precinct are outlined in the table below.

Table 7. Suggested Aboriginal heritage development objectives and controls for Ingleside Precinct

Objectives:		Controls:	
1.	To protect and manage Aboriginal objects and Aboriginal places and areas of identified Aboriginal cultural heritage significance within Environmental Conservation and National Park land use areas of the Precinct.	1.	Aboriginal heritage provisions to be included in any Plan of Management for 'Environmental Conservation' or 'National Park' land use areas within the Precinct. Due diligence assessment to be carried out for any proposed activities within these areas to ensure no harm to Aboriginal objects and Aboriginal places.
2.	To have any activities carried out in the Precinct undertaken in a way which considers the location and heritage significance of Aboriginal objects and Aboriginal places.	2.	Development within the Precinct shall not proceed without appropriate investigation and consultation with registered Aboriginal stakeholders. Development-specific Aboriginal heritage due diligence / impact assessment is required to support a Development Application to Council and shall form part of the site analysis / environmental assessment. Aboriginal heritage and its context should be conserved. Appropriate buffers (if any) for Aboriginal objects and Aboriginal places to be determined as part of due diligence / impact assessment to ensure no harm to Aboriginal objects and Aboriginal places. Aboriginal objects and Aboriginal places to be avoided where possible, and impacts to Aboriginal sites and areas of cultural heritage significance minimised. The significance of Aboriginal objects and places must be considered for any works. Where harm to an Aboriginal object or place has been determined to be unavoidable, development consent will be conditional upon receipt of an Aboriginal Heritage Impact Permit (AHIP) issued under section 90 of the <i>National Parks and Wildlife Act 1974</i> . An AHIP is required prior to any activity which may harm an Aboriginal object or declared Aboriginal place.
3.	To recognise the Precinct's significant Aboriginal heritage value through incorporating elements of Aboriginal heritage within the redevelopment of the Precinct where appropriate.	3.	Opportunities for the recognition and interpretation of the Precinct's significant Aboriginal heritage are to be considered. Interpretation opportunities may include print and electronic information, on-site and directly related off-site installations, educational programs, public art and community activities. Aboriginal heritage interpretation should be undertaken in consultation with registered Aboriginal stakeholders.

References

- Attenbrow, V. 2002. *Sydney's Aboriginal Past: Investigating the Archaeological and Historical Records*. University of New South Wales Press, Sydney.
- Brook, J. and Kohen, J.L., 1991. *The Parramatta Native Institution and the Black Town: A History*. New South Wales University Press, Kensington.
- Byrne, D. 1984. Archaeological survey at Ingleside. Report to Warringah Shire Council.
- Campbell, W.D., 1899. Aboriginal Carvings of Port Jackson and Broken Bay. *Memoirs of the Geological Survey of New South Wales*, Ethnological Series No. 1, Sydney.
- Chapman, G.A., and Murphy, C.L., 1989. *Soil Landscapes of the 1:100,000 Sheet*. Soil Conservation Service of NSW, Sydney.
- Corkill, T. 1990. Survey for Aboriginal archaeological sites along proposed sewer line between Terrey Hills and Mona Vale, NSW. Report to Water Board.
- Dallas, M. 1997. Archaeological survey of Burrawang Ridge Estate at Ingleside, NSW. Report to Deacons Graham & James for Healesville Holdings Pty Ltd.
- DECCW, 2010. *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*. Department of Environment, Climate Change and Water, Sydney.
- DECCW, 2010. *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*. Department of Environment, Climate Change and Water, Sydney.
- Govett, W.R., 1836. Sketches of New South Wales. Saturday Magazine. John William Parker, London.
- Gunn, R.G., 1992. Garigal National Park Archaeological Survey. Management Report to the NPWS (NSW).
- Herbert, C (ed), 1983. *Geology of the Sydney 1:100 000 sheet 9130*. Geological survey of New South Wales. Department of Mineral Resources, NSW.
- JCIS Consultants, 2012. Preliminary Environmental Investigation: Mona Vale Road Upgrade, Terrey Hills to Ingleside, NSW. Non-Indigenous Heritage Assessment. Report prepared for GHD Pty Ltd and Roads and Maritime Services.
- Kayandel Archaeological Services, 2008. Aboriginal heritage assessment of Ingleside Land Release Area, Ingleside NSW. Report prepared National Project Consultants Pty Ltd.
- Kelleher Nightingale Consulting Pty Ltd (KNC) 2015. Mona Vale Road upgrade, Terrey Hills to Ingleside: Aboriginal cultural heritage constraints mapping and archaeological survey report. Report to Roads and Maritime Services.
- KNC 2014, Mona Vale Road upgrade from Manor Road, Ingleside to Foley Street, Mona Vale: Aboriginal archaeological survey report Stage 2 PACHCI. Report to Roads and Maritime Services.
- KNC, 2011. Mona Vale Road – Terrey Hills to Ingleside: Aboriginal Cultural Heritage Constraints Mapping and Archaeological Survey Report. Report prepared for Roads and Traffic Authority of New South Wales (RTA).
- Koettig, M. 1993. Warriewood/Ingleside Release Area: Assessment of Aboriginal sites. Report to Pittwater Council.
- Koettig, M. 1981. Archaeological survey for Aboriginal sites – Mona Vale Road (McCarrs Creek Road – Alan Street). Report to Department of Main Roads.
- McCarthy, F.D., 1983. Catalogue of rock engravings in the Sydney-Hawkesbury District, N.S.W. Sydney: National Parks and Wildlife Service (NSW).
- McCarthy, F.D., 1954. Records of the Rock Engravings of the Sydney District, Nos. 41 – 55. *Mankind* 5(1):8-32
- Navin Officer Archaeological Resource Management, 1995. Archaeological survey gas pipeline route Mona Vale, NSW. Report to AGL Gas Company (NSW) Limited.

- NSW National Parks and Wildlife Service, 1996. *Ku-ring-gai Chase National Park*. NSW National Parks and Wildlife Service, Hurstville.
- Oakley, B. 1998. Aboriginal and European Heritage Assessment – Proposed upgrade of Mona Vale Road Ingleside NSW. Report to the Roads and Traffic Authority.
- Oakley, B. 1993. Optus Communications – a survey for Aboriginal archaeological sites along the Optus cable route – Mona Vale Road, Palm Beach and Liverpool. Report to Kinhill Engineers Pty Ltd.
- Office of Environment and Heritage (OEH), 2011. *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW: Part 6 National Parks and Wildlife Act 1974*. Office of Environment and Heritage, Sydney.
- OEH, 2011. *Applying for an Aboriginal Heritage Impact Permit: Guide for applicants*. Office of Environment and Heritage NSW, Department of Premier and Cabinet, Sydney South.
- OEH, 2010. *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010: Part 6 National Parks and Wildlife Act 1974*. Office of Environment and Heritage, Sydney.
- Pickett, J.W. and Alder, J.D., 1997. *Layers of Time: The Blue Mountains and their Geology*. New South Wales Department of Mineral Resources, Sydney.
- Sim, I. M. 1965. Records of the Rock Engravings of the Sydney District, Nos. 138–145. *Mankind* 6(6):275-287.
- Tench, W., 1793. *Complete Account of the Settlement at Port Jackson*. G. Nicol and J. Sewell, London.

Appendix A

Advertisement for Registration of Interest

Public notices

Notice of Commencement of Aboriginal Heritage Studies for Ingleside Precinct and Notice for Registration of Interest

The Department of Planning and Infrastructure, in partnership with Pittwater Council and UrbanGrowth NSW, is undertaking a precinct planning project for land at Ingleside, referred to as Ingleside Precinct. The precinct is within the Pittwater Local Government Area (LGA) and borders Ku-ring-gai Chase and Garigal National Parks, Warriewood Escarpment and Ingleside Chase Reserve. The suburbs of Bayview and Elanora Heights are located to the north and south.

Although Ingleside is not located within the Sydney Region Growth Centres, planning for the Ingleside Precinct will be modelled on the Precinct Planning approach used in the Growth Centres. The precinct planning process aims to determine the future urban development potential of the lands and establish planning controls that will enable development consistent with this potential.

This notice is to inform Aboriginal Stakeholders that Aboriginal Heritage Studies will be commencing in the near future and to request that Aboriginal Stakeholders register their interest in participating in the planning process for Ingleside Precinct. The studies will be based on the established Protocol for Aboriginal Stakeholder Involvement in the Assessment of Aboriginal Heritage in the Sydney Growth Centres

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

- Inform the precinct planning process and the assessment of any Aboriginal heritage impact permit (AHIP) applications made pursuant to the National Parks and Wildlife Act for Aboriginal objects within the project area;
- Acknowledge that the groups and individuals specified in the protocol will be consulted with; and
- Invite any other interested parties to register their interest in writing, providing their name, address, phone number and information on their connection to the area and the skills and experience they would bring to the process in accordance with Department of Planning and Infrastructure requirements.

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

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

Any group or individual wishing to participate in the Aboriginal Heritage Study consultation process for the Ingleside Precinct should register their interest by phone or in writing. The closing date for registration of interest is Friday 28 February 2014.

**To register your interest, please contact: Kelleher Nightingale Consulting
Attention: Alison Nightingale Level 10, 25 Bligh St, Sydney NSW 2000
or by phone 02 9232 5373 or fax 02 9223 0680**

Appeared in: *Manly Daily*, Friday 7 February 2014, page 36