

DUE DILIGENCE ABORIGINAL ARCHAEOLOGICAL ASSESSMENT

***Crescent Road (122-128) &
The Avenue (55-57)
Newport
NSW 2106
(Northern Beaches LGA)***



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Prepared for

Marco Silva

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Cover Image

Aerial of study area.

Study area outlined in red. QGIS using Six Maps. LRS Online (accessed 13/06/2023).

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EXECUTIVE SUMMARY

Background

Archaeological Management and Consulting Group (AMAC Group) was commissioned by Marco Silva to prepare a Due Diligence Aboriginal Archaeological Assessment for the proposed subdivision, at Lot 21 DP 545339, Lot 2 DP 210342, Lot 3 DP 210342, Lot 1 DP 503390, Lot 111 DP 556902, Lot 112 DP 556902, and Lot 295 DP 820302 at the combined street address 122-128 Crescent Road and 55-57 The Avenue, Newport, New South Wales 2106.

Aboriginal Consultation

As this is a desktop study and no Aboriginal Heritage Impact Permit (AHIP) is being applied for, this report does not require consultation to be undertaken as per the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010c).

AMAC engaged the Metropolitan Local Aboriginal Land Council to participate in the site inspection of the study area. This document has also been distributed for review and comment. All comments will be included in the final version of this document.

Results

There were no confirmed Aboriginal archaeological site records located within the study area on the Aboriginal Heritage Information Management System (AHIMS) however, there are five registered sites within 1000m of the study area, the closest being approximately 378m (ID 45-6-1891). The site is also located within 200m of Pittwater and an unnamed tributary as well as along the foreshore of Winji Jimmi Bay which indicates that sub-surface Aboriginal objects and/or deposits are likely in undisturbed areas.

Recommendations

In accordance with the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (DECCW 2010b), it is recommended that further archaeological and cultural assessment is necessary in the form of an ACHAR, as the proposed development zone is located within 200m of waters. Dependent on the design and location of development activities within the study site, archaeological test excavation may be required in accordance with Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2010a).

- Further assessment is required in the form of a full Aboriginal Cultural Heritage Assessment Report, including full Aboriginal community consultation in accordance with Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010c).
- A program of archaeological investigation may be required. This should be guided by a methodology produced within an ACHAR which should include a site survey to identify areas of archaeological potential and may result in a recommendation for systematic, subsurface archaeological test excavation in accordance with the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2010a), or an AHIP if appropriate to establish the nature and extent of any archaeological objects and/or deposits that are/may be present.

CONTACT DETAILS

The contact details for the archaeologist, NSW Police, Heritage NSW, and the Local Aboriginal Land Council are as follows:

Organisation	Contact	Contact Details
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NSW Mona Vale Police Station		PAC Office: 1705-1707 Pittwater Road, Mona Vale 2103 Phone: (02) 9998 0699 Fax: (02) 9998 0616
Archaeological Management & Consulting Group	Mr. Benjamin Streat or Mr. Martin Carney	122c-d Percival Road Stanmore NSW 2048 Ph:(02) 9568 6093 Fax:(02) 9568 6093 Mob: 0405 455 869 Mob: 0411 727 395 benjaminstreat@archaeological.com.au
Heritage NSW Department of Planning & Environment	Archaeologist – Head Office	Level 6 Valentine Avenue Parramatta, NSW 2150 Ph: (02) 9873 8500 heritagemailbox@environment.nsw.gov.au
Metropolitan Local Aboriginal Land Council (MLALC)	Cultural Heritage Officer	Po Box 1103 Strawberry Hills NSW 2012 (02) 8394 9666 culturalheritage@metrolalc.org.au

1.0 INTRODUCTION

1.1 BACKGROUND

Archaeological Management and Consulting Group (AMAC Group) was commissioned by Marco Silva to prepare a Due Diligence Aboriginal Archaeological Assessment for the proposed subdivision at Lot 21 DP 545339, Lot 2 DP 210342, Lot 3 DP 210342, Lot 1 DP 503390, Lot 111 DP 556902, Lot 112 DP 556902, and Lot 295 DP 820302 at the combined street address 122-128 Crescent Road and 55-57 The Avenue, Newport, New South Wales, 2264.

1.2 STUDY AREA

The study site is that piece of land described as Lot 21 DP 545339, Lot 2 DP 210342, Lot 3 DP 210342, Lot 1 DP 503390, Lot 111 DP 556902, Lot 112 DP 556902, and Lot 295 DP 820302, forming the following street address 122-128 Crescent Road and 55-57 The Avenue, Newport, 2264 in the Parish of Narrabeen, County of Cumberland (Figure 1.1-Figure 1.2).

Lot	Deposited Plan
21	545339
2	210342
3	210342
1	503390
111	556902
112	556902
295	820302

1.3 SCOPE

The aims of this assessment are to evaluate the Aboriginal archaeological potential of the study area and the likelihood of any intact soil profiles within the study area that have the potential to contain Aboriginal archaeological deposits and/or objects; to develop mitigative strategies under the appropriate legislation; and to devise an appropriate strategy for the management of Aboriginal archaeological and cultural heritage values of the area.

1.4 ABORIGINAL CONSULTATION & PARTICIPATION SUMMARY

As this is a desktop study and no Aboriginal Heritage Impact Permit (AHIP) is being applied for, this report does not require consultation to be undertaken as per the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010c).

AMAC engaged the Metropolitan Local Aboriginal Land Council to participate in the site inspection of the study area. This document has also been distributed for review and comment. All comments will be included in the final version of this document.

1.5 AUTHOR IDENTIFICATION

The analysis of the archaeological background and the reporting were undertaken by Prue Newton (B. Arts, Hons, MMarArchaeol) in association with Steven J. Vasilakis (B. Arts. Hons.) and reviewed by Benjamin Streat (BA, Grad Dip Arch Her, Grad Dip App Sc), Director of Indigenous Heritage, AMAC Group. QGIS and mapping were undertaken by Emma Williams (B Arts).

1.6 ACKNOWLEDGEMENTS

The author would like to thank the following for advice and/or input into this assessment:

- Marco Silva of Essex Develop
- Jordan Soliman of Essex Develop
- The Metropolitan Local Aboriginal Land Council

DRAFT



Figure 1.1 Aerial of study area.
Study area outlined in red. QGIS using Six Maps. LRS Online (accessed 13/06/2023).

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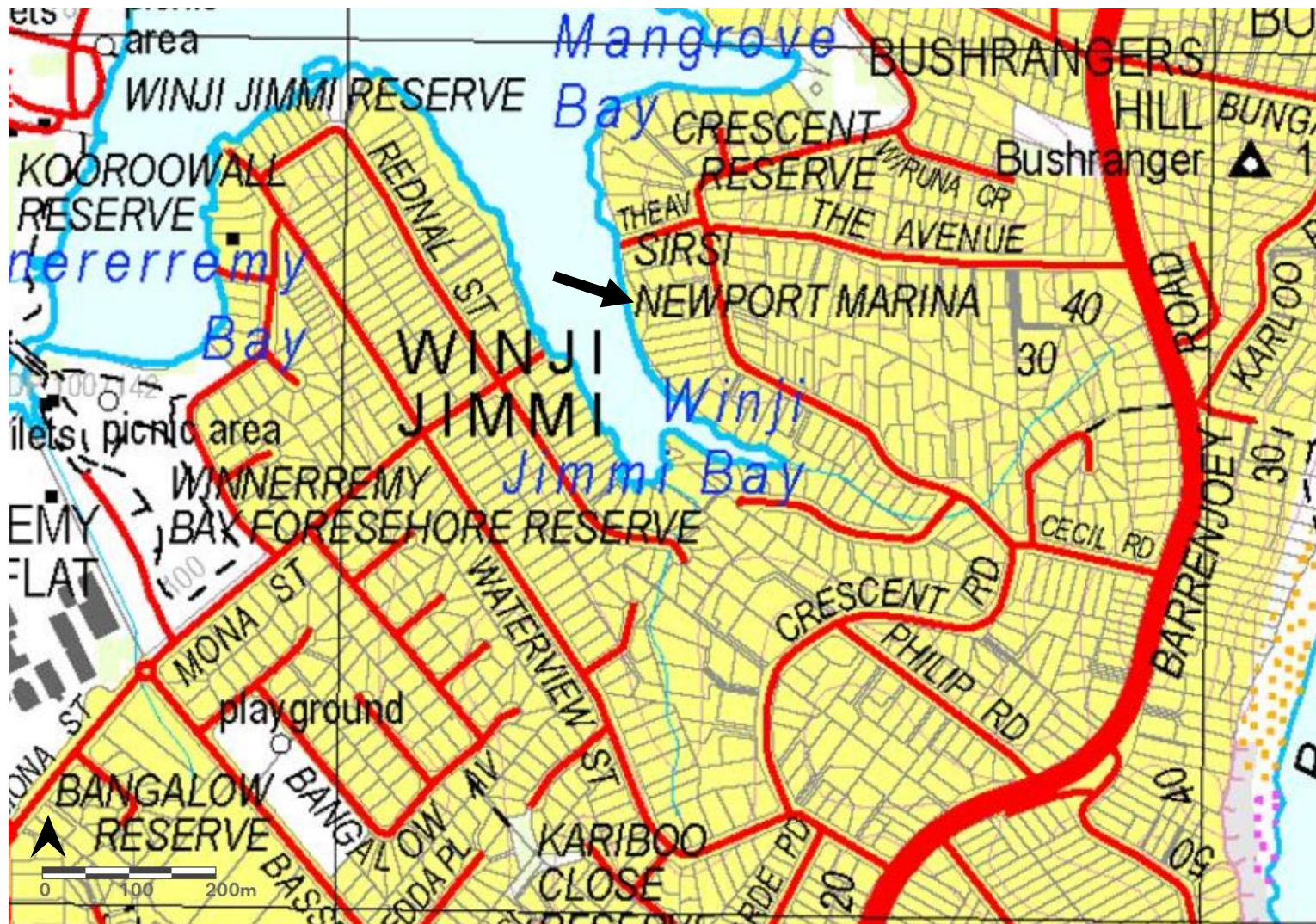


Figure 1.2 Topographic map with site location. Study area indicated by black arrow. Six Maps. LRS Online (accessed 13/06/2023).

2.0 LEGISLATIVE CONTEXT AND STATUTORY CONTROLS

This section of the report provides a brief outline of the relevant legislation and statutory instruments that protect Aboriginal archaeological and cultural heritage sites within the state of New South Wales. Some of the legislation and statutory instruments operate at a federal or local level and as such are applicable to Aboriginal archaeological and cultural heritage sites in New South Wales. This material is not legal advice and is based purely on the author's understanding of the legislation and statutory instruments. This document seeks to meet the requirements of the legislation and statutory instruments set out within this section of the report.

2.1 COMMONWEALTH HERITAGE LEGISLATION AND LISTS

One piece of legislation and two statutory lists are maintained and were consulted as part of this report: *the Environmental Protection and Biodiversity Conservation Act 1999*, the National Heritage List and the Commonwealth Heritage List.

2.1.1 Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act 1999)* offers provisions to protect matters of national environmental significance. This act establishes the National Heritage List and the Commonwealth Heritage List which can include natural, Indigenous and historic places of value to the nation. This Act helps ensure that the natural, Aboriginal and historic heritage values of places under Commonwealth ownership or control are identified, protected and managed.

2.1.2 National Heritage List

The National Heritage List is a list which contains places, items and areas of outstanding heritage value to Australia; this can include places, items and areas overseas as well as items of Aboriginal significance and origin. These places are protected under the Australian Government's *EPBC Act 1999*.

2.1.3 Commonwealth Heritage List

The Commonwealth Heritage List can include natural, Indigenous and historic places of value to the nation. Items on this list are under Commonwealth ownership or control and as such are identified, protected and managed by the Federal Government.

2.1.4 The Native Title Act 1993

The *Native Title Act 1993 (NTA 1993)* provides the legislative framework to:

- Recognise and protect native title;
- establish ways in which future dealings affecting native title may proceed, and to set standards for those dealings, including providing certain procedural rights for registered native title claimants and native title holders in relation to acts which affect native title;
- establish a mechanism for determining claims to native title;

- provide for, or permit, the validation of past acts invalidated because of the existence of native title.

The National Native Title Tribunal has a number of functions under the *NTA 1993* including maintaining the Register of Native Title Claims, the National Native Title Register and the Register of Indigenous Land Use Agreements and mediating native title claims (*NPW Act 1974* and *DECCW 2010b*).

2.2 NEW SOUTH WALES STATE HERITAGE LEGISLATION AND LISTS

The state (NSW) based legislation that is of relevance to this assessment comes in the form of the acts which are outlined below.

2.2.1 National Parks and Wildlife Act 1974

The NSW *National Parks and Wildlife Act 1974* (as amended) (*NPW Act 1974*) defines Aboriginal objects and provides protection to any and all material remains which may be evidence of the Aboriginal occupation of lands continued within the state of New South Wales. The relevant sections of the Act are Sections 84, 86, 87 and 90.

An Aboriginal object, formerly known as a relic 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” (NSW Government, 1974).

It is an offence to harm or desecrate an Aboriginal object or places under Part 6, Section 86 of the *NPW Act 1974*:

Part 6, Division 1, Section 86: Harming or desecrating Aboriginal objects and Aboriginal places:

- (1) A person must not harm or desecrate an object that the person knows is an Aboriginal object.

Maximum penalty:

- (a) in the case of an individual—2,500 penalty units or imprisonment for 1 year, or both, or (in circumstances of aggravation) 5,000 penalty units or imprisonment for 2 years, or both, or
- (b) in the case of a corporation—10,000 penalty units.

- (2) A person must not harm an Aboriginal object.

Maximum penalty:

- (a) in the case of an individual—500 penalty units or (in circumstances of aggravation) 1,000 penalty units, or
- (b) in the case of a corporation—2,000 penalty units.

- (3) For the purposes of this section, **circumstances of aggravation** are:

- (a) that the offence was committed in the course of carrying out a commercial activity, or
- (b) that the offence was the second or subsequent occasion on which the offender was convicted of an offence under this section.

This subsection does not apply unless the circumstances of aggravation were identified in the court attendance notice or summons for the offence.

(4) A person must not harm or desecrate an Aboriginal place.

Maximum penalty:

- (a) in the case of an individual—5,000 penalty units or imprisonment for 2 years, or both, or
 - (b) in the case of a corporation—10,000 penalty units.
- (5) The offences under subsections (2) and (4) are offences of strict liability and the defence of honest and reasonable mistake of fact applies.
- (6) Subsections (1) and (2) do not apply with respect to an Aboriginal object that is dealt with in accordance with section 85A.
- (7) A single prosecution for an offence under subsection (1) or (2) may relate to a single Aboriginal object or a group of Aboriginal objects.
- (8) If, in proceedings for an offence under subsection (1), the court is satisfied that, at the time the accused harmed the Aboriginal object concerned, the accused did not know that the object was an Aboriginal object, the court may find an offence proved under subsection (2).

2.2.2 Environmental Planning & Assessment Act 1979

The *Environmental Planning and Assessment Act 1979 (EP&A Act 1979)* states that environmental impacts of proposed developments must be considered in land use planning procedures. Four parts of this act relate to Aboriginal cultural heritage.

- Part 3, Divisions 3, 4 and 4A refer to Regional Environmental Plans (REP) and Local Environmental Plans (LEP) which are environmental planning instruments and call for the assessment of Aboriginal heritage among other requirements.
- Part 4 determines what developments require consent and what developments do not require consent. Section 4.15 calls for the evaluation of:
 - The likely impacts of that development, including environmental impacts on both the natural and built environments and the social and economic impacts in the locality.

This part of the legislation also addresses State Significant Developments as mentioned in Division 4.7 with Section 4.38 outlining the consent for State Significant Development in relation to the environmental planning instruments.

- Part 5 of this Act requires that impacts on a locality which may have an impact on the aesthetic, anthropological, architectural, cultural, historic, scientific, recreational or scenic value are considered as part of the development application process.

2.2.3 The Aboriginal Land Rights Act 1983

The NSW *Aboriginal Land Rights Act 1983 (ALR Act 1983)*, administered by the NSW Department of Aboriginal Affairs, established the NSW Aboriginal Land Council (NSWALC) and Local Aboriginal Land Councils (LALCs). The *ALR Act 1983* requires these bodies to:

- Take action to protect the culture and heritage of Aboriginal persons in the council's area, subject to any other law;
- promote awareness in the community of the culture and heritage of Aboriginal persons in the council's area.

These requirements recognise and acknowledge the statutory role and responsibilities of New South Wales Aboriginal Land Council and Local Aboriginal Land Councils.

The *ALR Act 1983* also establishes the Office of the Registrar whose functions include but are not limited to, maintaining the Register of Aboriginal Land Claims and the Register of Aboriginal Owners.

Under the *ALR Act 1983* the Office of the Registrar is to give priority to the entry in the Register of the names of Aboriginal persons who have a cultural association with:

- Lands listed in Schedule 14 to the *NPW Act 1974*;
- lands to which section 36A of the *ALR Act 1983* applies (*NPW Act 1974* and DECCW 2010b).

2.2.4 NSW Heritage Act 1977 (as amended)

The *NSW Heritage Act 1977* affords automatic statutory protection to relics that form archaeological deposits or part thereof. *The Act* defines relics as:

- Relic means any deposit, artefact, object or material evidence that:
- (a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and
 - (b) is of State or local heritage significance

Sections 139 to 145 of the *Act* prevent the excavation or disturbance of land for the purpose of discovering, exposing or moving a relic, except by a qualified archaeologist to whom an excavation permit has been issued by the Heritage Council of NSW.

2.2.5 New South Wales State Heritage Register and Inventory

The State Heritage Register is a list of places and objects of particular importance to the people of NSW. The register lists a diverse range of over 1,500 items, in both private and public ownership. Places can be nominated by any person to be considered to be listed on the Heritage register. To be placed an item must be significant for the whole of NSW. The State Heritage Inventory lists items that are listed in local council's local environmental plan (LEP) or in a regional environmental plan (REP) and are of local significance.

2.2.6 Declared Aboriginal Places

The *NPW Act 1974* protects areas of land that have recognised values of significance to Aboriginal people. These areas may or may not contain Aboriginal objects (i.e. any physical evidence of Aboriginal occupation or use). Places can be nominated by any person to be considered for Aboriginal Place gazettal. Once nominated, a recommendation can be made to Heritage NSW for consideration by the Minister. The Minister declares an area to be an 'Aboriginal place' if the Minister believes that the place is or was of special significance to Aboriginal culture. An area can have spiritual, natural resource usage, historical, social, educational or other type of significance.

Under Section 86 of the *NPW Act 1974* it is an offence to harm or desecrate a declared Aboriginal place. Harm includes destroying, defacing or damaging an Aboriginal place. The potential impacts of the development on an Aboriginal place

must be assessed if the development will be in the vicinity of an Aboriginal place a place (DECCW 2010b).

2.3 LOCAL PLANNING INSTRUMENTS

2.3.1 Pittwater Local Environmental Plan 2014

The Pittwater Local Environment Plan was endorsed in 2014. Heritage Conservation is discussed in Part 5 section 5.10 and highlights objectives to conserve archaeological sites, Aboriginal objects and places of heritage significance (Part 5 section 5.10(1)).

Development consent is required when proposed works may disturb or excavate archaeological sites, Aboriginal objects or Aboriginal places of heritage significance (Part 5 section 5.10(2)(a-f)). Conservation incentives through development mitigation and preservation of significant sites is detailed in Part 5 section 10(10). Specific consent requirements surrounding proposed development to Aboriginal places of heritage significance is stated in Part 5 section 5.10(8):

(8) Aboriginal places of heritage significance

The consent authority must, before granting consent under this clause to the carrying out of development in an Aboriginal place of heritage significance:

- (a) 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
- (b) 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.

2.3.2 Pittwater Development Control Plan 2014

The Pittwater Development Control Plan was endorsed in 2014. Aboriginal Cultural Heritage is discussed in section B1.4.

Outcomes

- (a) Provide protection for Aboriginal place of heritage significance or Aboriginal object. (S)
- (b) Potential Aboriginal places of heritage significance and Aboriginal objects are identified and protected. (S)

Controls

If a property, the subject of a development application is identified as possibly meeting any of the criteria for being a potential Aboriginal place or containing an Aboriginal object then additional independent information on the potential heritage significance may be requested.

If a property, the subject of a development application, is in the vicinity of an identified or potential Aboriginal place of heritage significance or Aboriginal object then additional independent information on the potential heritage significance may be requested.

The additional information requested may take the form of a report prepared by a suitability qualified person as defined by the NSW Office of Environment and Heritage, as well as consultation with the NSW Office of Environment and Heritage and appropriate Aboriginal groups.

If an Aboriginal site or relic is discovered, it must be reported to the NSW Office of

Environment and Heritage and all works stopped.

Development must conserve the significance of any Aboriginal place of heritage significance or Aboriginal object.

2.4 DUE DILIGENCE CODE OF PRACTICE FOR THE PROTECTION OF ABORIGINAL OBJECTS IN NEW SOUTH WALES

This assessment conforms to the parameters set out in the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (DECCW 2010b).

The Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales states that if:

- A desktop assessment and visual inspection confirm that there are Aboriginal objects or that they are likely, then further archaeological investigation and impact assessment is necessary.

2.5 CODE OF PRACTICE FOR ARCHAEOLOGICAL INVESTIGATION OF ABORIGINAL OBJECTS IN NSW

Any further work resulting from recommendations should be carried out conforming to the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2010a).

2.6 GUIDELINES

This report has been carried out in consultation with the following documents which advocate best practice in New South Wales:

- Aboriginal Archaeological Survey, Guidelines for Archaeological Survey Reporting (NSW NPWS 1998).
- Aboriginal Cultural Heritage Standards and Guidelines Kit (NPWS 1998).
- Australia ICOMOS 'Burra' Charter for the conservation of culturally significant places (Australia ICOMOS 1999).
- Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010c).
- Protecting Local Heritage Places: A Guide for Communities (Australian Heritage Commission 1999).

3.0 ENVIRONMENTAL CONTEXT

To adequately understand and assess the potential Aboriginal archaeological resources that may be present within the study area it is vital to understand the environment in which the Aboriginal inhabitants of the study area carried out their activities. The environment that Aboriginal inhabitants lived in is a dominant factor in shaping their activity and therefore the archaeological evidence created by this activity. Not only will the resources available to the Aboriginal population have an influence on the evidence created but the survival of said evidence will also be influenced by the environment.

3.1 TOPOGRAPHY

The study site is located within the suburb of Newport and is part of the Northern Beaches region of North Sydney and represents a built-up area and modified landscape. The suburb is located between Pittwater to the west and the South Pacific Ocean to the east. This body of water separates the Central Coast from the greater Metropolitan Sydney. The study site is located on the western foreshore and frontage of Winji Jimmy Bay and Pittwater. Pittwater is a large embayment connected to the Hawkesbury River estuary where the river enters the sea.

Based on NSW eSpade, the study area is located over one topographic zone: the Erina (er) soil landscape. Erina (er) soil landscape occurs on rolling hills and footslopes of the Erina Hills at Long Reef, Mona Vale, Whale Beach, Daleys Point, Bensville, and at Bouddi National Park. This landscape covers undulating to rolling rises and low hills with local relief to 60 m, and slopes <20%. Ridges, crests and valleys are rounded and moderately narrow (300–800 m). Slopes are gently to moderately inclined. Rock outcrop is rarely present.

3.2 GEOLOGY AND SOILS

The geology of the study area is in the Terrigal Formation of the Narrabeen Group consisting of lithic and quartz sandstone and siltstone, minor sedimentary breccia, claystone and conglomerate (Herbert, 1983). Some sandstones are highly weathered and friable.

The following are typical soil profiles for the Erina (er) soil landscape.

Table 3.1 Description of dominant soil material for Erina (er)

Dominant Soil Material	Soil Horizon	Description
er1	A1 Horizon	Weakly pedal, brownish-black fine sandy loam. This is a fine sandy loam or a loam-fine sandy with weakly pedal structure and rough-faced, porous fabric. It usually occurs as topsoil (A1 horizon).
er2	A2 Horizon	Hardsetting, earthy, yellowish-brown sandy clay loam. This is commonly a sandy clay loam or occasionally silty clay loam with hardsetting apedal massive structure and slowly porous earthy fabric. This material usually occurs as an A2 horizon.

er3	B Horizon	Strongly pedal, yellowish-brown sandy clay. This is sandy clay to medium clay with strongly pedal structure and porous rough-faced ped fabric. It commonly occurs as subsoil on sandstone bedrock (B horizon).
er4	B Horizon	Reddish brown, strongly pedal clay. This is a light clay to light-medium clay with strongly pedal structure and dense smooth-faced ped fabric. It generally occurs as subsoil on shale parent material in well-drained sites (B horizon).
er4	B Horizon	Dull yellow-orange, mottled, strongly pedal clay. This is commonly medium clay with strongly pedal structure and smooth-faced dense ped fabric. It usually occurs as subsoil on shale bedrock in poorly drained areas (B horizon).

Table 3.2 Expected Erina (er) soil profile depth based on landform.

Shale crests and upper slopes

- Generally, up to 15 cm of weakly pedal, brownish-black fine sandy loam (er1) overlies 10–20 cm of hardsetting, earthy, yellowish-brown sandy clay loam (er2) and 100 cm of strongly pedal reddish-brown clay (er4)
- Total soil depth is 100 cm and boundaries between soil materials are usually clear. Shale derived soils of lower slopes. Up to 30 cm of er1 overlies 15–30 cm of er2 and 150 cm of dull yellow-orange, mottled, strongly pedal clay (er5).
- Total soil depth is 200 cm.
- Boundaries between soil materials are clear to sharp.

Sandstone derived soils of crests and slopes

- Up to 20 cm of er1 overlies 20-35 cm of er2 and 100 cm of mottled, strongly pedal, yellowish-brown sandy clay (er3).
- Total soil depth is 150 cm.
- Boundaries between soil materials are sharp to clear.
- Deep (200cm) colluvial Yellow Earths (Gn2.21) occur occasionally on footslopes.

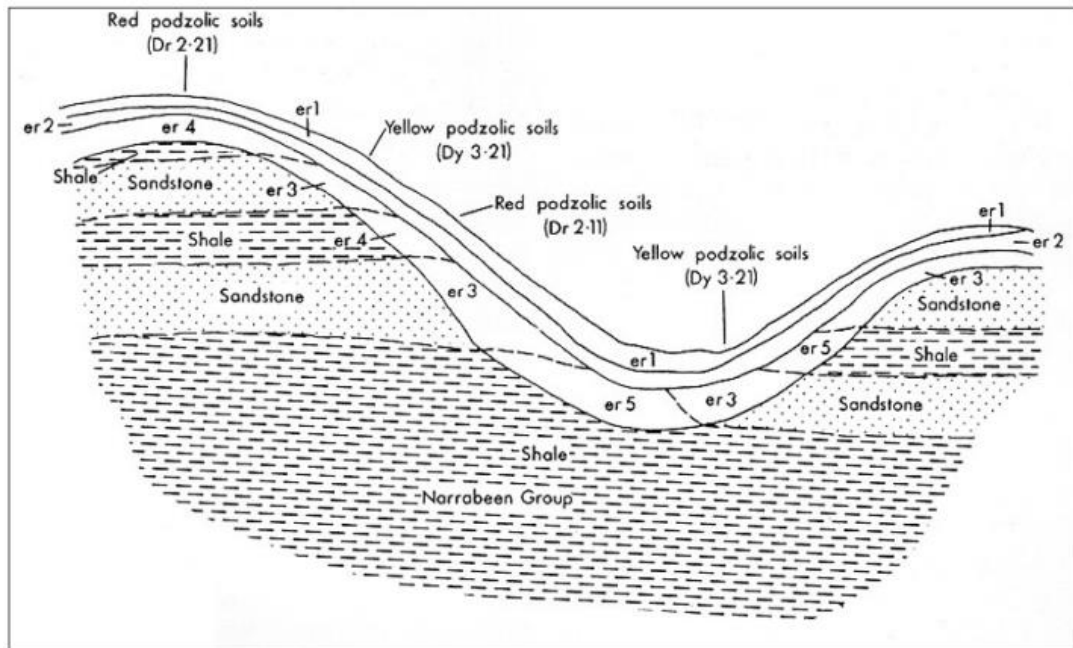


Figure 3.1 Schematic cross section of the Erina soil landscape illustrating relationships between landscape features and dominant soil materials. Soil Landscapes of the Sydney 1:100 000 sheet report (Chapman and Murphy 1989).

3.3 VEGETATION

The vegetation found in the study area is no longer in a native state and is comprised of a variety of introduced and noxious types of vegetation. This movement away from the natural vegetation is a result of previous land clearing for farming and development. These lands were cleared soon after European settlement due to the relatively high agricultural value of the soils upon which they are situated.

Extensively cleared tall open-forest (wet sclerophyll forest) with open-heath in exposed coastal locations. Common species of the open-forest include spotted gum *Eucalyptus maculata*, grey ironbark *E. paniculata* and forest oak *Allocasuarina torulosa*. Associations of turpentine *Syncarpia glomulifera* and Sydney blue gum *E. saligna* are also common. Heathlands occur on exposed coastal headlands. They contain coastal banksia *Banksia integrifolia*, black she-oak *Allocasuarina littoralis*, native rosemary *Westringia fruticosa* and Sydney golden wattle *Acacia longifolia*. Heathland vegetation has been described by Siddiqui et al. (1972).

3.4 WATERCOURSES

The study area is located on the foreshore and frontage of Winji Jimmy Bay which runs into Pittwater, a tide dominant drowned valley estuary. Pittwater originates from the confluence of McCarrs Creek and is a large embayment connected to the Hawkesbury River estuary where the river enters the sea. Pittwater flows north towards its mouth into Broken Bay, between West Head and Barrenjoey Head and connects to the Hawkesbury River to the west and the Tasman Sea, a marginal sea of the South Pacific Ocean to the east. Several creeks and tributaries connect to Pittwater and the Hawkesbury River which are both significant Aboriginal resource zones.

The study site is located 720m west of the Tasman Sea/Pacific Ocean accessed via Newport Beach, 4.2km north of Narrabeen Lagoon and 10km from the Hawkesbury River. Cahill Creek is 1.2km to the west. The closest watercourses are Pittwater which the study site extends into and 200m north of an unnamed tributary.

These foreshores, estuaries, creek lines and rivers are known to have channelled Aboriginal activity to this area as an important resource within the landscape. Several lakes, rivers, reservoirs, and man-made ponds are located in the wider surrounding landscape.

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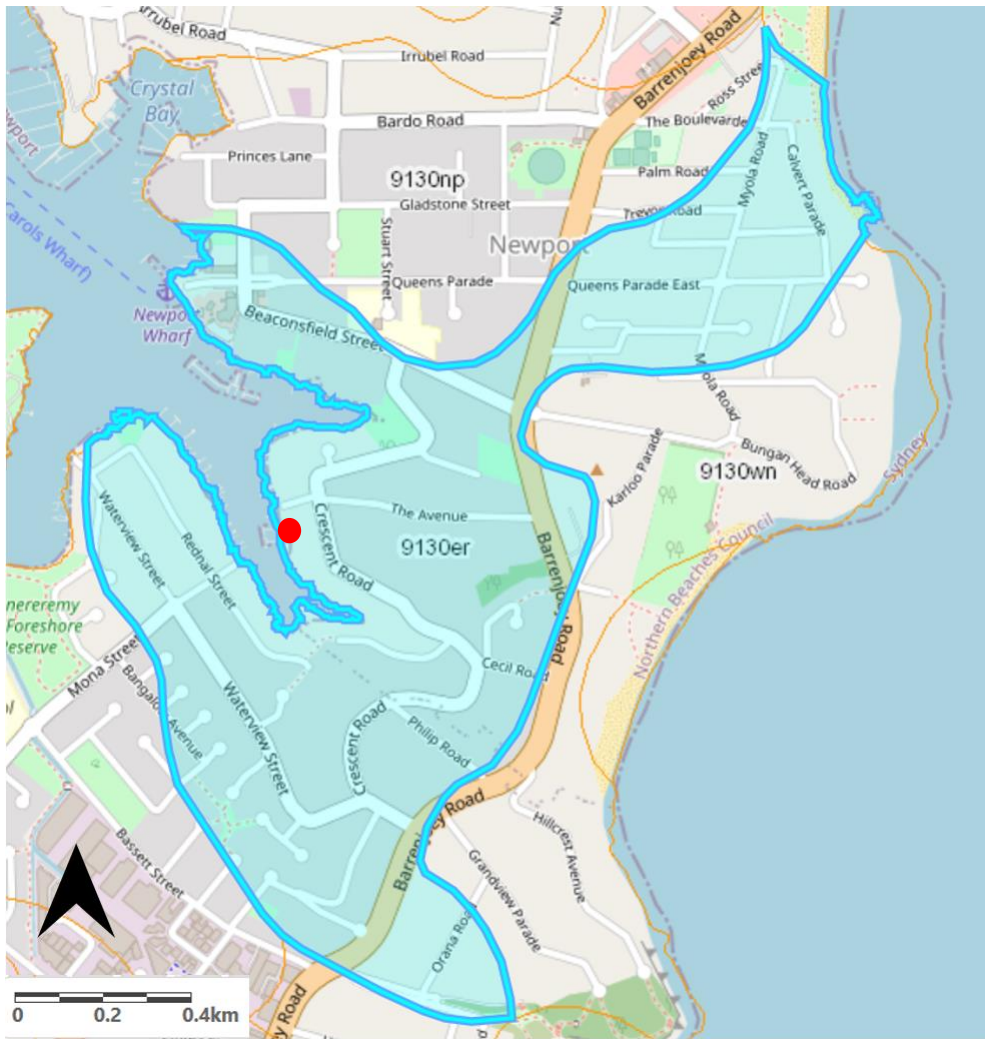


Figure 3.2 Study area on soil map.
Study area indicated by red marker. Erina (er) soil profile highlighted in blue.
NSW Government Sharing and Enabling Environmental Data in NSW (SEED), accessed 16/06/2023.

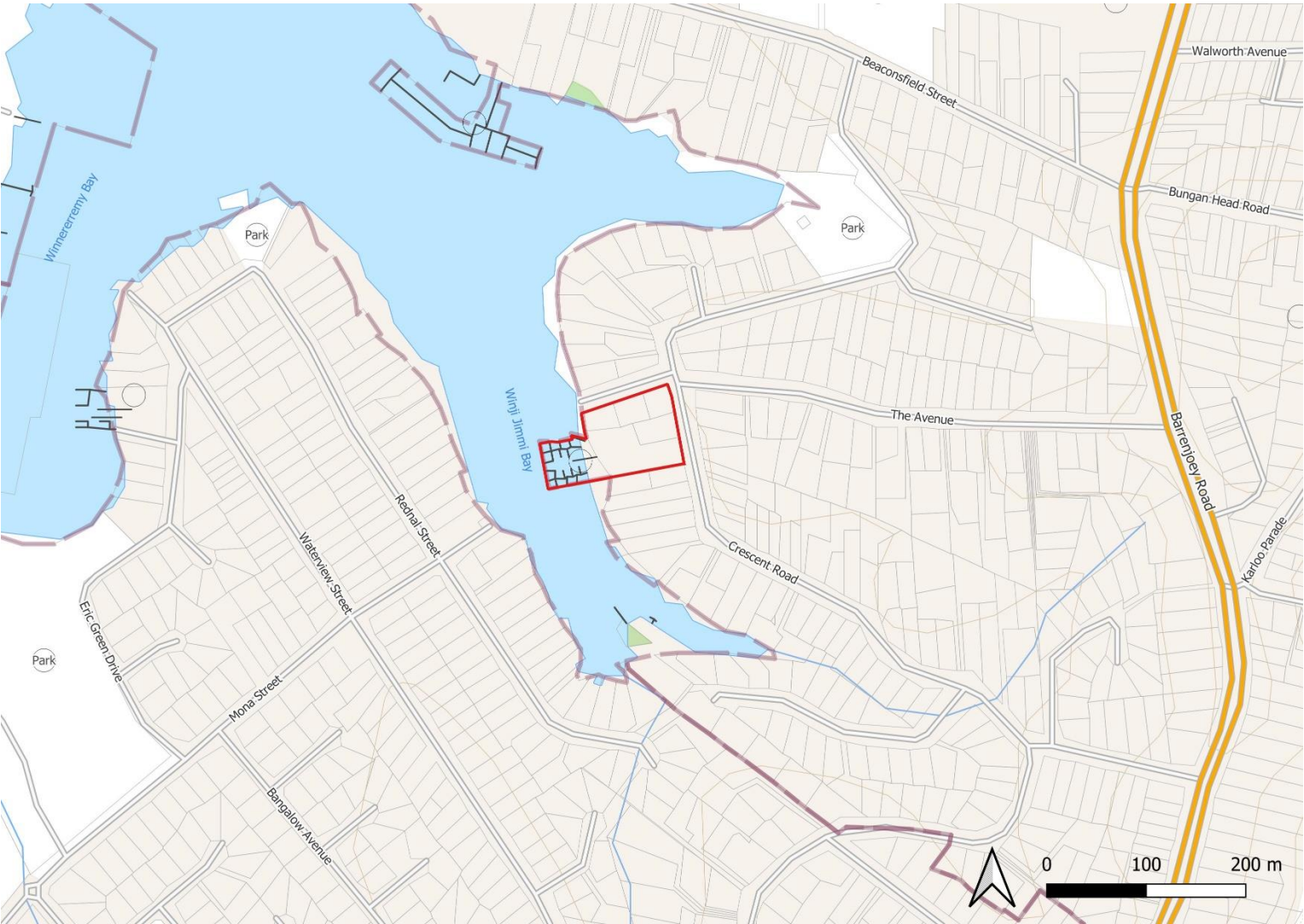


Figure 3.3 Map indicating watercourses in blue. QGIS using Six Maps, LRS Online (accessed 13/06/2023).

4.0 DUE DILIGENCE ASSESSMENT

This desktop assessment conforms to the parameters set out in the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (DECCW 2010b).

This section builds upon the evidence provided from the environmental context collating archaeological predictive modelling with what is already known about the archaeological context and nearby registered sites. This includes a search of the Aboriginal Heritage Information Management System as well as other statutory lists and an analysis of the current site conditions to determine whether objects and deposits of Aboriginal Cultural Heritage significance are likely to exist within the study area.

4.1 ARCHAEOLOGICAL CONTEXT

It is generally accepted that Aboriginal occupation of Australia dates back at least 40,000 years (Attenbrow 2002; Kohen et al 1984) and to as long as 60,000 years (Mulvaney and Kamminga 1999). The majority of reliably dated archaeological sites within the region are less than 5,000 years old which places them in the mid to late Holocene period. A combination of reasons has been suggested for this collection of relatively recent dates; There is an argument that an increase in population and 'intensification' of much of the continent took place around this time, leading to a significant increase in evidence being deposited than was deposited as a result of the sparser prior occupation period. In addition, it is also true that the acidic soils which are predominate around the region do not allow for longer-term survival of sites (Hiscock 2008).

It is estimated that around 250 distinct languages were in use throughout the Australian continent at the time of contact. The exact number cannot be known for certain, however 250 is a conservative estimate. These languages fell within two language groups: the *Pama-Nyungan* and *Non Pama-Nyungan* languages. Knowledge of the different language groups in a given area is variable. Early European recordings noted the names of particular Aboriginal individuals and groups but were not always clear about which named groups represented a language rather than some other social grouping (Hardy and Streat 2008).

Within these large language groups resource access and ownership was centred on extended family groups or 'clans' which appear to have had ownership of land (Attenbrow 2002). As it was unlikely to be acceptable to find sexual partners within the family grouping and for other reasons such as resource sharing, a number of clans would often travel together in a larger group.

These groups are referred to as *bands*. Whether the clan or the band was the most important group politically to an individual is likely to have varied from place to place. Group borders were generally physical characteristics of the landscape inhabited, such as waterways or the limits of a particular resource. Groups also shared spiritual affiliations, often a common dreaming ancestor, history, knowledge, and dialect (Hardy 2008).

A wide variety of activities comprised the lifestyle of the Aboriginal groups across the region. Some behaviours leave traces which can be retrieved by archaeological study of material remains. Many of these can only be reconstructed by oral history,

observations of European explorers and ethnologists, and other forms of past recording such as photography or art. Some of the details of the complexity and sophistication of the past lifestyles of Aboriginal people in the area have been lost, but many can be reconstructed using the sources available.

4.1.1 Sydney Basin

Different landscape units not only influence the preservation of sites but can determine where certain site types will be located. Across the whole of the Sydney Basin, the most common Aboriginal archaeological site type is occupation evidence within Rock Shelters. However, the most common Aboriginal archaeological site type in the Cumberland Lowlands is Open Artefact Scatters or Open Campsites, which are locations where two or more pieces of stone show evidence of human modification. These sites can sometimes be very large, with up to thousands of artefacts and include other habitation remains such as animal bone, shell, or fireplaces [known as hearths] (Attenbrow 2002 p. 75 – 76). Many hundreds of artefact sites have been recorded within the Cumberland Lowlands. This is despite the fact that at least 50% of the Cumberland Lowlands has already been developed to such an extent that any archaeological evidence which may have once been present has been destroyed.

4.1.2 Relevant Aboriginal Cultural Heritage Consultant Reports

The Heritage NSW library of Aboriginal cultural heritage consultant report was searched for reports carried out for sites within 1000m of the study area. This list is by no means exhaustive and is merely a representative sample of archaeological activity within the vicinity of the study area.

This search found the following nearby Aboriginal cultural heritage consultant report:

- Heath, A. 1980. 'Survey along Foreshores of Broken Bay, Mona Vale & Cowan 1:25k Naps'. AHIMS 417.

This study broadly indicates the aboriginal activity within the foreshores of Broken Bay, Mona Vale & Cowan.

4.2 AHIMS SEARCH RESULTS

The Archaeological Heritage and Information Management System Database (AHIMS) is an online database maintained by Heritage NSW Offices. This database comprises information regarding all the previously recorded Aboriginal archaeological sites registered with Heritage NSW. Further to the site card information that is present about each recorded site, the assessments and excavation reports that are associated with the location of many of these sites are present in the library of reports.

The location of these sites must be viewed as purely indicative as errors in recording due to the disparate nature of the recording process, the varying level of experience of those locating the sites and the errors that can occur when transferring data. If possible, sites that appear to be located near a study area should be relocated.

An AHIMS extensive 1km search was conducted on 13/06/2023 (ID 787187). This search resulted in five registered sites. The site card for each site within 1000m in all directions from the centre of the study area was inspected (where available) and an

assessment made of the likelihood of any of the sites being impacted by the proposed development.

Of these, all are located substantially north and northwest of the study site with the majority (approximately 100%) consisting of shell, artefact, and midden with two containing a shelter. The closest registered site to the study area is approximately 378m (ID 45-6-1891). It is unlikely that any of these registered sites would extend into the study area (Figure 4.1).

The following table is comprised of the results listed from the extensive search.

Table 4.1 AHIMS Search Results.

Site ID	Site name	Site status	Site features
45-6-1891	Winji Jimmi (duplicate of 45-6-3990)	Valid	Shell; Artefact; Midden
45-6-1565	Bayview	Valid	Shell; Artefact; Midden
45-6-1564	Crystal Bay	Valid	Shell; Artefact; Midden
45-6-1438	Bayview	Valid	Shell; Artefact; Shelter with Midden
45-6-1440	Bayview Midden	Valid	Shell; Artefact; Shelter with Midden
45-6-3990	Winji Jimmi Reserve Midden	Valid	Shell;

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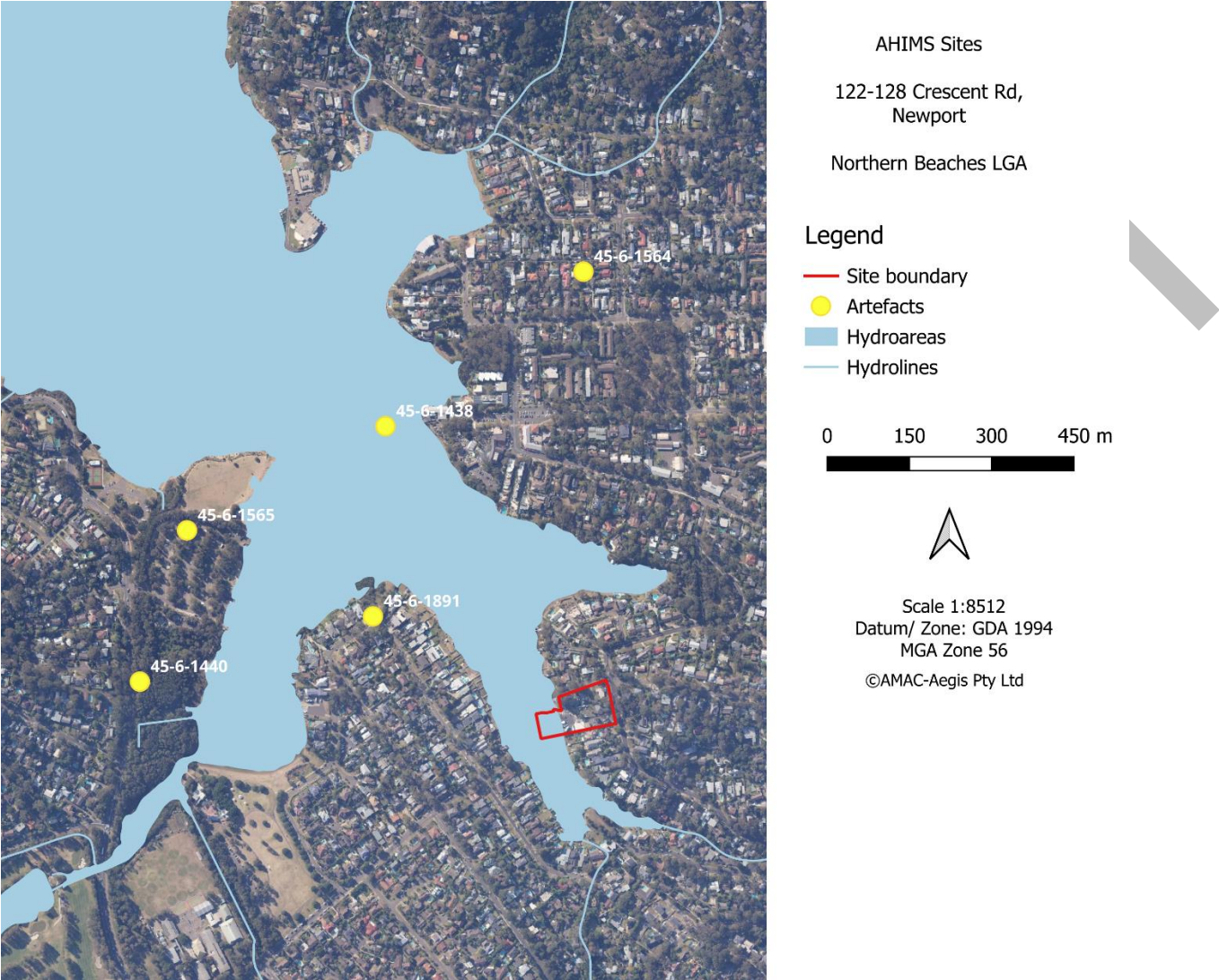


Figure 4.1 AHIMS Search Results
Six Maps. QGIS using LRS Online (accessed 13/06/2023).

4.2.1 Other Search Results

Searches were undertaken on the relevant databases outlined in Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2010a).

Further to this the following sources were examined:

- The National Heritage List.
- The Commonwealth Heritage List.
- The NSW State Heritage Inventory.
- The National Native Title Register.
- Prevailing local and regional environmental plans, and
- Environmental background material for the study area.

Results for other statutory databases searched are given below:

Heritage Listings/ Register/ Other	Result
National Heritage List	Not Listed
Commonwealth Heritage List	Not Listed
NSW State Heritage Register	Not Listed
National Native Title Register	Not Listed
Pittwater Local Environmental Plan 2010	Not Listed

4.3 ARCHAEOLOGICAL PREDICTIVE MODEL

While the AHIMS search provides data regarding previously discovered and registered sites, archaeological predictive modelling is used to identify the potential for unrecorded or subsurface Aboriginal cultural deposits or materials. The presence or absence of subsurface Aboriginal cultural deposits or materials is rarely accurately reflected on the surface, (McDonald 1993).

Predictive modelling is an adaptive process which relies on a framework formulated by a number of factors, including but not limited to the use of local land systems, the environmental context, archaeological work and any distinctive sets of constraints that would influence land use patterns. This is based on the concept that different landscape zones may offer different constraints, which is then reflected in the spatial distributions and forms of archaeological evidence within the region (Hall and Lomax 1996).

Early settlement models focused on seasonal mobility, with the exploitation of remote resources being sought once local ones become less abundant. These principles were adopted by Foley (1981) who developed a site distribution model for forager settlement patterns. This model identifies two distinctive types of hunter-gatherer settlements; 'residential base camps' and 'activities areas.' Residential base camps are predominately found located in close proximity to a reliable source of permanent water and shelter. From this point the surrounding landscape is explored, and local resources gathered. This is reflected in the archaeological record, with high density artefact scatters being associated with camp bases, while low density and isolated artefacts are related to the travelling routes and activity areas (Foley 1981).

However, more recently, investigation into understanding the impacts of various episodes of occupation on the archaeological record has been explored, of which single or repeated events are being identified. This is often a complex process to establish, specifically within predictive models as land use and disturbance can often result in post depositional processes and the superimposition of archaeological materials by repeated episodes of occupation.

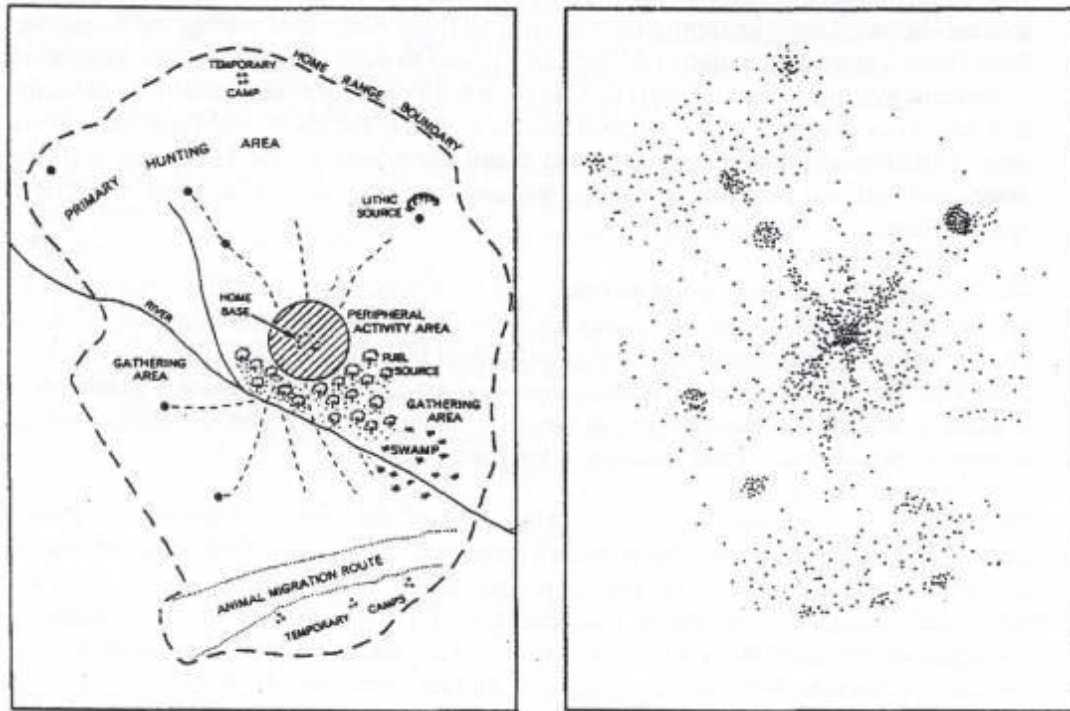


Figure 4.2 Examples of forager settlement patterns.
Foley (1981).

The principals behind this model have been incorporated into other predictive models such as that of McBryde (1976). McBryde's model is centred on the utilisation of food resources as a contributor to settlement patterns, specifically with reference to the predictability and reliability of food resources for Aboriginal people within the immediate coastal fringe and/or hinterland zone, with migratory behaviour being a possibility. Resources such as certain species of animals, particularly; small marsupials and reptiles, plant resources and nesting seabirds may have been exploited or only available on a seasonal or intermittent basis. As such, archaeological sites which represent these activities whilst not being representative of permanent occupation may be representative of brief, possibly repeated occupation.

Jo McDonald and Peter Mitchell have since contributed to this debate, with reference to Aboriginal archaeological sites and proximity to water using their Stream order model (1993). This model utilises Strahler's hierarchy of tributaries. This model correlates with the concept of proximity to permanent water and site locations and their relationship with topographical units. They identify that artefact densities are greatest on terraces and lower slopes within 100m of water.

Intermittent streams also have an impact on the archaeological record. It was discovered that artefacts were most likely within 50–100m of higher (4th) order streams, within 50m (2nd) order streams and that artefact distributions around (1st) order streams were not significantly affected by distance from the watercourse.

Landscapes associated with higher order streams were found to have higher artefact densities and more continuous distribution than lower order streams.

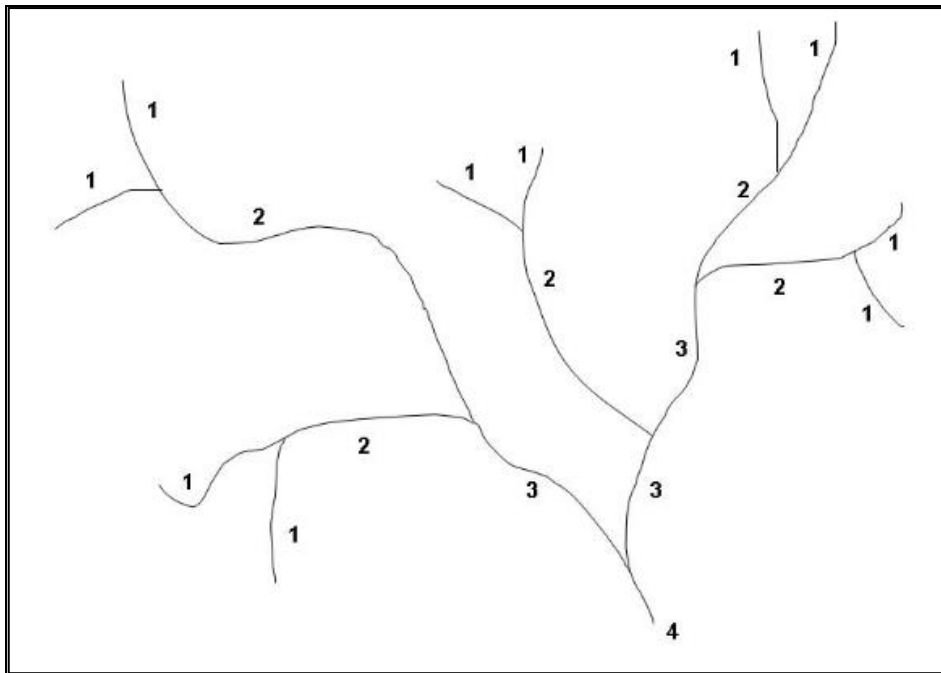


Figure 4.3 Strahler's hierarchy of tributaries. Strahler (1957).

Table 4.2 Relationship between landscape unit and site distribution for region

Landscape Unit /Site types	Site Distribution and activity
1st order stream	Archaeological evidence will be sparse and reflect little more than a background scatter.
Middle reaches of 2nd Order Stream	Archaeological evidence will be sparse but focus activity (one off camp locations, single episodes and knapping floor).
Upper reaches of 2nd order stream	Archaeological evidence will have a relatively sparse distribution and density. These sites contain evidence of localised one-off behaviour.
Lower reaches of 3rd order stream	Archaeological evidence for frequent occupation. This will include repeated occupation by small groups, knapping floors (used and unused material) and evidence of concentrated activities.
Major creek lines 4th order streams	Archaeological evidence for more permanent or repeated occupation. Sites will be complex and may be stratified with a high distribution and density.
Creek junctions	This landscape may provide foci for site activity, the size of the confluence in terms of stream rankings could be expected to influence the size of the site, with the expectation of there being higher artefact distribution and density.
Ridge top locations between drainage lines	Ridge Tops will usually contain limited archaeological evidence, although isolated knapping floors or other forms of one-off occupation may be in evidence in such a location.
Raw Materials near water sources	The most common raw materials are silcrete and chert in sites closer to coastal headlands, though some indurated mudstone/silicified tuff and quartz artefacts may also be found.
Grinding Grooves	Grinding Grooves may be found in the sandstone or shale/sandstone transition areas.
Scarred trees	May occur in stands of remnant vegetation.

Ceremonial Sites Consultation with relevant Aboriginal Stakeholder groups, individuals and review of ethnographic sources often reveal the presence of ceremonial or social sites.

Umwelt (2004), has identified similar environmental – archaeological relationships which contribute to the mapping and modelling of archaeological sites, such as:

- The pattern of watercourses and other landscape features such as ridge lines affected the ease with which people could move through the landscape.
- Certain landscape features such as crests or gently sloping, well-drained landforms influenced the location of camping places or vantage points that provided outlooks across the countryside.
- The morphology of different watercourses affected the persistence of water in dry periods and the diversity of aquatic resources and so influenced where, and for how long, people could camp or procure food.
- The distribution of rock outcrops affected the availability of raw materials for flakes and ground stone tools.
- The association of alluvial, colluvial and stable landforms affects the potential that sites will survive.
- European land-use practices affect the potential for site survival and/or the capacity for sites to retain enough information for us to interpret the types of activities that took place at a specific location.

All models state that the primary requirement of all repeated, concentrated, or permanent occupation is reliable access to fresh water. Brief and possibly repeated occupation may be represented in areas that have unreliable access to ephemeral water sources, however these areas will not possess a high archaeological potential (Goodwin 1999).

4.3.1 Identifying Landscape Features

Based on predictive modelling, the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (DECCW 2010b: 11-12) describes the likelihood for Aboriginal objects and sites based on predictive modelling:

Aboriginal objects are often associated with particular landscape features as a result of Aboriginal people's use of those features in their everyday lives and for traditional cultural activities. Examples of such landscape features are rock shelters, sand dunes, waterways, waterholes, and wetlands. Therefore, it is essential to determine whether the site contains landscape features that indicate the likely existence of Aboriginal objects.

Consequently, if your proposed activity is:

- within 200m of waters, or
- located within a sand dune system, or
- located on a ridge top, ridge line or headland, or
- located within 200m below or above a cliff face, or
- within 20m of or in a cave, rock shelter, or a cave mouth.

Based on these categories, 'Waters' are defined as

‘Waters’ means the whole or any part of any river, stream, lake, lagoon, swamp, wetlands, natural watercourse, tidal waters (including the sea). Note: the boundary or tidal waters is defined as the high-water mark.

‘Sand dune system’ is defined as

sand ridges and sand hills formed by the wind, usually found in desert regions, near a lake or in coastal areas. In areas of western NSW, windblown dunes can occur along the eastern edges of ephemeral lakes (called lunettes dunes). They can also occur along the banks of rivers.

4.3.2 Archaeological Predictive Model for the Study Area

Analysis of the environmental context provided in Section 3.0, has found that the study site is located extending into Pittwater, a tide dominant drowned valley estuary that connects with the Hawkesbury River and 200m north from an unnamed tributary watercourse and thus can be identified as having potential for subsurface Aboriginal cultural deposits or materials.

It is important to acknowledge that the information provided in the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (DECCW 2010b, p.11-12) is, as with all predictive modelling, indicative. Aboriginal activity cannot be said to have ceased at a hard 200m from waters nor 20m from a cave or rock shelter and these parameters must be viewed as a guide. It must also be taken into account that the course of waterways changes over time and even ephemeral watercourses mark potential features that may have once influenced Aboriginal settlement patterns.

In addition to this, McDonald’s modelling only states that artefact density reduces as the distance from permanent water increases; it also states that the nature of the watercourse may influence artefact density, which may be reflected in the archaeological record.

As such if the study area lies within the 200m zone from waters it may be concluded that the entire study area may have once lay with 200m of waters. In addition to this the artefact density will only decrease at or about 200m from waters but not cease entirely.

The following section gives an indication of the likelihood of certain site types being located within the study area.

Table 4.3 Potential site types associated with the study area.

Site Type	Study Site	Likelihood
Open Artefact Scatters	A high order water course is located within the vicinity of the study area.	Likely within undisturbed parts of the study area.
Isolated Artefacts	A high order water course is located within the vicinity of the study area and five registered sites.	Likely within undisturbed parts of the study area.
Grinding Grooves	Boulders of sandstone or outcrops could occur in the landscape units represented in the study area.	Possible

Stone Resource Sites	Rock outcrops of suitable flaking material could be in the soil landscapes represented within the study area.	Possible
Scarred Trees	No trees of sufficient age/scarring/modified are known to be present within the study area.	Unlikely
Sandstone Shelters	The soil landscapes of the study area do not contain sandstone overhangs.	Unlikely
Burials	There is an unknown potential for burials within the study site. Consultation with relevant Aboriginal parties and individuals is not taking place. It is possible, however, that such information may become available in the future as a result of further consultation.	Possible
Ceremonial Sites	Consultation with relevant Aboriginal parties and individuals is not taking place. It is possible, however, that such information may become available in the future as a result of further consultation.	Possible that Ceremonial/Social sites will be present within the study area

4.4 DISTURBANCE FACTORS

This section of the report provides an assessment of land use, the level of disturbance and the likely archaeological potential of the study area. The archaeological potential is based on the level of previous disturbance as well as the previously discussed predictive model for the region.

The Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (DECCW 2010b); defines disturbed lands as:

Land is disturbed if it has been the subject of a human activity that has changed the land’s surface, these being changes that remain clear and observable. Examples include ploughing, construction of rural infrastructure (such as dams and fences), construction of roads, trails and tracks (including fire trails and tracks and walking tracks), clearing vegetation, construction of buildings and the erection of other structures, construction or installation of utilities and other similar services (such as above or below ground electrical infrastructure, water or sewerage pipelines, stormwater drainage and other similar infrastructure and construction of earthworks)

This definition is based on the types of disturbance as classified in The Australian Soil and Land Survey Field Handbook (CSIRO 2010). The following is a scale formulated by CSIRO (2010) of the levels of disturbances and their classification.

Minor Disturbance		Moderate Disturbance		Major Disturbance	
0	No effective disturbance; natural	3	Extensive clearing (e.g.: poisoning and ringbarking)	6	Cultivation: grain fed
1	No effective disturbance other than grazing by hoofed animals	4	Complete clearing: pasture native or improved, but never cultivated	7	Cultivation; irrigated, past or present

2	Limited clearing (e.g.: selected logging)	5	Complete clearing: pasture native or improved, cultivated at some stage	8	Highly disturbed (quarrying, road works, mining, landfill, urban)
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N.B The above scale is used in determining the level of disturbance of the study area and its impact on the potential archaeology which may be present.

It is important to note that the following assessments describe the *archaeological* potential of the study area. It is acknowledged if the study area has little or no archaeological potential the study area may still have cultural significance to the Aboriginal community.

4.4.1 Disturbance Summary

Background research indicates that past European land use has led to extensive land clearing for residential, and commercial development. The study site fronts and extends into Winji Jimmy Bay which runs into Pittwater. Based on the 19th century map and early to late aerial photographs no major foreshore remediation occurred which minimises the level of disturbance. However, by the mid-20th century, the marina was constructed with a wharf, ramp and pontoon that extended out from the foreshore. The two current residential buildings on Lot 1 were constructed by 1955 whereas the current residential buildings on the remaining allotments were built by 1965. By 1975 the wharf was expanded on, and a second pontoon was established. The study area has undergone significant disturbance due to the excavation, grading, and levelling required for the construction of the marina and residential houses, however, a large portion of the site is yard space, and the houses are all original with all but Lot 21 being built on isolated pier footings.

In light of this, and in the context of the information provided about the land use of the site, its proximity to a high order watercourse - Pittwater and five registered shell, artefact, midden and shelters and thus likelihood for the presence of subsurface Aboriginal Cultural Heritage Material, the following has been predicted:

Moderate-High disturbance to sections of the landscape: Sub-surface Aboriginal objects with potential conservation value have a moderate probability of being present within the study area.



Figure 4.4 Detail of an 1886 plan of Bassett Darley Estate. Approximate location of the study site indicated by red circle. State Library of NSW, FL9041526.

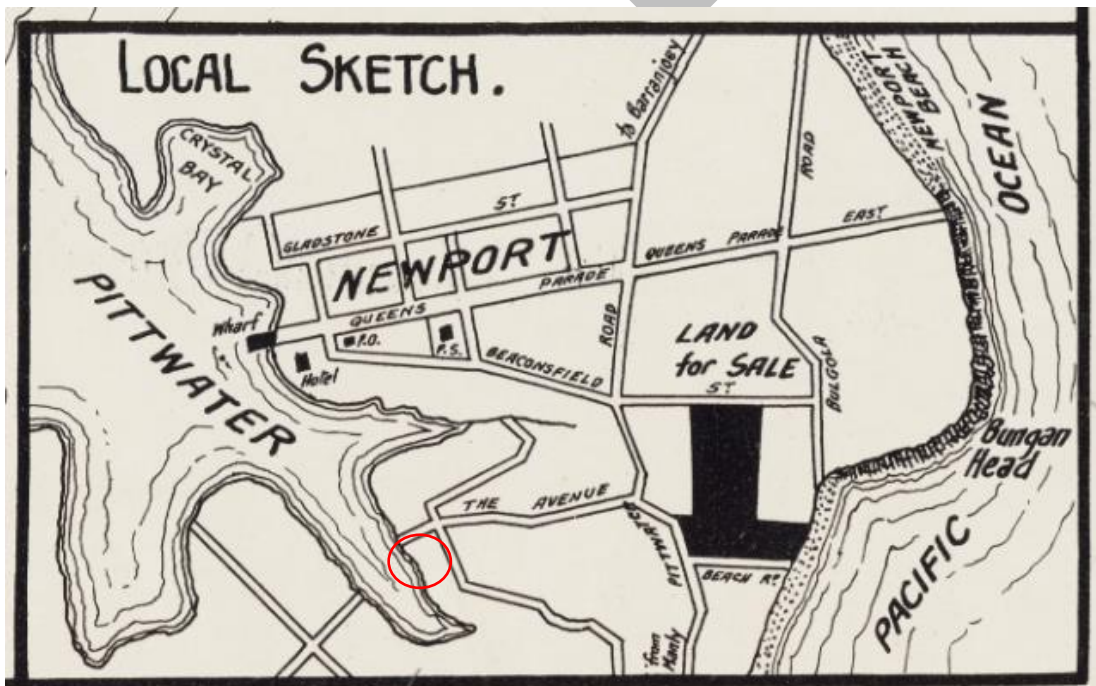


Figure 4.5 Detail from a 1917 subdivision plan. Approximate location of study site indicated by red circle. State Library of NSW, FL9040046.



Figure 4.6 1955 aerial photograph showing study site outlined in red. NSW Historic Imagery.



Figure 4.7 1965 aerial photograph showing study site outlined in red. NSW Historic Imagery.



Figure 4.8 1975 aerial photograph showing study site outlined in red. NSW Historic Imagery.



Figure 4.9 1986 aerial photograph showing study site outlined in red. NSW Historic Imagery.



Figure 4.10 2005 aerial photograph showing study site outlined in red. NSW Historic Imagery.

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Figure 4.11 Current aerial photograph showing study site outlined in red.
NSW Land Registry Services, Six Maps Viewer (accessed 3/07/23).

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4.5 SITE INSPECTION

The field inspection was undertaken on the 21st of June 2023 by archaeologist Prue Newton of AMAC Group. Representatives of the Metro Local Aboriginal Land Council attended the site inspection.

The MLALC have been provided a copy of this report for review and comment. All comments will be included in the final version of this report.

4.5.1 Survey Methods

The study site was inspected on foot. Where practical the whole of the study area was inspected, however there were a number of limiting factors such as existing classrooms, turf and hard surfaces and other school infrastructure. Any areas of exposed soil or areas of erosion were inspected in detail.

All visible landscape units were inspected as well as photographed where informative details as to land use and disturbance could be ascertained. Information was also collected regarding land surface and vegetation conditions as encountered during the survey.

The following broadly outlines the methods adopted:

- Field inspections will be carried out on foot.
- attempts will be made to relocate the registered sites within the study area and assess their condition.
- highly disturbed areas indicated on plans will be inspected to verify the level of disturbance and depending on level of disturbance will be included or excluded from the additional survey.
- undisturbed areas will be inspected in as much detail as the remaining surface coverage and environment will allow and the results will be recorded.
- areas of exposed ground such as tracks or eroded surfaces which allow good surface visibility will form the focus of the field inspections.

4.5.2 Inspection Results

The natural topography of the study site slopes down to the southwest towards the foreshore of Winji Jimmi Bay. The study site contains a mid-20th century marina extending into Pittwater and on the upper slope mid-late 20th century residential buildings (Figure 4.12 - Figure 4.27). Lot 112 and 295 containing Sirsi Marina is accessed via a bitumen driveway off Crescent Road and contains a carpark to the east (Figure 4.12 and Figure 4.13). The marina consists of associated buildings, a concrete surfaced wharf and two pontoons extending out into the water from the foreshore (Figure 4.15 - Figure 4.20). The land appears to be cut down for the wharf and is supported by a brick and wooden retaining wall between Lot 295 and 111. Lot 111 contains a bitumen carpark with a shed and storage container (Figure 4.14). Lot 1 contains two mid-20th century fibro houses with grassed backyards and driveway (Figure 4.21). Lot 3, 2 and 21 accessed via The Avenue all contain residential buildings, driveways and grassed backyards that appear to have respected the natural sloping topography (Figure 4.22 - Figure 4.26). Lot 21 fronts the water and there is a steep drop off down to the wharf. The vegetation in this area is dense (Figure 4.26 and Figure 4.27).

The majority of the site had nil to low visibility or exposure due to sealed surfaces consisting of concrete and bitumen surfaces and grassed areas. All visible

landscape units were inspected as well as photographed where informative details as to land use and disturbance could be ascertained. Information was also collected regarding land surface and vegetation conditions as encountered during the survey. Approximately 2% of the surface area of the study area was exposed but limited to the foreshore north of the wharf which was not accessible. A small area was manually exposed in the location of a garden bed in the wharf area, revealing the presence of a sandy clay with shell soil profile (Figure 4.20).

Table 4.4 Site Inspection Coverage

Unit	Landform	Area (sq. m)	Visibility (%)	Exposure (%)	Effective Coverage (sq. m)	Effective Coverage (%)
1	Foreshore slope	9085	2%	2%	181.7	0.02%



Figure 4.12 Driveway from Crescent Road to carpark and marina (Lot 112 & 295), facing west.

Note: topography sloping down to the east towards the water.
AMAC Group IMG_7387 (21/06/2023).



Figure 4.13 Driveway from Crescent Road to Lot 111 and marina carpark (Lot 112), facing west.
AMAC Group IMG_7390 (21/06/2023).



Figure 4.14 Lot 111 showing storage sheds and retaining walls, facing west.
AMAC Group IMG_7404 (21/06/2023).



Figure 4.15 Marina and concrete surfaced wharf, facing southeast.
AMAC Group IMG_7409 (21/06/2023).



Figure 4.16 Concrete surfaced wharf and ramp, facing west to Pittwater.
AMAC Group IMG_7421 (21/06/2023).



Figure 4.17 North edge of wharf showing shoreline, facing north.
AMAC Group IMG_7417 (21/06/2023).



Figure 4.18 Foreshore of Lot 21 along The Avenue, facing east from the north pontoon.
AMAC Group IMG_7414 (21/06/2023).



Figure 4.19 Vegetation east of the wharf on the slope, facing east.
AMAC Group IMG_7415 (21/06/2023).



Figure 4.20 Exposed soil profile showing shell.
AMAC Group IMG_7419 (21/06/2023).



Figure 4.21 View from Crescent Road showing residential buildings on Lot 1, facing northwest.
AMAC Group IMG_7420 (21/06/2023).



Figure 4.22 View of the intersection of Crescent Road and The Avenue showing residential buildings on Lot 3, facing southwest.
AMAC Group IMG_7393 (21/06/2023).



Figure 4.23 The Avenue showing topography sloping westward towards Pittwater facing west.
AMAC Group IMG_7394 (21/06/2023).



Figure 4.24 View of residential building on Lot 3 along The Avenue, facing south.
AMAC Group IMG_7395 (21/06/2023).



Figure 4.25 View of residential building on Lot 2 along The Avenue, facing south. AMAC Group IMG_7398 (21/06/2023).



Figure 4.26 View of residential building on Lot 21 along The Avenue, facing south. AMAC Group IMG_7398 (21/06/2023).



Figure 4.27 The end of the Avenue showing vegetation and steep drop off to foreshore, facing east.
AMAC Group IMG_7401 (21/06/2023).

DRAFT

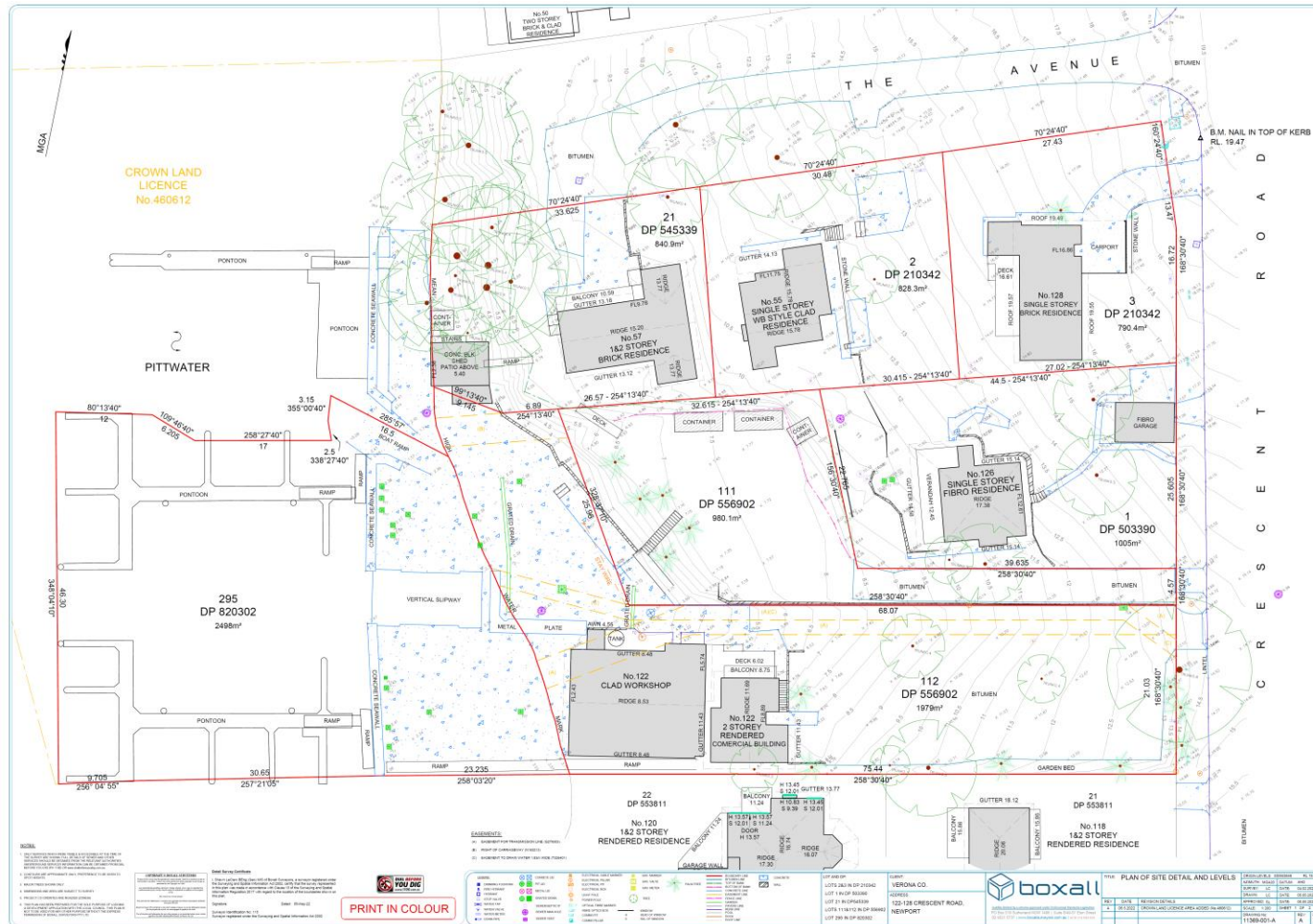
4.6 PROPOSED ACTIVITY

This section outlines the proposed activity including the staging and timeframes along with the potential harm of the proposed activity on Aboriginal objects and or declared Aboriginal places, assessing both the direct and indirect result of the activity on any cultural heritage values associated with the study area.

4.6.1 Description of Proposed Activity and Impacts

The proposed development will impact the site, through the subdivision, demolition and excavation works. The study area is proposed to be subdivided into nine allotments, four waterfront and five waterview with carriageway and easements planned to enable access and drainage. The existing buildings on the study site will be demolished as part of these works. In addition, nine pontoons for each allotment will be built with associated infrastructure such as jetties and ramps. Grading and levelling works will also be required. (Figure 4.28 and Figure 4.29).

This will primarily impact ground surfaces, but sub-surfaces may be impacted through the excavation works for carriageway, easements, and marina infrastructure. Therefore, there is a potential to harm any objects and/or deposits of Aboriginal cultural and archaeological significance that may be present. There is a moderate potential for Aboriginal artefacts and/or deposits of archaeological and cultural significance to be present.



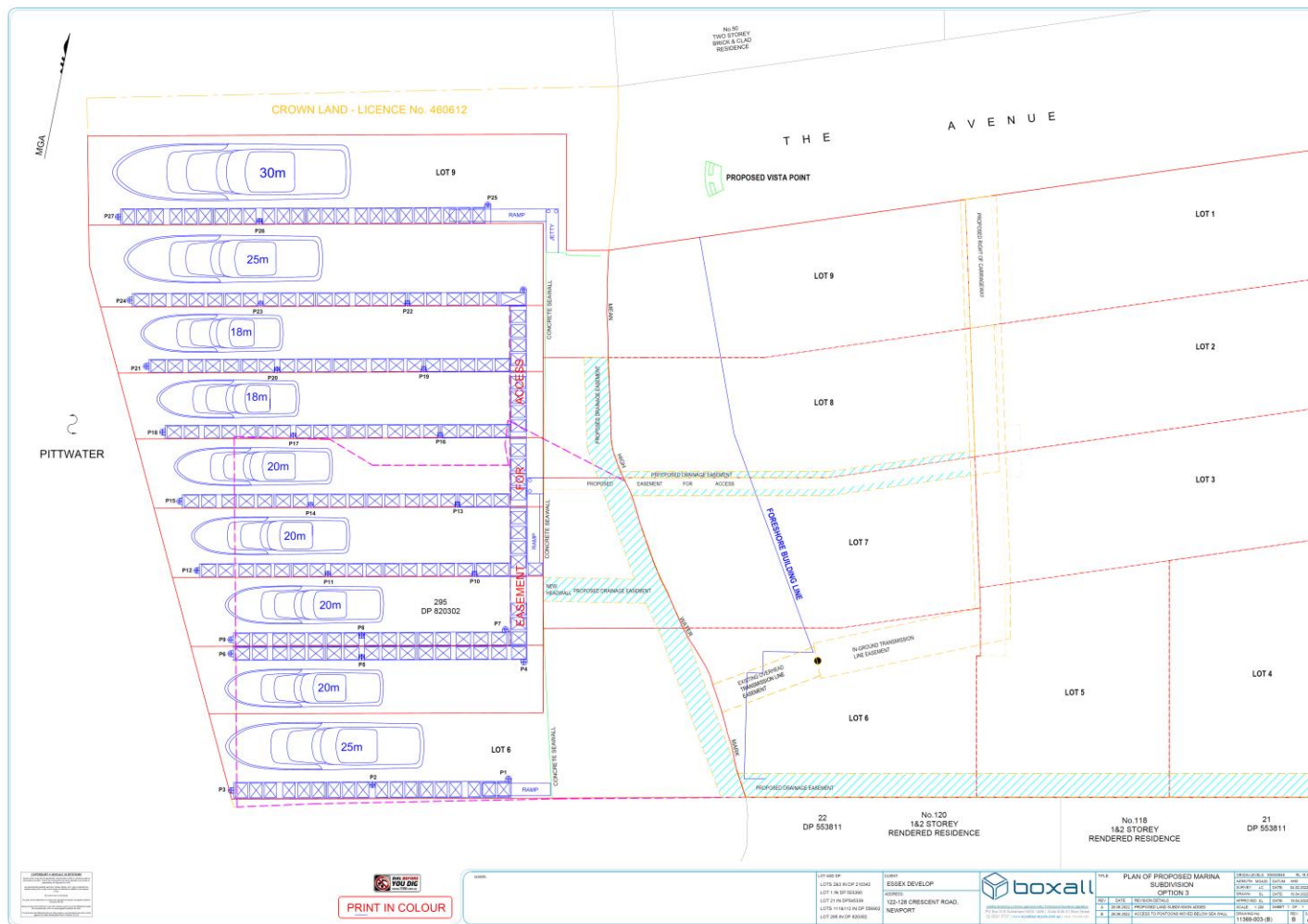


Figure 4.29 Plan of Proposed Marina Subdivision. Boxall Surveyors. Drawing No. 11369-003-B, Rev B. (2022).

4.7 DUE DILIGENCE PROCESS

This assessment has been conducted in accordance with the Due Diligence Code of Practice for Protection of Aboriginal Objects in NSW (DECCW 2010b). A copy of the Due Diligence flow chart is indicated below (Figure 4.30).

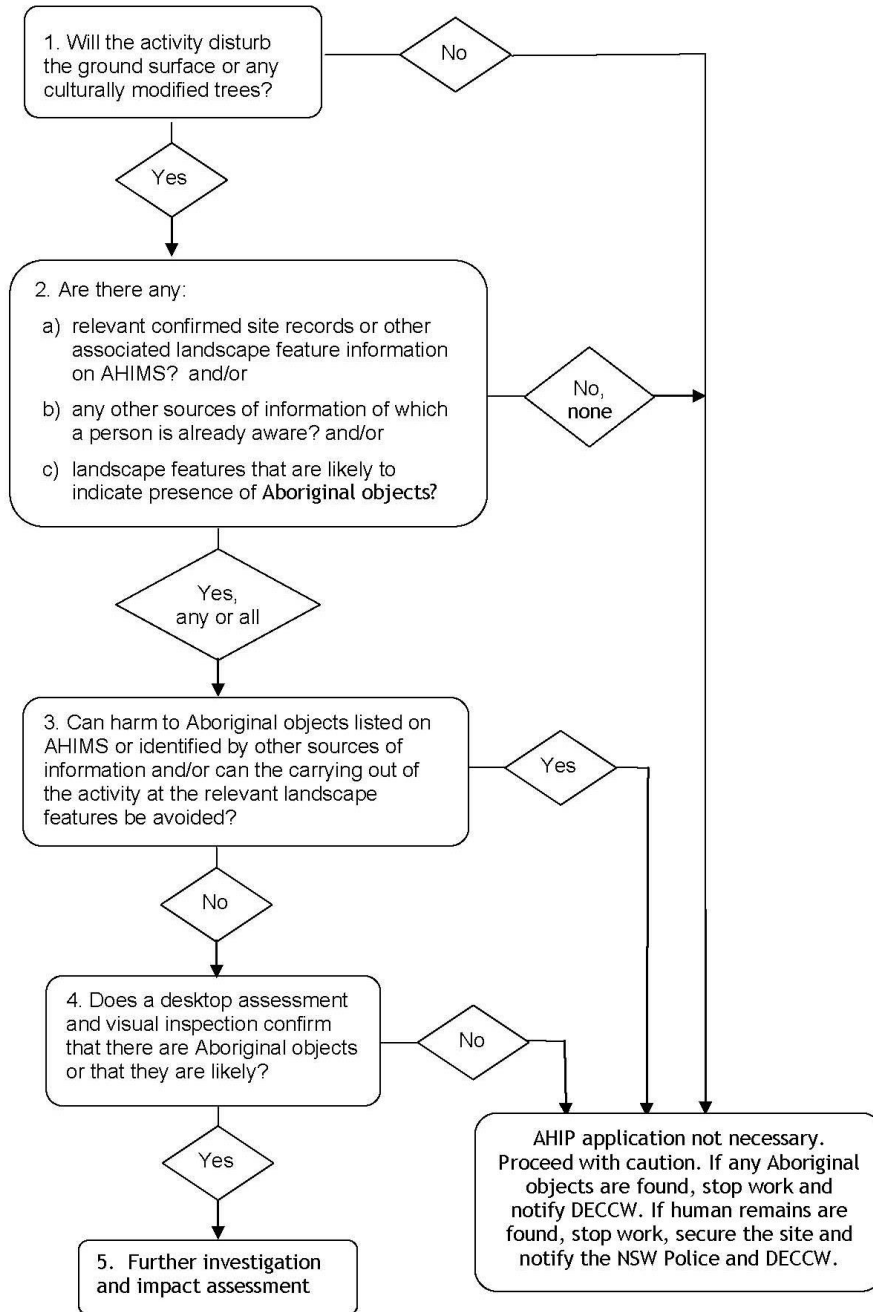


Figure 4.30 Generic Due Diligence Process.
DECCW (2010b, p. 10).

4.7.1 Due Diligence Results

The results of the Due Diligence process are indicated below demonstrating the due diligence steps completed:

Step One: Will the activity disturb the ground surface or any culturally modified trees?

Yes - the proposed activity requires demolition and excavation works for the subdivision, the installation of carriageways, easements, and marina infrastructure. No culturally modified trees are currently known on the site.

Step Two: Are there any:

a) relevant confirmed site records or other associated landscape feature information on AHIMS? and/or

Yes - there are five nearby registered AHIMS sites, the closest being approximately 378m (ID 45-6-1891).

b) any other sources of information of which a person is already aware? and/or

No stakeholder engagement has occurred as part of the Due Diligence reporting process.

c) landscape features that are likely to indicate presence of Aboriginal objects.

Yes –on the foreshore of Winji Jimmi Bay and within 200m of Pittwater and an unnamed tributary.

Step Three: Can harm to Aboriginal objects listed on AHIMS or identified by other sources of information and/or can the carrying out of the activity at the relevant landscape features be avoided?

No – the excavation required for the proposed development may affect natural soils likely to contain Aboriginal objects and/or deposits should they survive.

Step Four: Does a desktop assessment and visual inspection confirm that there are Aboriginal objects or that they are likely?

Yes - the desktop assessment indicates that Aboriginal objects are likely.

Step Five: Further investigation and impact assessment.

Yes - further assessment is recommended.

5.0 MANAGEMENT AND MITIGATION

The management recommendations presented in the following section of the report take into account the following:

- Legislation outlined in this report which protects Aboriginal cultural and archaeological objects and places in New South Wales.
- Research and assessment carried out by the author/s of this report.
- Results of previous archaeological assessment and excavation in the vicinity of the study area.
- The possible impact of future development on any Aboriginal archaeological material that may be present.
- The requirements of the consent authority Metro Local Aboriginal Land Council.

5.1 CONCLUSION

There were no confirmed Aboriginal archaeological site records located within the study area on the Aboriginal Heritage Information Management System (AHIMS) or from other sources of information of which the author of this report is aware of. As a result, an Aboriginal Heritage Impact Permit (AHIP) is not required at this stage however further assessment should be undertaken in the form of an Aboriginal Cultural Heritage Assessment Report. Archaeological test excavation may be undertaken as part of this assessment and, dependent on the approval's pathway required, this would determine whether an AHIP is required for any works to proceed.

A background analysis of the environmental and archaeological context revealed that study site has a moderate to high surface disturbances to sections of the site. Due to the foreshore's close proximity, however, there is a moderate potential for Aboriginal artefacts and/or deposits of archaeological and cultural significance to be present.

The surrounding landscape features present do indicate that sub-surface Aboriginal objects and/or deposits are likely in undisturbed areas.

The proposed activity is not:

- located within a sand dune system, or
- located within 200m below or above a cliff face, or
- located on a ridge top, ridge line or headland, or
- within 20m of or in a cave, rock shelter, or a cave mouth.

The study area is:

- located within 200m of waters.

Based on the locale of water and major tributaries such as Pittwater, the Hawkesbury River, South Pacific Ocean, and unnamed tributaries, it is likely that Aboriginal movement and land use would be channelled to this location and therefore the site may hold information regarding cultural activities of the area.

5.2 RECOMMENDATIONS AND HERITAGE MANAGEMENT PLAN

In accordance with the Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales (DECCW 2010b), it is recommended that further archaeological and cultural assessment, as well as test excavation in accordance with Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2010a), is necessary as this work is within an area of archaeological potential being within 200m of waters.

As part of the above recommendations the following actions should take place:

- Consultation with the registered Aboriginal Stakeholders should continue. The Metro Local Aboriginal Land Council has been given the opportunity to comment on the recommendations of this report. All comments will be included in the final version of this report.
- Further assessment is required in the form of a full Aboriginal Cultural Heritage Assessment Report, including full Aboriginal community consultation in accordance with Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010c).
- In accordance with the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (DECCW 2010b), a program of systematic, subsurface archaeological test excavation in accordance with the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2010a), should be undertaken to establish the nature and extent of any archaeological objects and/or deposits that are/may be present.
- If archaeological test excavation in accordance with the Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW, (DECCW 2010a) reveals no Aboriginal archaeological objects or deposits, then the proposed development should be allowed to 'proceed with caution.'
- If archaeological test excavation in accordance with Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2010a) reveals Aboriginal archaeological objects or deposits, once the nature and extent of the archaeological site has been established through test excavation then this data should be analysed and synthesised into an Aboriginal archaeological technical report.
- After this and before any ground disturbance takes place all development staff, contractors and workers should be briefed prior to works commencing on site, as to the status of the area and their responsibilities in ensuring preservation of the said area. They should also be informed of their responsibilities regarding the unexpected discovery of any Indigenous archaeological deposits, objects, or human remains that may be located during the following development.

Should any human remains be located during the development, then the following actions should take place:

- All excavation in the immediate vicinity of any objects of deposits shall cease immediately.
- The NSW police and Heritage NSW Enviroline be informed as soon as possible.

- Once it has been established that the human remains are Aboriginal ancestral remains, Heritage NSW and the relevant Registered Aboriginal Parties will identify the appropriate course of action.

Should any Aboriginal archaeological deposits or objects be located during the development, then the following actions should take place:

- All excavation in the immediate area shall cease immediately and the area should be demarcated.
- Heritage NSW, the Metropolitan Local Aboriginal Land Council, and a suitably qualified archaeologist should be notified so the significance of the said deposits or objects can be evaluated and presented in another report. The study area be recorded as an archaeological site, in accordance with Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales, Part 6 *National Parks and Wildlife Act 1974* (DECCW, 2010).
- The archaeological features or objects shall subject to fulfilment of the relevant legislative requirements particularly section 90 of the NPW Act 1974 (as amended).

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GLOSSARY AND ABBREVIATIONS

Term	Definition
Aboriginal Object	A term now used (formerly 'relic') within the NSW <i>National Parks and Wildlife Act, 1974</i> to refer to "...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."
ACH	Aboriginal Cultural Heritage
ACHAR	Aboriginal Cultural Heritage Assessment Report
AHIP	Aboriginal Heritage Impact Permit, issued under Part 6 of the <i>National Parks and Wildlife Act 1974</i> , where harm to an Aboriginal object or Aboriginal place cannot be avoided.
Alluvial	Describes material deposited by, or in transit in flowing water.
AMAC Group	Archaeological Management and Consulting Group.
Artefact	Any object, usually portable, that has been made or shaped by human hand.
Assemblage	A collection of artefacts found in close proximity with one another often excavated together.
Axe grinding Grooves	Areas on a stone surface where other items such as stone tools, wood or bones have been sharpened.
Basalt	A dark coloured, basic volcanic rock.
Bioturbation	Reworking of sediments through the action of ground dwelling life forms. This can also include soil cracking and root activity.
Broken Flake	A flake fragment which displays only part of the diagnostic features of a complete flake.
BP	Before present (AD1950).
Burial	Sites containing the physical remains of deceased Aboriginal people.
Ceremonial Sites	Places or objects of ceremonial, religious or ritual significance to Aboriginal people.
DCP	Development Control Plan.
DoPE	Department of Planning and Environment
DP	Deposited Plan.
Erosion	Process where particles are detached from rock or soil and transported away principally via water, wind and ice.
Flake	A piece of stone, detached by striking a core with another stone.
Flaking/Knapping	The process of making stone tools by detaching flakes from a piece of stone.
Friable	Easily crumbled or cultivated.
Hard setting	Soil which is compact and hard. It appears to have a pedal structure when dried out.
Heritage Division	Formerly known as the Heritage Branch now Heritage NSW
HNSW	Heritage NSW
Holocene	The period of time since the last retreat of the polar icecaps, commencing approximately 10,000 – 110,000
Intensification	Increased social and economic complexity.
Landscape Unit	An area of land where topography and soils have distinct characteristics, are recognisable, describable by concise statements and capable of being represented on a map.
Laminite	A thinly bedded, fine grained sedimentary rock.
LEP	Local Environment Plan.
LGA	Local Government Area.

Term	Definition
Lithics	A term used to describe stone and stone artefacts.
Loam	A medium textured soil of approximate composition of 10- 25% clay, 25-50% silt and 2% sand.
Loose	A soil which is not cohesive.
Matrix	Finer grained fraction, typically a cementing agent within soil or rock in which larger particles are embedded.
Midden	Aboriginal occupation site consisting chiefly of shells, which can also include bone, stone artefacts and other debris.
NPW Act	National Parks and Wildlife Act 1974
OEH	NSW Office of Environment and Heritage (formerly known as the DECCW)
Open Campsite	A surface accumulation of stone artefacts and/ or other artefacts exposed on the ground surface.
Potential Archaeological Deposit (PAD)	An area where no surface archaeological remains are visible but where it has been assessed that there is some potential for sub-surface archaeological remains to be present.
Ped	An individual, natural soil aggregate.
Pedal	Describes a soil in which some or all of the soil material occurs in the form of peds in a moist state.
Plastic	Describes soil material which is in a condition which allows it to undergo permanent deformation without appreciable volume change or elastic rebound and without rupture.
Pleistocene	The epoch of geological time starting 1.8 million years ago.
RAP	Registered Aboriginal Parties
Rock Painting	Encompassing drawing, paintings or stencils that have been placed on a rock surface usually within a rock shelter.
Rock Engraving	Pictures which have been carved, pecked or abraded into a rock surface, usually sandstone and predominantly open, flat surfaces.
Sandstone	A detrital sedimentary rock with predominantly sand sized particles.
Scarred/ Carved Tree	A tree from which bark has been deliberately removed.
Sclerophyll	Denoting the presence of hard stiff leaves, typically used to classify forest and indicative of drier conditions.
Sedimentation	Deposition of sediment typically by water.
Silcrete	A sedimentary rock comprising of quartz grains in a matrix of fine grained – amorphous silica.
Silt	Fine soil particles in size ranges of 0.02 – 0.002mm.
Slope	A landform element inclined from the horizontal at an angle measured in degrees or as a percentage.
SHI	State Heritage Inventory
SHR	State Heritage Register
Subsoil	Subsurface material comprising the B and C horizons of soils with distinct profiles.
Stone Resource Site	A geological feature in the landscape from which raw material for the manufacture of stone tools was obtained.
Texture	The coarseness or fineness of a soil as measured by the behaviour of a moist ball of soil when pressed between the thumb and forefinger.
Topsoil	A part of the soil profile, typically the A1 Horizon, containing material, which is usually darker, more fertile and better structured than the underlying layers.
Weathering	The physical and chemical disintegration, alteration and decomposition of rocks and minerals at or near the earth's surface by atmospheric and biological agents.

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APPENDICES

APPENDIX ONE – AHIMS SITE SEARCH RESULTS

Basic Search



AHIMS Web Services (AWS)
Search Result

Your Ref/PO Number : Crescent Rd 122 Newport

Client Service ID : 787182

AMAC Group P/L

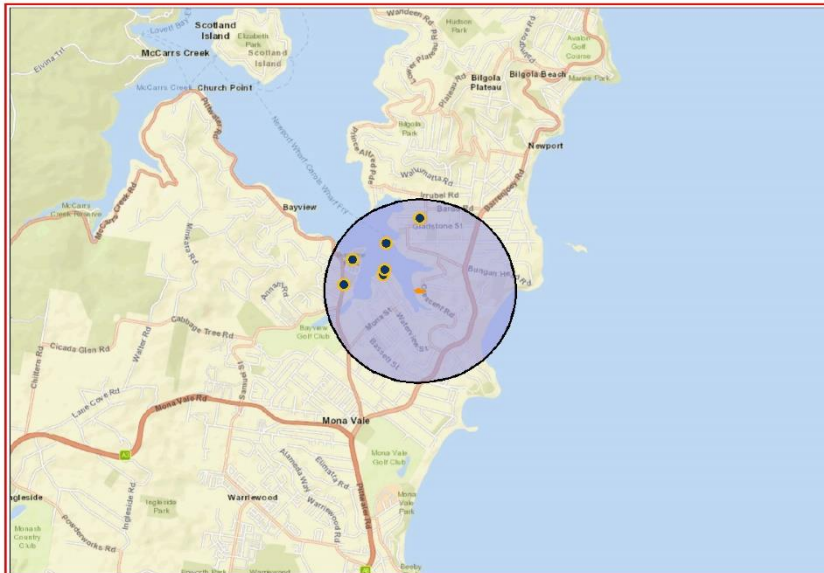
Date: 31 May 2023

122c Percival Rd
Stanmore New South Wales 2048
Attention: Martin Carney
Email: amac@archaeological.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 111, DP:DP556902, Section :- with a Buffer of 1000 meters, conducted by Martin Carney on 31 May 2023.

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



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

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

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

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

Important information about your AHIMS search

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

Level 6, 10 Valentine Ave, Parramatta 2150
Locked Bag 5020 Parramatta NSW 2124
Tel: (02) 9585 6345

ABN 34 945 244 274
Email: ahims@environment.nsw.gov.au
Web: www.heritage.nsw.gov.au



Extensive Search



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

Your Ref/PO Number : Crescent Rd 122 Newport
Client Service ID : 787187

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
45-6-1891	Winji Jimmi.; Duplicate of 45-6-3990	GDA	56	342982	6273905	Open site	Valid	Shell : -, Artefact : -	Midden	
	Contact	Recorders	Margrit Koettig, Ms. Yvonne Kaiser-Glass							
45-6-1565	Bayview;	AGD	56	342537	6273871	Open site	Valid	Shell : -, Artefact : -	Midden	417
	Contact	Recorders	ASRSYS							
45-6-1564	Crystal Bay;	AGD	56	343260	6274343	Open site	Valid	Shell : -, Artefact : -	Midden	417
	Contact	Recorders	ASRSYS							
45-6-1438	Bayview;	AGD	56	342899	6274061	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	Contact	Recorders	ASRSYS							
45-6-1440	Bayview Midden;	AGD	56	342451	6273595	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	Contact	Recorders	ASRSYS							
45-6-3990	Winji Jimmi Reserve Midden - Duplicate of 45-6-1891	GDA	56	342998	6273963	Open site	Valid	Shell : -		
	Contact	Recorders	Mr. Bob Conroy							

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground



Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Report generated by AHIMS Web Service on 31/05/2023 for Martin Carney for the following area at Lot : 111, DP:DP556902, Section : null with a Buffer of 1000 meters.. Number of Aboriginal sites and Aboriginal objects found is 6

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

Page 1 of 1

45-6-1891

		National Parks and Wildlife Service BOX N189, GROSVENOR STREET POST OFFICE, SYDNEY, NSW 2000. TEL. (02) 237 6500		
				45-6-1891
MAP NAME MONA VALE SYDNEY	EDITION 1ST	SCALE 1:25,000 1:250K	REFERENCE 343930 6273730 43937373	HEAD OFFICE USE ONLY: NWPS site no: 45-6-1891 Site types: Midden File nos: Date: Filed by: AKD 14/8/89
Site name: NWJ1 Jimmi		Locality/property name:		Owner/Manager:
Local post office:		Address:		
NPWS District:		Region: CENTRAL		
Reason for investigation (give R.O. instruction no. where applicable): HERITAGE STUDY				
Portion no: Parish:	Other land category: County:		Plan/sketch/section of site attached? Yes/No. How many?	
Air photo refs. (for stereo pair)			Photos taken? Yes/No How many attached?	
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff. (Draw diagram on separate sheet.)				
Other sites in locality? Yes/ No		Site Types include: Middens, shelters + ash deposit		
Are sites in NPWS Register? Yes/ No		Unregistered sites — plans for future recording? Yes/No.		
Have artefacts been removed from site? Yes/ No /don't know. When?				
By whom? Deposited where?				
Is site important to local Aborigines? Yes/ No /don't know.				
Give contact(s) name(s) + address(es) DON THOMPSON METROPOLITAN LALC 72 Remwick St Refem				
Contacted for this recording? Yes/ No (Attach additional information separately) If not, why not?				
Verbal/written reference sources (including full title of accompanying report): Heritage Study of the Barruwoy Peninsula/Pittwater Area: Aboriginal Sites Assessment. Koethig 1988				
Checklist: surface visibility, damage/disturbance/ threat to site	Condition of site: Poor - unknown amount removed.			
Recommendations for management & protection (attach separate sheet if necessary):				
Site recorded by: M. Koethig			Date: 1988	

X

SITE POSITION & ENVIRONMENT		OFFICE USE ONLY: NPWS site no: 45-6-1891
1. Land form a. beach/hill slope/ridge top, etc:		b. site aspect: N/A c. slope:
d. mark on diagram provided or on your own sketch the position of the site:		e. Describe briefly:
f. Local rock type: Narrabeen		g. Land use/effect: park
2. Distance from drinking water:		Source:
3. Resource Zone associated with site (estuarine, riverine, forest etc):		
4. Vegetation:		
5. Edible plants noted:		
6. Faunal resources (include shellfish):		
7. Other exploitable resources (river pebbles, ochre, etc):		
Site type: Midden CHECKLIST TO HELP: length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock. DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types. ART: area of surface decorated, motifs, colours, wet, dry pigment, technique of engraving, no. of figures, sizes, patination. BURIALS: number & condition of bone, position, age, sex, associated artefacts. TREES: number, alive, dead, likely age, scar shape, position, size, patterns, axe marks, regrowth. QUARRIES: rock type, debris, recognisable artefacts, percentage quarried. OTHER SITES EG. structures (fish traps, stone arrangements, bora rings, mia mias), mythological sites, rock holes, engraved groove channels, contact sites (missions massacres cemeteries) as appropriate	DESCRIPTION OF SITE & CONTENTS. Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents. These shell revealed along the edge of the road above the reserve (Wingj Jimmi) and along the side boundaries Cochle and oyster dominant. The depth of the midden could not be assessed, and it is likely that some material was removed during construction of the park - which is grassed over and has swings etc. Either side of the reserve are houses.	
Attach sketches etc, eg. plan & section of shelter, show relation between site contents, indicate north, show scale. Attach annotated photos (stereo where useful) showing scale, particularly for art sites.		

45-6-~~1897~~
1891.

WINSI JIMMI RESERVE



Facing into Pittwater.



From: KAISER, YVONNE
 To: LARRY DAVIS
 Subject: Further enquiries of 45-6-1891 - Wiji Jimmi Reserve Newport N. Update by 45-6-2000.
 Date: Thursday, 21 July 2022 10:11:19
 Attachments: 1564031648; 1564031648; 1564031648; 1564031648; 1564031648

Hi Carlos, hope all is well? David said you will be A/Arch Manager.

Can you correct the location of 45-6-1891 - AHMS, please? It is a recording of the mid midden under Wiji Jimmi Reserve in Newport, evident at the time from the edge of the road northward to the water's edge according to the site card. Midden material is still evident towards the northern part of the site.

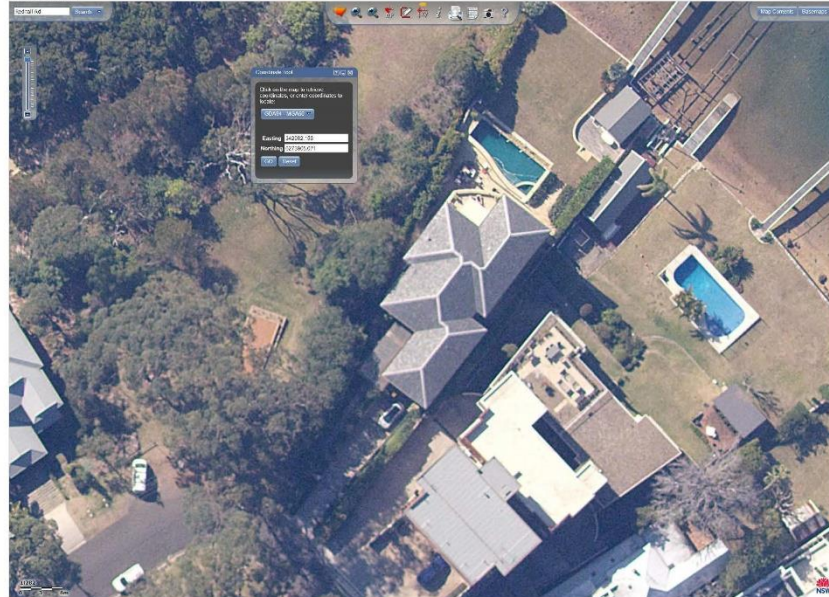
According to SitMaps, the centroid should be as shown in the screen shot below:

Grid Reference: GDS

Zone: 56

Easting: 542782

Northing: 6272825



The location correction means 45-6-3950 - ai duo xuel 45-6-1891 (in existing registration). Both are the same site but the centroid for 45-6-3950 is over the northern part of the same site.

Could you please update both 45-6-1891 and 45-6-3950 to show they are the same site middens to within Wiji Jimmi Reserve, Newport?

Many thanks, Yvonne

Yvonne Kaiser-Glass
 Senior Heritage Advisor
 Asset Lifecycle
 Week days: Mon-Fri & Thurs-Fri
 Mobile 0457 512 778
yvonne.kaiser@glass@sydneywater.com.au



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Click or scan

Sydney Water respectfully acknowledges the traditional custodians of the land and water on which we work, live and learn. We pay respect to Elders past and present.

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45-6-1565

MSM

Sydney 1:250,000 43068408
 Broken Bay 1:63,360 3064075

1. Map Name Mona Vale (Orthophotomap) 5. Site No. 45-6-1565
 2. Scale 1:25,000 6. Site type O. midden
 3. Grid ref 424738 (approx)
 4. Site name(s) Bayview 7. Classification

8. Air photo ref
 9. Cadastral County of Cumberland, Shire of Waveragh
 10. Land Status May be council land (?) 11.  45-6-1565

12. Directions for site relocation *The site is in a soil bank on the western edge of Pettwater Rd. at Bayview. The site is adjacent to a bus-stop and it is just S. of the entrance to the large boat-ramp (which has just been built) at Bayview.*

See attached map.

13. Owner? 14. Tenant/Manager?
 Address Address
 Attitude? Attitude?

15. Site Description *The shells in the midden are Cockles and wedges. The shells are in an 18" layer at the bottom of a 2ft. high bank but they extend approx. 5 ft. up the slope at the N.W. end of the midden. The midden appears to be approx. 12 yds. wide and it may have a vertical depth of 18". The midden may extend up the slope behind the site for 10 yds. (?) (under a driveway leading to a house). There is charcoal amongst the shells. The site is reasonably near to a rich shellfish source and it is approx. 500 yds. N. of a creek. The site may extend N. to past the entrance to the boat-ramp. (along the bank).*

16. Reasons for investigation
 17. Condition *The site appears to have been damaged by the building of the bus stop and Pettwater Rd. The installation of the private driveway appears to have damaged site also.*
 18. Interpretation *For scientific research and education.*
 19. Visitation *The site may be visited 20 times (day on average over 1yr).*
 20. Recommendations

X

21. Environmental description of site locality. The site is in an earth bank on the W. side of ~~Pittwater Rd.~~ Pittwater Rd. at Bayview. The site overlooks Pittwater rd. and the surrounding covered swampy land on the E. side of Pittwater Rd. The vegetation is mainly introduced trees and grasses with many casuarinas near the site. The fauna is probably a mix of domestic and native animals and birds. The ground at the site slopes down at approx. 20° to the horizontal (towards the S.E.). The site is approx. 500yds. N. of a creek. The climate is temperate. The site appears to be relatively dry. The site is near to a rich shellfish source and it is reasonably near to fresh water. The site may be on "council" land (?).

22. Relation to other sites in locality

23. Details of artifact collections

24. Is plan or diagram of site attached? Yes

25. Are annotated photographs attached? /No How many?

26. Other additions

27. Importance of site to Aborigines

28. Source of this information

29. Oral sources of information

30. Written references

31. Recorded by Alan Heath.

Filed by

Address 29 Penimbla Crescent,
Belgola Plateau, 2107,
N.S.W.

Date

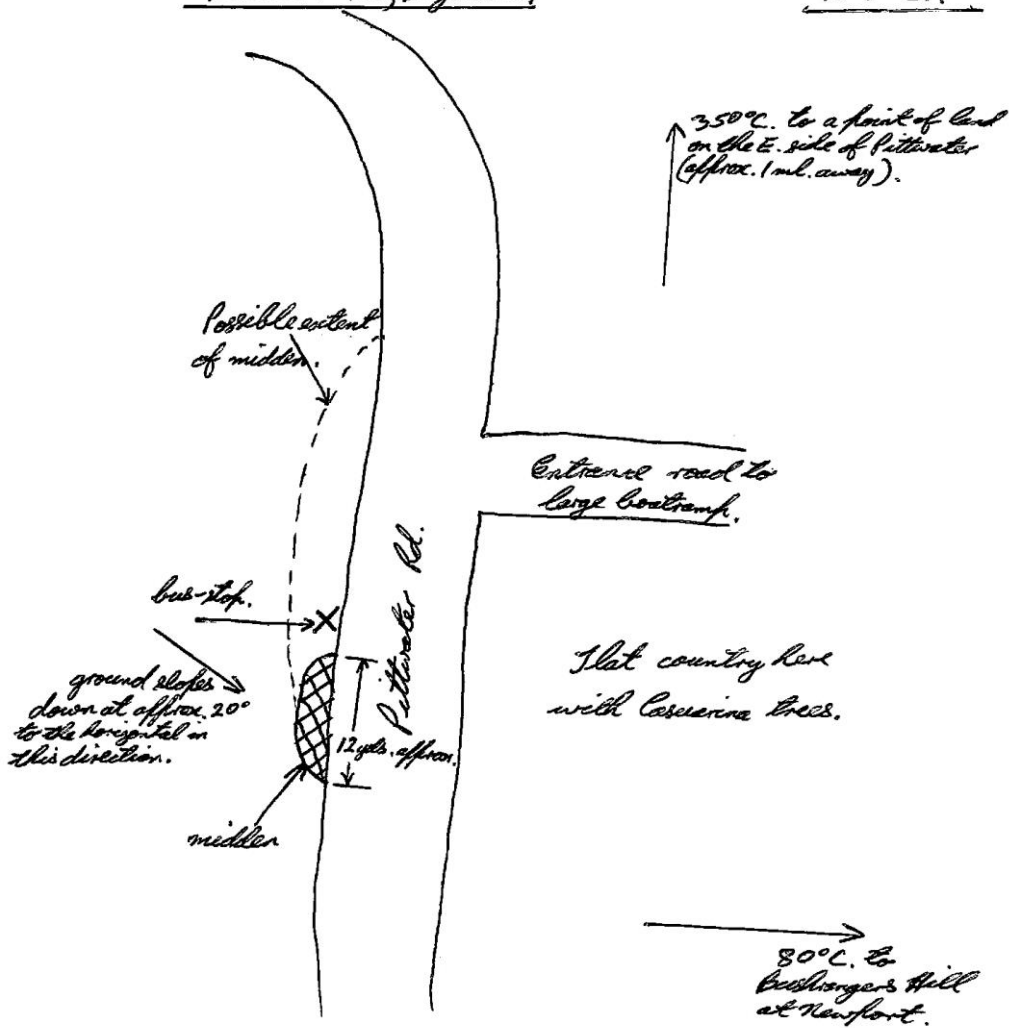
11-1-1981.

Date

45-6-1565

11-1-81

Pittwater Rd, Bayview.



0

45-6-1564

not met

Sydney 1:250,000 4314.8413

1. Map Name *Mona Vale (Oristopholomah) B. Bay.* 5. Site No. *45-6-1564*

2. Scale *1:25,000* 1:63,360 6. Site type *0. midden*

3. Grid ref *431.744 approx* 314. H13

4. Site name(s) *Crystal Bay* 7. Classification

8. Air photo ref

9. Cadastral *County of Cumberland, Shire of Warringah*

10. Land Status *May be a recreation reserve(?)*



45-6-1564


12. Directions for site relocation *The site is at the extreme W. end of Bardo Rd, Newport. (Continue down the dirt rd. which runs W. from the intersection of Noval St. and Bardo Rd.) The site is on the S. side of the "turning circle" at the extreme W. end of Bardo Rd. The midden may extend behind a beach which is on the S.E. shore of Crystal Bay. See attached map.*

13. Owner *?* 14. Tenant/Manager *?*

Address

Address

Attitude *?* Attitude

15. Site Description *The shells in the midden are cockles, shells, mud oysters and shells that look like this: -  The shells may make up 30% of the midden. The shells are in a black sandy soil bank. The midden is approx. 15yds. wide and it has a vertical depth of approx. 18" (?). It may extend up the slope behind the site for 10yds. (?). There is charcoal amongst the shells. The site is adjacent to a rich shellfish source and there is a small creek approx. 100yds. E. of the site.*

16. Reasons for investigation

17. Condition *The site has been damaged by the building of a "turning-circle" adjacent to the site. The site appears to extend onto private property.*

18. Interpretation *For scientific research and education.*

19. Visitation *May be visited 20 times / day on average over 1yr.*

20. Recommendations

X

21. Environmental description of site locality *The site is just above the H.W. mark on the S.E. shore of Crystal Bay. The site overlooks Crystal Bay. The vegetation is a mixture of native and introduced trees and shrubs + grasses. The fauna is probably a mixture of native and domestic birds and animals. The soil is a black sandy loam. The ground at the site slopes down at approx. 10° to the horizontal. The site is approx. 100m W. of a small creek. The climate is temperate. The site appears to be relatively damp. The site is adjacent to a rich shellfish source and it is near to freshwater. The site appears to be on private property and also on "council" land.*

22. Relation to other sites in locality

23. Details of artifact collections

24. Is plan or diagram of site attached? Yes/

25. Are annotated photographs attached? ~~Yes~~/No How many?

26. Other additions

27. Importance of site to Aborigines

28. Source of this information

29. Oral sources of information

30. Written references

31. Recorded by *Alan Heath*

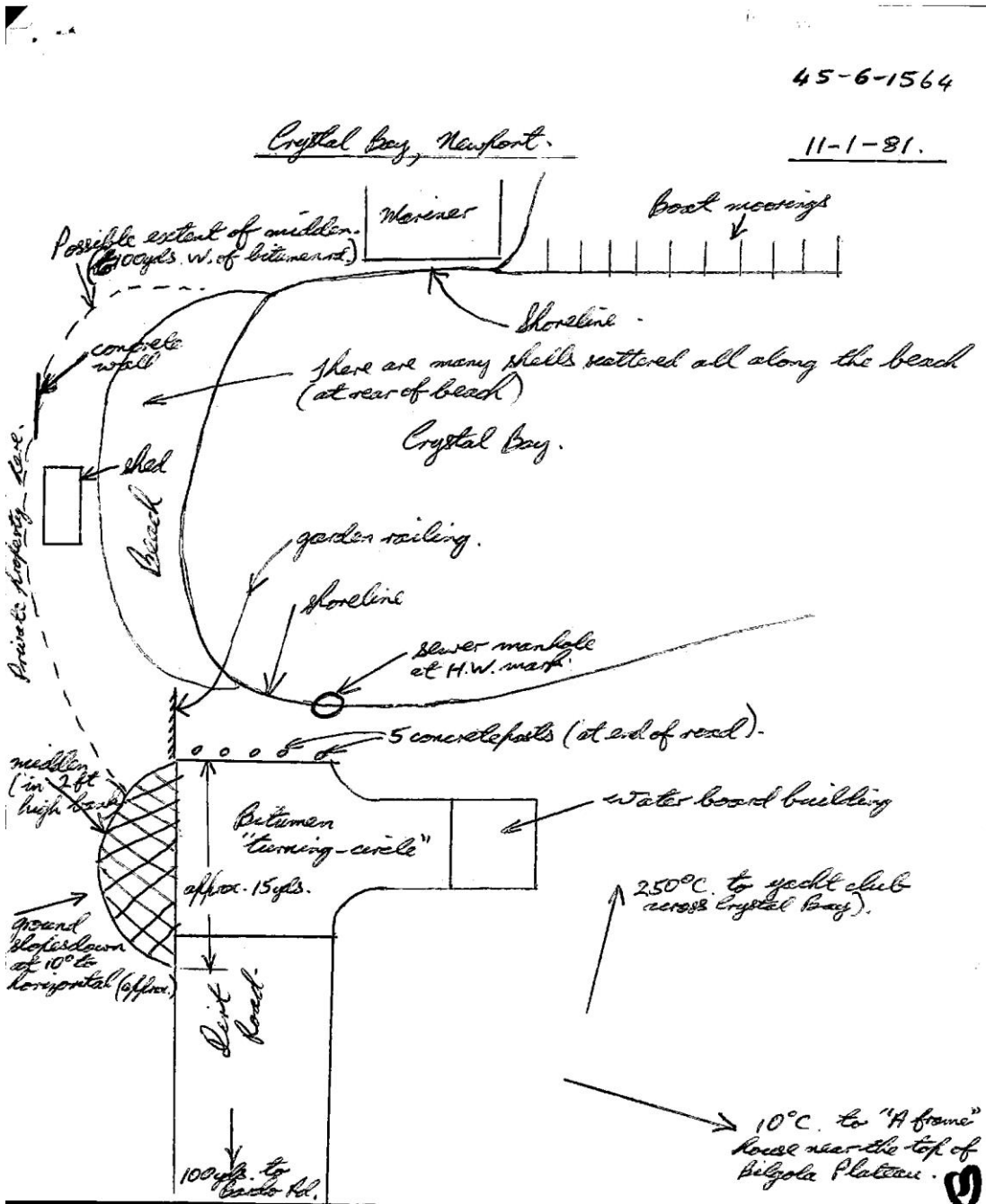
Filed by

Address *29 Kanimbla Crescent,
Belgola Plateau, 2107,
N.S.W.*

Date

11-1-1981.

Date



45-6-1438

- 1. Map Name *MONA VALE... BROKEN BAY... SYDNEY* 5. Site No. *45-6-1438*
- 2. Scale *1:25,000... 1:63,360... 1:250,000* 6. Site type *MIDDEN...*
- 3. Grid ref *42:02.7401... 30.5 40.7... e. 431.841*
- 4. Site name(s) *BAYVIEW* 7. Classification
- 8. Air photo ref *RUM.7... 10.348... PINNED*
- 9. Cadastral
- 10. Land Status *FREEHOLD* 11.
- 12. Directions for site relocation



45-6-1438

- 13. Owner *MR. LEIGH PURCELL* 14. Tenant/Manager
- Address *27 ALEXANDRA CR. S... BAYVIEW... 992-441* Address
- Attitude *GOOD* Attitude

15. Site Description

MIDDEN DEPOSIT UNDER AND AROUND ROCK OVERHANG. DEPOSIT EXTENDS FOR APPROX 20 METRES ALONG ROCK FACE TO APPROX 3 METRES UNDER OVERHANG. DEPTH OF MIDDEN NOT RECORDED.

- 16. Reasons for investigation *HQ INSTRUCTION CR/06/019*
- 17. Condition *GOOD*
- 18. Interpretation
- 19. Visitation *NIL*
- 20. Recommendations *INSTRUCTIONS TO MR PURCELL RE MIDDENS*

X

21. Environmental description of site locality

22. Relation to other sites in locality NEAREST OTHER SITE AT CHURCH POINT.

23. Details of artifact collections

GENERAL MIDDEN DEPOSIT, SHELLS TYPICAL OF OTHER LOCALITIES.
 ANADARA TRAPEZIA, CRASSOSTREA COMMERCIALIS, PYRAZUS ERBINUS.

24. Is plan or diagram of site attached? Yes/No

25. Are annotated photographs attached? Yes/No How many?

26. Other additions

27. Importance of site to Aborigines NOT KNOWN, POSSIBLE FOOD SUPPLY.

28. Source of this information FROM OWNER

29. Oral sources of information

30. Written references

31. Recorded by C BENNETT

Filed by C BENNETT


Address K.C.N.P.

Date 25/10/82

Date


45-6-1440

N.P.W.S.



National Parks and Wildlife Service

Standard Site Recording Form



45-6-1440

MAPNAME	EDITION	SCALE	REFERENCE	HEAD OFFICE USE ONLY:
BROKEN BAY MOMA VALE SYDNEY	1 <i>NOV 417</i> FIRST EDITION	1:63,360 1:25,000 1:250,000	3042-4069 LA 2 27 73 78 A3058405	NWPS site no: 45-6-1440 Site types: S + M File nos: Report filed with site no: Classification: Site status: Filed by: <i>[Signature]</i> Date: 4/2/83
Site name: BAYVIEW MIDDEN				
Local post office: BAYVIEW				
Locality/property name: 27 ALEXANDRA CRCS BAYVIEW				
NPWSDistrict: NTH METROPOLITAN Region: CENTRAL				
Reason for investigation (give H.O. instruction no. or full title of accompanying report where applicable): H.O. INSTRUCTION CR/06/019				
Portion no: 27 Parish: BROKEN BAY		Other land category: TORRENS County: CUMBERLAND		Plan/sketch/section of site attached? Yes/No: How many? 1
Air photo refs. (for stereo pair) CON 7 NO 348 PINNEY			Annotated photos attached? Yes/No: How many?	
Condition of site: (GOOD)		Causes of damage/disturbance/threat to site: SITE IS ON PRIVATE PROPERTY AND IS PROTECTED BY PROPERTY OWNER AT PRESENT <small>(Fill in separate management/protection recommendations sheet if necessary)</small>		
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff. Draw diagram on separate sheet if necessary). ACCESS TO ADDRESS BY ROAD ACCESS TO SITE VIA BLOCK NO 27 ALEXANDRA CRCS BAYVIEW. SEE ATTACHED GREGORY'S DIRECTORY MAP 83, A12.				
Other sites in locality? Yes/No: No		Site Types include: MIDDENS		
Are sites in NPWS Register? Yes/No: No		Unregistered sites-plans for future recording? Yes/No:		
Have artefacts been removed from site? Yes/No/don't know. When? By whom? N.A. Deposited where? N.A.				
Is site important to local Aborigines? Yes/No/don't know. Give contact(s) name(s) + address(es) MR LEIGH PORCELL 27 ALEXANDRA CRCS BAYVIEW.				
Contacted for this recording? Yes/No: (Attach additional information separately) If not, why not?				
Verbal/written reference sources: AS ABOVE (KID) REFERENCE INFORMATION SOURCES FROM MR PORCELL & ABORIGINAL RELICS FILE NO R1180 LABO214.				
Site recorded by: C BENNETT				Date: 25/10/82
Address/institution: N.P.W.S. NTH METROP DIST.				

SITE POSITION & ENVIRONMENT		OFFICE USE ONLY: NPWS site no: 45-6-11100
<p>1. Land form e.g. beach/hill slope/ridge top, etc: HILL SLOPE</p> <p>2. Describe briefly & mark on diagram provided or on your own sketch the position of the site:</p>		
3a Local rock type: SAND STONE	b rock type at site: SANDSTONE	c site aspect: N. E. d slope: 5 DEGREES
4. Distance from drinking water: NOT KNOWN Source: NOT KNOWN Perm/temp: N.A.		
5. Vegetation: SPOTTED GUM, IRON BARK, WATTLE, STRINGY BARK		
6. Edible plants noted: NOT OBSERVED		
7. Faunal resources (include shellfish) GENERAL SHELL TYPE TYPICAL OF OTHER LOCALITIES ANADARA TRAPEZIA, CRASSOSTREA COMMERCALIS, PYRAZUS ERBINUS.		
<p>CHECKLIST TO HELP: length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock. DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types. ART: area of surface decorated, motifs, colours, wet, dry pigment, technique of engraving, no. of figures, sizes, patination. BURIALS: number & condition of bone, position, age, sex, associated artefacts. TREES: number, alive, dead, likely age, scar shape, position, size, patterns, axe marks, regrowth. QUARRIES: rock type, debris, recognisable artefacts, percentage quarried. OTHER SITES EG. structures (fish traps, stone arrangements, bora rings, mia mias), mythological sites, rock holes, engraved groove channels, contact sites (missions massacres cemeteries) as appropriate</p>	<p>DESCRIPTION OF SITE & CONTENTS. Site type(s):</p> <p>Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents. Attach sketches etc, eg. plan & section of shelter, show relation between site contents, indicate scale. Attach annotated photos (stereo where useful) showing scale, particularly for art sites.</p> <p>SHELTER DIMENSIONS, 3 METRES HIGH X 3 METRES DEEP, LENGTH 20M. DEPOSITS OF MIDDEN (NOT MEASURED) ON TOP</p> <p>NOT KNOWN</p> <p>NO ART SITES OR ENGRAVINGS AT LOCALITY</p> <p>NOT KNOWN</p> <p>NO SCAR TREES OBSERVED HEAVY VEGETATION ALL AROUND SITE. SPECIES MENTIONED ABOVE.</p> <p>NOT OBSERVED</p> <p>NONE OBSERVED.</p>	

45-6-3990



Aboriginal Site Recording Form

AHIMS Registrar
P O Box 1967, Hurstville 2220 NSW

AHIMS site ID:	45-6-3990	Date recorded:	12-08-2021
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Site Location Information			
Site name:	Winji Jimmi Reserve Midden		
Easting:	342998	Northing:	6273963
Coordinates must be in GDA (MGA)			
Horizontal Accuracy (m):	10		
Zone:	58	Location method:	Phone GPS

Recorder Information		
<small>(The person responsible for the completion and submission of this form)</small>		
Title	Surname	First name
Mr.	Conroy	Bob
Organisation:	ARRDENT Pty Ltd	
Address:	24 Kennedy Place Bayview NSW 2104	
Phone:	0428451288	E-mail: bobconroy44@GMAIL.com

Site Context Information		
Land Form Pattern:	Coastal Plain	Land Use: Recreation
Land Form Unit:	Slope	Vegetation: Cleared
Distance to Water (m):	0	Primary Report:
How to get to the site:	Edge of bay and c.40m upslope within the northern (lower) section of Winji Jimmi Reserve in Halesmith Road Mona Vale NSW 2103.	
Other site information:	Site location and details reported by Roberta Conroy. This is popular local recreation area of which c.50% is mown and 50% is natural bushland. Site has a northerly aspect and c.10 degree slope.	

1

Site location map



Site contents information

open/closed site:

Site condition:

Features:

	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)
1. <input type="text" value="Shell"/>	<input type="text" value="10000"/>	<input type="text" value="50"/>	<input type="text" value="25"/>

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Primarily edible-sized cockle and whelk shells exposed over about 1500 square metres within the Winji Jimi Reserve from shoreline to about 20m ASL. Some shell exposed around recent bush regeneration plantings on higher levels of the slope.

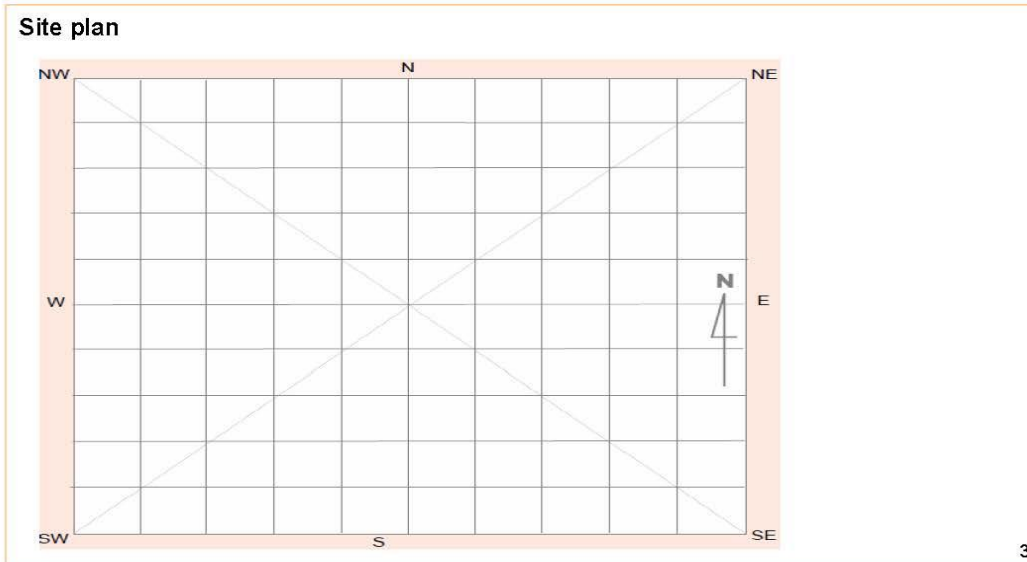
Features:

	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)
2. <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

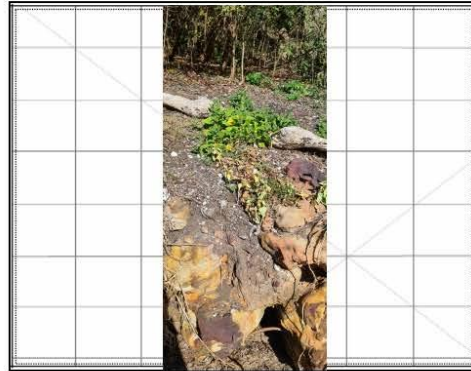
Features:		Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)													
3.	<input style="width: 100%;" type="text"/>	<input style="width: 20px; height: 20px;" type="text"/>	<input style="width: 20px; height: 20px;" type="text"/>	<input style="width: 20px; height: 20px;" type="text"/>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: center;">Scarred Trees</th> </tr> <tr> <th style="width: 15%;">Scar Depth (cm)</th> <th style="width: 15%;">Regrowth (cm)</th> <th style="width: 20%;">Scar shape</th> <th style="width: 50%;">Tree Species</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><input style="width: 20px; height: 20px;" type="text"/></td> <td style="text-align: center;"><input style="width: 20px; height: 20px;" type="text"/></td> <td style="text-align: center;"><input style="width: 30px; height: 20px;" type="text"/></td> <td style="text-align: center;"><input style="width: 30px; height: 20px;" type="text"/></td> </tr> </tbody> </table>	Scarred Trees				Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species	<input style="width: 20px; height: 20px;" type="text"/>	<input style="width: 20px; height: 20px;" type="text"/>	<input style="width: 30px; height: 20px;" type="text"/>	<input style="width: 30px; height: 20px;" type="text"/>
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Description:																	
<input style="width: 100%; height: 100%;" type="text"/>																	
Other Site Info:	<p>Site location and details reported by Roberta Conroy. This is popular local recreation area of which c.50% is mown and 50% is natural bushland. Site has a northerly aspect and c.10 degree slope.</p>																



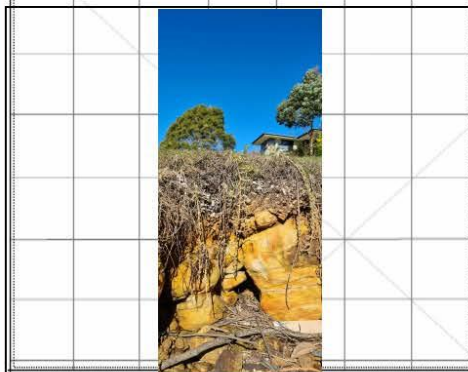
Site photographs



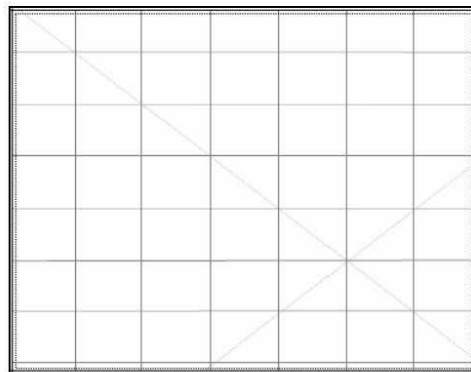
Description: Depth of shell midden on exposed western shoreline.



Description: Exposed shell on bay NW shoreline



Description: Exposed shell on NNW shoreline.



Description:

Site restrictions

Do you want to Restrict this site?: Restriction type: Gender General Location

Why is this site restricted?:

Further information contact

Title Surname First name

Organisation:

Address:

Phone: E-mail: