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Peat Island and Mooney Mooney Planning Proposal Aboriginal Cultural Heritage Assessment

Prepared for Property and Development NSW, Department of
Planning, Industry and Environment

August 2021 – FINAL

Sydney
Melbourne
Brisbane
Perth

WARNING: Aboriginal and Torres Strait Islander readers should be aware that this document may contain pictures or names of people who have passed away.

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EXECUTIVE SUMMARY

Extent Heritage Pty Ltd (Extent Heritage) has been commissioned by Property and Development NSW to prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the rezoning of surplus government land near Peat Island, on the M1 Pacific Motorway at Mooney Mooney, NSW.

The Planning Proposal has Gateway approval from the Department of Planning, Industry and Environment (PP_2017_CCOAS_006_00), under Section 3.34 of the *Environmental Planning and Assessment Act 1979*. However, this determination requires that updates are made to the Planning Proposal (PP) to ensure there is sufficient detail to satisfy statutory planning provisions. With respect to Aboriginal heritage, the relevant provisions are Section 9.1 Directions (formerly Section 117 Directions, 2.3 Heritage Conservation), and the *State Environmental Planning Policy (Coastal Management) 2018* (formerly *State Environmental Planning Policy 71 – Coastal Protection*). Specifically, this includes consultation with the Office of Environment and Heritage and the Aboriginal community, the undertaking of further Aboriginal heritage assessment and investigation, determination of an agreed heritage outcome (with respect to heritage on the island) and the proposition of planning instrument changes, if required.

Given the approval pathway being implemented for the project, an ACHAR was initiated to present the findings of the Aboriginal community consultation process and to assess the Aboriginal cultural heritage values of the study area. The ACHAR has been used to inform the amended PP for the study area (PP_2017_CCPAS_006_00 (17/06254)).

Aboriginal Archaeological Resource

The documentary research and archaeological survey resulted in the identification of eight Aboriginal archaeological sites within the study area. This total includes three Aboriginal site complexes: (1) an Aboriginal engraving and grinding groove site on a sandstone platform on Peat Island (consisting of two separate AHIMS recordings, #45-6-3586 and #45-6-3587); (2) an Aboriginal engraving site on a vast sandstone outcrop along the western Mooney Mooney foreshore (with three separate AHIMS recordings #45-6-0476, #45-6-1837 and #45-6-2757, the latter now deleted); and (3) an Aboriginal rockshelter complex comprising six separate rockshelters with midden deposit, and located on a three-tiered sandstone shelf along the southern Mooney Mooney foreshore (with three separate AHIMS recordings #45-6-0479, #45-6-1990 and #45-6-3584). A further five Aboriginal sites have been recorded within the study area, including a rockshelter at Cabbage Point (#45-6-1836; not identified during the survey), two rockshelters along the eastern foreshore (#45-6-3643 and #45-6-3644) as well as an Aboriginal engraving site (#45-6-3135) and grinding groove site (#45-6-3585) within the Mooney Mooney public school grounds. The investigation is unlikely to have identified all sites within the study area, and predictive modelling has been undertaken to map locations where further sites are likely to be present.

Potential Heritage Impact and Management Strategy

Based on the findings of this assessment, there are several known Aboriginal sites and complexes and areas of archaeological potential within the potential impact zone of the proposed redevelopment. With reference to the latter, Heritage NSW specifies that all areas that have not been subjected to disturbance, and that are within 200 m of water, or within 50 m of a cave or rockshelter, are considered landforms of archaeological interest. At present, this encompasses a large part of the study area.

To assist Property and Development NSW in Aboriginal cultural heritage management, the study area has been divided into four areas of Aboriginal heritage constraint, and illustrated in **Figure 36**. These

include *no-go areas* and *high risk areas* where significant cultural material is identified, *areas requiring further investigation* where cultural materials are predicted to be present, and *areas with few or no constraints*.

The no-go areas identified in this study comprise Aboriginal rockshelter sites and Aboriginal engraving and grinding groove sites, and likely form the most significant constraint to the proposed development. While there are legislative processes that allow for harm and/or destruction of all Aboriginal cultural heritage, we believe it to be highly unlikely that any development impact in these areas would be supported by Heritage NSW (formerly Office of Environment and Heritage) and/or Registered Aboriginal Parties; and as such their destruction is unlikely to be permissible. Options for retention could include their inclusion within open space, riparian, bio-link, set-backs and/or asset protection zones. Where possible, the landscape integrity and amenity of these areas should be retained, including appropriate set-backs. Provisions for retention should also include specific measures that limit ground disturbance or erosion into the future. Strategies for their management would usually be developed during any Development Application (DA), through the preparation of Conservation Management Plans/Plans of Management, and their implementation.

The high risk areas and areas requiring further assessment also form some constraints to the proposed development. Where development impact must occur within high risk areas or areas requiring further assessment, Property and Development NSW should prepare an Aboriginal Cultural Heritage Assessment (ACHA) in accordance with Heritage NSW standards and guidelines, prior to development approvals. The exact nature and extent of the impact on these high risk areas and areas requiring further assessment is unclear at this stage, as there has been limited surface investigation and no subsurface archaeological investigation to date. Therefore as part of any ACHA process, appropriate site investigation, including test excavation, is essential.

Areas with few Aboriginal constraints propose the lowest risk to the development, and it is anticipated that no site specific design and/or planning recommendations are required. Property and Development NSW should however assess each development proposal in accordance with Heritage NSW standards and guidelines to ensure Aboriginal heritage is suitably managed in these areas, which at the very least should include some form of due diligence.

Recommendations

With regards to the proposed development of the study area, the following recommendations are made with respect to Aboriginal cultural heritage:

ACHAR Review:

- This report constitutes an ACHAR with formal Aboriginal community consultation. A copy of the finalised report should be provided to the registered Aboriginal stakeholders and the AHIMS Registrar of Heritage NSW, for their records.

Further Investigation:

- The assessment identified eight Aboriginal archaeological sites, as well as large areas of moderate, high and very high archaeological potential within the study area. The results of this investigation, and the outcomes of the Aboriginal community consultation process, have been used to inform the finalisation of the Indicative Concept Plan, to ensure that the potential for impacts to Aboriginal cultural heritage are avoided and/or minimised. To assist Property and Development NSW in Aboriginal cultural heritage management, the study area has been divided

- Works of any kind, including geotechnical testing and other environmental investigations, are not permissible in the vicinity of identified Aboriginal sites or their identified site boundaries (corresponding with the no-go zones above) without first obtaining an Aboriginal Heritage Impact Permit (AHIP) from Heritage NSW. In other areas, appropriate assessment in accordance with Heritage NSW standards and guidelines should be adopted.
- Where Aboriginal sites are identified but would remain unaffected by the proposed development, appropriate Aboriginal Cultural Heritage Management Plans (or equivalent documents) should be developed at the DA assessment phase. This would ensure their conservation and management into the future as development progresses and visitation increases around them.

Should the proposed development be altered and/or revised from the maps and plans presented here, then this report and associated tasks (including Aboriginal consultation) should be re-visited and updated where necessary.

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1 INTRODUCTION

1.1 Project Description

Extent Heritage Pty Ltd (Extent Heritage) has been commissioned by Property and Development NSW to prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the rezoning of surplus government land near Peat Island, on the M1 Pacific Motorway at Mooney Mooney, NSW (**Figure 1**; hereafter the 'study area').

The Planning Proposal has Gateway approval from the Department of Planning, Industry and Environment (PP_2017_CCOAS_006_00), under Section 3.34 of the *Environmental Planning and Assessment Act 1979*. However, this determination requires that updates are made to the Planning Proposal (via a Planning Proposal Addendum) to ensure there is sufficient detail to satisfy statutory planning provisions. With respect to Aboriginal heritage, the relevant provisions are Section 9.1 Directions (formerly Section 117 Directions, 2.3 Heritage Conservation), and the *State Environmental Planning Policy (Coastal Management) 2018* (formerly *State Environmental Planning Policy 71 – Coastal Protection*). Specifically, this includes consultation with the Office of Environment and Heritage (now, Heritage NSW) and the Aboriginal community, the undertaking of further Aboriginal heritage assessment and investigation, determination of an agreed heritage outcome (with respect to heritage on the island) and the proposition of planning instrument changes, if required.

Since October 2017, Property & Development NSW has undertaken a significant amount of consultation with public authorities and Central Coast Council, including the submission of a revised Planning Proposal Addendum to Council in December 2018 for review and comments. Post submission, Property & Development NSW has engaged technical consultants to undertake additional environmental investigations to respond to Council's and agency's feedback received in March 2019. These technical studies have responded to the Gateway Determination conditions and addressed key issues raised by Council and agencies during the pre-public exhibition consultation process.

Subsequent to extensive discussions with Council, public authorities and further detailed technical investigation, the Planning Proposal, draft LEP zoning maps and the Indicative Concept Plan has been revised to respond to comments received and to resolve the physical and environmental constraints identified by the additional technical investigations (PP_2017_CCPAS_006_00 (17/06254)).

Given the approval pathway being implemented for the project, an ACHAR was initiated to present the findings of the Aboriginal community consultation process and to assess the Aboriginal cultural heritage values of the study area. This report provides information on the location, distribution and significance of Aboriginal objects; the likely harm to known objects by the proposed development; and recommendations for the management of such harm.

The principal objectives of this report are to:

- Compile a review of existing documentation and listings within the study area and its immediate surrounds, by identifying and summarising known and previously recorded Aboriginal sites and cultural values places;
- Determine if any Aboriginal objects, places, areas of archaeological potential or cultural values areas are present (or likely to be present) within the study area, as well as areas of existing disturbance, through brief site inspection;

- Assess and identify heritage constraints and opportunities and the potential impacts of the proposed development; and
- Identify and recommend measures to avoid harm and mitigate any heritage impacts, and risks to the proposed development.

The ACHAR has been developed in accordance with the following guidelines:

- Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH 2011).
- Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Department of Environment, Climate Change and Water [DECCW] 2010).
- Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010).

1.2 Legislative Context

There are several Commonwealth and State Acts (and associated regulations) that manage and protect Aboriginal cultural heritage. These are outlined in detail in **Appendix 1** and summarised in **Table 1**.

Table 1. Summary of legislative context for the project.

Legislation	Description	Applies to Study Area?	Details
Commonwealth			
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	Recognises sites with universal value on the World Heritage List (WHL). Protects Indigenous heritage places with outstanding heritage value to the nation on the National Heritage List (NHL), and significant heritage value on the Commonwealth Heritage List (CHL).	No	There are no Indigenous heritage places within the study area listed on the World Heritage List, National Heritage List or the Commonwealth Heritage List.
<i>Native Title Act 1993</i>	Administers rights and interests over lands and waters by Aboriginal people. Provides for negotiation and registration of Indigenous Land Use Agreements (ILUAs). Often used in NSW to identify relevant stakeholders for consultation.	Not currently	Portions of the study area are government owned Crown Land, and could be subject to a future claim under this Act. There are no relevant entries for the study area on the National Native Title Register, Register of Native Title Claims, or Register of Indigenous Land Use Agreements.
<i>Aboriginal and Torres Strait Islander Heritage Protection Act 1984</i>	Preserves and protects areas and objects of particular significance to Aboriginal people that are under threat from injury or desecration.	Not currently	We understand the study area is not currently subject to any application for a declaration under this Act, although the Act remains in force for ministerial declarations and surpasses state-based regulatory and planning controls.

State (NSW)			
<i>Environmental Planning and Assessment Act 1979</i>	Requires environmental impacts, including Aboriginal heritage, to be considered in land use planning. Provides for the development of environmental planning instruments, including State Environmental Planning Policies and Local Environmental Plans.	Yes	The Planning Proposal has Gateway approval from the Department of Planning and Environment (PP_2017_CCOAS_006_00), under Part 3.34 of the EP&A Act. The Minister for Planning has issued a list of Directions to Planning Authorities under Section 9.1 of the EP&A Act (formerly Section 117 Directions). With respect to Aboriginal heritage, these directions require that a Planning Proposal contain provisions that facilitate the conservation of Aboriginal objects or Aboriginal places protected under the National Parks and Wildlife Act 1974, as well as any areas, objects, places or landscapes identified as being of heritage significance to Aboriginal culture and people (Division 2.3 Heritage Conservation).
<i>National Parks and Wildlife Act 1974</i>	Provides blanket protection for all Aboriginal objects and declared Aboriginal places. Includes process and mechanisms for development where Aboriginal objects are present, or where Aboriginal Places are proposed for harm.	Yes	An Aboriginal Heritage Impact Permit (AHIP) must be obtained from the Chief Executive of Heritage NSW under Section 90 of the Act where harm to an Aboriginal object or Aboriginal Place cannot be avoided.
<i>Aboriginal Land Rights Act 1983</i>	Establishes Local Aboriginal Land Councils (LALCs). Allows for the transfer of ownership of vacant crown land to a Local Aboriginal Land Council. The Office of the Registrar, Aboriginal Land Rights Act 1983 (ORALRA), registers Aboriginal land claims and maintains the Register of Aboriginal Owners. Often used in NSW to identify relevant stakeholders for consultation.	Yes	Portions of the study area are government owned Crown Land, and could be subject to a claim under this Act. A request to search the Register of Aboriginal Owners was made on 29 September 2020. ORALRA Two lots within the study area are subject to Aboriginal Land Claims by the Darkinjung Local Aboriginal Land Council: Lot 7011 DP1057994 Lot 7302 DP1151629 (Figure 4), but these have not been finalised.
Environmental Planning Instruments			
<i>State Environmental Planning Policy (Coastal Management) 2018</i>	Provides for the protection and conservation of environmental assets in the coastal zone, including Aboriginal cultural heritage items, practices and places.	Yes	Under Division 13 of the SEPP (Coastal Management) 2018, Development consent must not be granted by the consent authority unless it has considered whether the development will cause an adverse impact to Aboriginal cultural heritage, practices and places. The consent authority must also be satisfied that the development avoids, minimises and mitigates against adverse impacts to Aboriginal cultural heritage.
<i>Gosford Local Environmental Plan (LEP) 2014</i>	Conserves archaeological sites, Aboriginal objects and Aboriginal places of heritage significance.	Yes	Development consent is required for subdividing, excavating, developing and disturbing land on which an Aboriginal object is located, is within an Aboriginal place of heritage significance, or on land that contains an archaeological site. Within the study area, there are no items or places of Aboriginal heritage significance listed within Schedule 5 of the Gosford LEP.

1.3 Study Area

The study area is presented in **Figure 1**. The study area is owned and managed by a combination of stakeholders, including Property and Development NSW, the Mooney Mooney Reserve Trust, Department of Education and Transport for NSW (TfNSW). It comprises NSW government land to the east and west of the M1 Pacific Motorway at Mooney Mooney, NSW, and encompasses an area of approximately 38 hectares. It is situated within the Central Coast Local Government Area (LGA), in the Parish of Cowan, and the County of Northumberland.

Its real property description comprises various lots, being described as:

Lot	DP
2	DP239249
4	DP239249
1	DP431780
21	DP836628
11	DP863305
12	DP836305
1	DP945014
7011	DP1057994
7302	DP1151629
10	DP1157280
11	DP1157280
12	DP1158746
13	DP1158746
14	DP1158746
7	DP1180499
8	DP1180499
9	DP1180499
2	DP1205588

Lot 7011 DP1057994, Lot 7302 DP1151629, Lot 8 DP1180499 and Lot 9 DP1180499 are currently subject to undetermined land claims under the *Aboriginal Land Rights Act 1983* (**Figure 4**). The status of these Land Claims should be clarified in consultation with the Darkinjung LALC and the Department responsible for administering the *Crown Lands Management Act 2016*.

Lot 9 DP863305 is excluded from the Planning Proposal since it is owned and managed by Central Coast Council, and this area will be retained as “RE1 Public Recreation” zoned land. Lots 16, 17, 18 and 20 DP863305 are also excluded from the Planning Proposal since these lots are owned by Transport for NSW, are within the existing Freeway corridor, and may be required for future widening of the M1 Motorway.

The study area’s current land use is as the site of the Hawkesbury River Ambulance Station, SES Marine Rescue, Mooney Mooney RFS, a public wharf and carparking area, Deerubbun Reserve, uncleared space, and disused buildings associated with the former Peat Island mental health facility precinct.

1.3.1 Proposed Development

Property and Development NSW is proposing several amendments to the provisions of the Gosford LEP 2014, to facilitate the future redevelopment of the site for a mix of residential, community, tourism and employment generating land uses. This includes amending Clause 2.1 Land Use Zones of the Gosford LEP 2014 to include SP3 Tourist zone under the Special Purpose Zones, and amending the Gosford LEP 2014 “Land Zoning Map”, “Height of Buildings Map”, “Lot Size Map” and “Additional Permitted Uses Map” as they apply to the study area. The intention is to rezone SP2 Infrastructure and RE1 Public Recreation zones to E2 Environmental Conservation, R1 General Residential, R2 Low Density Residential, RE1 Public Recreation, RE2 Private Recreation and SP3 Tourist zones (**Figure 2**).

An Indicative Concept Plan has also been developed for the site, to demonstrate the likely development that would occur if the amended Planning Proposal is gazetted. The Concept Plan includes provision for hotel accommodation on Peat Island, new mixed-density housing, community facilities and other open space and public recreation facilities (**Figure 3**).

Further details of the proposed works are provided below in **Section 9.1**.

1.4 Limitations

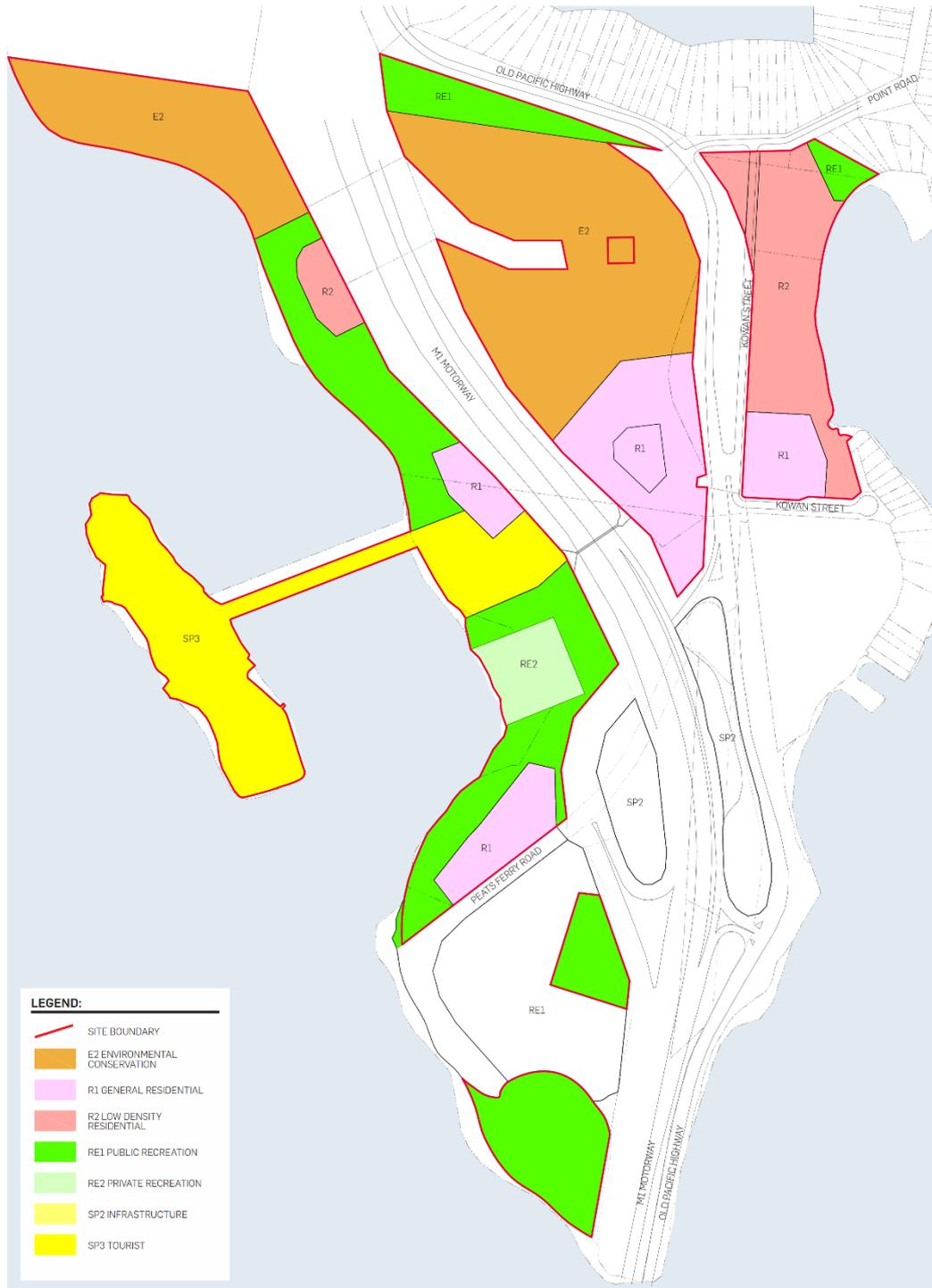
This report is based on existing and publicly available environmental and archaeological information and reports about the study area. The background research did not include any independent verification of the results and interpretations of externally sourced existing reports (except where the fieldwork indicated inconsistencies).

Information from the Aboriginal Heritage Information Management System (AHIMS) database was obtained from Heritage NSW. Information in the assessment reflects the scope and the accuracy of the AHIMS site data, which in some instances is limited.

This report does not address the historical archaeological potential of the study area, and cannot be used as supporting documentation for any historical archaeological permits.



Figure 1. The study area, located on the Pacific Motorway, Mooney Mooney, NSW.



MOONEY MOONEY & PEAT ISLAND
LEP PLANS - ZONING PLAN

DATE: 21.09.2020
JOB NO: P0020554
DWG NO: PP04
REV: J

1:4000 @ A3

Figure 2. Proposed Land Zoning Map to be incorporated into the Gosford LEP 2014 (Source: Urbis September 2020).



Figure 3. Proposed Concept Development Plan for the study area (Source: Urbis July 2021).

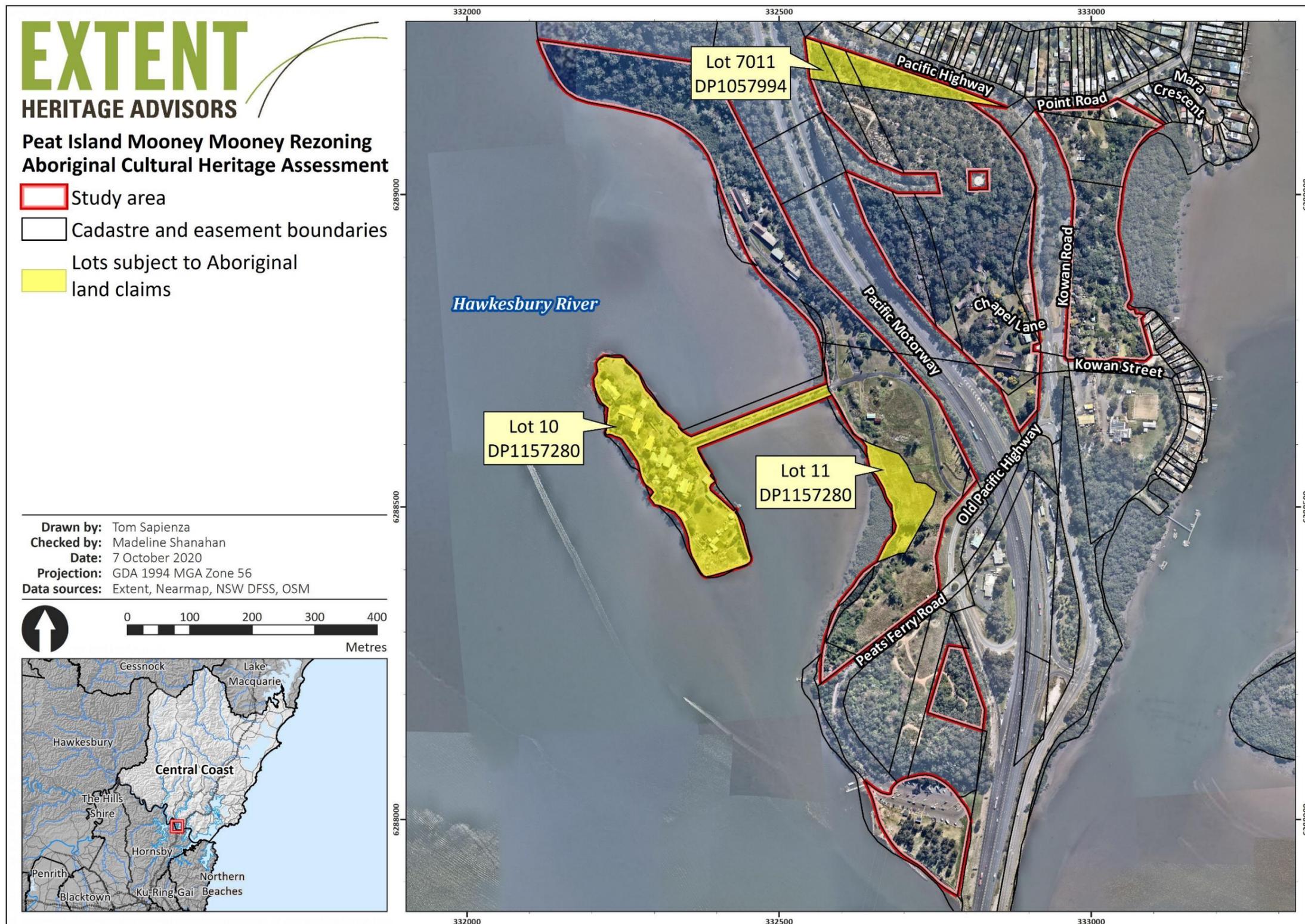


Figure 4. Crown lots subject to land claims by the Darkinjung Local Aboriginal Land Council (yellow) under the Aboriginal Land Rights Act 1983.

2 ABORIGINAL CONSULTATION

2.1 The Process

Aboriginal consultation for this project has been undertaken in accordance with procedures set out in the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010). These guidelines identify a four-stage process of consultation, which includes:

Stage 1: Notification of project proposal and registration of interest

- Pre-Notification – Identification of the Aboriginal parties through contacting various government agencies.
- Notification – Contacting any Aboriginal community organisations identified to determine their interest (if any) in the project. This includes the placement of an advertisement in local print media seeking expressions of interest from Aboriginal community members.

Stage 2: Presentation of information about the proposed project

- Presentation of Project Information – Briefing Registered Aboriginal parties (RAPs) about the project proposal and scope of the Aboriginal Cultural Heritage Assessment Report (ACHAR). This is usually undertaken through written correspondence and/or an on-site visit, and may undergo several iterations through the project lifetime as the nature of the assessment changes (e.g., field survey may lead to a requirement for test excavations).

Stage 3: Gathering information about cultural significance

- Seeking cultural information – Collection of information identifying any known Aboriginal objects of cultural value or places of cultural significance in the study area.
- Consultation protocols – Identification of any protocols that the RAPs would like adopted during the information gathering process, including how sensitive information will be managed.
- Potential impacts and mitigation measures – Discussion of potential impacts to heritage and appropriate mitigation options prior to developing the ACHAR. This is often undertaken on-site at the end of any field program and/or as part of the overall report review phase.

Stage 4: Review of draft Aboriginal cultural heritage assessment report

- Review of draft report – Review of the draft ACHAR by the RAPs, to provide comments on the overall findings, assessment of cultural significance and recommendations for management of Aboriginal heritage within the study area.

The consultation process for this project has two aims. Firstly, it is designed to comply with the Heritage NSW consultation procedures, to obtain input on the proposed assessment methodology and comment on our assessment report and management recommendations. Secondly, to identify cultural places and values that may be affected by the proposal.

2.2 This Project

A complete log of actions and correspondence regarding Aboriginal community consultation is included in **Appendix 2-1** and summarised in **Table 2**.

Overall, the consultation process identified 13 potential Aboriginal stakeholders in the region (**Appendix 2-2**). Of these, ten registered an interest in the project (**Appendix 2-3**):

- A1 Indigenous Services
- Amanda Hickey Cultural Services
- Darkinjung Local Aboriginal Land Council
- David Pross
- Guringai Tribal Link Aboriginal Corporation
- Sharon Hodgetts
- Valley ELM Corporation
- Wattaka Wonnarua Cultural Consultants Service
- Widescope Indigenous Group
- Yinarr Cultural Services.

Three Aboriginal stakeholder groups (represented by six individuals) participated in the archaeological survey on 19th and 20th July 2018:

- Darkinjung Local Aboriginal Land Council
- Guringai Tribal Link Aboriginal Corporation
- Sharon Hodgetts

Table 2. Summary of Aboriginal consultation for the project.

Consultation Stage	Description	Date Initiated	Date Completed	Details
1	Pre-Notification	18/04/2018	02/05/2018	Further correspondence and information in Appendix 2-4 .
	Advertisement in the <i>Central Coast Express Advocate</i>	17/05/2018	31/05/2018	Newspaper advert presented in Appendix 2-6 .
	Notification	09/05/2018	31/05/2018	Further correspondence and information in Appendix 2-5 .
2	Presentation of information about the proposed project	05/06/2018	04/07/2018	Further correspondence and information in Appendix 2-6 .
3	Gathering information about cultural significance			

n/a	Field investigation	19/07/2018	20/07/2018	Three Aboriginal stakeholder groups (represented by six individuals) participated in the archaeological survey. Further details are provided in Section 6 and Appendix 2-7 below.
4	Review of draft report	16.10.2018	13.11.2018	Feedback has been integrated into the report where relevant. Further details are provided in Appendix 2-7 .
5	Review of draft report	13.11.2020	14.12.2020	Feedback has been integrated into the report where relevant. Further details are provided in Appendix 2-7 .

2.3 Aboriginal Stakeholder Feedback (CULTURALLY SENSITIVE)

The ACHAR was distributed for a period of 28 days for review and comment by the RAPs. A follow up reminder of the finalisation of the report was also provided one week prior to the end of the comment period. Three RAPs supported the updated report in December 2020 (A1 Indigenous Services, Amanda Hickey Cultural Services, Widescope). **Appendix 2-7** includes any feedback received from the RAPs in relation to the report. Where relevant, such feedback has been integrated into the report, and is summarised below.

Sharon Hodgetts:

Sharon Hodgetts provided a detailed cultural heritage assessment in response to the ACHAR, which included information about the importance of the Mooney Mooney foreshore as a cultural landscape inextricably linked to other Aboriginal sites in the Central Coast region. She offered guidance and strategies for the investigation and protection of Aboriginal sites within the study area. With regards to Aboriginal site management, Sharon advocated for the protection and conservation of all sandstone engraving and rockshelter sites within the study area.

- Sharon believed that the “*Deerubbun*”, also known as the Hawkesbury River, was formed by the rainbow serpent, a Creator Being in the Dreamtime. She keeps a story of the *nuri* (Emu), which begins at the mouth of the River, extending in a northerly direction through Mount White, Mangrove Mountain and to country around Wollombi. Ceremonies are (still) performed near Mt Yengo as part of the expression of this story, and have brought together Aboriginal people for generations from across Australia.
- Sharon also keeps a story of the *wumbuyn* (kangaroo), whose role was to take boys to become men, and is also associated with travelling. The presence of the kangaroo motif and other Aboriginal sites along the Mooney Mooney foreshore clearly indicate that this place was a main crossing point for Aboriginal people over the River to visit relatives, gather resources and keep ceremonial obligations.
- Sharon considers that ceremonial pathways and travel routes are usually located along ridgetops, and that the Mooney Mooney ridgelines formed a main travel route up and into the Central Coast Hinterland and inland for thousands of kilometres.
- Sharon believes that some of the most important Aboriginal sites in the study area are located along the western foreshore of Mooney Mooney, in an area from Mooney Mooney Point to Cabbage Point and to the ridge above.

- In conjunction with Amanda Shields of the Darkinjung Local Aboriginal Land Council, Sharon identified two additional Aboriginal rockshelter sites along the eastern foreshore of Mooney Mooney during field survey on 20 July 2018. This feedback has been reviewed and integrated into **Section 6.2.1** below.
- She recommended that further assessment of outcropping sandstone on the eastern and western foreshores of Mooney Mooney, and on Peat Island, be undertaken, to help further identify any previously unknown sites. This included the manual removal of weeds, grass and soil and subsequent night recording.
- Sharon advocated for the creation of designated cultural areas, “exclusion zones” or similar around Aboriginal sites for their protection; but did not specify an exact distance. She recommended that an Aboriginal Cultural Heritage Management Plan be prepared for the entire project area, to provide detailed guidance and procedures for the long term management of each of the engraving sites and rockshelter sites present on site.
- Sharon emphasised that the western side of the study area, particular Peat Island, should not undergo further destructive development. Sharon is concerned that further development of this kind will compromise or block relationships between sites which identify pieces of important cultural stories and at worse destroy the cultural and social values of the remaining Aboriginal sites, places and the cultural landscape.

Sharon further highlighted her understanding that the island holds a sacredness to many Aboriginal people, due to small islands being the locations where spirits returned home to the spirit world. Considering the Aboriginal sites on the island foreshore and surrounds, Sharon is of the belief that Peat Island is highly likely one of these places. Sharon further iterated that Peat Island could be revealed as a very significant place, and a place where Aboriginal people were buried. At a minimum, the island holds important stories relating to Aboriginal law and ceremony.

Guringai Tribal Link Aboriginal Corporation:

Tracey and Kyle Howie, as representatives of the Guringai Tribal Link Aboriginal Corporation (GTLAC), provided detailed verbal feedback in response to the ACHAR. This included information about the importance of the Mooney Mooney foreshore as a cultural landscape, and the cultural significance of the engravings along the western Mooney Mooney foreshore. Tracey advocated for further investigation in areas along the eastern and western foreshore, to determine the spatial extent of sandstone outcrops and to investigate their potential for any unidentified Aboriginal grinding grooves and engravings. Their feedback also offered guidance and strategies for protection of Aboriginal sites within the study area. With regards to Aboriginal site management, Tracey advocated for the protection and conservation of all sandstone engraving and rockshelter sites within the study area with appropriate buffering and interpretation of the significance of the landscape, with overall management further refined through the preparation of Conservation Management Plans.

- Tracey stressed the cultural significance of the *Gurungatch* (eel) motif as a physical manifestation of a Creator Being in the Dreaming, associated with journeying and the creation of the *Deerubbin* (Hawkesbury River). Its significance was further strengthened by its location at the water’s edge, which became inundated at high tide, and is representative of the Creator Being journeying through the water.
- GLTAC shared a preference for visitors to be able to see the engraving sites (that they be uncovered and/or left uncovered), which was tempered with concern for potential vandalism.

- Tracey and Kyle also advocated for the establishment of appropriate barriers or exclusion zones around engraving sites along the Mooney Mooney foreshore (and with appropriate signage and interpretation), to demarcate these areas as Aboriginal sites and to limit further impacts/harm and/or unauthorised visitation. Specific details are to be developed through the preparation of Conservation Management Plans, but preliminary suggestions included low fencing barriers.
- Sediment and water washing downslope over Aboriginal sites along the western foreshore of considerable concern, and GTLAC stressed the importance of stopping this impact.
- Tracey also recommended that further assessment of outcropping sandstone be undertaken along the eastern and western foreshores, at Peat Island, and within the Mooney Mooney Public School grounds, to help identify previously unknown engraving sites.
- With regards to the engraving site within the Mooney Mooney Public School grounds depicting stylised hearts, hands, feet and ducks, Tracey believed this group was of a more recent (European) origin and recommended that the site be delisted from the AHIMS register; however, there was some evidence on the same platform that seemed to indicate that there may be older engravings covered with debris, and that removal of vegetation and further inspection was warranted.
- With regards to the substation location, Tracey and Kyle indicated a preference for Option 1, to be located along Peats Ferry Road and as far as possible from the rockshelter complex and grave of Frances Peat. GTLAC acknowledged that the placing of a substation would create increased surveillance of the area, and indicated a preference to establish appropriate barriers along Peats Ferry Road to restrict public access to the rockshelter complex.
- Tracey advocated for cyclical maintenance of Aboriginal sites by local Aboriginal community groups to identify any damage or processes that may result in damage to Aboriginal sites. GTLAC recommended the employment of people from the Aboriginal community as site rangers (by the developer, tourism operator or State Government), to implemented as a conservation measure into the Conservation Management Plan.
- Tracey recommended further archaeological test excavation along the eastern and western foreshores to test for (A) the presence of Aboriginal stone artefacts and (B) the depth of soils present.
- GTLAC acknowledge that much of Peat Island itself was reclaimed land, particularly along its eastern margin, but that the western margin was relatively intact.
- Tracey stressed the significance of the engravings in a later communication (15 July 2021), further emphasising the cultural and spiritual significance of the study area. GTLAC strongly recommend that this area is retained for all due to the presence of Aboriginal sites which should be accessed and maintained by the community and shared with younger generations.
- Tracey recommended this area be utilised as a 'Cultural Hub' with cultural experiences, historical education and events and a marine education facility to share the historical, cultural, maritime and marine life knowledge of this area.

Darkinjung Local Aboriginal Land Council

- Darkinjung Local Aboriginal Land Council advised Extent Heritage that they had active Aboriginal Land Claims over some lots within the study area but did not provide feedback on the ACHAR.
- Darkinjung LALC advised that “European settlement/settlers” be changed to “European colonisation” throughout the report. This has been amended.
- Emphasised the cultural significance of the study area and wishes for all sites within the study area be listed with ‘high’ social and cultural significance.
- Note that it is disputed that this was the traditional area of a group known as the Guringai or Wannagine. Darkinjung LALC advise that this was the traditional lands of the Darkinjung people.
- DLALC agree with the recommendations except where they relate to those parcels subject to land claim resolution. Furthermore DLALC recommend sub-surface investigation and an Aboriginal Cultural Heritage Management Plan be completed in consultation with RAPs (particularly DLALC) for the study area.

General Feedback:

- Amanda Hickey Cultural Services (AHCS) provided a brief email response in support of the report and its recommendations.
- Guringai Tribal Link Aboriginal Corporation do not support the rezoning of this area for housing and associated facilities due to cultural sensitivities outlined above.
- No other feedback or comments were provided by the RAPs throughout the report review period.

3 EXISTING ENVIRONMENT

3.1 Key Findings

- The study area is located on the rocky foreshores of the Hawkesbury River estuary, at the southern edge of the NSW Central Coast. It is characterised by undulating to rolling coastal rises with moderately inclined slopes; as well as rolling to very steep low hills, cliffs and scarps of the Narrabeen Formation, comprising interbedded lithic quartz sandstones, laminites and shales.
- Soil landscape mapping by the NSW Soil Conservation Service suggests that two soil landscapes exist within the study area – the Erina and Watagan soil landscapes. Both typically contain a shallow sandy loam topsoil and a sandy clay loam sub-topsoil unit, overlying sandy clay.
- Preliminary geotechnical investigation of the study area in 2014 found that portions of Peat Island and the Mooney Mooney western foreshore had been subjected to reclamation activities in the twentieth century, though areas of natural sandstone rock surfaces/sandstone bedrock were observed at these same locations.
- The study area is situated at the confluence of two major waterways – the Hawkesbury River, and one of its tributaries, Mooney Mooney Creek – both of which would have been key resources for past Aboriginal populations. Historical flooding is likely to have affected low-lying parts of the study area, particularly causing erosion of topsoils (and reworking or removal of any associated cultural material).
- Based on a review of past land disturbance, the vegetation coverage within the northern and central portions of the study area appear to have remained relatively unchanged over the last 70 years and may contain regrowth or natural bushland vegetation elements.
- An analysis of past land use indicates that the majority of the study area has been subjected to limited historical disturbance, with the exception of the Motorway and its various approaches. Moderate impacts have occurred throughout the course of the twentieth century from the construction housing and hospital buildings, with lesser impacts resulting from orcharding/farming and the creation of walking tracks.

3.2 Geology, Geomorphology and Soils

The study area is located on the rocky foreshores of the Hawkesbury River estuary, at the southern edge of the NSW Central Coast. The study area overlies interbedded Narrabeen Formation lithic quartz sandstones, laminites and shales, and the surficial geology is dominated by alluvial materials derived from this formation. The local topography is characterised by undulating to rolling coastal rises with moderately inclined slopes; as well as rolling to very steep low hills, cliffs and scarps (**Figure 5**). Occasionally, sandstone benches and colluvial benches are present, and some talus slopes contain sandstone boulders (Chapman and Murphy 1989:40, 54; JBS Environmental 2013:5).

Soil landscape mapping by the NSW Soil Conservation Service suggests that two soil landscapes exist within the study area. The majority of the study area contains soils of the Erina soil landscape; while a small portion in the north-western corner at Cabbage Point, comprises soils of the Watagan soil landscape (**Figure 5**). Erina soils are moderately deep, with a 200 mm brownish-black fine sandy loam topsoil unit (A₁ horizon) and a 200-350 mm yellowish-brown sandy clay loam sub-topsoil unit

(A₂ horizon); overlying >1000 mm of strongly pedal, yellowish-brown sandy clay (B horizon). This latter deposit is generally considered to pre-date the arrival of Aboriginal people to Australia.

Comparatively, Watagan soils range in depth from shallow (on crests and steep side-slopes) to moderately deep (on lower slopes and drainage lines). They comprise a <300 mm loose, stony, brownish-black fine sandy loam topsoil unit (A₁ horizon) and a 100-300 mm brown sandy clay loam sub-topsoil unit (A₂ horizon); overlying up to 1000 mm of strongly pedal, yellowish-brown fine sandy clay (B horizon). The boundary between the A₂ and B horizons is easily distinguished by sandstone fragments, that occur as a stone line in the base of the A₂ horizon (Chapman and Murphy 1989:41). Again, the B horizon deposit is generally considered to pre-date the arrival of Aboriginal people to Australia.

3.2.1 Geotechnical Information

Preliminary geotechnical investigation of the study area was undertaken by Pells Sullivan Meynink (PSM) in 2014 and updated by JBS & G Australia in 2016 to inform its proposed rezoning and eventual redevelopment. These studies were primarily desktop assessments of the area with brief site investigation to verify surface conditions and the extent of land reclamation and potential contamination. They included a review of geological maps, historical aerial photographs and the concept master plan, and provided preliminary geotechnical and contamination advice for rezoning purposes (PSM 2014; JBS & G 2016). No borehole sampling was undertaken, and no soil descriptions were provided.

The study found that portions of Peat Island (to the west and south of the island), as well as the Mooney Mooney western foreshore, had been subjected to reclamation activities in the twentieth century (PSM 2014:2; **Figure 6**). However, the site inspection also demonstrated the presence of sandstone rock surfaces/sandstone bedrock on the beach at the north side of Peat Island, and along the western foreshore area “near the bridge connecting the foreshore to Peat Island” (PSM 2014:2-3).

The desktop geotechnical study recommended that additional investigation of the study area was required (in the form of boreholes to bedrock and shallow test pits), to characterise depth and nature of uncontrolled fill; to characterise the presence, thickness and nature of any alluvium; and to characterise the surface geometry and strength of the sandstone bedrock (PSM 2014:4).

3.3 Hydrology

The study area is situated at the confluence of two major waterways: the Hawkesbury River and Mooney Mooney Creek, a tributary of the Hawkesbury River. These waterways drain into Broken Bay which opens to the South Pacific Ocean. Prior to European colonisation, the study area would have been characterised as a well-watered, semi-swampy area with mangrove mudflats; it was an area that would have been able to support Aboriginal populations. As well as providing fresh water for cooking and drinking, these resources would have supported a diverse range of plant, marine and animal resources within open forest and wetland environments. The environmental conditions were conducive to occupation throughout the entire year.

The banks of the Hawkesbury river and its various islands were known to be camping locations by Aboriginal people shortly after European colonisation (Bradley 1969 [1788]), and it is likely this was also the case prior to European contact.

However, while the Hawkesbury River is an important resource from an archaeological perspective, there are well-documented accounts of historic floods along the river, and these have implications for the survival of cultural deposits within flood-prone areas (**Figure 7**). Given the proximity of the study area to the waterways, it is considered likely that parts of the site would have been inundated during

flood events, and that parts of the soil profile (and any associated cultural materials) may have been lost during these events.

3.4 Past Vegetation

The natural vegetation of a landscape is an important consideration when undertaking an Aboriginal cultural heritage assessment because various plants species provided Aboriginal people with key resources. Bark from trees, for example, could be stripped to make canoes, shields and other utilitarian items. Vegetation also provided food resources, both directly – as edible portions of plants – and indirectly – by providing habitat for animals that could in turn be hunted for their meat, as well as their fur and feathers (Attenbrow 2010:76-78, 85-97).

Relict stands of tall, open dry sclerophyll forest are associated with the Watagan and Erina soil landscapes, with subtle variations in species composition and structure according to topography and soil moisture. The open eucalypt canopy may be less than 10 m high on the most exposed ridges or plateau where drainage is poor, but may exceed 25 m in sheltered gullies with moist but freely-draining soils. Conversely, the sclerophyll shrub understorey is shorter and more open on ridges than in gullies, and the open ground cover is dominated by sedges (Keith 2006:146-147).

Dominant tree species in the area include Sydney red gum (*Angophora costata*), red bloodwood (*Corymbia gummifera*), spotted gum (*Eucalyptus maculata*), grey ironbark (*E. paniculata*), brown Stringybark (*E. capitellata*) and silver ash (*E. sieberi*). Dominant shrub species include old man banksia (*Banksia serrata*), broad-leaved geebung (*Persoonia levis*) and grass tree (*Xanthorrhoea arborea*). Rushes and grass species were also prevalent and may have formed key resources for Aboriginal occupation (Chapman and Murphy 1989; Vinnicombe 1980:III/14).

Many areas of dry sclerophyll forest have been protected from agricultural and industrial development because these forests live in otherwise-infertile soils and in rugged terrain (Keith 2006:147); however, along the Mooney Mooney foreshore large stands of native vegetation were extensively cleared during the historic period (Chapman and Murphy 1989:54).

Based on a review of past land disturbance, the vegetation coverage within the northern and central portions of the study area appears to have remained relatively unchanged over the last 70 years and may contain either regrowth or natural bushland vegetation elements.

3.5 Existing Disturbance

The historical development and occupation of the study area is described in the heritage report prepared by Urbis in 2014 (Urbis 2014). In brief, historical research suggests that the study area formed part of two early land grants that were promised to George Peat in the 1830s “at the head of a creek flowing into the Hawkesbury River at its confluence with Berowra Creek ... [and at] Fairview Point, fronting the Hawkesbury River and Mooney Mooney Creek” (Ferguson 1925:198-199). At the location of the latter grant, Peat cleared much of the land and constructed a substantial residence known as Fairview, on a high point overlooking the river (**Figure 8**).

With the intention of conveying stock to Sydney markets, George Peat established a punt across the Hawkesbury River from his property at Fairview, on the northern bank, to Kangaroo Point (Pearce’s Corner), on the southern bank, in 1844. Prior to this, settlers from the Brisbane Water district were forced to track inland to the Great North Road through “cheerless and difficult” (Ferguson 1925:203) bush to reach Sydney, and the punt crossing soon became a popular means of transportation. The residence was run as an open-house for travellers and vacationers, and settlers of the Lower

Hawkesbury gathered there for Sunday church services. At that time the areas near Peat Island, which was then known as Rabbit Island, were vacant Crown Land.

Following the success of Peat's punt, the Government came under increased pressure to provide an alternative route from Sydney to Newcastle, and Peat's track was considered to be the most preferable route. Work on the road proceeded "on both sides of the Hawkesbury by means of small contracts" (Selkirk 1925:221) from the late 1840s and was completed in 1852 (**Figure 9**). From this time the road, and the operation of the punt crossing, came under Government control. Following George Peat's death in 1870, the Fairview residence became vacant, and within six years it had fallen into disrepair. By the 1930s the home had been reduced to rubble, and it was reported that stones from the residence were taken to build a church on nearby Bar Island (Ferguson 1925:204; Thorp 1984:9).

In 1902, Rabbit Island was selected at the site of a new asylum for inebriated people, and the Island was cleared and levelled. Several buildings were erected, including a number of brick structures, and a hexagonal sewing room. In 1910, the facility was rededicated as a mental hospital for male patients, and patients were admitted from 1911. Paths and gardens were constructed with manual labour, and new buildings were added throughout the 1920s. In 1930, two new vehicular ferries were established at the punt crossing following the upgrade of Peats Ferry Road by the Main Roads Board. These two ferries continued to cross the Hawkesbury until they were replaced by the Peats Ferry Road Bridge, which was completed in 1945.

An aerial photograph of the study area in 1947 reveals that large parts of the study area, to the west of the Motorway, were used for orchards, market gardens or some other sort of agricultural activity. A small jetty was located on the western foreshore, and much of Peat Island had been developed. The remainder of the study area, particularly its northern half, was covered in vegetation (**Figure 10**). In the 1950s and 1960s, the hospital outgrew the small island and expanded onto the adjacent mainland, where a chapel, recreational hall and other facilities were constructed. In 1951, a school was opened and a full-time teacher was supplied by the Department of Education. An aerial photograph of the study area in 1961 shows that by this point the southern portion of Peat Island had been reclaimed, and a rubble causeway and bridge to the mainland had been built (**Figure 11**).

Considerable development of the study area occurred throughout the 1960s and 1970s, with the construction of the Pacific Motorway (**Figure 12 – Figure 14**). This included substantial clearing and cut/fill works in the central portion of the study area, for the Motorway itself and its associated off-ramps, as well as rest stop facilities, and general landscaping (**Figure 13**). The Peats Ferry Road bridge crossing was upgraded in 1973. Also constructed at this time were the RSL club, a water tower, a church, a series of cottages, and a new school. Additional land reclamation southwest of the Motorway for the construction of Deerubbun Reserve (**Figure 14**).

Historical aerial photographs demonstrate that only minor changes have taken place to the study area since the 1980s (**Figure 15 – Figure 18**): the construction of a public wharf and carparking facilities at Deerubbun Reserve. The residential facility on Peat Island was closed in 2010.

Based on the above information about historical land use, a map of existing disturbance is provided in **Figure 19**. Specifically, it identifies four levels of disturbance as follows:

- **High:** areas of significant ground surface disturbance, in which has occurred the total removal of soils and the truncation of any Aboriginal cultural deposits. These areas are associated with cutting and levelling works for the construction of the Motorway and its various offramps, significant stormwater installations, swimming pool construction and basement carparking;

- **Moderate:** areas of moderate ground disturbance, in which has occurred the partial removal of soils and partial truncation of any Aboriginal cultural deposits. These areas are associated with relatively minor earthworks, namely the construction of local roads, dams and urban developments (houses, petrol stations, and other buildings);
- **Low:** areas of limited ground disturbance due to basic landscape modification, which has resulted in the partial removal and/or reworking of soils and the reworking of any Aboriginal cultural deposits. These areas are associated with early pastoral and/or landscaping works, including previous orchards and market gardens, vegetation removal, low-impact walking tracks and low-impact urban development (buildings on piers); and
- **Reclaimed areas:** areas where material of an unknown origin has been introduced to the area, which may preserve underlying soils and any Aboriginal cultural deposits, if present. These areas are associated with the reclamation of low-lying, waterlogged and frequently inundated land to the south of Peat Island, the western foreshore of the Mooney Mooney peninsula, and Deerubbun Reserve.

An analysis of past land use indicates that the majority of the study area has been subjected to limited historical disturbance, with the exception of the motorway corridor and its various approaches. Moderate impacts have occurred throughout the course of the twentieth century from the construction housing and hospital buildings, with lesser impacts resulting from orcharding/farming and the creation of walking tracks.

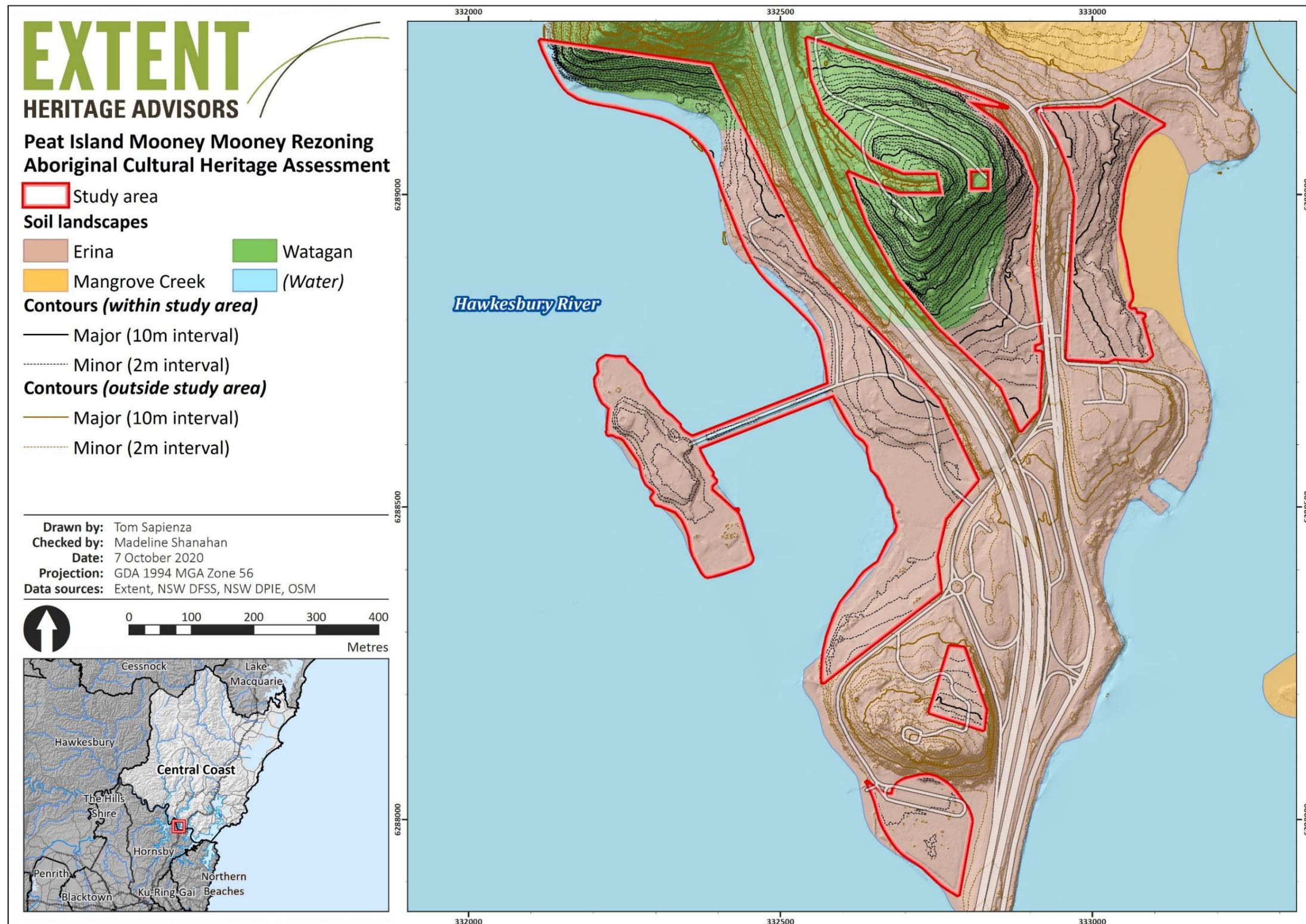


Figure 5. Geological, topographical and environmental context for the study area.



Figure 6. Inferred distribution of reclaimed land in blue hatching, based on a site inspection and desktop geotechnical assessment by PSM (Source: JBS Environmental, cited in PSM 2014:7).

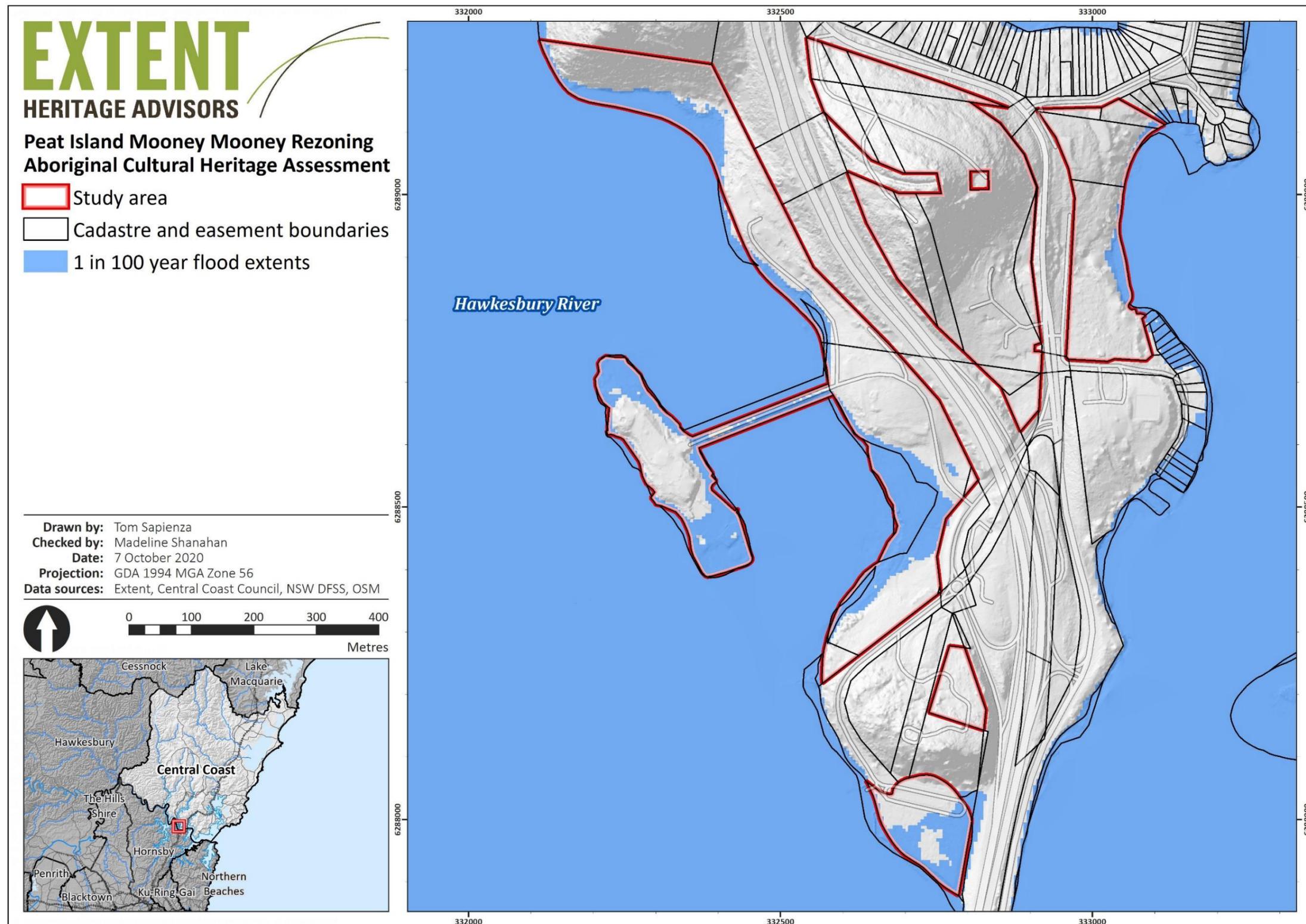


Figure 7. Regional hydrology of the study area. Note the 100 year flooding extent, shown in blue, where parts of the soil profile (and any associated artefactual materials) may have been lost during these events (Source: Central Coast Council Online Mapping 2020, <https://maps.centralcoast.nsw.gov.au/public/>).

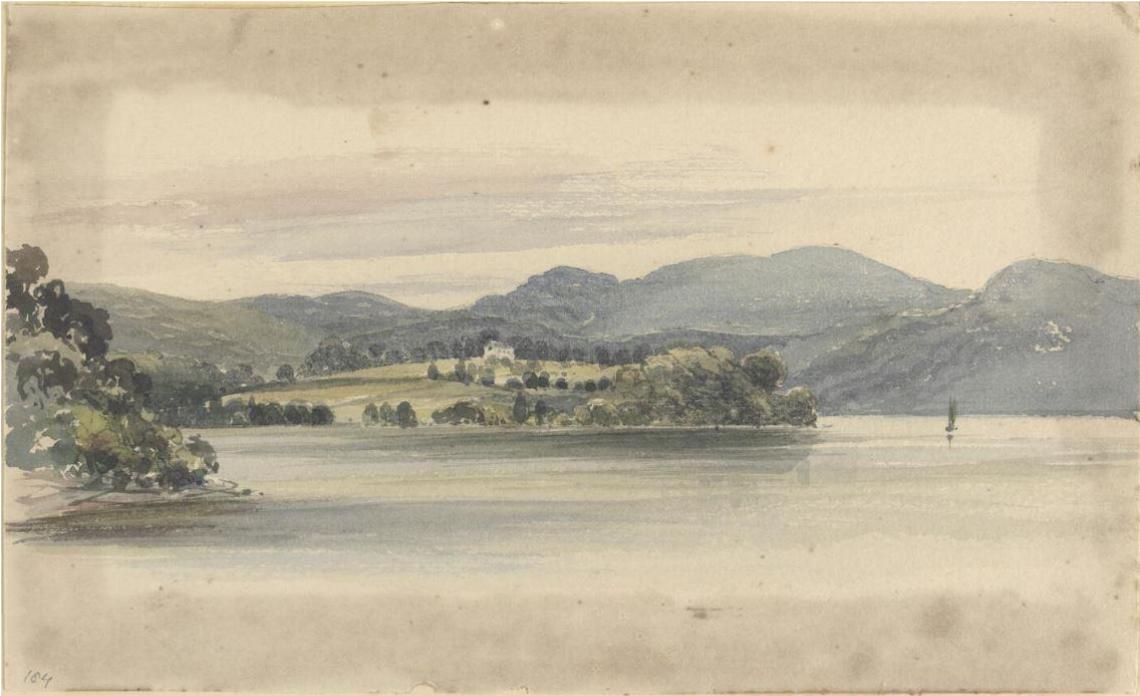


Figure 8. *Watercolour of the Hawkesbury River with Fairview in the distance, by George Penkivill Slade, 1869 (Source: National Library of Australia, PIC Volume 1004 #R7312, <http://nla.gov.au/nla.obj-139006651/view>).*



Figure 9. *Undated plan of the Parish of Cowan, County of Northumberland, showing Peats Ferry Road and punt crossing location, with revisions up to 1942 (Source: Land and Property Information, Historical Land Records Viewer, Land and Water Conservation ID108408).*

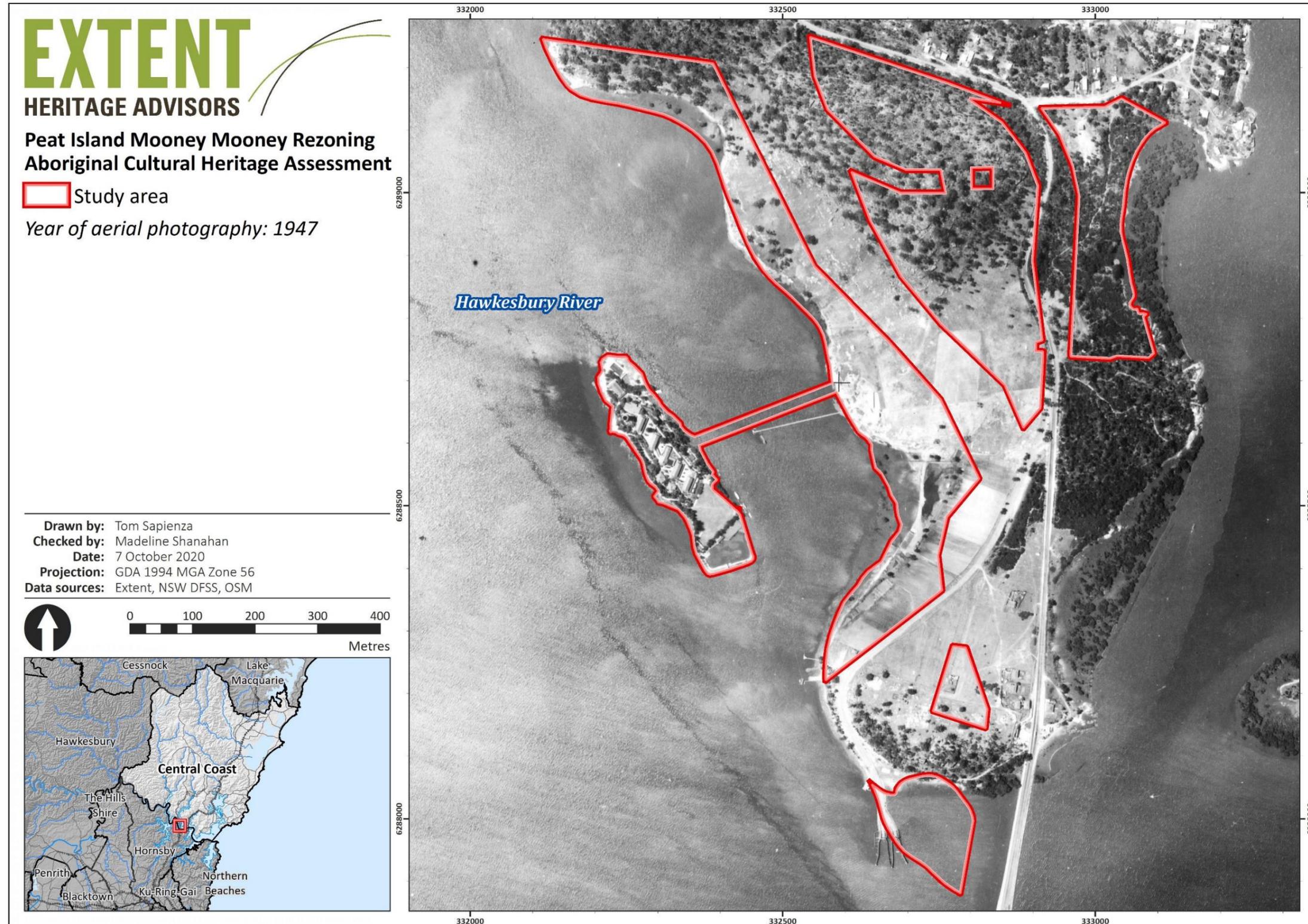


Figure 10. Aerial photograph of the study area in 1947.

EXTENT

HERITAGE ADVISORS

Peat Island Mooney Mooney Rezoning Aboriginal Cultural Heritage Assessment

 Study area

Year of aerial photography: 1961

Drawn by: Tom Sapienza
Checked by: Madeline Shanahan
Date: 7 October 2020
Projection: GDA 1994 MGA Zone 56
Data sources: Extent, NSW DFSS, OSM

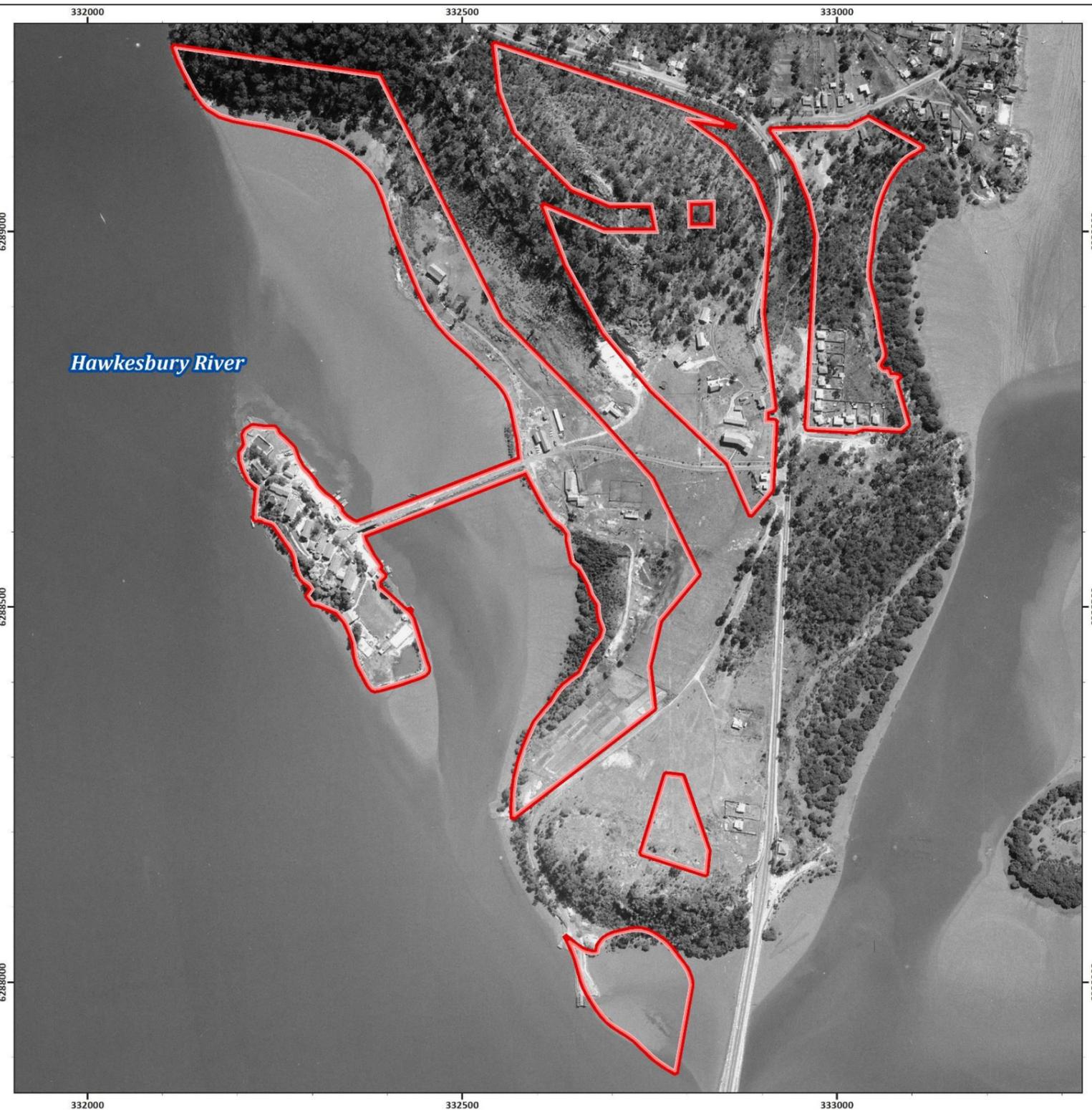
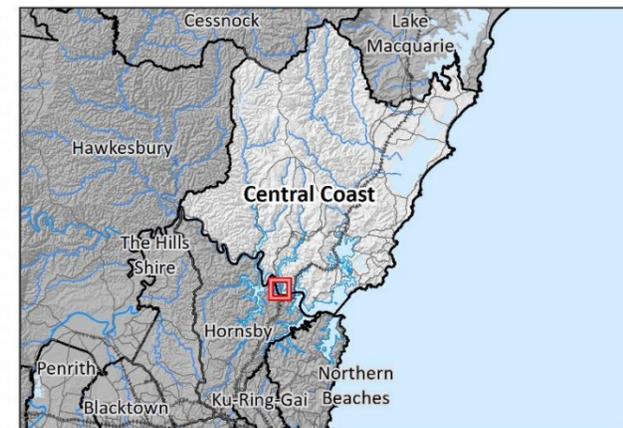
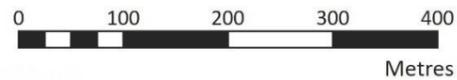


Figure 11. Aerial photograph of the study area in 1961.

EXTENT

HERITAGE ADVISORS

Peat Island Mooney Mooney Rezoning Aboriginal Cultural Heritage Assessment

 Study area

Year of aerial photography: 1965

Drawn by: Tom Sapienza
Checked by: Madeline Shanahan
Date: 7 October 2020
Projection: GDA 1994 MGA Zone 56
Data sources: Extent, NSW DFSS, OSM

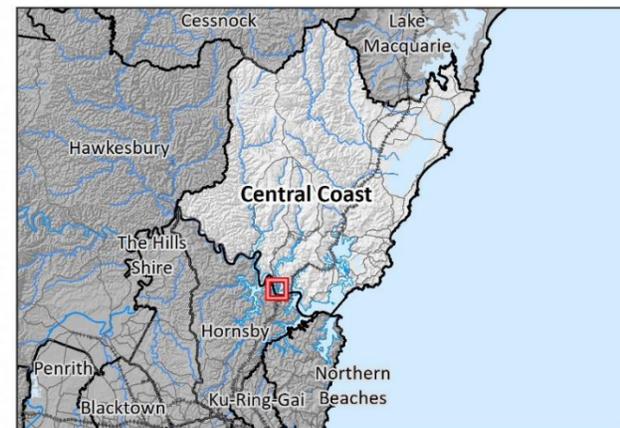


Figure 12. Aerial photograph of the study area in 1965.



Figure 13. *Aerial photograph of the study area during construction of the Motorway, c.1968-1978 (Source: National Archives of Australia, Series B941, Negative X6621, <https://recordsearch.naa.gov.au/SearchNRetrieve/Interface/ViewImage.aspx?B=5984629>).*

EXTENT

HERITAGE ADVISORS

Peat Island Mooney Mooney Rezoning Aboriginal Cultural Heritage Assessment

 Study area

Year of aerial photography: 1978

Drawn by: Tom Sapienza
Checked by: Madeline Shanahan
Date: 7 October 2020
Projection: GDA 1994 MGA Zone 56
Data sources: Extent, NSW DFSS, OSM

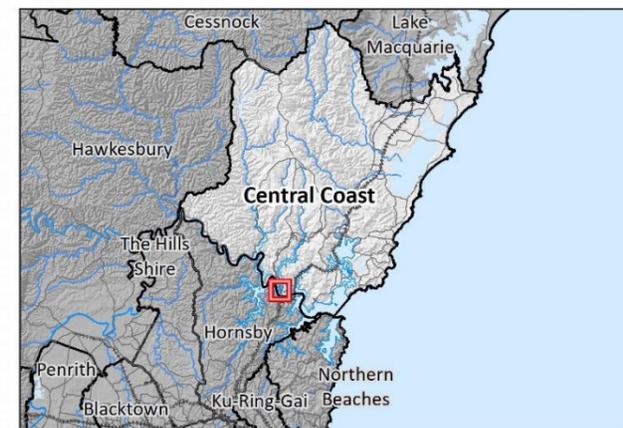
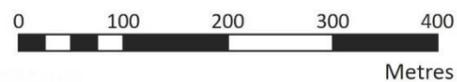


Figure 14. Aerial photograph of the study area in 1978.

EXTENT

HERITAGE ADVISORS

Peat Island Mooney Mooney Rezoning Aboriginal Cultural Heritage Assessment

 Study area

Year of aerial photography: 1986

Drawn by: Tom Sapienza
Checked by: Madeline Shanahan
Date: 7 October 2020
Projection: GDA 1994 MGA Zone 56
Data sources: Extent, NSW DFSS, OSM

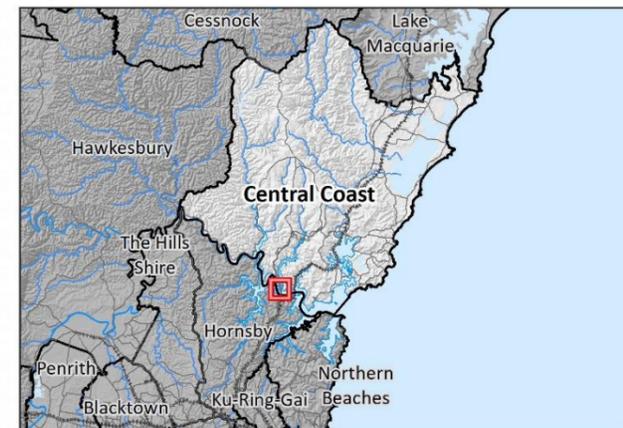
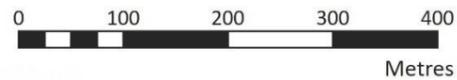


Figure 15. Aerial photograph of the study area in 1986.

EXTENT

HERITAGE ADVISORS

Peat Island Mooney Mooney Rezoning Aboriginal Cultural Heritage Assessment

 Study area

Year of aerial photography: 1994

Drawn by: Tom Sapienza
Checked by: Madeline Shanahan
Date: 7 October 2020
Projection: GDA 1994 MGA Zone 56
Data sources: Extent, NSW DFSS, OSM

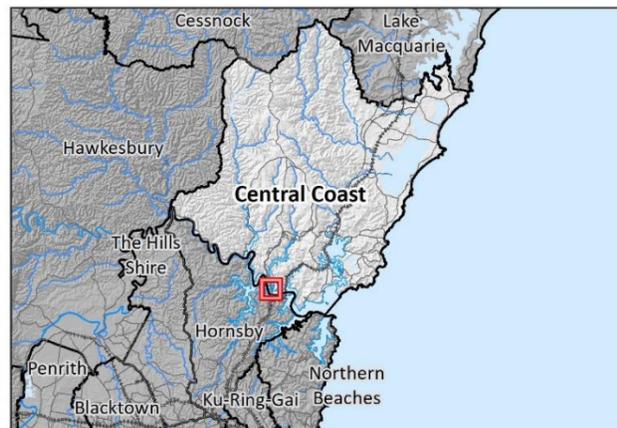


Figure 16. Aerial photograph of the study area in 1994.

EXTENT

HERITAGE ADVISORS

Peat Island Mooney Mooney Rezoning Aboriginal Cultural Heritage Assessment

 Study area

Year of aerial photography: 2005

Drawn by: Tom Sapienza
Checked by: Madeline Shanahan
Date: 7 October 2020
Projection: GDA 1994 MGA Zone 56
Data sources: Extent, NSW DFSS, OSM

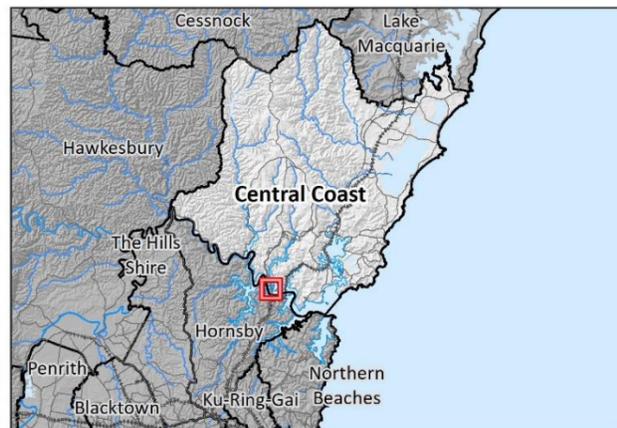
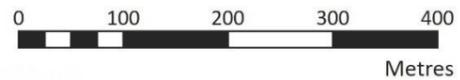


Figure 17. Aerial photograph of the study area in 2005.

EXTENT

HERITAGE ADVISORS

Peat Island Mooney Mooney Rezoning Aboriginal Cultural Heritage Assessment

 Study area

Year of aerial photography: 2014

Drawn by: Tom Sapienza
Checked by: Madeline Shanahan
Date: 7 October 2020
Projection: GDA 1994 MGA Zone 56
Data sources: Extent, NSW DFSS, OSM

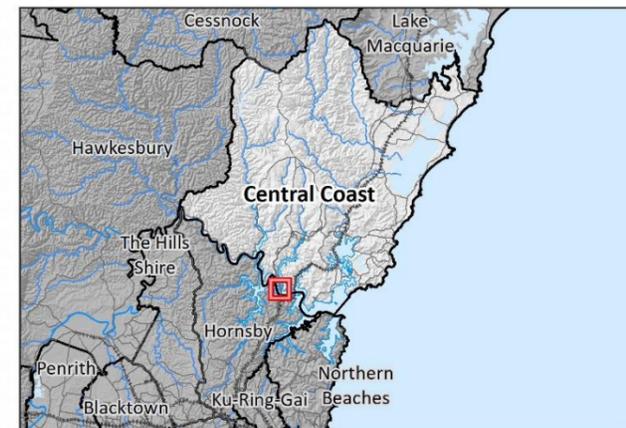
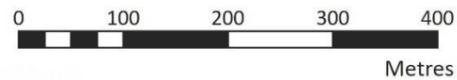


Figure 18. Aerial photograph of the study area in 2014.

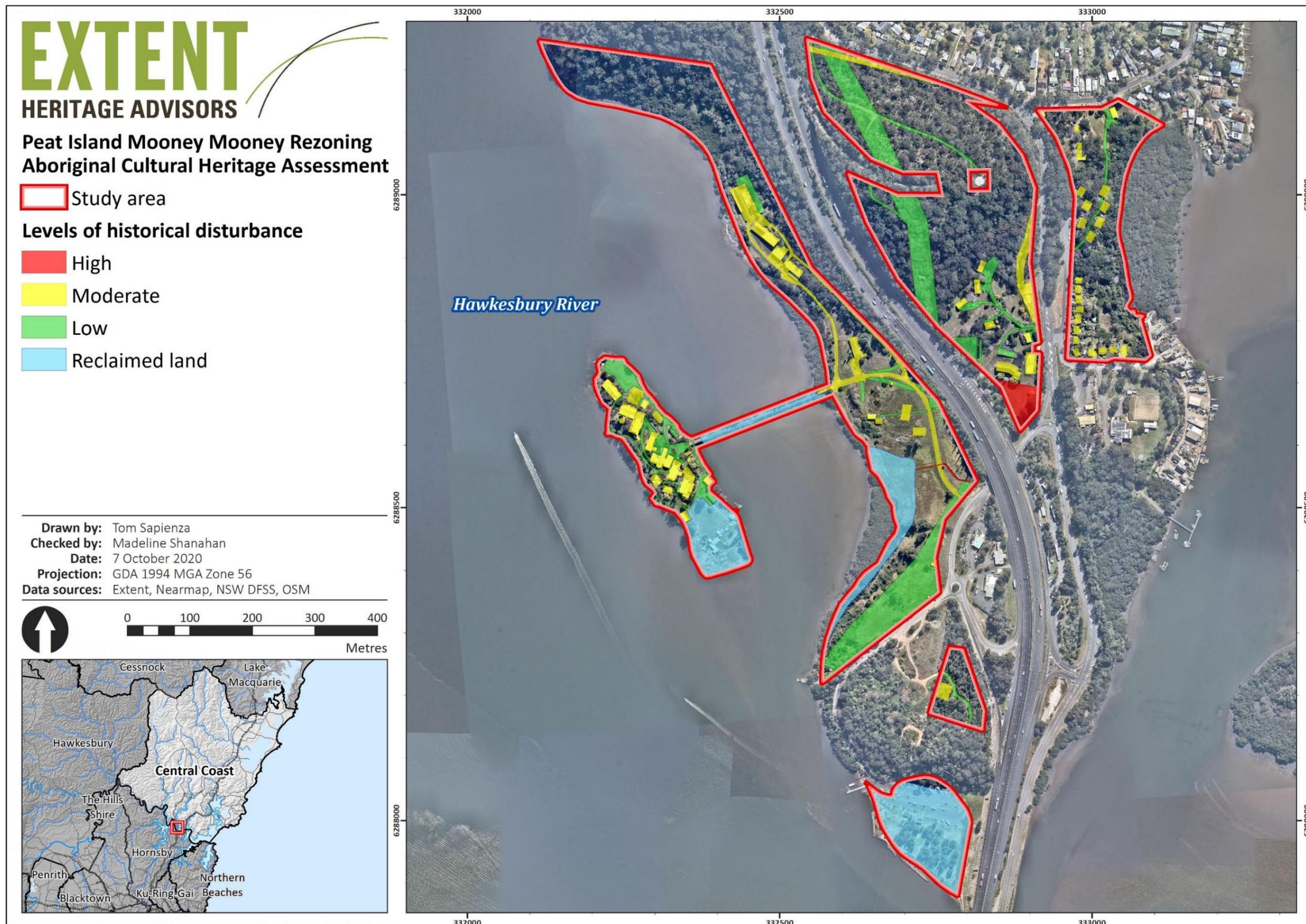


Figure 19. Areas of historical disturbance and reclaimed land within the study area. Areas of high disturbance are associated with the construction of the Motorway and its various approaches, areas of moderate disturbance are associated with building footings and services, while areas of low disturbance are associated with orcharding/farming and the creation of walking tracks. Areas not highlighted are considered to have very low disturbance.

4 ETHNOGRAPHIC RECORD

4.1 Key Findings

- There is dispute about who the Aboriginal people of the study area were, with both the Guringai or Wannungine/Wanangine people and Darkinjung people claiming the study area occupies part of their traditional lands.
- The Hawkesbury River and its tributaries, estuaries and mangrove swamps formed critical resources for local Guringai people. The River itself provided a reliable supply of fresh water, as well as freshwater- and estuarine species of fish, shellfish and eel. When fish were scarce, or the weather was foul, coastal groups turned their attention to gathering shellfish, hunting reptiles and small animals, digging fern roots, or gathering berries. Important plants and animals were also found in mangrove wetlands and the river's fertile floodplains, providing medicines, fibres, vitamins and other food staples.
- One of the RAPs considers that the Mooney Mooney area was a main crossing point for Aboriginal people over the river, and a main travel route up and into the Central Coast Hinterland.
- There was considerable enmity and ritualised fighting between the Guringai and the Awabakal to the north, the Dharawal to the south and the inland Darug. By contrast, relationships between the Guringai and the inland Darkinjung were apparently very cordial. Reciprocal visits were made between the groups, and items were exchanged (Darkinjung LALC 2012:14).
- Mapping of early ethnohistorical observations in the general vicinity of the study area confirm the presence of Aboriginal people in the area shortly after European colonisation. However, relationships between the Guringai people and Europeans deteriorated rapidly at the turn of the 19th Century; where two separate conflicts between local Aboriginal people and Europeans were recorded as occurring on Mullet Island and Mangrove Creek.
- Peat's Ferry Road, which passes through the study area, was blazed by local settler George Peat with assistance from a local Aboriginal man, and was likely an existing Aboriginal track. This road formed an important communication and transport route for Aboriginal people, providing the most negotiable route to and from the interior and the sea.
- The origins of the placename "Mooney Mooney" are unclear. Research by Aboriginal language analyst Jeremy Steele indicates that the words 'moane/moani/munnee' translate as either 'kangaroo' or 'pademelon', and that the reduplication of the word "Mooney" acts as an intensifier. Steele determined that the term means 'many kangaroos' or 'many pademelon', and thus the area may have been a place where an abundance of these marsupials was found.

4.2 Regional Ethnographic Information

The coastal and hinterland regions of the NSW Central Coast were utilised by Aboriginal people for thousands of years prior to European colonisation. The coast and lakes, inland waterways, swamps, floodplains, valleys and mountain ranges of the region provided Aboriginal people with rich and varied resource zones, as well as occupational areas, ceremonial sites and transport corridors for movement throughout the landscape. Aboriginal sites provide tangible evidence of an ongoing link with the long

history of Aboriginal use and occupation in the area. The intersection of diverse resources used by Aboriginal people made the Central Coast region a particularly attractive location for Aboriginal occupation and use.

4.2.1 The Guringai People

There is considerable debate about the nature, territory and range of the pre-contact Aboriginal language groups along the NSW Central Coast. This is largely because by the time colonial diarists and missionaries began making detailed records of Aboriginal people in the 19th Century, Aboriginal groups had already been reduced in number, and were dispersed by European colonisation activity; but also because of the complexity of the traditional relationship between Aboriginal people, language and country.

At the time of European colonisation, the Aboriginal people of the Central Coast were separated into named territorial groups on the basis of language. Three main language groups occupied the region. This included the Awabakal people to the north, whose range extended from Broken Bay to the Hunter River; the coastal Guringai (Ku-ring-gai) or Wannungine/Wanangine people, who occupied the coastline from the Hunter River to Broken Bay and westwards along the Hawkesbury River estuary; and the hinterland Darkinjung, who occupied an area from Wollombi and Cessnock in the west down to the Colo/Macdonald Rivers and east towards Brisbane Water (Vinnicombe 1980:IV/1; Ford 2010:487; Howie 2012:72). Territories were often defined by physical places in the landscape, and boundary lines were indicated by natural features such as hills, watercourses and rock outcrops.

The study area forms part of traditional coastal Guringai land, however there is considerable conjecture that this area is the traditional lands of the Darkinjung people. Amongst the Guringai, there were many smaller bands of people called clans, which early Europeans referred to as 'tribes'. There are many accounts of the Cammeraigal 'tribe', but it is now recognised that the Cammeraigal were a clan of the Guringai. To the north of the Cammeraigal were the Terramerragal (Turramurragal), whose names are perpetuated as place names in the area, while to the east were the Gayimai from Manly. In the vicinity of Broken Bay and Pittwater were the Carigal (karee-gal), while on the north side of Broken Bay were the Erina, Narara, Terrigal and Wyong clans, who have also been perpetuated in place names (Attenbrow 2010:26; Ku-ring-gai Historical Society 2014).

Seasonal movement of people occurred between the coastal plains and the hinterland, in order to exploit seasonal hunting grounds and resources, and to escape the winter cold. Clans occasionally converged with other clans to trade, hunt, fight, feast, arrange marriages, resolve disputes, and share information. There was often tension between neighbouring clans and the boundaries between territories were not lightly traversed. There was considerable enmity and ritualised fighting between the Guringai and the Awabakal to the north; and to a lesser extent, with the Dharawal (South Coast) to the south. Relationships with the inland Darug, too, were reportedly strained (Collins 1798:44). By contrast, relationships between the Guringai north and south of Broken Bay and the inland Darkinjung were apparently very cordial. Reciprocal visits were made between the groups, and items were exchanged (Swancott 1955:68, 86, 102; McCarthy 1939:407; Threlkeld 1892:206). This sentiment is echoed by Guringai Tribal Link Aboriginal Corporation CEO, Tracey Howie, who recalled that Darkinjung people seasonally occupied Guringai land in order to exploit resources (Howie 2012:72), and by the Darkinjung LALC, who considered that there was likely a zone between language groups that was shared and utilised by neighbouring groups (Darkinjung LALC 2012:14).

The landscape of the Central Coast was crossed with Aboriginal paths, many of which later became European roads. Unfortunately, in 1789 the same paths that wove Aboriginal communities together rapidly spread smallpox throughout the region. The devastating outbreak forced major reorganisations among clan groups. When William Bradley sailed into Sydney in May 1789, he recorded the "dreadful

havock” that smallpox had wrought amongst Aboriginal communities. “[We] did not see a Canoe or a Native the whole way coming up the Harbour & were told that scarce any had been seen lately except laying dead in & about their miserable habitations” (Bradley 1969). As entire communities were destroyed by the disease, traditional burial practices broke down and clans merged together for survival (Hunter 1793). Bradley reported that bodies were found in caves, along streams, around the harbour and along the entire path between Port Jackson and Broken Bay (Bradley 1969).

4.2.2 Utilising Natural Resources

Aboriginal groups of the Central Coast enjoyed a rich economy, providing quality and variety in food. The Hawkesbury River provided a reliable supply of fresh water for drinking and cooking with; as well as freshwater- and estuarine species of fish, shellfish and eel. According to Watkin Tench, the task of fishing was divided between husband and wife, the woman using a hook and line and the man using a fish gig (spear). When fish were scarce, or the weather was foul, coastal groups turned their attention to gathering shellfish, hunting reptiles and small animals, digging fern roots, or gathering berries (Tench 1793:258-260). Archaeological evidence from shell middens of the Hawkesbury River indicates that the shellfish procured by Aboriginal people in this locale included rock oysters and mussels from intertidal rocky areas and mangrove roots; Sydney cockles and whelks on mud flats; and mud oysters and scallops in sandy mud on sea-grass flats (Vinnicombe 1980:V/10-11).

Kangaroos, swamp wallabies, possums, sugar gliders, bandicoots, wombats, echidnas, fruit bats (flying foxes) and other smaller mammals were amongst the wide range of land animals that inhabited the Central Coast region and were available to Guringai people. Most Australian land animals are not migratory and therefore their seasonal availability and abundance do not vary markedly (Attenbrow 2010:70).

Starchy tubers, yams and fern roots, bush fruits and native seeds including Burrawang palm seeds were also frequently consumed (Vinnicombe 1980:V/19-31). On a boating expedition in 1789, Governor Phillip observed local Aboriginal people along the banks of the “Hawkesbury River Branches” harvesting tubers of a riverside sedge known as the marsh club-rush (*Bolboschoenus fluvialis*) (Ford 2010:12). Certain plant foods such as the blackbean and *cunjevoi* plants along with some varieties of wild yam (*Dioscorea* sp.) were unpalatable or toxic in their natural state and required complex processing before consumption. To combat toxicity, these foods were roasted in ashes, open fires or earth ovens; pounded and baked into cakes; or grated, peeled or sliced using bone, stone and shell implements and leached for lengthy periods of time in water (Beck 1985:107, 211).

A number of tree species present in the district were important sources of bark that could be used in the construction of shelters, canoes and twine. Important plants and animals were also found in mangrove wetlands and the river’s fertile floodplains, providing medicines, fibres, vitamins and other food staples. Equipment manufactured from locally available plant resources included string bags, ‘coolamons’ (wooden vessels) and bark canoes.

Clothing was scarcely worn, although possum skin cloaks were worn around the waist for protection during cold and wet weather. In contrast, this left scarification and body paint visible to the observer. Possum skins were cured by securing them to boards or laid flat, and then set out to dry. When a sufficient number had been collected, they were sewn together with a bone or wooden needle using plant fibres or sinew from animals such as kangaroos (Vinnicombe 1980:IV/6).

It has been noted that during battles, corroborees or other major gatherings, Aboriginal people decorated themselves with body paint. Paint colours were derived from natural pigments and comprised white clay, red and yellow ochre and powdered charcoal and ash. According to Patricia Vinnicombe, accumulations of clay and iron (pisolitic nodules) routinely form at the interface between sandstone and

shale, and different colours ranging from yellow limonite to red oxide were obtained, White clay pipe could also be found at these locations (Vinnicombe 1980:III/6).

Traditional weapons included hunting spears, boomerangs, clubs (known as *waddy*), spear throwers (*wummerah* or *woomerah*). Hunting spears were barbed with bone or pieces of shell by coastal Guringai, while those who occupied inland areas used stone-barbed spears (Collins 1798:586). Spears could be thrown by hand, or with a woomerah. Stone hatchets or *mogo* (also called tomahawks by European observers) were one of the tools used for hunting. They had a stone head that was fastened to a wooden haft with strips taken from the inside of the stringy bark tree. Three-pronged fishing spears (*mootim*), made from the stems of the grass tree *Xanthorrhoea* sp., were employed to catch freshwater fish and eels in inland waterways, either from shallow rock platforms or from within canoes (Matthew in Havard 1943:193).

Tools were primarily fashioned from local stone or imported and traded from elsewhere; and there are no known stone quarries on the Central Coast. Raw stone material used in the manufacture of stone artefacts appears to have been obtained from pebble lenses within the Narrabeen Formation and Hawkesbury Sandstone materials, where 'hen's-egg sized' nodules of quartz, quartzite, silcrete, chert, jasper and igneous rock weather out as residual deposits on ridge tops and terraces or are carried into creek beds. At a rockshelter in the Spencer area (AHIMS Site ID #45-3-0471), and at the Ground Axe Shelter in the Upper Mangrove Creek catchment, Vinnicombe observed *in situ* pebbles partly eroded out of the walls or ceilings that "show evidence of having been intentionally fractured in order to obtain a flake of suitable stone material" (Vinnicombe 1980:III/6). Rich deposits of pebble conglomerate suitable for the manufacture of stone tools have been identified on the sea-front at Bateau Bay and at Norah Head, on Tuggerah Lake; at Deep Creek in the Upper Mangrove Creek catchment; and in the Maroota area, south of Wiseman's Ferry.

Shelters were constructed out of sheets of bark and timber (Vinnicombe 1980:IV/3-4). Caves and rock overhangs were also used as shelters and, according to Governor Hunter, those "caves of considerable dimensions... would lodge forty or fifty people" (Hunter 1793:59-60).

In 1827, Police Magistrate Willoughby Bean reported to the Colonial Secretary that there were five family groups or 'tribes' of Aboriginal people in the Brisbane Water district. Those listed were the Broken Bay Tribe, the Tuggera Beach Tribe, the Wyong Tribe, the Narara Tribe and the Erina Tribe, accounting for a total population of 65 individuals (Sainty and Johnson 1980:15; David Scobie Architects 2010:12). The numbers mentioned by Bean do not correspond to another list generated by the Newcastle Magistrates Allman and Brooks in September 1826. The 'Tugrah Beech Tribe', number 200 strong, was listed with the Newcastle tribes, with 'Chuge' as 'Chief'. Accepting the richness of natural resources to sustain a population, and the accuracy of Allman and Brooks' numbers in just one group of Central Coast people, the population of Aboriginal people in the Brisbane Water district would have been far in excess of Bean's estimate of 65 persons.

4.3 The Study Area

The coastal Guringai people comprised a number of sub-groups often referred to as 'clans', based upon religious and/or totemic associations to country. However, ethno-historical sources do not provide sufficient evidence to identify the clan that occupied the modern-day Mooney Mooney area.

Mapping of early ethnohistorical observations in the general vicinity of the study area confirm the presence of Aboriginal people in the area shortly after European colonisation (**Figure 20**). During an expedition along the Hawkesbury River in March 1788, Lieutenant Bradley recounted his visit to Mullet Island (now Dangar Island, some 3.5km southeast of the study area):

Friday. 7th, A.M. Left the Southern Arm & went again into the South West Arm to look into that opening to the North West, found but few of the Natives in it: We landed on an Island about 2 Miles up this branch, on which we secured every thing for the night got a great quantity of Mullet in the Sein from which we called it Mullet Island, there is long flat to the SE & a reef of rocks, round which is the bay for hauling the Sein, we found some Huts on the Island, but only 3 Natives came to us this evening.

Saturday. 8th, A.M. Several of the Natives came to us, painted very whimsically with pipe Clay & red Ochre both which is plenty on the Island, the pipe Clay just under the Sand on the beach round the rocks.

(Bradley 1788)

One year later, Captain Hunter reported an encounter with Aboriginal people on the Hawkesbury River in canoes, approximately 5km northwest of the study area:

On the 9th in the morning, we proceeded to examine some of the inferior branches; their general direction was to the southward, and the longest was not more than five or six miles in length, and was navigable for such boats as ours; the general depth was three and four fathoms for about four miles up, and then shoal water; the others were inconsiderable.

In one of these branches we passed the night of the 9th, and saw a few natives, who came off to us in their boats with much cheerfulness and good humour; I thought I had seen them before; they received a few presents, among which was a looking-glass, which we took much trouble to shew them the use of: they were some time before they observed their own figure in the glass, but when they did, they turned it up and looked beyond it; then pointed to the water, signifying that they could see their figure reflected as well from that.

(Hunter 1789)

Relationships between the Guringai people and Europeans deteriorated rapidly at the turn of the 19th Century. Two separate conflicts between local Aboriginal people and Europeans were recorded as occurring on Mullet Island and Mangrove Creek – the second of which resulted in the death of Branch Jack and Woglomigh, the latter man being the leader of the local Aboriginal tribe (Swancott 1967:14, 25-26; Kohen 1993, see **Figure 20**). By the 1820s and 1830s, widespread settlement of the riverine floodplains and open forests deprived Aboriginal groups of sources of food and access to camping and ceremonial sites. This forced individuals to either relocate into the potentially hostile lands of neighbouring Aboriginal groups, to partially integrate into colonial society as fringe dwellers, to resist, or to use a combination of these approaches.

At least some form of integration into local society occurred for Aboriginal people living in the vicinity of study area. It has been suggested that local settler George Peat befriended a local Aboriginal man and sought his help to blaze a road amongst the maze of ridges and valleys zigzagging from Brisbane Water to his residence at Mooney Mooney (Department of Main Roads 1949:84; Ollif 1973:42; Swancott 1953:11). This road followed an Aboriginal track that formed an important communication and transport route for Aboriginal people, providing the most negotiable route to and from the interior and the sea – it eventually became Peat's Ferry Road, which passed through the study area. According to local historian Tom Richmond, "the proximity of carvings on either side of the eventual road, would suggest that the Aboriginal people had traversed the ridges for years, and possibly centuries" (Richmond 2013:2).

The origins of the placename "Mooney Mooney" are unclear, however, it is not disputed that the term is an Aboriginal word. Research by Aboriginal language analyst Jeremy Steele indicates that the words

'*moane/moani/munnee*' translate as either 'kangaroo' or 'paddymelon', as recorded by Reverend Threlkeld for the Awabakal language, and by an unknown recorder of the language of Aboriginal people much farther north, on the Richmond-Tweed River (Steele 2012; Threlkeld 1892:54; Muurrbay Aboriginal Language and Culture Cooperative 2018). Based on the assumption that the reduplication of the word "Mooney" acts as an intensifier, Steele determined that the term means 'many kangaroos' or 'many pademelons', and thus the area may have been a place where an abundance of these marsupials was found.

4.4 Information Provided by RAPs

- One of the RAPs recalled that Darkinjung people seasonally occupied Guringai land in order to exploit resources. They also stated that tribal boundaries were a European concept and there was likely a zone between language groups that was shared and utilised by neighbouring groups (Darkinjung LALC 2012:14).
- Two of the RAPs stressed the importance of the *Deerubbun* (Hawkesbury River), and its creation by the *Gurungatch* (eel) in the Dreaming. A physical manifestation of this Creator Being is present within the study area, as a large engraved eel motif. Its significance was further strengthened by its location at the water's edge, which became inundated at high tide, and is representative of the Creator Being journeying through the water.
- One of the RAPs keeps a story of journey of the *nuri* (Emu), which begins at the mouth of the River, extending in a northerly direction through Mount White, Mangrove Mountain and to country around Wollombi. Ceremonies are (still) performed near Mt Yengo as part of the expression of this story.
- One of the RAPs keeps a story of the *wumbuyn* (kangaroo), whose role was to take boys to become men, and is also associated with travelling. The presence of the kangaroo motif and other Aboriginal sites along the Mooney Mooney foreshore clearly indicate that this place was a main crossing point for Aboriginal people over the River.
- One of the RAPs considers that ceremonial pathways and travel routes are usually located along ridgetops, and that the Mooney Mooney ridgelines formed a main travel route up and into the Central Coast Hinterland and inland for thousands of kilometres.
- One of the RAPs recalls that Mooney Mooney Creek, to the east of the study area, was well known for containing oyster beds, and that Aboriginal people are likely to have camped on the ridges and within rockshelters above the mangrove line eating oysters.

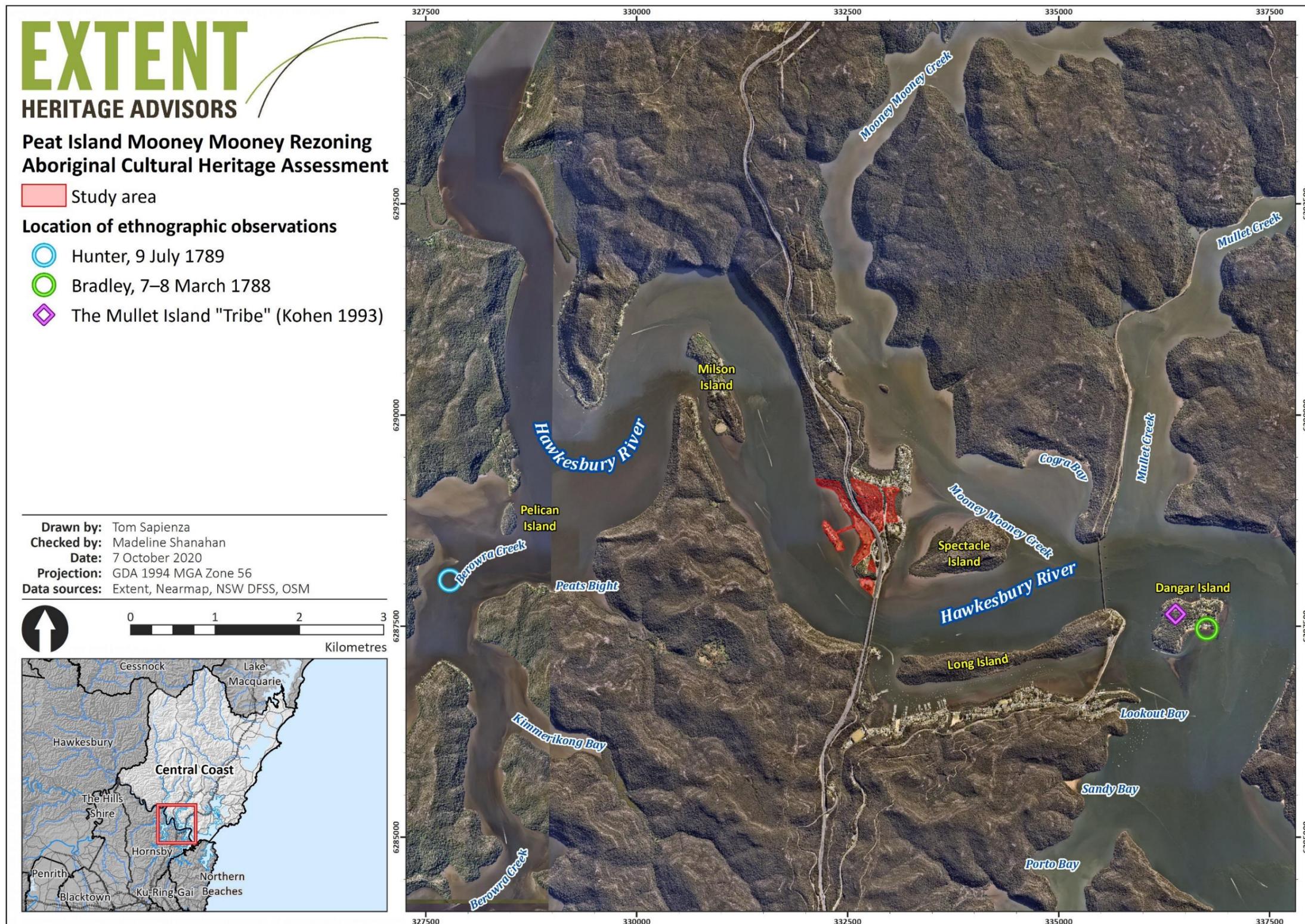


Figure 20. Ethnographic locations in the vicinity of the study area and referred to in text.

5 ARCHAEOLOGICAL RECORD

5.1 Key Findings

- Aboriginal occupation of the Central Coast extends back to the Pleistocene (>10,000 years ago), but the majority of sites are likely to reflect Holocene (<10,000 years ago) occupation, with evidence of continued occupation into the contact period.
- An 'Aboriginal Cultural Heritage Data Audit', prepared by the Department of Environment & Conservation (2005), found that art sites, grinding grooves, artefact sites and shell middens were the most prevalent sites in the LGA. A cumulative result of the study was the production of twelve Aboriginal cultural values maps; and Aboriginal community members highlighted the entire study area as having "environmental/resource-gathering" cultural value.
- Dallas and Bell undertook an Aboriginal heritage study of the Gosford LGA in 1989 and determined that there was a high potential for Aboriginal sites to be present within the study area, along the Mooney Mooney foreshore.
- Systematic archaeological survey of the study area in the 1960s, 1980s and 2010s has resulted in the identification of a number of Aboriginal sites comprising rock engravings on flat sandstone rock outcrops, as well as rockshelters with pigmented art and associated occupation deposits. These sites comprise a large engraving site on a vast rock platform on the western foreshore of the Mooney Mooney peninsula (which comprises three separate AHIMS database listings), a second engraving site on a sandstone ledge in the grounds of the former Mooney Mooney Public School, one rockshelter site with midden material at Cabbage Point, and two rockshelter sites with midden material on the crest of a low hill near the grave of Frances Peat.
- The study area has areas predicted to have high and moderate potential for archaeological deposits, in areas of sandstone outcrop, along the Hawkesbury River foreshore and on the upper slopes/crests and hills, where these areas have not been subject to vegetation clearance or historical disturbance. Areas of low and very low potential have been identified for those locations that are further than 200m from the foreshore, are not on the upper slopes / crests and hills, in areas that have been subjected to substantial ground disturbance, and in reclaimed areas.
- Since 2010, no Aboriginal Heritage Impact Permits (AHIPs) have previously been issued within the study area.

5.2 Regional Background

The study area is located on the southern edge of the NSW Central Coast region. The archaeology of the NSW Central Coast region has been documented through a number of academic and impact assessment investigations over the past 30 years. The majority of these investigations have been archaeological surveys and only a small number of archaeological excavations have been undertaken.

5.2.1 Early Occupation

Aboriginal occupation in the Central Coast region dates back into the Pleistocene period with an earliest radiocarbon date of approximately 13,015 years before present taken from charcoal excavated from a

rockshelter site called Loggers Shelter (Attenbrow 1987). This site is located in the Upper Mangrove Creek catchment, approximately 25 kilometres northwest of the current study area.

However, the antiquity of Aboriginal occupation is likely to extend back further into the Pleistocene. Sites dating to this earlier period are rare and tend to be recovered from deep sand deposits. Optically-Stimulated Luminescence (OSL) dates recovered from a sand body in Pitt Town further south in Sydney date to ~36,000 years ago (Williams et al. 2014) and artefacts associated with charcoal were dated to >35ka at Glennies Creek in the Hunter Valley to the north (Koettig 1986a, 1986b).

The dates of these latter sites fall at about the beginning of the Last Glacial Maximum, a period from about 30,000 to 18,000 BP, when temperatures were between 6 °C and 10 °C cooler than they are today and rainfall was lower. At the height of the Last Glacial Period, about 21,000 BP, areas of rainforest and tall open forest contracted and areas of woodland became more extensive than in the periods before 44,000 BP and after 11,000 BP (Attenbrow 2010:37).

5.2.2 Intensification during the Holocene

The Holocene period is equivalent to Oxygen Isotope Stage 1 (OIS1), beginning between 12 and 10 ka, and continuing through to the present. The last significant rise in sea level occurred approximately 7,000 years ago, and the level stabilised after about 6,500 years ago. Bays and estuaries formed in previous low-lying valleys and flats, and the groups living along the coast were forced inland (McDonald 2008:40). Many sites therefore are now inundated by the sea, and regions as large as tribal territories may have disappeared under water (Vinnicombe 1980:III/11). Later in the Holocene, about 3,000 years ago, the onset of an El Niño–Southern Oscillation (ENSO) dominated climate started a trend to a drier and more variable rainfall (McDonald 2008:37).

The archaeological evidence indicates that significant and widespread changes occurred during the Holocene. Changes in lithic technology included a decline in the use of silicified tuff as the preferred raw material, and a greater use of local materials; a substantial growth, then decline, in the production and use of backed artefacts; and the introduction of ground-edged implements (with the peak period being approximately 4-1 ka).

There is also a considerable increase in archaeological evidence of occupation. This is thought to reflect an intensification of the occupation of the area in this period, but also greater survivability of these sites. Archaeological excavation of a rockshelter containing midden deposit, pigmented and engraved art at Daley's Point, 14km east of the study area, recovered extensive shell material as well as shell fish hooks. Radiocarbon dates associated with excavated shell and carbon fragments ranged from 585±100 BP to 1425±95 BP, with a somewhat anomalous charcoal basal date of 5430±105 BP (J. Clegg 1978 pers. comm. cited in Vinnicombe 1980:VII/9). Archaeological excavation of a rockshelter containing pigmented art, on the slopes of Mount Manning near Mangrove Creek (~45km northwest of the study area) recovered stratified red ochre in two colours matching the pigmented art. Dates obtained for associated carbon from this deposit ranged from 1400-1830 AD (or approximately 550-100 BP) (MacIntosh 1965). Excavation of rockshelter sites within 10km of the study area, at Great Mackerel Beach (McDonald 1992:39), Cowan Creek (Greer 1985) and Crosslands, Berowra (Kohen 1979), identified dense midden materials with dates of up to 3,670 BP.

5.2.3 Key Regional Studies

A summary of key regional studies that have relevance for the current assessment are provided below.

Department of Environment & Conservation Comprehensive Coastal Assessment (DEC 2005)

In 2005, the NSW Department of Environment & Conservation (DEC) published the New South Wales Comprehensive Coastal Assessment, which aimed to assess the environmental, cultural heritage, social and economic values of the State's coastline. The assessment was to provide data on, and an analysis of, the values of land within the 'Coastal Zone' to inform land use planning and management decisions. The Coastal Assessment study area comprised 24 coastal NSW Local Government Areas; from Gosford north to the Queensland border, and from Wollongong south to the Victorian border.

A critical component of the Coastal Assessment was the collation, review and evaluation of existing data and information on Aboriginal cultural heritage items and values. This resulted in the preparation of an 'Aboriginal Cultural Heritage Data Audit'. The audit considered a total of 2,318 listed sites in the Gosford LGA, located predominantly in hinterland sandstone country (DEC 2005: Appendix 1; **Table 3**). For the 2,318 sites, 3,217 site features were recorded, and demonstrate that art sites, grinding grooves, artefact sites and shell middens are the most prevalent in the LGA. A number of 'living places' were also identified in the Gosford LGA, including an 'opportunistic camp' for Aboriginal people in the contact period, located on Dangar Island. It should be noted, however, that most sites were identified as part of development-related environmental impact assessment processes and some academic research; and further, that there is limited cultural or archaeological information in areas where there has been limited development (**Figure 21**).

Table 3. *Aboriginal sites in the Gosford/Wyong LGAs (after DEC Comprehensive Coastal Assessment 2005).*

Site Feature	Number	%
Rock Art Site	1,368	42.52
Grinding Groove	700	21.76
Artefact Sites	504	15.67
Shell Midden	269	8.36
Earth Mound	265	8.24
Stone Arrangement	82	2.54
Burial	9	0.28
Modified Tree	9	0.28
Water Hole	7	0.22
Potential Archaeological Deposit	2	0.06
Aboriginal Ceremonial and Dreaming	1	0.03
Stone Quarry	1	0.03
Total	3,217	100.00

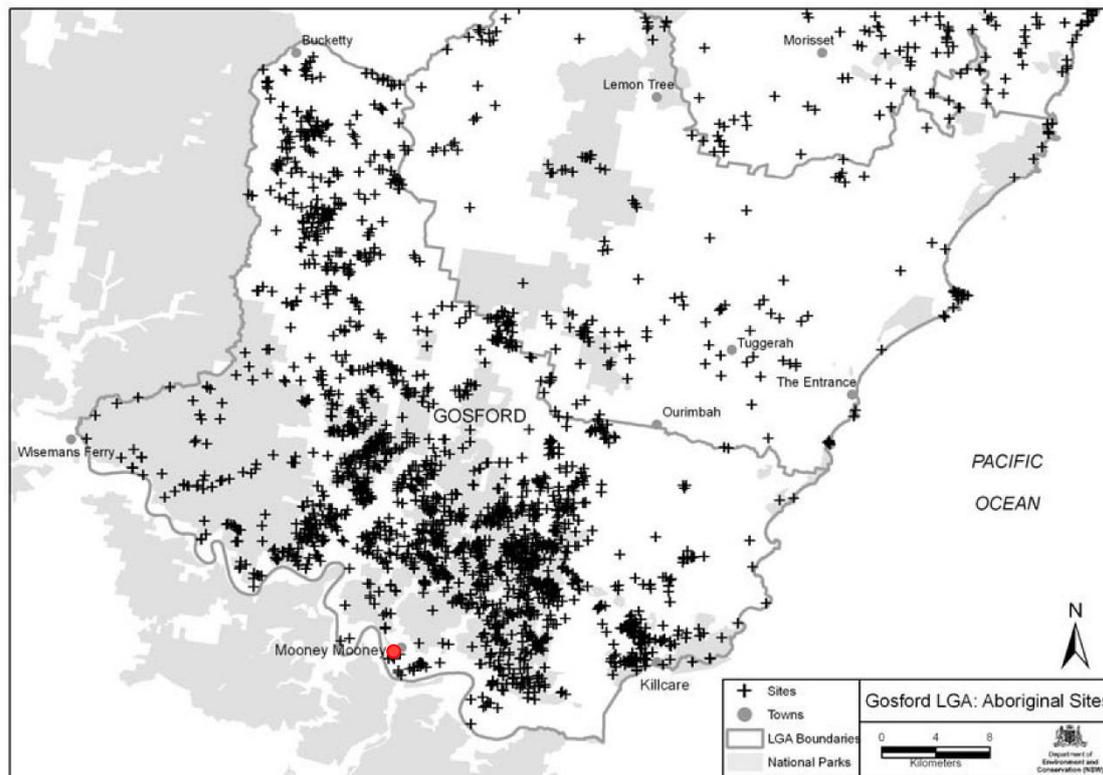


Figure 21. Indicative site distribution in the Gosford LGA (source: DEC Comprehensive Coastal Assessment 2005). The red circle indicates the approximate location of the study area.

A cumulative result of the study was the production of twelve Aboriginal cultural values maps – showing places identified by Aboriginal community members as having specific cultural value. These specific values were grouped into five generic groupings:

- **A Spiritual/Ceremonial** – includes places and areas of creation and law stories (legends), ceremonial activity areas, gender specific areas, burials, etc;
- **B Physical Evidence** – includes the diverse array of archaeological sites on record (DEC), and also those additional sites and areas known to the Aboriginal communities;
- **C Environmental Knowledge & Resources** – includes places and areas known for their cultural resources (foods, medicines, implements, etc), and environmental knowledge areas (increase sites, weather knowledge, etc);
- **D Historical** – includes post-colonial places and areas of importance such as conflict areas, massacre areas, missions, etc; and
- **E Social/Economic** – includes traditional travel & trade routes, contemporary social gathering areas, etc.

Aboriginal community members highlighted the entire undulating low hillslopes and Ridgelines/steep slopes landscapes within the study area as having environmental/resource-gathering cultural value (**Figure 22**). This likely relates to the diverse and abundant range of plant, animal and stone resources that would have been available to Aboriginal occupants prior to European colonisation.

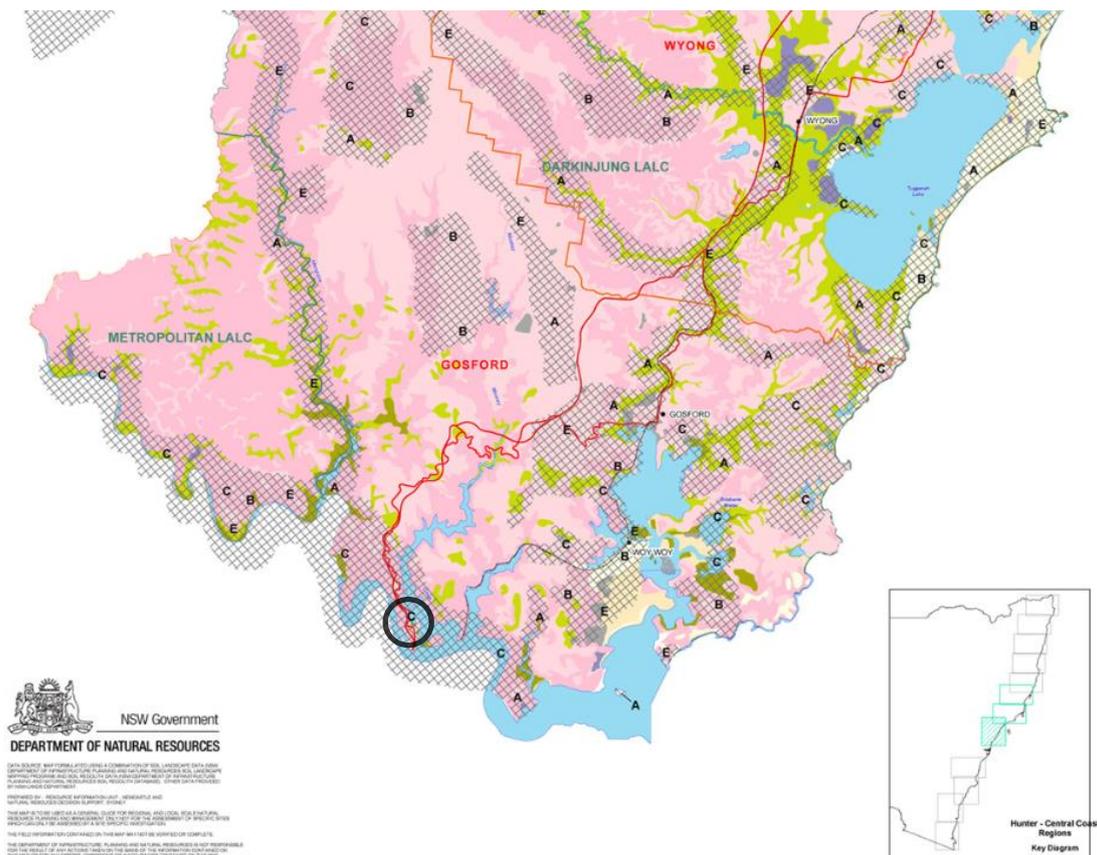


Figure 22. Cultural Values Areas identified by the Department of Environment and Conservation (2005) as part of the NSW Comprehensive Coastal Assessment – Aboriginal Cultural Heritage Data Audit. The approximate location of the study area is circled.

Gosford-Wyong Region (Vinnicombe 1980)

This study was prepared for the National Parks and Wildlife Service to investigate the Aboriginal occupation of the Central Coast in terms of environmental, ethnographic and archaeological data. It consisted of a systematic study of areas within the Gosford and Wyong LGAs to obtain data on numbers and types of sites and their distribution, to inform the development of a predictive model as to where sites could be expected to occur. Three eco-systems were selected for intensive survey:

- Open coastline and coastal estuary – fully tidal, high salinity
- Riverine estuary – tidal margins, low salinity
- Inland sclerophyll forest – upper valley catchment, fresh water

Vinnicombe emphasised the seasonal nature of site usage throughout the various environments in the region and presented a model for Aboriginal movement between the coast and hinterland. The Aboriginal site usage was directly linked to available resources in each environment. Coastal shellfish and fish species were heavily utilised during summer, lake and estuary usage would have primarily coincided with spring-summer nesting of water birds and summer-autumn migratory fish, while marginally estuarine waters and swamps would have experienced year-round flora and fauna exploitation. Terrestrial fauna could have been exploited all year, while plant varieties that experienced seasonal change would have likely seen lower usage during winter due to lower nutrition value at this

time of year. It is unlikely that these patterns of land use would have required large scale population movements, but rather during winter periods smaller groups would disperse to reduce stress on resources.

Vinnicombe developed the following site type predictions (reproduced in Dallas & Bell 1989:40-41):

- Open middens are usually in protected positions near water and shellfish resources. They occur on sand, alluvium and sandstone, often at the junction of valley bottom and hillslope.
- Camp sites commonly occur on relatively level dry ground near water. They are often difficult to detect outside eroded or partly destroyed surfaces. They are very difficult to detect in Hawkesbury sandstone formations.
- Sheltered occupation sites are most commonly located in exposed Hawkesbury sandstone above valley floors or below ridgetops. Weathered sandstone may form overhangs or caverns which provide shelter from wind, rain and are easily heated. There is a general preference for north or north west facing shelters.
- Painted or drawn art sites are most common in larger shelters immediately below ridgetops in the Hawkesbury sandstone formation.
- Engraved art sites are more likely to occur on ridgelines and plateau areas of the Hawkesbury sandstone. They are rare on Narrabeen formations. They can occur singly or in group depictions.
- Grinding grooves are commonly found on Hawkesbury sandstone creek beds, at the tops of valleys above or along watercourses and around rock pools on ridgetops near aquifers.

Gosford LGA (Dallas & Bell 1989)

This investigation was undertaken to provide Gosford Council with an overview of the Aboriginal material culture of the Gosford LGA. The LGA was divided into four landform units: lakes and lagoons, coastal plain, coastal hills, and upland plateaus.

Of particular relevance to the study area, a number of predictive statements were made for the “upland plateaus” landform unit. This unit is characterised by areas of ridgeline capped by sandstone, and is likely to contain examples of the following site types:

- Rock shelters and rock platforms with occupation deposit, engravings, paintings and axe grinding grooves, in areas of Hawkesbury Sandstone geology.
- These sites occur almost anywhere along ridge tops and ridge slopes, but particularly near water sources or the boundaries of flora and fauna communities. Such sites may also occur where sandstone boulders have fallen down ridge slopes.
- Open campsites are likely to occur on valley floor alluvial deposits.
- Shell middens are likely to occur on the margins of tidal water courses, more commonly in protected positions along the Hawkesbury River and the lower reaches of Patonga Creek, Mullet Creek, Mooney Mooney Creek and Mangrove Creek.

- Rock shelters containing art and/or occupation deposit usually associated with sandstone outcrops along ridgelines and ridgeslopes (Dallas and Bell 1989:58).

Dallas' and Bell's investigation considered that there was a high potential for Aboriginal sites to be present along the foreshore of Mooney Mooney, and recommended that additional survey be undertaken (**Figure 23**).

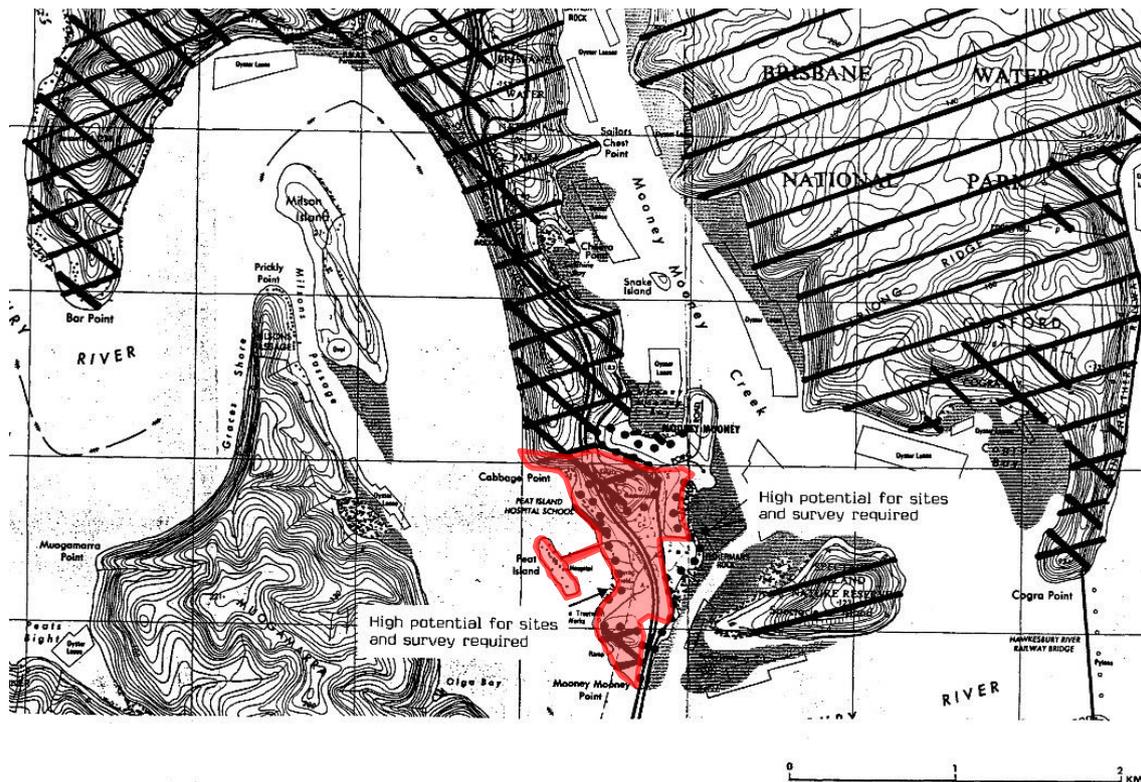


Figure 23. Map of archaeologically sensitive areas, as identified by Dallas and Bell (1989: Map 7). The approximate study area is highlighted in red.

5.3 Local Aboriginal Archaeological Context

This section provides a summary of previous studies undertaken in the vicinity of the study area. With specific reference to Mooney Mooney and its surrounding islands and headlands, few archaeological surveys have been undertaken. What limited knowledge we do have for the area has been gathered from predominantly archaeological survey undertaken as part of compliance-based archaeological investigations associated with urban development, some academic research, and infrastructure upgrade projects (Trustees of the Australian Museum 1956; Sim 1963; Vinnicombe 1980; Artefact Heritage 2014). On the whole, these development footprints and focus areas have been relatively small-scaled and centred on the foreshores of the Hawkesbury River and its tributaries, as well as neighbouring Islands.

Within the foreshore contexts of the Mooney Mooney headland and neighbouring islands, the focus of archaeological investigation has been on the identification and characterisation of pigmented art and engraving sites, as well as rock shelter sites and their associated shell, bone and stone deposits. This

began with Frederick McCarthy of the Australian Museum, who in 1936 undertook archaeological surveys of the northern bank of the Hawkesbury River, as far upstream as Wiseman's Ferry. Rockshelter and midden sites were also recorded on the Bouddi Peninsula and west of Brisbane Water, as well as the creek systems feeding into Broken Bay. In all, almost 200 engraving sites were located, though none appear to have been located within the Mooney Mooney study area.

In 1955, Frederick McCarthy and Neil MacIntosh excavated a small portion of a rockshelter site on Long Island, some 1.8km southeast of the study area (AHIMS ID #45-6-0468). The excavation aimed to shed further light on local Aboriginal burial practices, as well as Aboriginal diet and resource-subsistence strategies, stone tool manufacturing and provenance, and environmental formation processes and contexts. The deposit comprised compacted shell and ash, and though it yielded scattered animal and human bones, there were no bone or stone implements (Trustees of the Australian Museum 1956:7; Vinnicombe 1980:VII/4).

With particular respect to the study area, systematic archaeological survey of the Mooney Mooney peninsula in the 1960s, 1980s and 2010s has identified a series of Aboriginal sites comprising rock engravings on flat sandstone rock outcrops, as well as rock shelters with pigmented art and associated occupation deposits (Sim 1963; Bluff 1989; Artefact Heritage 2014; Timothy Stewart 2016). Three extensive engraving sites were identified by Ian Sim and RJ Martin in April 1960. These engravings are illustrated in **Figure 24** below. The first of these sites was described as being located on the foreshore of the bay on the western side of Mooney Mooney Point, with a group of engraved figures on a number of flat rock surfaces extending for about a quarter of a mile along the edge of the water. Engravings included a kangaroo, two men, three small circles, multiple fish, boomerang, club, a goanna, a skate or ray, a speared echidna, an eel, and two wallabies (Sim 1963:60). The second site was located just outside the study area, on the western side of Big Bay at Mooney Mooney Point. Engravings here included a man, with a line running from his hand, part of a kangaroo's hindquarters, and several lines – on a flat rock about 40ft in diameter (Sim 1963 [1960]:61). The third site was identified on a small patch of rock on top of the ridge on the western side of the Pacific Highway at Mooney Mooney and consists of a "bird-beaked" man holding a large shield (Sim 1963[1960]:61). This latter site does not appear to have been registered on AHIMS, and its location and present condition is unclear.

In 1989, Warren Bluff undertook a survey of the study area, where he identified three new rockshelter sites with midden material along the western foreshore of the Mooney Mooney peninsula, one in a densely vegetated area on the edge of Cabbage Point, and two on the crest of a low hill near the grave of Frances Peat (Bluff 1989). Of the latter rockshelters, one facing Deerubbun Reserve was found to have been disturbed and partly excavated in the recent past (Bluff 1989).

Further investigation of the study area in 2014 by Artefact Heritage identified an engraving site within the grounds of the former Mooney Mooney Public School, located on a prominent sandstone ledge facing west (Artefact Heritage 2014:14). Subsequent inspection of this site by Timothy Stewart in 2016 demonstrated extensive engraving across the surface of the ledge. Engravings included a water fowl, human footprint, an eel, small stingray, two arrows or spears, a human right hand, and a stylised heart (Stewart 2016).

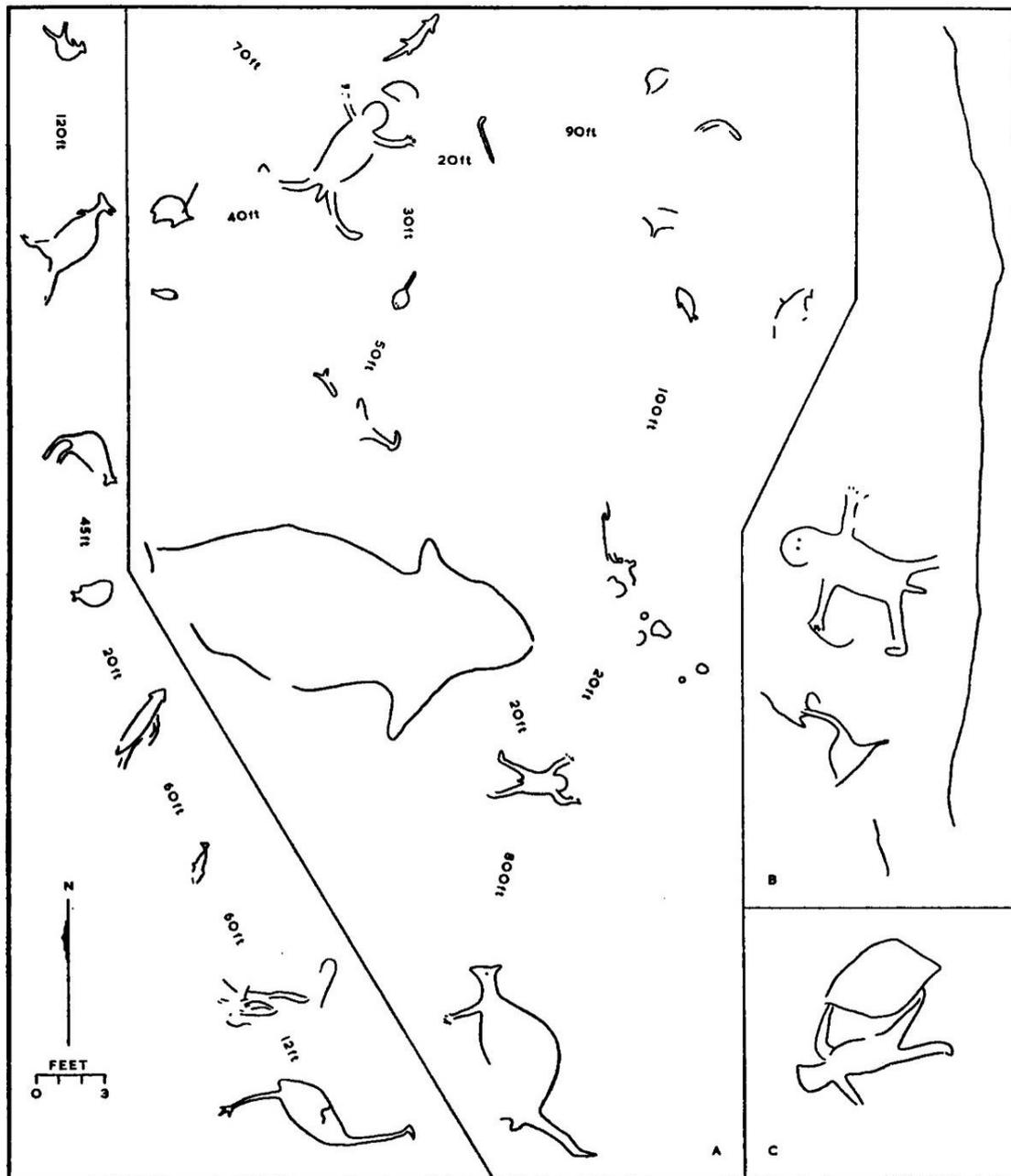


Figure 24. Rock engravings on the Mooney Mooney peninsula identified by Ian Sim and RJ Martin in 1960, on the western foreshore (A), at Big Bay (B) and on the western side of the Pacific Highway (C) (Sim 1963:58).

5.4 AHIMS Data

The Aboriginal Heritage Information Management System (AHIMS) database is managed by Heritage NSW and includes all spatial and compositional information of Aboriginal objects and sites previously recorded and registered, through academic investigation and cultural resource management (see **Appendix 3** for further explanation of site types).

An extensive search of the Heritage NSW AHIMS database was carried out on 5 June 2018 (AHIMS Client Service ID: 349301) and was updated on 29 September 2020 (AHIMS Client Service ID:538980). Both searches encompassed a 3.5km x 4km area centred on the study area. The original search resulted in the identification of 43 sites within the search area, while the updated search identified 52 sites (**Appendix 3**). Six of the nine additional sites were identified during the archaeological survey undertaken for this assessment, and though they are included below in discussion on identified sites in the AHIMS Search Area, we discuss these sites in greater detail in Section 6.2 of the report below. We can confirm that the remaining three additional sites are not within the study area.

Of the 52 recorded sites, one (“Peat Island”, AHIMS #45-6-2757) has been deleted from the AHIMS system, leaving a total of 51 valid sites. The most frequently recorded sites within the search area are shell and artefact sites (41.18%), followed by art sites (37.25%). The sites within the search area are almost equally divided between closed sites (n=25 - shelters with art or both art and potential deposit) and open sites (n=26). Art sites are commonly found in relation to other sites types, such as shell middens, artefact scatters and grinding grooves. Large portions of the study area include intact landforms with potential to contain Aboriginal sites, either in sub-surface contexts or on sandstone platforms and sandstone overhangs (

Table 4, Figure 25).

Mapping of the AHIMS data indicates that there are ten sites registered within the study area, all of which are associated with the foreshore of the Hawkesbury River (**Figure 26**). One of these, engraving site ‘Peat Island’ (#45-6-2757) has been deleted, and one is a duplicate copy of an existing site (#45-6-1837 and #45-6-0476) sites (**Table 5**). The first site is an extensive engraving site on a vast rock platform on the western foreshore of the Mooney Mooney peninsula, that has three separate AHIMS numbers. This site, ‘Spectacle Island, Mooney Mooney’, was first identified by Ian Sim and RJ Martin (#45-6-0476), and was subsequently re-recorded and registered again by Warren Bluff (‘Peats Point’ #45-6-1837 and ‘Peat Island’ #45-6-2757 – the latter now deleted from AHIMS). There appears to be some discrepancy with regards to the actual location of the art site ‘Spectacle Island, Mooney Mooney’ (#45-6-0476) – data from Heritage NSW records the site as being within an area of reclaimed land at Deerubbin Reserve; though earlier reports (Sim 1963:60) place it along the western foreshore, and overlapping descriptions of engraving motifs from these sites suggest they refer to the same site. A second engraving site ‘Point Road Engravings Site 1’ (#45-6-3135) with animal and human motifs was identified on a sandstone ledge in the grounds of the former Mooney Mooney Public School by Artefact Heritage (2014). This site card was subsequently updated by Timothy Stewart in 2016 following the identification of additional engravings across the sandstone ledge. A rockshelter site with midden material was also been recorded on the AHIMS database, in a densely vegetated area on the edge of Cabbage Point (‘Cabbage Point’ #45-6-1836). The remaining six sites were identified as part of this assessment and are discussed in greater detail in Section 6.2 below.

Overall, the site distribution is dominated by the results of academically-driven archaeological research, as well as compliance-based investigations associated with development in the last few decades. A search of the Heritage NSW public and archived Aboriginal Heritage Impact Permit (AHIP) Register reveals that no AHIPs have previously been issued within the study area since 2010.

Table 4. Valid Aboriginal sites in the AHIMS search area, summarised by site feature.

Site feature	Number of sites	% of total
Aboriginal resource and gathering, Aboriginal ceremony and dreaming, Shell	2	3.85
Art (pigment or engraved)	12	23.08
Art (pigment or engraved), Artefact, Grinding groove, Rockshelter, Shell	1	1.92

Art (pigment or engraved), Artefact, Potential archaeological deposit (PAD), Rockshelter, Shell	1	1.92
Art (pigment or engraved), Artefact, Rockshelter, Shell	1	1.92
Art (pigment or engraved), Rockshelter	7	13.46
Artefact	1	1.92
Artefact, Potential archaeological deposit (PAD), Rockshelter, Shell	2	3.85
Artefact, Rockshelter, Shell	9	17.31
Artefact, Shell	10	19.23
Grinding groove	2	3.85
Potential archaeological deposit (PAD)	1	1.92
Rockshelter, Shell	2	3.85
Total	51	100

Table 5. Summary of AHIMS sites within the study area. The six newly recorded sites (as part of this assessment) are discussed below in Section 6.2.

Site ID	Site Name	Datum	Easting	Northing	Site Type	Site Features	Description	Reference	Comments
45-6-0476	Spectacle Island, Mooney Mooney	AGD 1966 MGA zone 56	332667	6287764	Rock Engraving	Art (Pigment or Engraved)	Located on west foreshore, north of the bridge to Peat Island. Flat sandstone surfaces. 31 engravings: 2 men; 1 whale; 3 circles; 4 fish; 2 wallabies; 1 boomerang; 1 club; 1 goanna; 1 skate/ray; 1 speared echidna; 1 emu; 1 eel; 1 kangaroo; 9 indeterminate; 3 partial figures. For scale and relationships see Figure 24. Total length of site approximately 400m.	Sim 1963 [1960]	This site is recorded in an incorrect location on the AHIMS database. Its coordinates should correspond with #45-6-1837 and #45-6-2757, which are duplicate copies of the same site.
45-6-1837	Peat Island	AGD 1966 MGA zone 56	332320	6288780	Rock engraving	Art (Pigment or Engraved)	Located on sandstone platform adjacent to Hawksbury River. Engravings: echidna, snake(?), emu, fish. No measurements given.	Bluff 1989	
45-6-2757	NA	NA	NA	NA	NA	NA	Site information unavailable as site has been deleted from the AHIMS database.	NA	
45-6-1836	Cabbage Point	AGD 1966 MGA zone 56	332250	6288980	Shelter with midden	Artefact, Shell	Located on hill slope. Shelter with midden. Shelter is approximately 11m x 7m. Midden size not recorded.	Bluff 1989	
45-6-3135	Point Road Engravings Site 1	GDA 1994 MGA zone 56	333000	6389089	Rock Engraving	Art (Pigment or Engraved)	Located on sandstone ledge (25m x 8m). 12 engravings: 1 waterfowl (800mm x 800mm); 3 waterfowl chicks (150mm x 200mm; 300mm x 210mm; 180mm x 150mm); 1 long eel(?) (2500mm x 350mm); 1 stingray(?); 1 head in profile(?); 1 human right hand; 1 human right foot (240mm x 90mm); 1 stylized heart (500mm x 550mm); 2 points/arrows (230mm x 80mm). Whole feature is 4m x 2.5m.	Artefact 2014 Stewart 2016	

5.5 Predictive Model

Archaeological predictive models identify, locate and map where archaeological resources are likely to survive. They can apply to small single sites or large areas, and can be simple exercises or enhanced by the use of specially designed GIS based spatial models. This section provides a summary of the predictive model created for the study area. The model for the study area is shown in **Figure 27**, and is based on series of environmental and archaeological variables.

The model identifies corridors of very high archaeological potential in areas of sandstone outcrop; as well as areas of very steep topography where there remains potential for overhangs and rockshelters. Areas of high and moderate potential along the Hawkesbury River foreshore and on the upper slopes / crests and hills are identified as being subject to relatively little disturbance, and mark areas of generally flat, slightly elevated land suitable for past Aboriginal occupation in the form of Aboriginal artefact scatters and isolated objects. In general, these areas correspond to Heritage NSW guidelines and conform with other archaeological models of the region (see above). Areas of low and nil potential have been identified for those locations that have been subjected to substantial ground disturbance. Historical use of the study area has included extensive cutting and levelling works for the construction of the Motorway and its various offramps. This is likely to have caused severe truncation to the underlying soils and any underlying cultural material in this localised area, if present. Further disturbance to underlying soils has occurred from the construction of local roads, dams and urban developments in the form of houses, petrol stations, and other buildings. Reclaimed areas of previously low-lying, waterlogged and frequently inundated land to the south of Peat Island, the western foreshore of the Mooney Mooney peninsula, and Deerubbun Reserve would likely have been less attractive to Aboriginal people in the past.

However, across portions of the study area, historical disturbance appears to have been relatively minor in nature and is unlikely to have entirely removed all evidence of previous Aboriginal occupation (where this was present).

The results of the preceding sections identify the prevailing pattern of Aboriginal site distribution within the broader Central Coast region and in the local Mooney Mooney area:

- The overwhelming majority of sites in the Central Coast “upland plateau” area, and indeed within the study area, are associated with areas of sandstone rock outcrop.
- The most commonly occurring sites are shell midden and artefact sites within rockshelters and overhangs on the Hawkesbury River foreshore; as well as Aboriginal pigmented and engraved art sites within rockshelters and overhangs, or on flat sandstone rock outcrops and platforms.
- Proximity to running water is not necessarily a determining factor for the presence of engraved art and/or grinding grooves across the region. These sites can often be found on the margins of naturally-eroded depressions that fill with water during inclement weather, along water runoff/drainage channels, or from perched water on ridgetops and crests that is released through breaks in the sandstone bedding planes (c.f. Vinnicombe 1980:III/6).
- Artefact scatter sites and isolated finds are somewhat less common in the region; but the latter of these can occur across most landforms, even in disturbed contexts. Proximity to permanent water sources and raw materials are considered important factors in archaeological site distribution and patterning; artefact scatters are larger, more complex and more densely clustered along the foreshore at the confluence of major river systems, rather than along lower order creeks and ephemeral drainage lines.

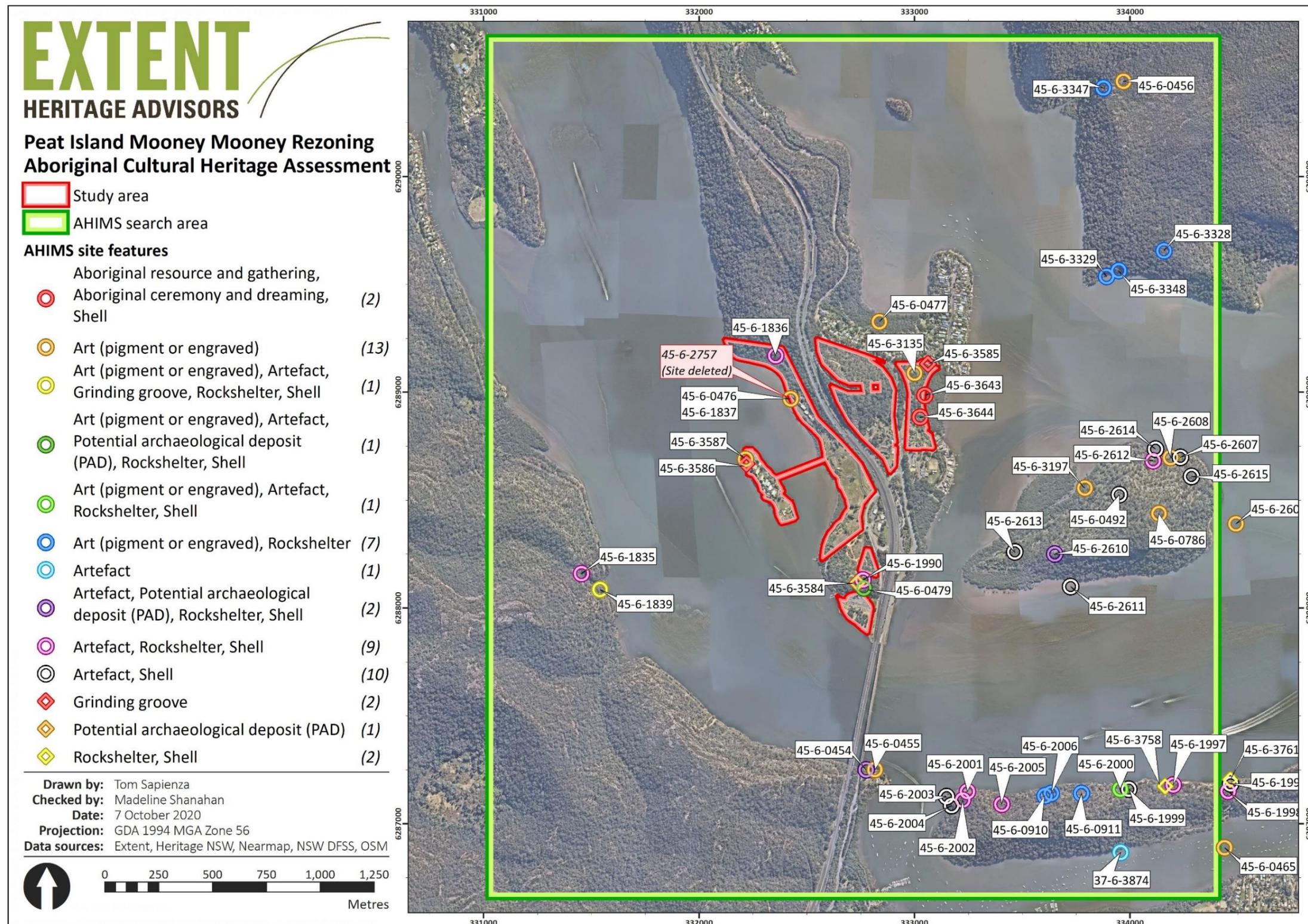


Figure 25. AHIMS sites in the search area. Note that this search includes the six site identified in the archaeological survey detailed in Section 6.2, the six newly identified sites are also included.

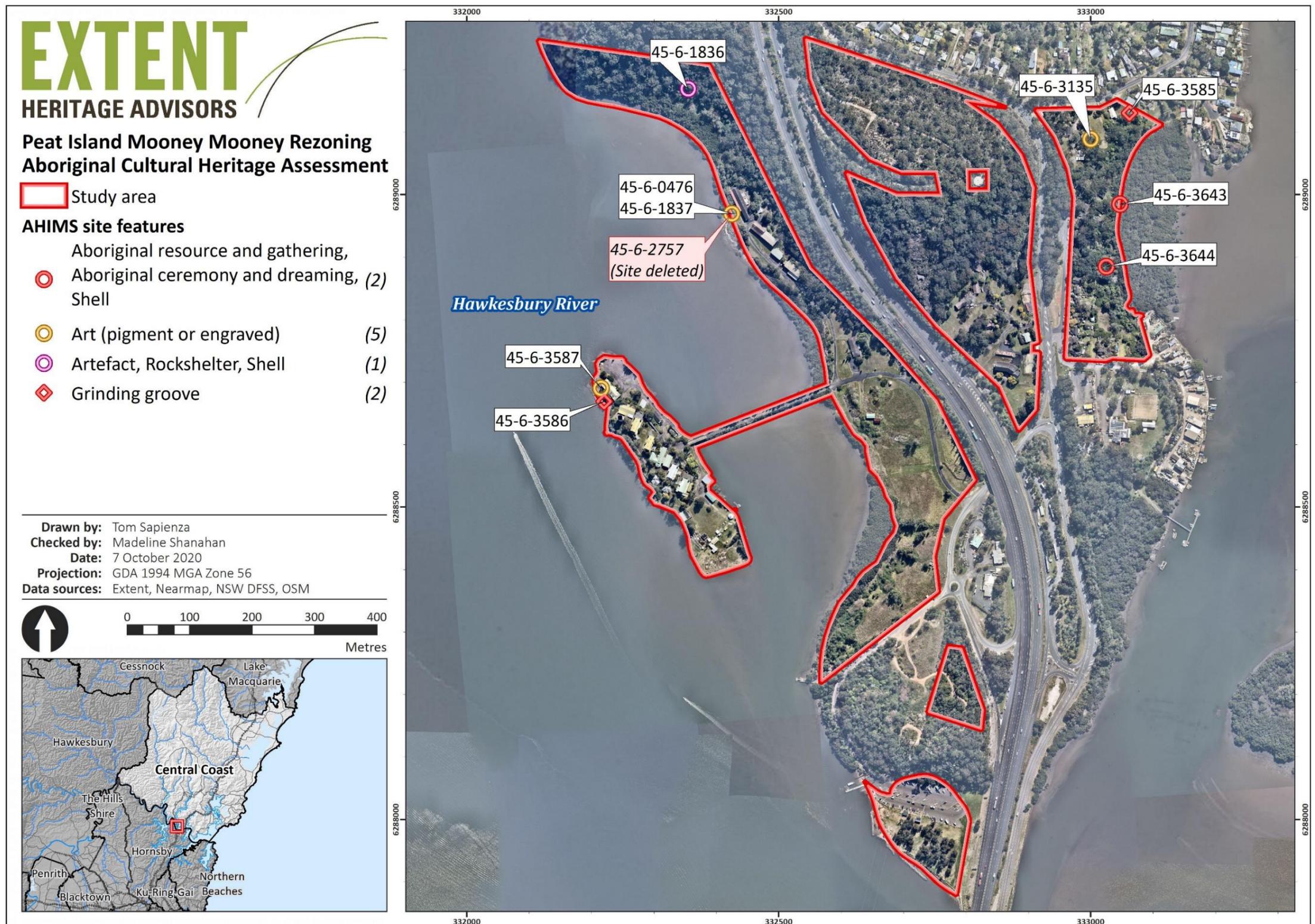


Figure 26. Registered AHIMS sites within the study area. Note #45-6-0476 has been incorrectly entered onto the AHIMS database, and should be located at the same co-ordinates as #45-6-1837, which describes the same site.

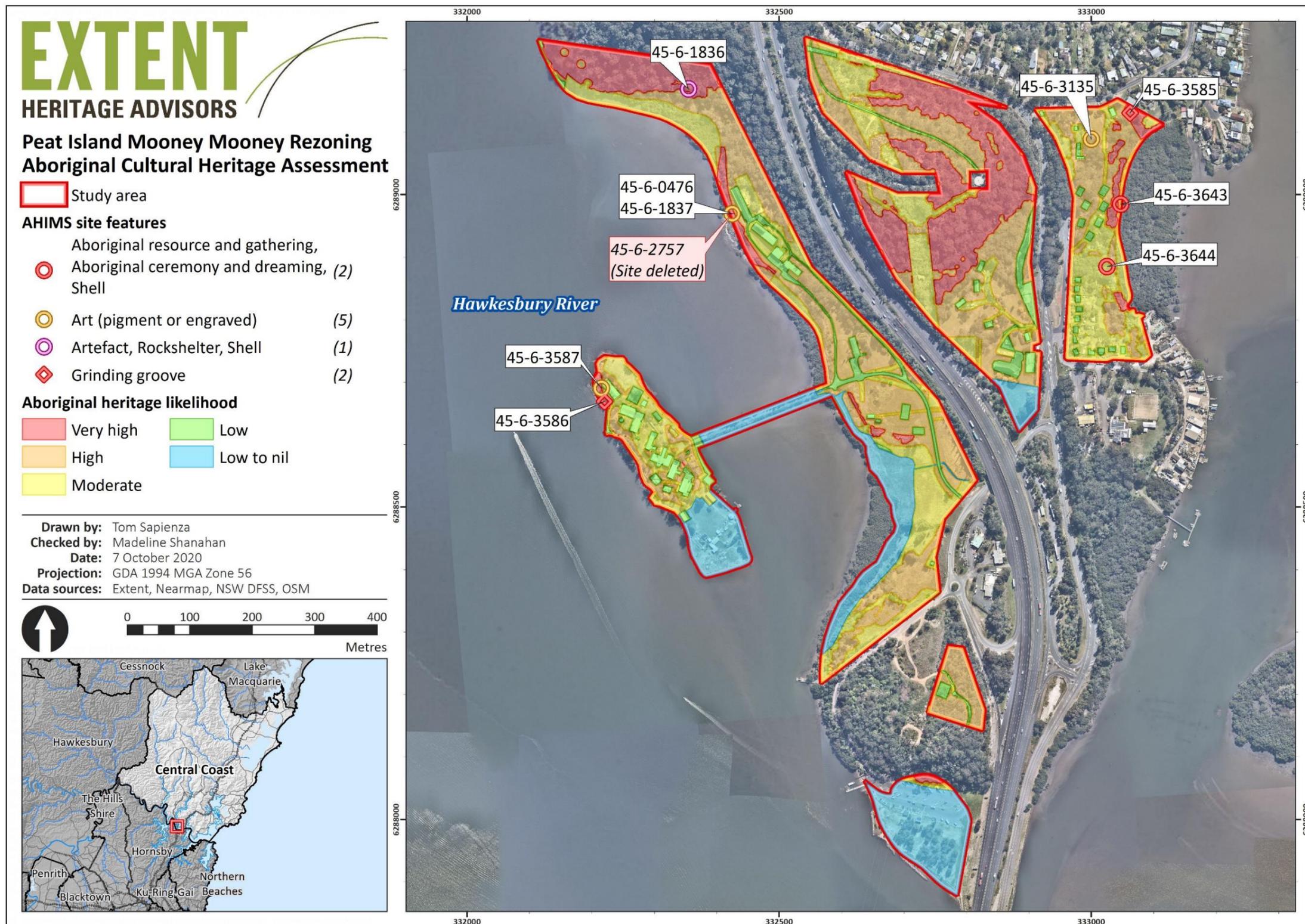


Figure 27. Predictive model of Aboriginal archaeological potential for the study area, based on regional site distribution models, registered sites in the region, and existing historical disturbance.

6 ARCHAEOLOGICAL SURVEY

6.1 Approach and Methodology

The results of the background research indicated that there are recorded Aboriginal archaeological sites within the study area, and that additional sites were also likely to be present. An archaeological survey was therefore undertaken on 19-20 July 2018 by archaeologists Alistair Hobbs and Peter Douglas (Extent Heritage) together with Amanda Shields, Anthony Freeman, and Tim Olliver (Darkinjung Aboriginal Land Council), Tracey Howie (Guringai Tribal Link Aboriginal Corporation), and Sharon Hodgetts. All field investigation was undertaken in accordance with the Heritage NSW's *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010). The main aims of the field investigation were to:

- Verify the results of the desktop review
- Identify and record any extant Aboriginal objects or sites present within the study area, where possible
- Identify any potential deposits or landforms of archaeological interest that may be present within the study area
- Identify evidence of previous and existing disturbance that may have resulted in partial or complete removal of Aboriginal objects that may have been present.

The survey methodology involved the field team (archaeologists and RAP representatives) traversing those parts of the study area that were publicly accessible, and which covered multiple landforms. Priority was given to areas predicted to have very high and high archaeological sensitivity (steeply sloped land likely to contain rock overhangs and elevated, flat areas likely to contain flat sandstone outcrop), registered AHIMS sites within the study area, and areas containing exposed soils. Any areas of good ground exposure were examined for archaeological evidence such as stone artefact scatters or isolated finds. Where identified, ground surfaces and cuttings were also examined to document landscape configuration, soil profiles, soil disturbance, erosion and potential for subsurface archaeological deposits.

During the survey, detailed field notes, GPS coordinates and photographs were taken to document landform units, soil profiles, ground surface visibility and vegetation types. Any areas of ground exposure were examined for archaeological evidence such as historic artefacts and deposits or Aboriginal stone artefacts, as well as for evidence of previous disturbance.

On commencement of the survey, it was found that ground surface visibility across the study area varied considerably. As a result, the following areas were targeted: locations with good ground surface visibility, previously recorded sites, outcropping sandstone, relatively undisturbed locations, and locations in proximity to water. Some sections of the study area were inaccessible due to dense vegetation, and steep scarps; or were not accessed because they formed private land and permission to access these lots had not been obtained.

6.2 Results

The study area was divided into four survey units for the purpose of reporting, and are broadly defined by landform context. Detailed descriptions of the survey units are included in **Table 6** and **Figure 28**.

The first survey unit (Unit 1) encompasses Peat Island and its access bridge, comprising rocky platforms and reclaimed land. The second unit (Unit 2) comprises the lower slopes and western foreshore of Mooney Mooney, extending from Cabbage Point to Deerubbun Reserve/Mooney Mooney Point, with the Pacific Highway as the eastern boundary. The third survey unit (Unit 3) comprises the crest, steep upper slopes and scarps of the central portion of Mooney Mooney, bounded by Pacific Highway in the west and the Old Pacific Highway in the east. The fourth survey unit (Unit 4) comprises the rolling lower slopes and eastern foreshore of Mooney Mooney, bound by Point Road to the north, Kowan Road to the west, and Kowan Street to the south.

Those parts of the study area that were not surveyed included:

- The northmost portion of Unit 2, an area of National Park, and deemed “Constrained Land - not developable”, and is not the subject of the current development (Urbis 2016).
- The northernmost portion of Unit 3, an area of National Park characterised by crest, steep upper slopes and scarp landforms. The relief in this area was too steep to be adequately surveyed during this assessment. However, much of this land has been deemed “Constrained Land - not developable”, and is not the subject of the current development (Urbis 2016).
- The eastern foreshore of Unit 4, which comprised private lots that backed onto impenetrably thick mangrove growth along the eastern foreshore (**Figure 28**).

Table 6. Archaeological survey unit descriptions for the study area.

Survey Unit	Landform(s) Survey Unit Description	Survey Unit Area (m ²)	Visibility (%)	Exposure (%)	Effective Coverage Area (m ²)	Effective Coverage (%)	Number of Newly Identified Sites	Number of Registered Aboriginal Sites
1	Upland plateau; coastal rock platforms; reclaimed land.	37,172	60	5	1,115	3	1	-
2	Coastal rock platforms; rolling rises to steep low hills of the western foreshore; reclaimed land.	146,971	20	15	4,409	3	1	5
3	Crest; steep upper slopes and scarps; with gently undulating hillslopes in southern portion.	111,660	10	10	1,117	1	-	-
4	Rolling lower slopes of the eastern foreshore; coastal rock platforms.	43,443	10	5	217	0.5	1	1
Average		84,882	25	8.75	1,715	1.875	0.75	1.5
Total		339,246	-	-	6,858	-	3	6

The study area encompasses a total area of 339,426m² within the suburb of Mooney Mooney. The study area is partitioned into five separate land areas as divided by the intersecting Pacific Motorway

and Old Pacific Highway, the roadways of which are deliberately excluded from this assessment. The overall study area can be characterised by Peat Island and its rocky platforms, with the low foreshore of the Hawksbury River, and an undulating rolling landscape forming the inland portion, where slopes ranging from moderate to very steep. Due to the amount of relief in the area, the views from high points in the area are picturesque vistas of the Hawksbury River and surrounding areas.

Survey unit 1 is characterised by Peat Island and its reclaimed land bridge, the latter of which is fenced and gated, and covered with a single-lane asphalt roadway (**Plate 1**). The sloped embankments of this land bridge have been planted with vegetation, and the western margins of Peat Island retain some elements of vegetation. Whilst the central portion of Peat Island has been cleared, levelled and built up to form a series of terraces and retaining walls with a series of masonry and metal structures and storage tanks, in contrast its coastal rock platform margins have been subjected to very little disturbance (**Plate 2 – Plate 3**). These rock platforms are frequently inundated by the tidal waters of the Hawkesbury River, and with this, fine-grained quartz sands are deposited on the rock surface. Sparse mangroves grow along the western foreshore in the inter-tidal zone (**Plate 4**). The southern third of the Island comprises reclaimed land.

Survey unit 2 is characterised by low grassy slopes along the western foreshore of Mooney Mooney Point, overlooking Peat Island. Historically, the southern foreshore abutting the Freeway would have comprised a steeply sloped rock scarp and a jetty for Peat's Ferry; but the area further south has since been reclaimed for the construction of a public carpark, a boat ramp and other marine-based recreational facilities, within Deerubbun Reserve (**Plate 5 - Plate 7**). Within the low hill skirted by Peats Ferry Road (of which, only a small proportion along the Highway off-ramp is included in the Planning Proposal study area), the area has been partially cleared of vegetation due to the installation of electricity lines, and a dirt access track meanders up the hill to its crest, where the historical grave of Frances Peat is situated (**Plate 8 and Plate 9**). Ground surface exposures here revealed an eroded soil profile onto clayey sand subsoils, though areas of albeit thin, dark silty sand topsoil were observed in still vegetated areas (**Plate 9**). The central and northern portions of Unit 2 comprise a gently sloped, grassy foreshore bound by Peats Ferry Road, the Old Pacific Highway, and the access road to Peat Island. Exposed sandstone outcrop is visible along the foreshore edge and further inland, with the remainder of the ground surface being covered with low, manicured grasses – small parts of which appear to have been subject to orcharding or market gardening in the past. The slope from east to west is shallow, with a fall of 2-3m in height between the waterline and Peats Ferry Road. The northern portion contains buildings associated with the use of the mainland for hospital facilities (**Plate 12**).

Survey unit 3 is characterised by a densely vegetated hillcrest and associated steep upper slopes and scarps in the northern half; with gently undulating, cleared hillslopes in the southern portion. The southernmost land lot, bound by the Old Pacific Highway, the Pacific Highway and the Pacific Motorway, has been subjected to substantial disturbance from the construction of the Motorway and subsequent construction of a public rest area and toilet facilities, but is Transport for NSW land and is excluded from the Planning Proposal study area (**Plate 13 - Plate 14**). At the foot of the escarpment in the vicinity of Chapel Lane, the area has been cleared of its native vegetation and a number of houses, a chapel and driveways have been constructed (**Plate 15**). Steep escarpment slopes at the northernmost extent of this area limit any further development (**Plate 16**). The northern half of this unit comprises thick, impenetrable native bushland. Two existing transects enabled an inspection of the ground surface in this area, namely a ~50m wide, cleared electricity easement, and a dirt road leading to a water tank at the crest of the hill (**Plate 17 - Plate 18**).

Survey unit 4 is characterised by residential properties on the eastern foreshore of Mooney Mooney, with the Mooney Mooney Public School grounds encompassing a small part of the northern portion. These residential properties were not accessed during the survey; but observations from Kowan Road

suggest that these houses are constructed upon the highest points of each lot, with partially cleared and relatively undeveloped backyards sloping gently down to the water's edge (**Plate 19**). Access along the eastern shoreline was inhibited by thick mangroves. The Mooney Mooney Public School grounds sit atop the highest part of the eastern foreshore, and from Kowan Road, is accessed by a steep walking track. Ground surface exposures along this access track reveal a partially eroded dark clayey sand topsoil unit (**Plate 20**). The school grounds are characterised by weatherboard and masonry buildings (some of which are on brick piers), with sheds, carparking areas and open grassed areas/playing fields (**Plate 21**). The school is located on a series of stepped sandstone ledges and overhangs (**Plate 22** and **Plate 23**). Those parts of the fenceline along the western and eastern boundary of the school are densely vegetated, and ground surface visibility is obscured by low scrambling vegetation and leaf debris (**Plate 24**).

6.2.1 Aboriginal Sites Identified

In conjunction with the results of the desktop research, the survey resulted in the identification of eight Aboriginal archaeological sites (termed here as "complexes") within the study area, for which a total of eleven separate AHIMS numbers have been recorded. Of the eleven recorded AHIMS sites, two separate cards (#45-6-3586 and #45-6-3587) record separate features of the one site complex on Peat Island, three separate cards (#45-6-0476, #45-6-1837 and #45-6-2757) record features of the one site complex of engravings along the western foreshore of Mooney Mooney, one card (#45-6-3584) records four separate rockshelters within the one complex near Deerubbin Reserve, and the remaining five cards (#45-6-1836, #45-6-3135, #45-6-3585, #45-6-3643 and #45-6-3644) record five separate sites (**Table 7** and **Figure 29**).

The survey resulted in the identification of four previously unrecorded Aboriginal archaeological sites, as well as the identification and recording of a new feature (#45-6-3584) within a previously identified site. Of the previously identified sites, only one site, a rockshelter with deposit at Cabbage Point (AHIMS #45-6-1836) was not relocated during the survey. However, no evidence was found to indicate that this site had been removed or destroyed.

During the course of the survey, six Aboriginal site cards were registered on the AHIMS database by the Aboriginal community. These sites comprised the four previously unrecorded sites (one on Peat Island where two features of the same site were recorded separately, #45-6-3586 and #45-6-3587; one within the Mooney Mooney Public School - #45-6-3585, and two rockshelters on the eastern foreshore, #45-6-3643 and #45-6-3644), as well another rockshelter site with deposit (#45-6-3584), which formed part of the previously recorded complex of rockshelters (#45-6-1990 and #45-6-0479), and a grinding groove site within the former Mooney Mooney Public School (#45-6-3585).

Of the eight identified Aboriginal site complexes, one is an engraved art and grinding groove complex (#45-6-3586 and #45-6-3587), located on Peat Island (Unit 1) (**Figure 30**). Three sites are present on the western foreshore (Unit 2), including one rockshelter site with deposit at Cabbage Point (#45-6-1836), a rockshelter complex with deposit and pigmented art on the southern foreshore immediately north of the public carpark and Deerubbin Reserve (#45-6-3584), and an engraved art complex along a sandstone outcrop on the foreshore edge (#45-6-0476, #45-6-1837 and #45-6-2757) (**Figure 31** and **Figure 32**). No sites were identified within Unit 3, and four sites were identified in Unit 4. These comprised an engraved art and grinding groove site (#45-6-3135) and an engraved art site (#45-6-3585), both of which are located within the Mooney Mooney Public School grounds, as well as two rockshelter sites along the eastern foreshore (#45-6-3643 and #45-6-3644) (**Figure 33**).

All of the surface sites were located in areas of good ground surface visibility, where outcropping sandstone was exposed.

Survey Unit 1

Survey Unit 1 comprised Peat Island and its land bridge. No previously identified sites were recorded in this area, but one additional site was recorded (with two features of the same site being recorded separately by the Aboriginal community):

- 45-6-3586 (Peat Island Grinding Groove) This site comprises six grinding grooves in three separate locations (approximately 10m²), on a coastal rock platform on the north western foreshore of Peat Island (**Plate 25** and **Plate 26**). The grinding grooves are located below the high tide mark, and are weathered due to tidal waves from the Hawksbury River. Despite the significant development across Peat Island, this has not significantly impacted the condition of the site (**Plate 27 - Plate 30**). The grinding grooves show signs of natural weathering from tidal waves, but are still clearly visible.
- 45-6-3587 (Peat Island Engraving) This site comprises an engraved art site on a coastal rock platform on the north western foreshore of Peat Island, located some 10m north of AHIMS No. 45-6-3586 (**Plate 31**). The engraving features an oval-shaped motif, approximately 28cm x 18cm (**Plate 32**). As with the adjacent features, the engraving shows signs of natural weathering from tidal waves, but is clearly visible.

For the purposes of Aboriginal cultural heritage management, the entire sandstone outcrop along the western and northern shoreline of Peat Island has been recorded as an Aboriginal complex (**Figure 30**). There remains potential that additional grinding grooves or engraved art may be preserved below the high-water line.

Survey Unit 2

Three sites were identified within Survey Unit 2 – two of which had been previously recorded. One site had duplicate recordings, and for the purposes of Aboriginal cultural heritage management, the original AHIMS recording number has been taken to refer to the entire complex. Another site was recorded as three separate rockshelters; though for the purposes of Aboriginal cultural heritage management the entire rock shelf landform has been reappraised as one complex of rockshelters, and, according to one RAP, should be considered a “cultural landscape”. As part of this survey, additional features within these three sites were registered as separate sites on AHIMS by the Aboriginal community, but the site boundaries have since been refined to accurately reflect the extent of this rockshelter complex.

- 45-6-1836 (Cabbage Point) This site has been described as a rockshelter with midden deposit, but no charcoal or artefacts were observed. At the time of the inspection, the site was described as subject to weathering. The recorded location of the site was not inspected, as survey of this section of the study area was not required.
- 45-6-0476 (Spectacle Island, Mooney Mooney) This site has been registered as multiple duplicate entries, namely #45-6-1837 (Peats Point) and #45-6-2757 (Peat Island, since deleted). The site card records site #45-6-0476 as being within Deerubun Reserve, however inspection confirmed this was in the wrong location, and its coordinates should correspond with 45-6-1837. The site was described as being located on the foreshore of the bay on the western side of Mooney Mooney Point, on a number of flat rock surfaces extending for about a quarter of a mile along the edge of the water (**Plate 33 - Plate 36**). The grooves of these engravings were originally reported as narrow, shallow and very weathered. The condition of these engravings was originally recorded as very poor. The current condition is in line with this assessment (**Plate 37 - Plate 44**).

Some of the engravings could not be relocated, and it is possible they have been weathered away, or are obscured by vegetation. This site extent is illustrated in **Figure 31**.

- Aboriginal Rockshelter Complex” Cultural Landscape encompassing 45-6-1990 (Hawkesbury), 45-6-0479 (Mooney Mooney Point) and 45-6-3584 (Mooney Mooney Shelter/Cultural Landscape) This cultural landscape comprises a series of six rockshelter sites on a three-tiered sandstone shelf located at the southern foreshore, immediately north of the carpark and Deerubbun Reserve, and partially extending into the study area (**Figure 32**, **Plate 45** and **Plate 46**). This recording is intended to acknowledge the relationships between the individual sites in the immediate vicinity, and the overall cultural significance of the landscape. This area would have been considered a desirable location with good access to food, shelter and fresh water, and offers excellent southern visual aspects of the Hawksbury River. Previously registered and newly identified sites as part of this landscape are as follows:
 - Site 45-6-0479 has been recorded as a rockshelter with a charcoal motif and disturbed midden deposit (**Plate 47** and **Plate 48**). Shell midden material comprising oyster (*Ostreidae*) and periwinkle (*Littorinidae*) were observed during the survey, but the charcoal on the west wall of the shelter could not be discerned (**Plate 49**). The site is currently in good overall condition with little weathering, despite the exposed archaeological material. **It is not within the amended Planning Proposal area.**
 - Site 45-6-1990 has been recorded as a small rockshelter with disturbed midden deposit (**Plate 50** and **Plate 51**). Shell midden material comprising oyster (*Ostreidae*), periwinkle (*Littorinidae*) and Sydney cockle (*Anadara trapezia*) were observed during the survey (**Plate 52**). The shelter is currently in good condition with little weathering; though the presence of modern graffiti on the shelter walls confirms that the shelter is subject to visitation from the public, and has seen increased disturbance since the site was initially recorded. **It is not within the amended Planning Proposal area.**
 - Site 45-6-3584 was recorded during the survey by the Aboriginal community, and comprises four small rockshelters with midden deposit (**Plate 53 - Plate 56**). These rockshelters are adjacent to the cleared electrical easement. Some shell material was observed on the floor of these rockshelters, but in all instances the majority of the ground surface was obscured by leaf litter. It was considered that there was high potential for subsurface deposits to be present in all identified rockshelters.

Survey Unit 3

No previously recorded or additional sites were identified within Survey Unit 3.

Survey Unit 4

Four sites were identified in Survey Unit 4; one that had been previously recorded, and three additional sites (**Figure 33**):

- 45-6-3135 (Point Road Engravings Site 1) This site was re-identified in the location as recorded in AHIMS, on a broad sandstone shelf within the school grounds (**Plate 57** and **Plate 58**). It comprises an engraving site with ten engraved motifs. These motifs included a waterfowl and three chicks, a large eel, a small stingray, a human right foot, a head in profile, a human right hand, and stylised heart (**Plate 59 - Plate 62**). All of these motifs were relocated during the site

visit. The condition of the site appeared to be similar to the condition recorded in the site card, whereby the site is subjected to weathering, but visibility of each motif was good.

- 45-6-3585 (Mooney Mooney Public School) This site comprises four grinding grooves on a large sandstone platform approximately 75m northeast of 45-6-3135 (**Plate 63**). The dimensions of the grinding grooves average approximately 25cm in length and 15cm in width (**Plate 64 - Plate 66**). The area around the site is heavily vegetated and weathered.
- 45-6-3643 (Mooney-Kowan 1) This site comprises a rockshelter with scattered shell, located in an area of steep sandstone relief above the mangrove line. The floor of the rockshelter was heavily obscured by grass, and the location is overgrown with vegetation making access difficult (**Plate 67 and Plate 69**).
- 45-6-3644 (Mooney-Kowan 2) This site comprises a low rockshelter with scattered shell, located in an area of steep sandstone relief above the mangrove line and some 100m south of #45-6-3643. Shell fragments observed included worn fragments of *Anadara Trapezia* and *Saccostrea* spp (**Plate 68 and Plate 70**). The site is currently in good overall condition with little weathering, despite the exposed archaeological material.

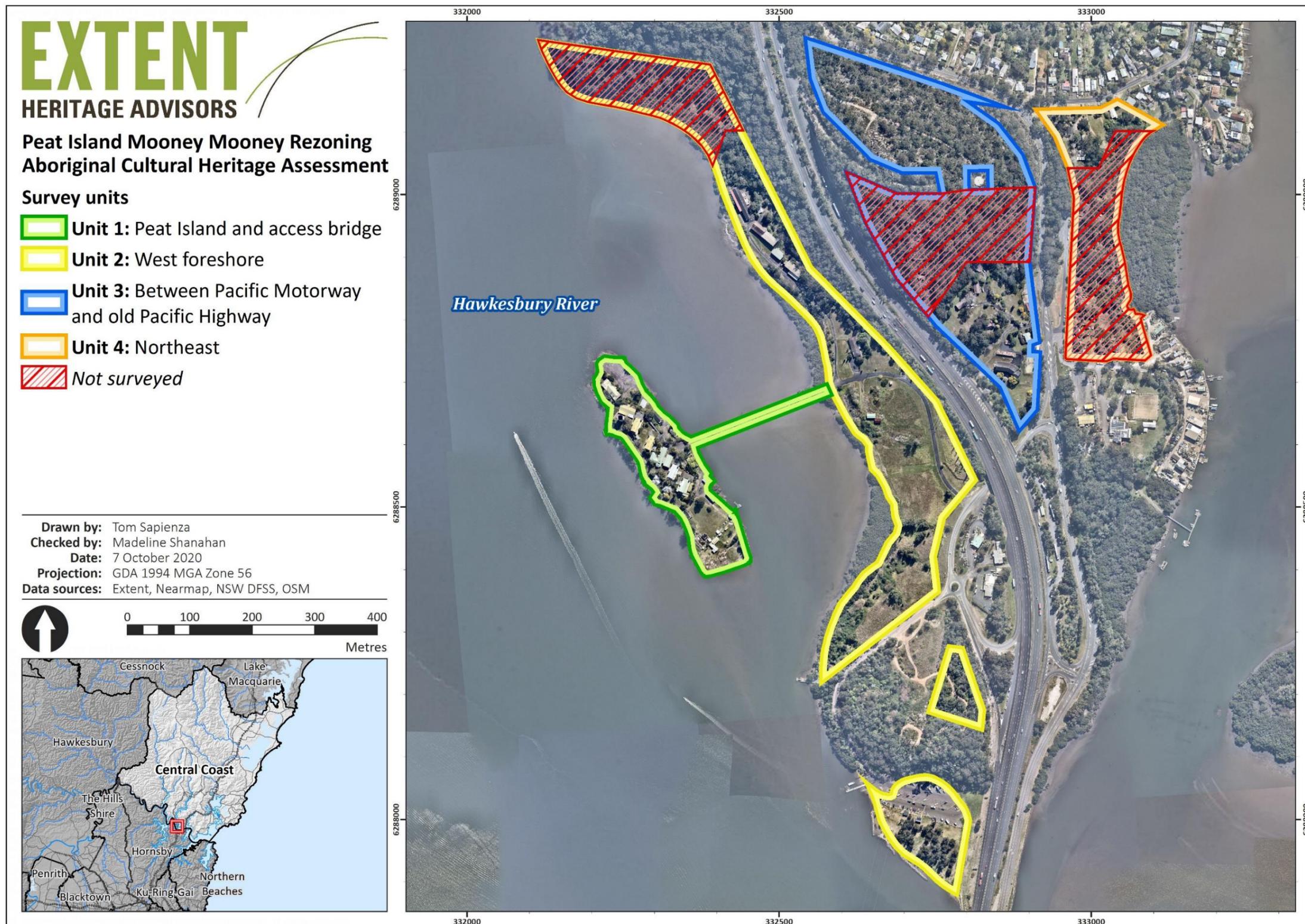


Figure 28. Survey units and areas not surveyed during the current assessment.



Plate 1. Reclaimed land forming access bridge to Peat Island, Unit 1, view west.



Plate 2. Coastal rock platform in inter-tidal zone along Peat Island foreshore, Unit 1, view south.

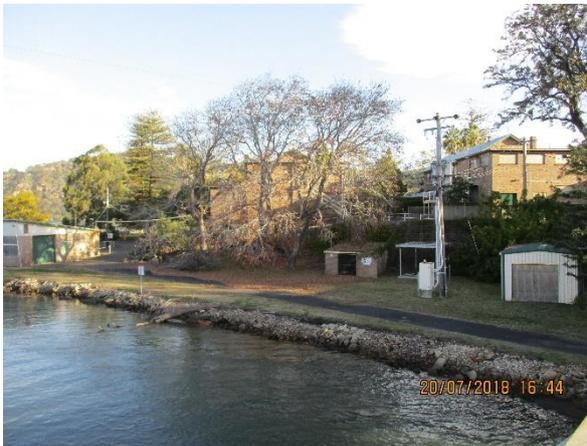


Plate 3. Cleared, levelled and developed land on eastern foreshore of Peat Island, Unit 1, view south.



Plate 4. Sparse mangrove growth on western foreshore of Peat Island, Unit 1, view south.



Plate 5. Natural rock scarp foreshore immediately north of Deerubun Reserve, Unit 2, view southeast.



Plate 6. Public carpark on reclaimed land immediately north of Deerubun Reserve, Unit 2, southeast.



Plate 7. Landscaped recreation area on reclaimed land in Deerubbun Reserve, Unit 2, view north.



Plate 8. Cleared electrical easement at crest of low hill off Peats Ferry Road, Unit 2, view southwest.



Plate 9. Dirt access track meandering to low hill crest, Unit 2, view southwest.



Plate 10. Gently sloped, grassy foreshore with exposed sandstone outcrop, Unit 2, view west.



Plate 11. Partially eroded sandstone outcrop along western foreshore, Unit 2, view southeast.



Plate 12. Sloped and vegetated western foreshore, showing existing buildings and services (water pipes), Unit 2, view northwest.



Plate 13. Land cleared for road bound by Pacific Motorway and Pacific Highway, Unit 3, view south.



Plate 14. Public rest area and toilet facilities along Pacific Motorway, Unit 3, view south.



Plate 15. Cleared and developed lower slopes near Chapel Lane, Unit 3, view southeast.



Plate 16. Steep, heavily vegetated escarpment in northern half of Unit 3, view north.



Plate 17. Cleared electricity easement in northern half of Unit 3, with views toward Brooklyn, view southeast.



Plate 18. Cleared, eroded access track to water tank, Unit 3, view southeast.



Plate 19. Residential properties on Kowan Road along the eastern foreshore, Unit 4, view east.



Plate 20. Access track from Kowan Road to Mooney Mooney Public School, with dense vegetation and partially eroded topsoil, Unit 4, view north.



Plate 21. School buildings and recreation areas, Unit 4, view southeast.



Plate 22. Exposed sandstone ledge in school grounds, Unit 4, view northwest.



Plate 23. Sandstone outcropping in school grounds, Unit 4, view southeast.



Plate 24. Sandstone outcropping partially obscured by vegetation, Unit 4, view northwest.

Table 7. Aboriginal archaeological sites identified within the study area. All coordinates are now given in GDA 1994/ MGA Zone 56.

Unit	AHIMS #	Name	Context	Co-ordinates (GDA 1994)	Site Type, Features	Description	Comment
1	45-6-3586	Peat Island Grinding Groove	Coastal rock platform on water's edge	332220 E 6288669 N	Open Grinding Grooves	Six grinding grooves. Located in three separate locations (approximately 10m ²), on a coastal rock platform on the north western foreshore of Peat Island. Measuring 25x10cm, 26x9cm, 12x5cm, 14x5cm, 65x10cm and 20x7cm. The grooves show signs of natural weathering and erosion from tidal waves, but are still clearly visible. There remains potential that additional features may be preserved below the high-water line.	The entire sandstone outcrop along the western and northern shoreline of Peat Island has been recorded as an Aboriginal site; encompassing both #45-6-3586 and #45-6-3587. The site boundary is shown in Figure 30 .
1	45-6-3587	Peat Island Engraving	Coastal rock platform on water's edge	332215 E 6288690 N	Open Art (Pigment or Engraved)	Engraved art site. Located on a coastal rock platform on the north western foreshore of Peat Island, some 10m north of AHIMS No. 45-6-3586. The engraving features an oval-shaped motif, measuring 28cm x 18cm. The engraving shows signs of natural weathering from tidal waves, but is clearly visible. There remains potential that additional features may be preserved below the high-water line.	
2	45-6-1836	Cabbage Point	Scarp <50m from Hawkesbury River	332355 E 6289170 N	Closed Rockshelter with Deposit	Shelter with midden deposit. Location not surveyed.	The site is shown in Figure 29 .
2	45-6-0476*	Spectacle Island, Mooney Mooney	Coastal rock platform on water's edge	332425 E 6288970 N ###	Open Art (Pigment or Engraved)	Engraved art site containing 34 engraved motifs. Located on a coastal rock platform that extends approximately 550m along the foreshore of Mooney Mooney Point. Motifs included 4 fish, 3 circles, 3 partial figures, 2 men, 2 wallabies, a whale, a boomerang, a club, a goanna, a stingray, a speared echidna, an emu, an eel, a kangaroo and 9 indeterminate motifs. Of these, only one man, a goanna, a speared echidna, a stingray, a whale, a kangaroo and a group of unidentified motifs could be relocated. Originally reported as narrow, shallow, very weathered and in very poor condition. The condition of these engravings is unchanged.	The entire sandstone outcrop along the western foreshore of Mooney Mooney has been recorded as part of this site. Its site boundary is illustrated in Figure 31 .

Unit	AHIMS #	Name	Context	Co-ordinates (GDA 1994)	Site Type, Features	Description	Comment
2	45-6-1837	Peats Point	Coastal rock platform on water's edge	332425 E 6288970 N	Open Art (Pigment or Engraved)	Engraved art site containing 4(?) engraved motifs. Located on "sandstone platform adjacent to Hawkesbury River" Identified motifs an echidna, a snake(?) (eel?), an emu, and a fish. No measurements given. Described as being "Badly weathered".	
2	45-6-2757	Peat Island	-	-	-	This site card has been deleted and no further information available.	
2	45-6-3584	Mooney Mooney Shelter/ Cultural Landscape	Scarp 50m from original shoreline of Hawkesbury River	332735 E 6288116 N	Closed Rockshelter with Deposit	Four rockshelters with midden deposit. Located on sandstone shelf at the southern foreshore of Mooney Mooney Point. 1. 4m wide by 2m deep and 1m high, containing disturbed midden material and European debris. 2. Overhang largely collapsed. Remaining cavity 4m wide by 1m deep and 1m high, with dispersed shell midden material, highly disturbed, and with low subsurface archaeological potential. 3. 2m wide by 2m deep and 1m high, containing disturbed midden material and European debris. 4. 12m wide by 4m deep and 3.5m high shelter, high degree of rockfall obscuring ground surface. One piece of shell fragment observed.	This complex of six rockshelter sites (including two additional sites that are outside of the Planning Proposal area) was registered as a new "Aboriginal Rockshelter Complex/Cultural Landscape" by the Aboriginal community (#45-6-3584). The cultural landscape encompasses a vast, three-tiered sandstone shelf on the southern foreshore. Its site boundary is illustrated in Figure 32 .
4	45-6-3135	Point Road Engravings Site 1	Sandstone shelf 75m from original shoreline of Mooney Mooney Ck	333000 E 6289089 N	Open Art (Pigment or Engraved)	Engraved art site containing 12 engraved motifs. Located on a sandstone shelf within the school grounds, next to the playing oval. Motifs included four waterfowl, an eel with two arrows (speared?), a stingray, a human right foot, a human right hand, a head in profile, and a stylised heart. All engraved motifs were observed. Site is subjected to weathering, but visibility of each motif was good.	The site is shown in Figure 33 .
4	45-6-3585	Mooney Mooney Public School	Sandstone shelf 50m from original shoreline of	333062 E 6289131 N	Open Grinding Grooves	Four grinding grooves. Located on sandstone shelf 75m northeast of 45-6-3135. Measuring 18x7cm, 15x5cm, 20x7cm and 12x4cm.	The site is shown in Figure 33 .

Unit	AHIMS #	Name	Context	Co-ordinates (GDA 1994)	Site Type, Features	Description	Comment
			Mooney Mooney Ck			The area around the site is heavily vegetated and weathered, and there remains potential that additional features may be preserved beneath the vegetation.	
4	45-6-3643	Mooney-Kowan 1	Sandstone overhang above mangrove, overlooking Mooney Mooney Ck	333047 E 6288985 N	Closed Rockshelter with Deposit	Rockshelter with midden deposit. Located on in an area of steep sandstone relief above the mangrove line, along eastern foreshore. Scattered shell material observed. The floor of the rockshelter was heavily obscured by grass, and the location is overgrown with vegetation making access difficult.	The site is shown in Figure 33.
4	45-6-3644	Mooney-Kowan 2	Sandstone overhang above mangrove, overlooking Mooney Mooney Ck	333025 E 6288885 N	Closed Rockshelter with Deposit	Rockshelter with midden deposit. Located in an area of steep sandstone relief above the mangrove line and some 100m south of 45-6-3643. Shell fragments observed included worn fragments of <i>Anadara Trapezia</i> and <i>Saccostrea</i> spp. The site is currently in good overall condition with little weathering, despite the exposed archaeological material.	The site is shown in Figure 33.

+ This site has been registered as multiple duplicate entries, namely #45-6-1837 and #45-6-2757 (since deleted).

Coordinates in AHIMS place this site within Deerubbun Reserve, however inspection confirms these coordinates are incorrect. Its location should correspond with 45-6-1837.

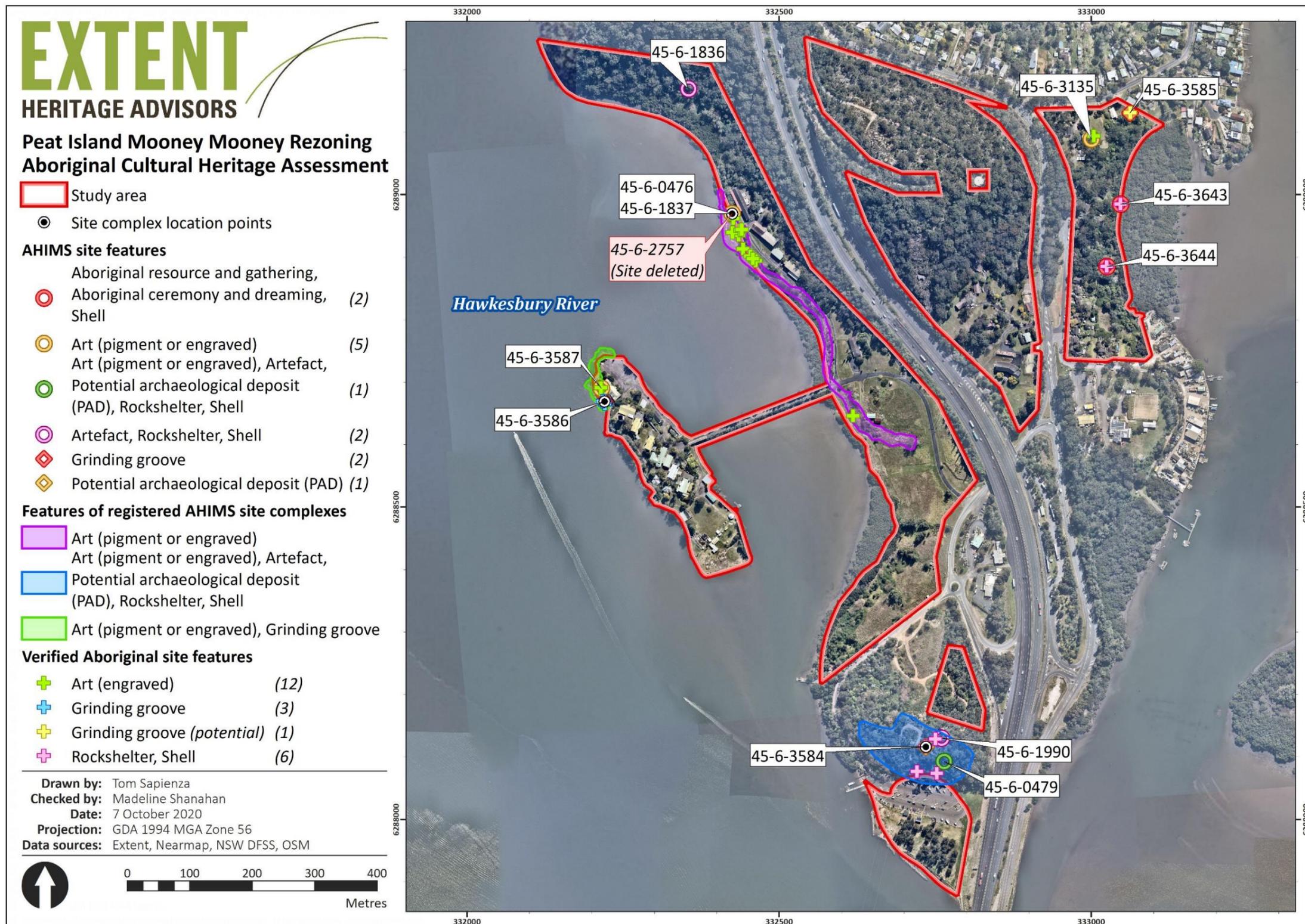


Figure 29. Identified Aboriginal sites and complexes within the study area.



Figure 30. Survey Unit 1: Identified Aboriginal archaeological sites.

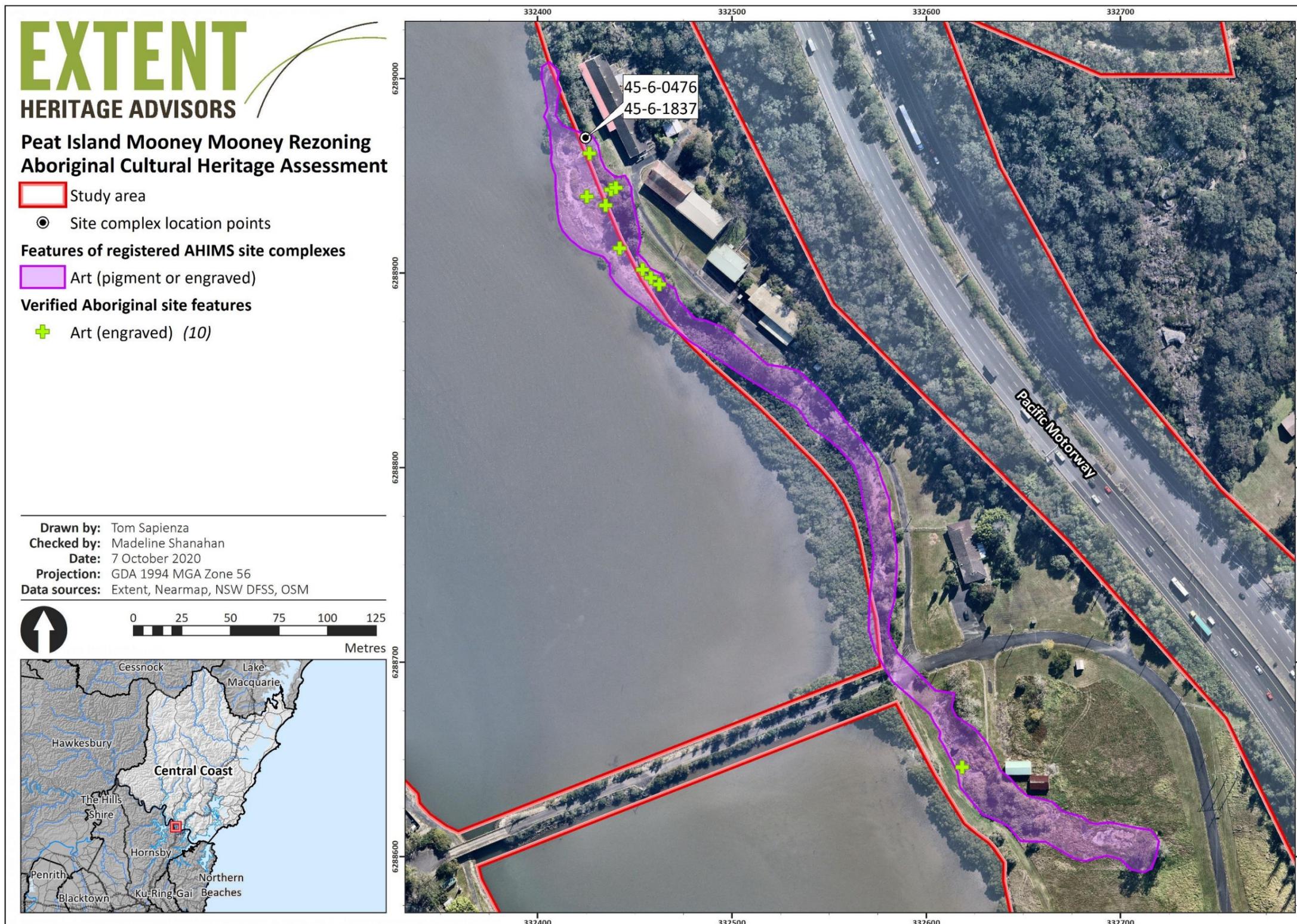


Figure 31. Detail Aboriginal engraved art site complex extent, Survey Unit 2.

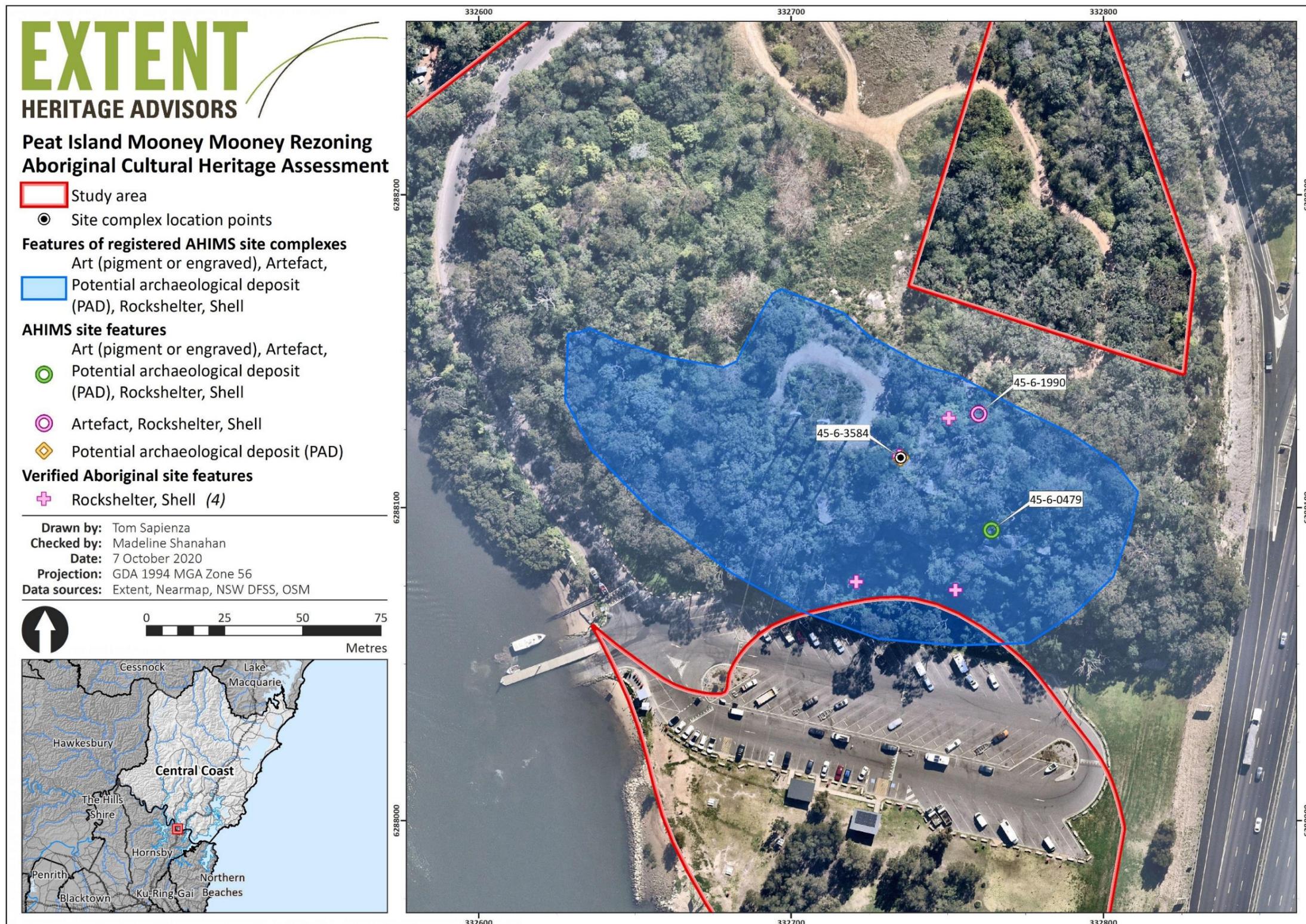


Figure 32. Detail Aboriginal Rockshelter Complex/Cultural Landscape extent, Survey Unit 2.

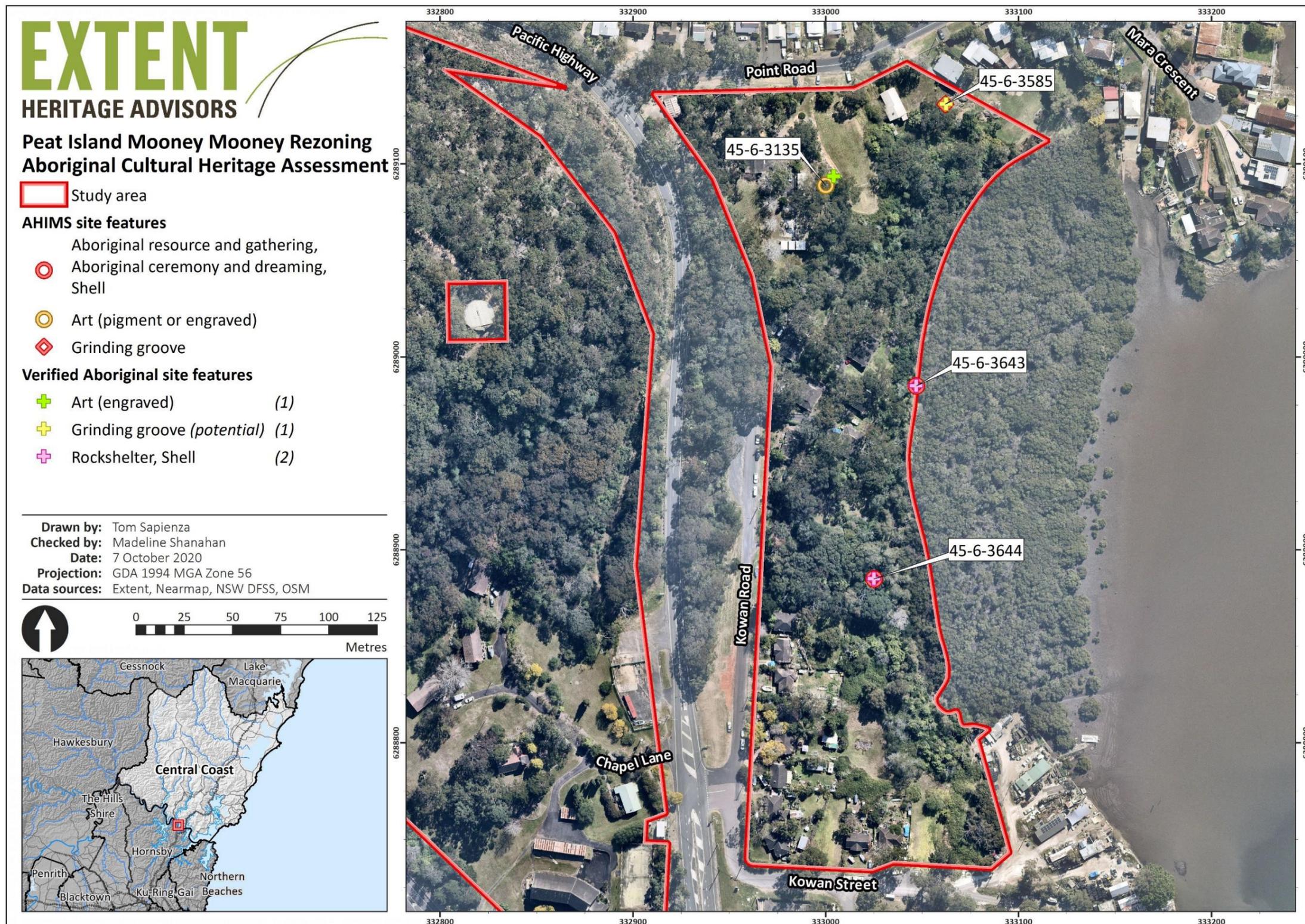


Figure 33. Survey Unit 4: Identified Aboriginal archaeological sites. Note the verified rockshelter sites comprise #45-6-3643 and #45-6-3644, and were recorded on AHIMS during this project.



Plate 25. Aboriginal engraving and grinding groove complex on Peat Island (#45-6-3587), view south.



Plate 26. Aboriginal engraving and grinding groove complex on Peat Island (#45-6-3587), view north.



Plate 27. Detail grinding groove, within engraving and grinding groove complex on Peat Island.



Plate 28. Detail grinding groove, within engraving and grinding groove complex on Peat Island.



Plate 29. Detail grinding groove, within engraving and grinding groove complex on Peat Island.



Plate 30. Detail grinding groove, within engraving and grinding groove complex on Peat Island.



Plate 31. Aboriginal engraving and grinding groove complex on Peat Island (#45-6-3587), view east.



Plate 32. Detail oval shaped engraving, within engraving and grinding groove complex on Peat Island.



Plate 33. Aboriginal engraving complex along western foreshore of Mooney Mooney (#45-6-0476), view south.



Plate 34. Aboriginal engraving complex along western foreshore of Mooney Mooney (#45-6-0476), view north.



Plate 35. Aboriginal engraving complex along western foreshore of Mooney Mooney (#45-6-0476), view south.



Plate 36. Aboriginal engraving complex along western foreshore of Mooney Mooney near substation (#45-6-0476), view east.



Plate 37. Detail of Aboriginal engraving within complex along foreshore (#45-6-0476), showing echidna motif.



Plate 38. Detail of Aboriginal engraving within complex along foreshore (#45-6-0476), showing eel motif.



Plate 39. Detail of Aboriginal engraving within complex along foreshore (#45-6-0476), showing human man motif.



Plate 40. Detail of Aboriginal engraving within complex along foreshore (#45-6-0476), showing stingray motif.



Plate 41. Detail of Aboriginal engraving of an unidentified motif (?) within complex along foreshore (#45-6-0476).



Plate 42. Detail of Aboriginal engraving within complex along foreshore (#45-6-0476), showing whale motif.



Plate 43. Detail of Aboriginal engraving within complex along foreshore (#45-6-0476), showing whale motif.



Plate 44. Detail of Aboriginal engraving within complex along foreshore, near substation (#45-6-0476), showing kangaroo motif.



Plate 45. View towards hilltop containing Aboriginal rockshelter complex/ cultural landscape (#45-6-3584), view southeast.



Plate 46. View south from hilltop containing Aboriginal rockshelter complex/ cultural landscape (#45-6-3584) to Hawksbury River and Mooney Mooney Bridge.



Plate 47. Previously registered rockshelter (#45-6-0479) within rockshelter complex, view northeast.



Plate 48. Previously registered rockshelter (#45-6-0479) within rockshelter complex, view west.



Plate 49. Detail of Aboriginal shell midden deposit within rockshelter (#45-6-0479).



Plate 50. Previously registered rockshelter (#45-6-1990) within rockshelter complex, view northeast.



Plate 51. Previously registered rockshelter (#45-6-1990) within rockshelter complex, view southwest.



Plate 52. Detail of Aboriginal shell midden deposit within rockshelter (#45-6-1990).



Plate 53. Newly identified rockshelter within rockshelter complex (#45-6-3584), view north.



Plate 54. Newly identified rockshelter within rockshelter complex (#45-6-3584), view north.



Plate 55. Newly identified rockshelter within rockshelter complex (#45-6-3584), view south.



Plate 56. Newly identified rockshelter within rockshelter complex (#45-6-3584), view northeast.



Plate 57. Aboriginal engraving site within public school grounds (#45-6-3135), view west.



Plate 58. Aboriginal engraving site within public school grounds (#45-6-3135), view south.



Plate 59. Detail of Aboriginal engraving within public school grounds (#45-6-3135), showing waterfowl/bird motifs.



Plate 60. Detail of Aboriginal engraving within public school grounds (#45-6-3135), showing eel, human hand and foot, and stingray motifs.



Plate 61. Detail of Aboriginal engraving within public school grounds (#45-6-3135), showing human foot and head in profile (?) motifs.



Plate 62. Detail of Aboriginal engraving within public school grounds (#45-6-3135), showing hand motif.



Plate 63. Aboriginal grinding groove site within public school grounds (#45-6-3585), view south.



Plate 64. Detail grinding groove within public school grounds (#45-6-3584).



Plate 65. Detail grinding groove within public school grounds (#45-6-3584).



Plate 66. Detail grinding groove within public school grounds (#45-6-3584).



Plate 67. Aboriginal rockshelter site along eastern foreshore (#45-6-3643), view northwest.



Plate 68. Aboriginal rockshelter site along eastern foreshore (#45-6-3644), view northwest.



Plate 69. Detail of Aboriginal shell midden material within rockshelter (#45-6-3643).



Plate 70. Detail of Aboriginal shell midden material within rockshelter (#45-6-3644).

7 THE ARCHAEOLOGICAL AND CULTURAL RESOURCE

The documentary research and archaeological survey resulted in the identification of eight Aboriginal archaeological sites within the study area (**Table 7** and **Figure 29**). This total includes three Aboriginal site complexes: (1) an Aboriginal engraving and grinding groove site on a sandstone platform on Peat Island (consisting of two separate AHIMS recordings, #45-6-3586 and #45-6-3587); (2) an Aboriginal engraving site on a vast sandstone outcrop along the western Mooney Mooney foreshore (with three separate AHIMS recordings #45-6-0476, #45-6-1837 and #45-6-2757, the latter now deleted); and (3) an Aboriginal rockshelter complex comprising six separate rockshelters with midden deposit, and located on a three-tiered sandstone shelf along the southern Mooney Mooney foreshore (with three separate AHIMS recordings #45-6-0479, #45-6-1990 and #45-6-3584). A further five Aboriginal sites have been recorded within the study area, including a rockshelter at Cabbage Point (#45-6-1836; not identified during the survey), as well as an Aboriginal engraving site (#45-6-3135) and grinding groove site (#45-6-3585) within the Mooney Mooney public school grounds and two rockshelter sites with midden material above the mangrove line on the eastern foreshore (#45-6-3643 and #45-6-3644).

Of these eight sites, the predominant site features identified were Aboriginal rockshelters with shell midden deposit and pigmented art, as well as Aboriginal engraved art sites and grinding grooves. All of the rockshelter sites have been previously disturbed to some extent by historical use. However, in all cases, this is unlikely to have resulted in the removal of all archaeological deposit (if present). The remaining engraved art sites and grinding groove sites are subject to disturbance from public access as well as the effects of weathering, and it was noted that additional engraved art sites/grinding groove sites may be present in areas of sandstone outcrop that are presently obscured by vegetation coverage or tidal conditions.

Whilst historical development of the study area has resulted in extensive disturbance from the construction of the Pacific Motorway, this disturbance has been highly localised, and in most areas is unlikely to have completely destroyed any potential artefact-bearing deposits. Market gardening and orcharding activities along the foreshore, along with the construction of residential housing and buildings associated with the Peat Island hospital facilities, are likely to have caused disturbance to the top 300-400 mm of the soil profile.

The background research and survey are unlikely to have resulted in the identification of all Aboriginal archaeological sites in the study area, for the following reasons:

- Most of the identified sites are located on exposed sandstone outcrops, where ground surface visibility was generally good. Where sandstone exposures were not present, ground surface visibility across the remainder of the study area was low, and the survey is therefore unlikely to have identified all Aboriginal objects that are present on the ground surface.
- No subsurface archaeological investigation has been undertaken within the study area.

Mapping of archaeological potential has therefore been undertaken, in order to identify the potential sensitivity of the study area (**Figure 34**). Identification of sensitivity has been based on proximity to water, landforms and geological formation, and existing disturbance. In relation to landform, Heritage NSW (DECCW 2010: 12) has suggested a number of landscape features that indicate the likely existence of Aboriginal objects:

- Within 200 m of water
- Within a sand dune system
- On a ridge top, ridge line or headland
- Within 200 m below or above a cliff face
- Within 20 m of or in a cave, rockshelter or cave mouth.

There are no sand dune systems present in the vicinity of the study area, though the remaining features are broadly consistent with the results of the previous archaeological investigations (survey) in the area, and the predictive model (see **Section 5.5** and **Figure 27**). The basis for the sensitivity rankings is outlined in **Table 8**. In general, the sensitivity identified across the site appears consistent with the results of the investigation: higher potential is associated closely with areas of exposed sandstone and very steep relief to capture potential Aboriginal engraving and grinding groove sites as well as potential rockshelter sites; with relatively flat but elevated areas in close proximity to the foreshore also considered to be of higher potential for containing Aboriginal stone objects. Reclaimed areas, as well as those areas that have been subject to impacts from the construction of roadways and other buildings, area considered to have lower potential to retain evidence for Aboriginal occupation.

Table 8. Ranking of sensitivity rationale for archaeological potential.

Sensitivity	Feature	Explanation
Higher	Within 200 m of water	A slightly higher ranking was given to major water courses, though it is recognised that the entire study area is within 200 m of water.
	Underlying geology	There is a high likelihood of outcropping sandstone, so there is a correspondingly high likelihood of site types that tend to be associated, such as rockshelters, grinding grooves, and rock art.
	Slope	Very steep slopes were given a higher ranking, in order to capture cliffs, which are a suitable location for rockshelters and possibly also rock art. A higher ranking was also given to level and gently inclined areas, as these have been identified as suitable occupation locations. A slightly lower ranking was given to moderately inclined and steep slopes (less than 40°), on the assumption that these areas would be less suitable for occupation.
Lower	Pacific Motorway construction footprint (including approaches)	A lower ranking was given to areas where previous development is likely to have resulted in the removal of most or all of the upper soil profile, within which any archaeological deposits would have been contained.
	Road and water infrastructure, and associated (stormwater) services	
	Housing and other buildings	

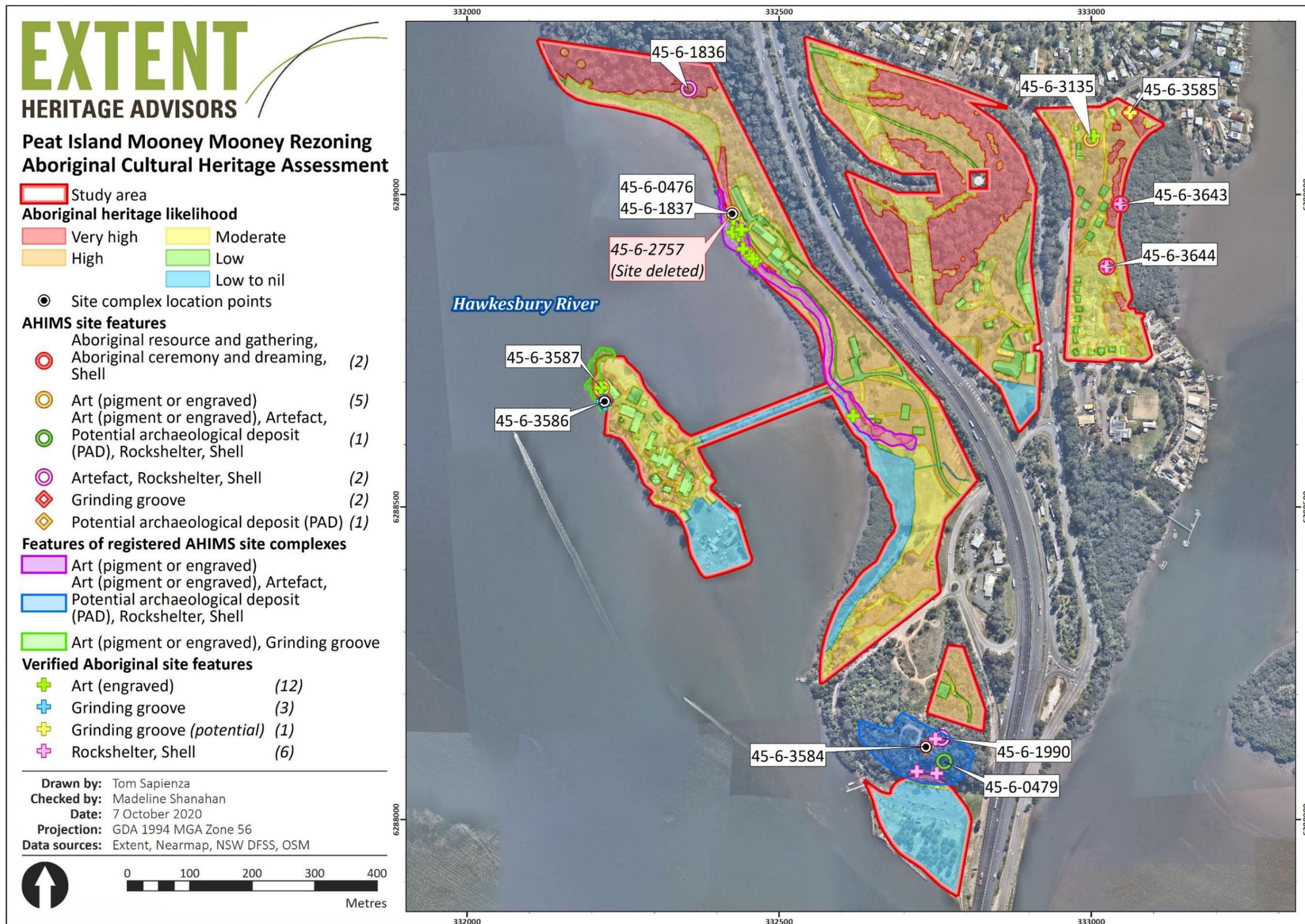


Figure 34. Aboriginal archaeological sensitivity of the study area.

8 PRELIMINARY SIGNIFICANCE ASSESSMENT

The management of heritage places is based on an understanding of the values of those places. The framework and criteria for significance assessment are discussed in detail in **Appendix 4**. Heritage NSW specifies that heritage significance should be assessed according to four criteria, as outlined in the Burra Charter; social/cultural or spiritual, historic, scientific (archaeological) and aesthetic (OEH 2011: 7; Australia ICOMOS 2013). The significance of the 6 sites within the study area is summarised in **Table 9**.

Assessment of social or cultural value is based on the views of the relevant Aboriginal community. Where previous site records have assessed social or cultural value, this has been included. In general, preliminary comments received from the RAPs over the course of the project indicate that all sites are considered to be of social/cultural significance, with particular significance being attributed to rockshelters and vast engraved art sites. In general, comments received from the RAPs do not distinguish ranking of social/cultural significance, but 'high' has been used in **Table 9** for sites that were identified as being of particular interest and/or where recorded in previous site registrations. The Mooney Mooney area was considered by RAPs to have been an important river crossing location, and that Peats Ferry Road formed an important communication and transport route for Aboriginal people travelling north in the past. The importance of conservation within the study area, as adjacent areas are redeveloped, was also noted.

It is not possible to accurately assess the historical, scientific or social/cultural significance of the study area and its identified Aboriginal archaeological and cultural resource on the basis of surface observation alone. The site types present, namely engraved art and rockshelter sites, are relatively common in the region; they are representative examples of the local archaeological resource, but still have potential to provide information about past Aboriginal occupation of the local area. Aboriginal rockshelter sites with archaeological deposit and PADs in relatively undisturbed locations are likely to have greater research potential as important cultural markers for local Aboriginal people, and more often contain tangible evidence of past Aboriginal occupation. However, further investigation would be required to assess their historic and archaeological (scientific) value.

Engraved art site #45-6-3135, within the former Mooney Mooney public school grounds is notable; featuring motifs that are both incredibly common within the Sydney region, whilst other motifs are incredibly rare, and some of which may be of a questionable nature. An analysis of engraved rock art motifs across the Sydney region by Val Attenbrow in 1994 (published in 2008) suggests that of 7,804 rock art samples analysed, human feet are the most commonly represented engraved art in the region (n=1,360 or 17.4%). Eels and other marine animals are also common (n=182, or 2.3% and n=156, or 2% respectively), whilst hands are relatively rare (the fewest identified sites, n=19, accounting for 0.2% of the sample). Bird motifs, or specifically waterfowl or ducks, are decidedly uncommon for the Sydney region, and stylised hearts have not been previously recorded within the Sydney region. Some of the engravings presently exposed on this sandstone outcrop may not be of cultural origin, and may be of low archaeological and cultural significance, though further investigation by a rock art specialist is required to provide definitive information. Still, there remains potential for Aboriginal engravings to be present elsewhere on this sandstone platform, and which are currently obscured by vegetation.

In terms of aesthetic value, most of the identified sites are considered to have a moderate level of significance. Although parts of the study area have been cleared and developed, it is still possible to appreciate the natural setting of the sites, especially on Peat Island and within densely vegetated areas along the southern and eastern margins of the site.

Table 9. Preliminary significance assessment of the Aboriginal complexes and sites within the study area.

Survey Unit	AHIMS No(s)	Name	Description	Social/Cultural	Scientific	Historic	Aesthetic	Overall Significance
1	45-6-3586 45-6-3587	Peat Island Grinding Groove Peat Island Engraving	Open Grinding Groove; Engraving Site	High	Moderate	Low	Moderate	Moderate
2	45-6-1836	Cabbage Point	Closed Rockshelter with deposit	High	Unknown	Unknown	Unknown	High
2	45-6-0476 45-6-1837 45-6-2757	Mooney Mooney / Spectacle Island Peat Island	Open Engraving site	High	High	Low	High	High
2	45-6-3584	Mooney Mooney Shelter/Cultural Landscape	Closed Rockshelter with art; Rockshelter with deposit	High	High	Low	Moderate	High
4	45-6-3135	Point Road Engraving Site 1	Open Engraving site	Low	Low	Low	Low	Low
4	45-6-3585	Mooney Mooney Public School	Open Grinding Groove	High	Moderate	Low	Moderate	Moderate
4	45-6-3643	Mooney-Kowan 1	Closed Rockshelter with deposit	High	High	Low	Moderate	High
4	45-6-3644	Mooney-Kowan 2	Closed Rockshelter with deposit	High	High	Low	Moderate	High

9 CONCLUSIONS AND RECOMMENDATIONS

9.1 Proposed Development

Property and Development NSW is proposing to rezone surplus government land at Peat Island and Mooney Mooney, NSW and has prepared a Planning Proposal for these works. The aim of the Planning Proposal is to facilitate the future redevelopment of the site, for a mix of residential, community, tourism and employment generating land uses.

The Planning Proposal has Gateway approval from the Department of Planning, Industry and Environment (PP_2017_CCOAS_006_00), under Section 3.34 of the *Environmental Planning and Assessment Act 1979*. However, this determination requires that updates are made to the Planning Proposal (via a Planning Proposal Addendum) to ensure there is sufficient detail to satisfy statutory planning provisions.

Property and Development NSW is proposing several amendments to the provisions of the Gosford LEP 2014. This includes:

- Amend Clause 2.1 Land Use Zones of the GLEP 2014 to include SP3 Tourist zone listed under Special Purpose Zones. The proposed SP3 Tourist Zone objectives and proposed permissible uses are consistent with the draft SP3 Tourist zone within the draft Consolidated Central Coast Consolidated Local Environmental Plan (CCLEP). Therefore, this Planning Proposal will be consistent with draft CCLEP, subject to gazettal.
- Amend the GLEP 2014 Land Zoning Map applicable to the site, and rezone SP2 Infrastructure and RE1 Public Recreation zones to E2 Environmental Conservation, R1 General Residential, R2 Low Density Residential, RE1 Public Recreation, RE2 Private Recreation, and SP3 Tourist zones.
- Amend the GLEP 2014 Height of Buildings Map to reflect the maximum height of the buildings proposed (8.5m, 12m and 15m) across selected areas of the site as indicated on the proposed Height of Buildings Map.
- Amend the GLEP 2014 Lot Size Map to allow minimum lots size of 150sqm, 220sqm, 300sqm and 450sqm across selected areas of the site as indicated on the proposed Minimum Lot Size Map.
- Amend the GLEP 2014 Additional Permitted Uses Map and amend the GLEP 2014 Schedule 1 Additional permitted uses to include the use of certain land at Mooney Mooney, including:
 - RE2 Private Recreation zoned land, being portion of Lot 11, DP 1157280 and Lot 12, DP 1158746 as identified on the Additional Permitted Uses Map.
 - R1 General Residential zoned land, being the southern portion of Lot 14, DP1158746 as identified on the Additional Permitted Uses Map.
 - Development for the purposes of emergency services facility is permitted with development consent. The proposed emergency services facility is permissible with consent within the proposed R1 General Residential zone under the draft CCLEP. Therefore, this Planning Proposal will be consistent with draft CCLEP, subject to gazettal).
 - RE1 Public Recreational zoned land, being the southern portion of lot 4 DP239249 as identified on the Additional Permitted Uses Map.
 - Development for the purposes of emergency services facility is permitted with development consent. The proposed emergency services facility is permissible with consent within the proposed RE1 zone under the draft CCLEP. Therefore, this Planning Proposal will be consistent with draft CCLEP, subject to gazettal.
 - R1 General Residential zoned land, being the south eastern portion of lot 12, DP1158746 located along Peats Ferry Road, lot 12, DP863305 and the southernmost portion of lot 14DP1158746, as identified on the Additional Permitted Uses Map:
 - Development for the purpose of 'food and drink premises' and 'shops' are permitted with development consent.

- The indicative Concept Plan comprises local shops/restaurants and cafes in the form of shop top housing within the Southern Foreshore precinct and the Chapel precinct, which has an area of approximately 200sqm. The proposed shops and food and drinks premises are of a scale that is better suited for this local area. Shops. Restaurants and cafes are prohibited under the R1 zone of the Gosford LEP and the draft CCLEP. Given the proposal no longer includes a service station and a neighbourhood centre, it is proposed to include food and drink premises and local shops to provide sufficient and much needed local retail services for exiting and incoming residents.
- RE1 Public Recreation zoned land, being Lot 11 DP863305 as identified on the Additional Permitted Uses Map.
 - Development for the purpose of electricity generating works is permitted with development consent.

In addition, consistent with the recommendation of the CMP, this Planning Proposal includes the proposed LEP amendment to include Peat Island as an Item of Environmental Heritage (Item - General) under Part 1 - Heritage Items, Schedule 5 of the Gosford LEP.

9.2 Preliminary Aboriginal Heritage Impacts

This preliminary assessment of potential Aboriginal heritage impacts is based on the Indicative Concept Plan prepared by Urbis in September 2020 (Revision K).

Two portions of undevelopable land within the study area associated with Cabbage Point and north of Chapel Lane have been excluded from the Planning Proposal, while land in the ownership of Transport for NSW and Central Coast Council has also been excluded from the current Planning Proposal. The Aboriginal rockshelter site “Cabbage Point” (#45-6-1836) is located within undevelopable land and could potentially be conserved as part of the eventual development. Two additional rockshelter sites along the eastern foreshore (#45-6-3643 and #45-6-3644) are in areas of riparian corridor which are designated as “no vegetation clearance” areas, and there may be potential for these sites to be conserved as a result of the eventual development.

The Indicative Concept Plan has been revised since 2018 to reduce the impact of the eventual development on the Aboriginal cultural value of the study area, by limiting development in some areas containing identified Aboriginal sites. These changes were initiated as part of an iterative Aboriginal community consultation process; and have resulted in the following design changes:

- The proposed pedestrian and cyclist pathway skirting the perimeter of Peat Island has been shifted to avoid encroachment into the inner Vegetated Riparian Zone, and *has the potential to avoid* direct impacts to the Aboriginal engraving and grinding groove complex #45-6-3587 (also associated AHIMS #45-6-3586);
- The designation of a ‘Pocket Park’ at the corner of Kowan Street and Point Road has been included to protect rock engravings at the former Mooney Mooney Public School site, and *has the potential to avoid* direct impacts to the Aboriginal engraving and grinding groove sites #45-6-3135 and #45-6-3585.

However, it is considered that the development of an electrical substation and associated bushfire APZ *has the potential to result in harm* to the identified Aboriginal rockshelter cultural landscape sites #45-6-3584, the boundary of which was determined in consultation with the Aboriginal community (**Table 10** and **Figure 35**). More broadly, *there is the potential for future inadvertent impacts* to occur to

the registered AHIMS sites resulting from increased visitation from future property owners and the wider public. The preliminary impact assessment should be further refined through ongoing consultation with the local Aboriginal community, and as detailed designs are developed.

As noted above (**Section 7**), it is unlikely that the investigation has resulted in the identification of all Aboriginal sites and objects within the study area. Mapping of archaeological potential has therefore been undertaken, in order to provide an indication of those locations where further archaeological sites are likely to be present. Where the proposed works involve excavation of topsoil, rather than subsoil and/or bedrock, they may result in damage to and movement of as yet unidentified Aboriginal objects that are present on the ground surface or within the upper soil profile. Areas of moderate and high potential are associated with relatively flat, slightly elevated and generally undisturbed landforms along the foreshore where there is a greater likelihood of Aboriginal objects being identified.

A detailed assessment of the potential impact to the identified heritage values would require further archaeological investigation in some cases, and will also require a detailed understanding of the location, extent and nature of the proposed works, and the number of sites that may be affected.

Feedback from the local Aboriginal community through the consultation process suggests that the development will impact on the social and cultural values of the study area, and that these impacts need appropriate management with further assessment and consultation with the Aboriginal community.

Table 10. Potential impact to identified Aboriginal archaeological sites, on the basis of the Indicative Concept Plan (Revision K).

Survey Unit	AHIMS Site No(s)	Significance (Preliminary)	Type of Harm	Degree of Harm	Consequence of Harm
1	45-6-3586 45-6-3587	Moderate	Unlikely to be harmed	None	No loss of value
2	45-6-1836	High	Unlikely to be harmed	None	No loss of value
2	45-6-0476 45-6-1837 45-6-2757	High	Unlikely to be harmed	Partial	Partial loss of value
2	45-6-0479 45-6-1990 45-6-3584	High	Potential to be harmed (further investigation required)	Partial	Partial loss of value
4	45-6-3135	Low	Unlikely to be harmed	None	No loss of value ^{##}
4	45-6-3585	Moderate	Unlikely to be harmed	Partial	Partial loss of value
4	45-6-3643	High	Unlikely to be harmed	None	No loss of value
4	45-6-3644	High	Unlikely to be harmed	None	No loss of value

^{##}The site may contain some features that are unlikely to be of cultural origin, though specialised investigation by a rock art specialist is required to provide clarification.

9.3 Conclusions

Conservation is the key principle for management of the potential Aboriginal heritage resource likely to be impacted by the proposed works. In general, this will require avoidance of works in and around the locations of identified archaeological sites and Aboriginal site complexes, as well as avoidance and/or

minimisation of ground disturbance in areas of moderate, high and very high archaeological potential identified in **Figure 34** above.

Based on the findings of this assessment, there are several known Aboriginal sites and complexes and areas of archaeological potential within the potential impact zone of the proposed redevelopment. With reference to the latter, Heritage NSW specifies that all areas that have not been subjected to disturbance, and that are within 200m of water, or within 50m of a cave or rockshelter, are considered landforms of archaeological interest. At present, this encompasses a large part of the study area.

To assist Property and Development NSW in Aboriginal cultural heritage management, the study area has been divided into four areas of Aboriginal heritage constraint, and illustrated in **Figure 36** below:

- **No-Go Areas:** areas within the study area that have identified Aboriginal sites of cultural value, with an appropriate boundary.
- **High-Risk Areas:** areas within the study area that are currently poorly assessed (primarily due to accessibility and vegetation growth), but where there is potential for sites of high cultural and/or scientific value to be present. These areas are considered greater than other parts of this zone due to the particular landform characteristics, namely the presence of areas of vertical/near vertical slope (i.e. sandstone escarpments where rockshelters occur), and/or areas of flat land (where sandstone exposures containing engravings occur).
- **Areas Requiring Further Investigation:** areas within the study area that are currently poorly assessed (primarily due to accessibility and vegetation growth) where there is potential for further cultural material, but less risk of sites of high cultural and/or scientific value to be present (i.e. less likely to contain Aboriginal engraving and/or rockshelter sites). These areas do not appear to contain the near vertical/flat sandstone geology within which the higher significance sites would more likely be found, but do not exclude the possibility of other cultural materials, such as artefact scatters or sub-surface deposits being present.
- **Areas with Few/No Aboriginal Constraints:** areas within the study area that have been subject to significant ground surface disturbance in the historic period, within which cultural material is considered of low risk to be present.

The no-go areas identified in this study comprise Aboriginal rockshelter sites and Aboriginal engraving and grinding groove sites, and likely form the *most significant constraint* to the proposed development. While there are legislative processes that allow for harm and/or destruction of all Aboriginal cultural heritage, we believe it to be highly unlikely that any development impact in these no-go areas would be supported by Heritage NSW and/or Registered Aboriginal Parties; and as such their destruction is unlikely to be permissible. Property and Development NSW should plan to minimise future development impact on these no-go areas and to retain these sites in their current form (the mapped site boundaries of which are shown in **Figure 34**). Options for retention could include their inclusion within open space, riparian, bio-link, set-backs and/or asset protection zones. Where possible, the landscape integrity and amenity of these areas should be retained, including appropriate set-backs. Provisions for retention should also include specific measures that limit ground disturbance or erosion into the future. Strategies for their management would usually be developed during any Development Application (DA), through the preparation of Conservation Management Plans/Plans of Management, and their implementation, or the inclusion of Aboriginal heritage on the Section 149 certificate for affected lots, for example.

The high risk areas and areas requiring further assessment (corresponding to areas of very high, high and moderate archaeological potential) also form some constraints to the proposed development.

Where development impact must occur within high risk areas or areas requiring further assessment, Property and Development NSW should prepare an Aboriginal Cultural Heritage Assessment (ACHA) in accordance with Heritage NSW standards and guidelines, prior to development approvals. Property and Development NSW should ensure adequate consultation with the local Aboriginal knowledge holders to ensure cultural values are given due consideration in development and planning decision making. Further assessment in these areas may reveal additional Aboriginal sites, and which may require re-classification as 'no-go' zones above. Equally, these areas upon further assessment may not contain such sites, and could be reclassified into areas with few constraints.

The exact nature and extent of the impact on these high risk areas and areas requiring further assessment is unclear at this stage, as there has been limited surface investigation and no subsurface archaeological test excavation to date. For this reason, it is proposed to incorporate a program of archaeological test excavation into the overall project schedule as part of the development application and assessment phase. Wherever possible, this archaeological program should closely mirror the impact footprint of the proposed development at an appropriate scale to be able to determine the extent, nature and significance of any areas of subsurface deposit, where present. In order to do this, excavation must be undertaken in accordance with the methodology outlined in the *Code of Practice for archaeological investigation of Aboriginal objects in New South Wales* (DECCW 2010). For excavations within 50m of a rockshelter site, Heritage NSW has mandated that it would not be possible to implement the *Code of Practice* methodology, and any required test excavation in these areas must therefore be undertaken under an Aboriginal Heritage Impact Permit (AHIP) for test excavations. It may be found once such assessment is undertaken that the sub-surface components of these areas are smaller or discontinuous and provide a more accurate picture for future planning and development. Depending on the findings, and if required, partial impact with appropriate mitigation measures may be required.

Areas with few Aboriginal constraints propose the lowest risk to the development, and it is anticipated that no site specific design and/or planning recommendations are required. Property and Development NSW should however assess each development proposal in accordance with Heritage NSW standards and guidelines to ensure Aboriginal heritage is suitably managed in these areas, which at the very least should include some form of due diligence.

With regards to the proposed development of the study area, the following recommendations are made with respect to Aboriginal cultural heritage:

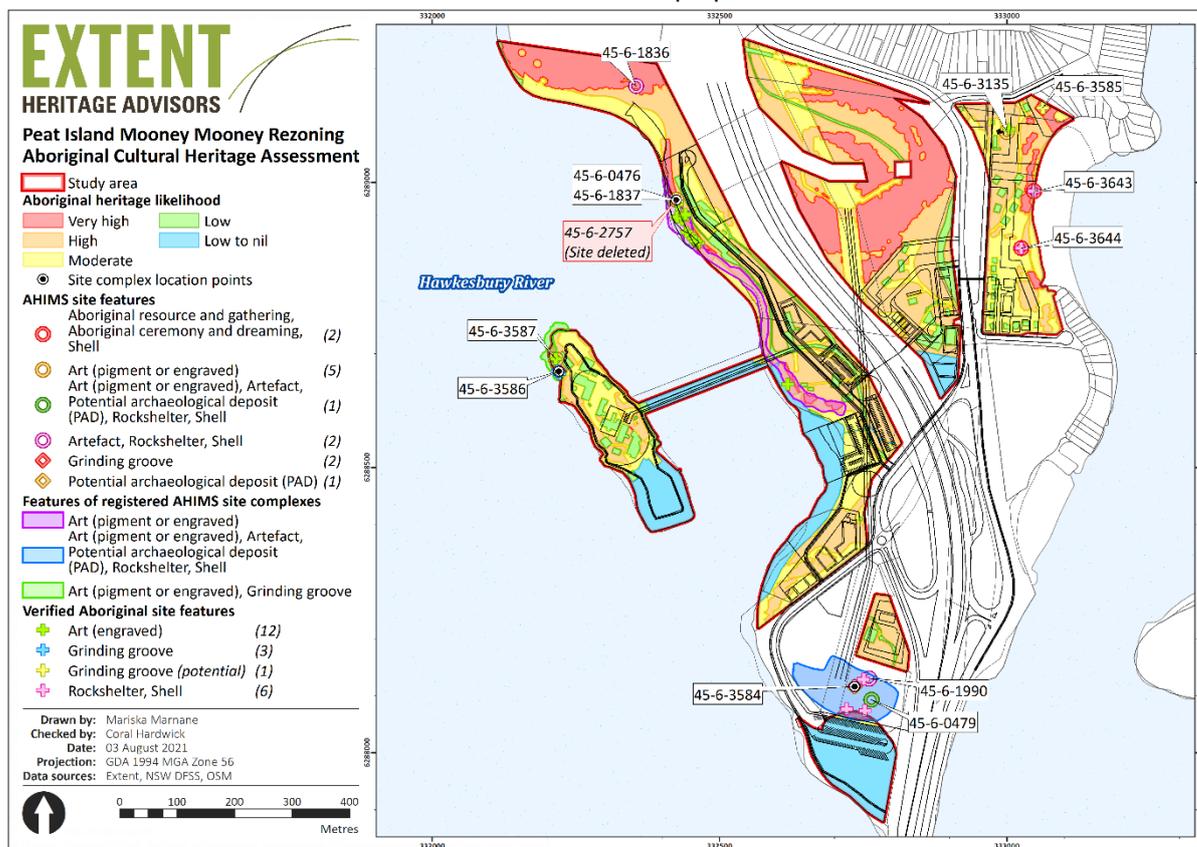
ACHAR Review:

- This report constitutes an ACHAR with formal Aboriginal community consultation. A copy of the finalised report should be provided to the registered Aboriginal stakeholders and the AHIMS Registrar of Heritage NSW, for their records.

Further Investigation:

- The assessment identified eight Aboriginal archaeological sites, as well as large areas of moderate, high and very high archaeological potential within the study area. The results of this investigation, and the outcomes of the Aboriginal community consultation process, have been used to inform the finalisation of the Indicative Concept Plan, to ensure that the potential for impacts to Aboriginal cultural heritage are avoided and/or minimised. To assist Property and Development NSW in Aboriginal cultural heritage management, the study area has been divided into four zones of Aboriginal heritage constraint, and the equivalent management recommendations for each zones are as follows:

- Works of any kind, including geotechnical testing and other environmental investigations, are not permissible in the vicinity of identified Aboriginal sites or their identified site boundaries (corresponding with the no-go zones above) without first obtaining an AHIP from Heritage NSW. In other areas, appropriate assessment in accordance with Heritage NSW standards and guidelines should be adopted.
- Where Aboriginal sites are identified but would remain unaffected by the proposed development, appropriate Aboriginal Cultural Heritage Management Plans (or equivalent documents) should be developed at the DA assessment phase. This would ensure their conservation and management into the future as development progresses and visitation increases around them.
- Should the proposed development



ment be altered and/or revised from the maps and plans presented here, then this report and associated tasks (including Aboriginal consultation) should be re-visited and updated where necessary.

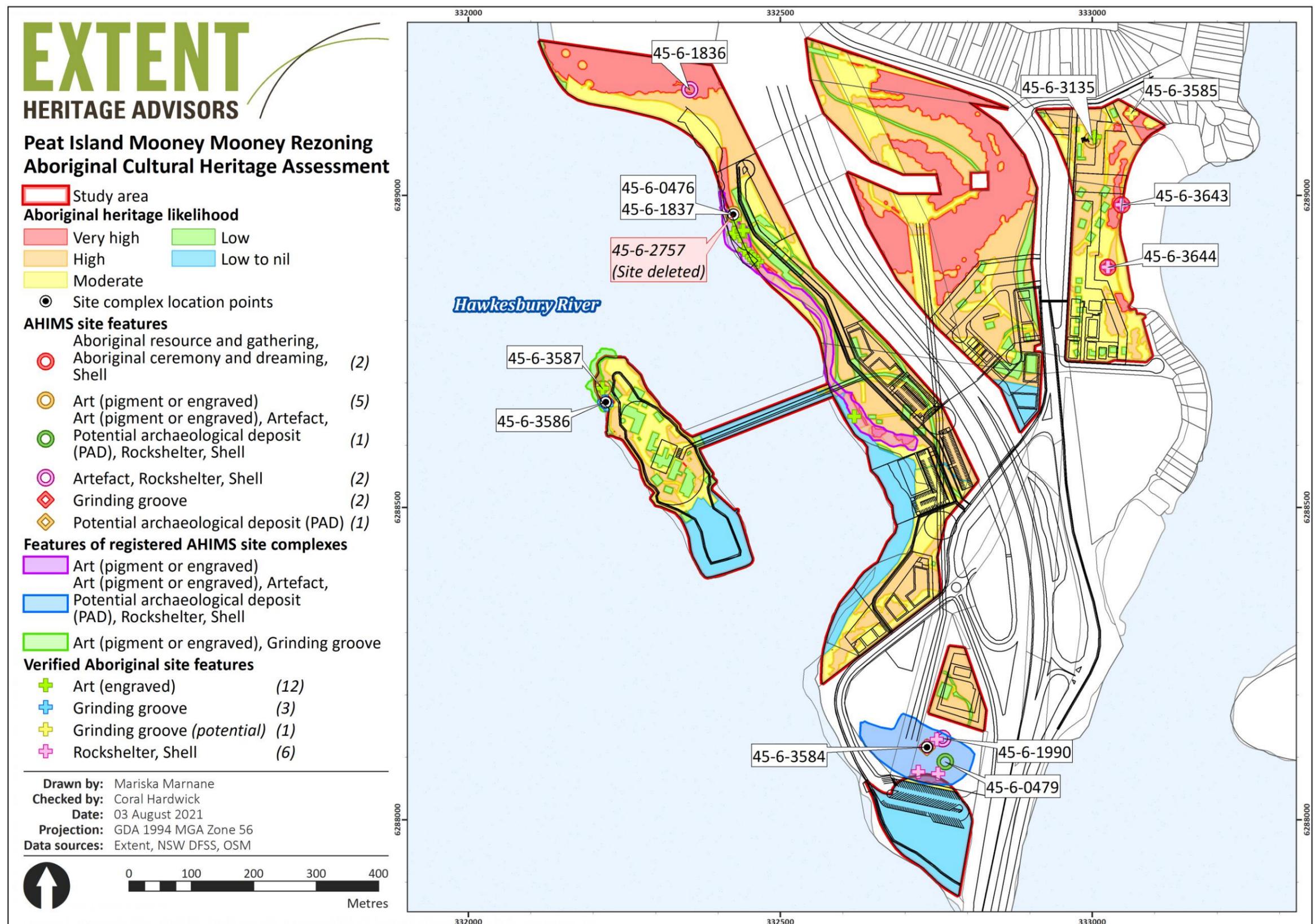


Figure 35. Aboriginal sites and areas of archaeological potential overlain with the proposed Concept Plan.

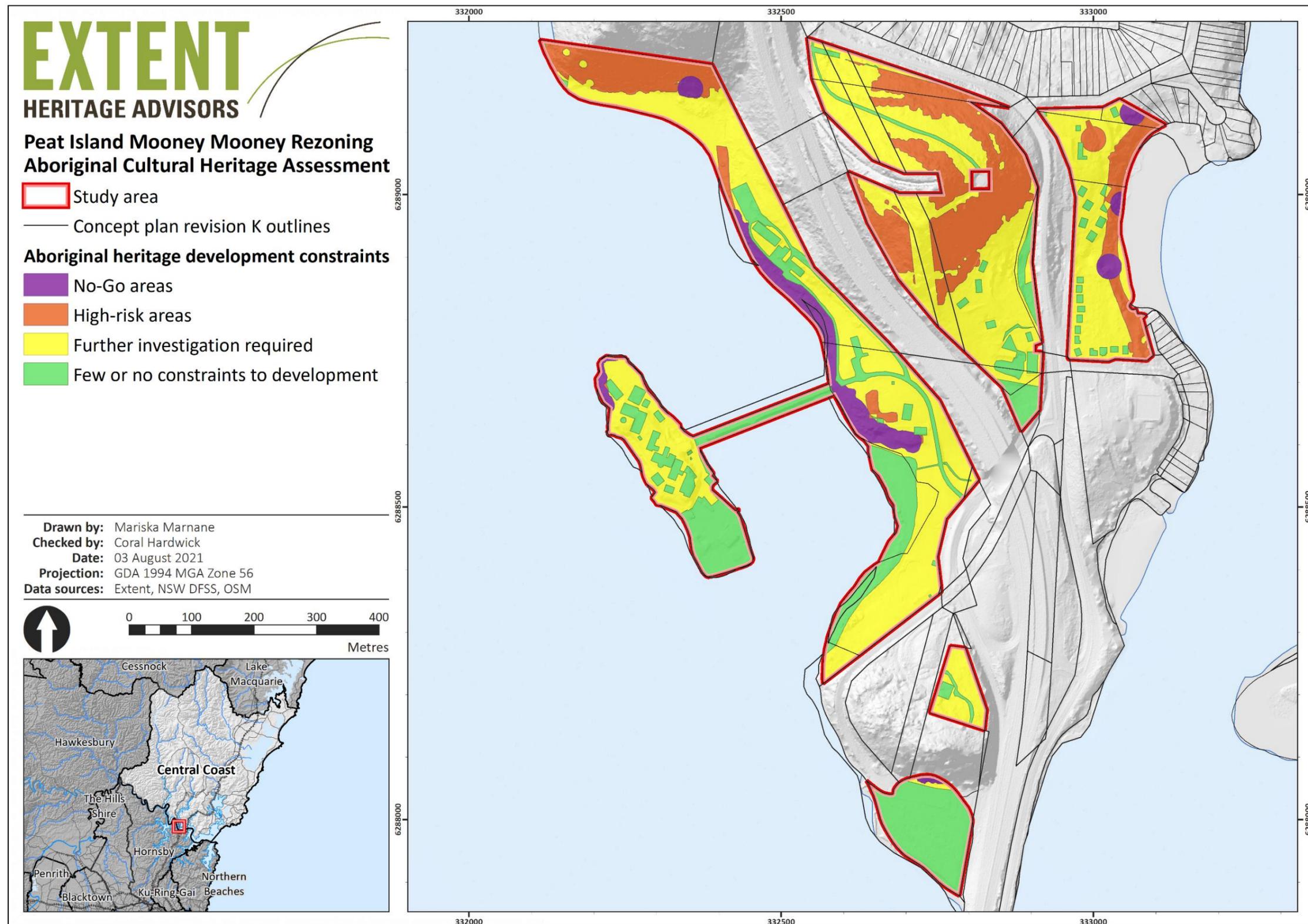


Figure 36. Aboriginal cultural heritage constraints for the study area. No-go areas constitute identified Aboriginal rockshelter, engraving and/or grinding groove sites. High risk areas constitute areas where the potential for unidentified Aboriginal sites is greater and further assessment is required. Areas requiring further assessment correspond to areas of very high, high and moderate archaeological potential and require further Aboriginal assessment. Areas with few/no Aboriginal constraints propose the lowest risk to the development, and it is anticipated that no design and planning recommendations are required.

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Abbreviations

ACHAR	Aboriginal Cultural Heritage Assessment Report
AHIMS	Aboriginal Heritage Information Management System
AHIP	Aboriginal Heritage Impact Permit
AHMS	Archaeological and Heritage Management Solutions
BP	Before present (AD 1950)
CHL	Commonwealth Heritage List
CRM	Cultural Resource Management
DCP	Development Control Plan
DECCW	Department of Environment, Climate Change and Water (now Heritage NSW)
DP	Deposited Plan
DPI	Department of Planning and Infrastructure (now Department of Planning and Environment)
ERS	Eastern Regional Sequence
ka	Abbreviation for thousands of years ago (e.g. 1 ka equals 1,000 years ago)
LALC	Local Aboriginal Land Council
LEP	Local Environmental Plan
LGA	Local Government Area
NHL	National Heritage List
NPW Act	National Parks and Wildlife Act 1974
OEH	Office of Environment and Heritage (now Heritage NSW, formerly DECCW)
PAD	Potential Archaeological Deposit
RAP	Registered Aboriginal party
REP	Regional Environmental Plan
SEPP	State Environment Planning Policy
WHL	World Heritage List

Glossary

Aboriginal Cultural Heritage Assessment Report (ACHAR)	A document developed to assess the archaeological and cultural values of an area, generally required as part of an Environmental Assessment (EA).
<i>Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010</i>	Guidelines developed by Heritage NSW to guide formal Aboriginal community consultation undertaken as part of an Aboriginal Cultural Heritage Assessment (ACHA).
Aboriginal Heritage Impact Permit (AHIP)	The statutory instrument that the Director General of Heritage NSW issues under Section 90 of the <i>National Parks and Wildlife Act 1974</i> to allow the investigation (when not in accordance with certain guidelines), impact and/or destruction of Aboriginal objects. AHIPs are not required where project approval under the state-significant provisions of Part 4 (Division 4.1) of the <i>Environmental Planning and Assessment Act 1979</i> .
Aboriginal object	A statutory term defined under the <i>National Parks and Wildlife Act 1974</i> as ‘any deposit, object or material evidence (not being a handcraft 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’.
<i>Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales</i>	Guidelines developed by Heritage NSW to inform the structure, practice and content of any archaeological investigations undertaken as part of an Aboriginal Cultural Heritage Assessment (ACHA).
Department of Environment, Climate Change and Water (DECCW)	Formerly known as the Office of Environment and Heritage (OEH), Department of Premier and Cabinet; now known as Heritage NSW.
<i>Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales</i>	Guidelines developed by Heritage NSW, outlining the first stage of a two stage process in determining whether Aboriginal objects and/or areas of archaeological interest are present within a subject area. The findings of a due diligence assessment may lead to the development of an Aboriginal Cultural Heritage Assessment.
<i>Environmental Planning and Assessment Act 1979</i>	Statutory instrument that provides planning controls and requirements for environmental assessment in the development approval process. The Act is administered by the Department of Planning and Environment.
Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW	Guidelines developed by Heritage NSW to inform the structure and content of an Aboriginal Cultural Heritage Assessment (ACHA).
Isolated Find	An isolated find is usually considered a single artefact or stone tool, but can relate to any product of prehistoric Aboriginal societies. The term “object” is used in the ACHA, to reflect the definitions of Aboriginal stone tools or other products in the <i>National Parks and Wildlife Act 1974</i> .
Heritage NSW	Heritage NSW is responsible for managing the Aboriginal Heritage (and other) provisions of the <i>National Parks and Wildlife Act 1974</i> .

<i>National Parks and Wildlife Act 1974</i>		The primary piece of legislation for the protection of Aboriginal cultural heritage in NSW. Part 6 of this Act outlines the protection afforded to and offences relating to disturbance of Aboriginal objects. The Act is administered by OEH.
Office of Environment and Heritage (OEH)		Now known as Heritage NSW.
Potential Archaeological Deposit (PAD)		An area assessed as having the potential to contain Aboriginal objects. PADs are commonly identified on the basis of landform types, surface expressions of Aboriginal objects, surrounding archaeological material, disturbance, and a range of other factors. While not defined in the <i>National Parks and Wildlife Act 1974</i> , PADs are generally considered to retain Aboriginal objects and are therefore protected and managed in accordance with that Act.
Proponent		A corporate entity, Government agency or an individual in the private sector which proposes to undertake a development project.

Appendix 1: Legislation

A1.1. Commonwealth Legislation

Aboriginal and Torres Strait Islander Heritage Protection Act 1984

The *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* was enacted at a Federal level to preserve and protect areas (particularly sacred sites) and objects of particular significance to Aboriginal Australians from damage or desecration. Steps necessary for the protection of a threatened place are outlined in a gazetted Ministerial Declaration (Sections 9 and 10). This can include the preclusion of development.

As well as providing protection to areas, it can also protect objects by Declaration, in particular Aboriginal skeletal remains (Section 12). Although this is a Federal Act, it can be invoked on a State level if the State is unwilling or unable to provide protection for such sites or objects.

Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* provides for the protection of natural and cultural heritage places. The Act establishes (amongst other things) a National Heritage List (NHL) and a Commonwealth Heritage List (CHL). Places on the NHL are of natural or cultural significance at a national level and can be in public or private ownership. The CHL is limited to places owned or occupied by the Commonwealth which are of heritage significance for certain specified reasons.

Places listed on the NHL are considered to be of State and local heritage value, even if State or local various heritage lists do not specifically include them.

The heritage values of places on the NHL or the CHL are protected under the terms of the EPBC Act. The Act requires that the Minister administering the EPBC Act assess any action which has, will have, or is likely to have, a significant impact on the heritage values of a listed place. The approval (or rejection) follows the referral of the matter by the relevant agency's Minister.

Native Title Act 1993

The *Native Title Act 1993* provides recognition and protection for native title. The Act established the National Native Title Tribunal to administer native title claims to rights and interests over lands and waters by Aboriginal people. The Tribunal also administers the future act processes that attract the right to negotiate under the *Native Title Act 1993*.

The Act also provides for Indigenous Land Use Agreements (ILUA). An ILUA is an agreement between a native title group and others about the use and management of land and waters. ILUAs were introduced as a result of amendments to the *Native Title Act* in 1998. They allow people to negotiate flexible, pragmatic agreements to suit their particular circumstances.

An ILUA can be negotiated over areas where native title has, or has not yet, been determined. They can be part of a native title determination, or settled separately from a native title claim. An ILUA can be negotiated and registered whether there is a native title claim over the area or not.

A1.2. NSW State Legislation

Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) requires that environmental and heritage impacts are considered by consent authorities prior to granting development approvals. The relevant sections of the EP&A Act are:

- Part 4: Development that requires consent under consideration of environmental planning instruments.
- Part 5: An assessment process for activities undertaken by Public Authorities and for developments that do not require development consent but an approval under another mechanism.

Where Project Approval is to be determined under Part 4 (Division 4.1) of the Act, further approvals under the *National Parks and Wildlife Act 1974*, are not required. In those instances, management of Aboriginal heritage follows the applicable Aboriginal assessment guidelines (the *Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation*, July 2005) and any relevant statement of commitments included in the Development Approval.

National Parks and Wildlife Act 1974

The *National Parks and Wildlife Act 1974* (NPW Act) provides blanket protection for Aboriginal objects (material evidence of Indigenous occupation) and Aboriginal places (areas of cultural significance to the Aboriginal community) across NSW. An Aboriginal object is defined as:

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

An Aboriginal place is any place declared to be an Aboriginal place by the Minister for the Environment, under Section 84 of the Act.

It is an offence to disturb Aboriginal objects or places without a permit authorised by the Director-General of Heritage NSW. In addition, anyone who discovers an Aboriginal object is obliged to report the discovery to Heritage NSW.

The operation of the NPW Act is administered by Heritage NSW. With regard to the assessment of Aboriginal cultural heritage, Heritage NSW has endorsed the following guidelines:

- *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (2010).
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (2010).
- *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (2010).
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (2011).

Aboriginal Land Rights Act 1983

The *Aboriginal Land Rights Act 1983* allows for the transfer of ownership to a Local Aboriginal Land Council of vacant Crown land not required for an essential purpose or for residential land. These lands are then managed and maintained by the Local Aboriginal Land Council.

Appendix 2: Aboriginal Consultation

Appendix 2-1. Aboriginal consultation log

Organisation/Group	Representative	Date	Comments	Extent Heritage Contact
Pre-Notification Stage				
National Native Title Tribunal; Office of the Registrar, <i>Aboriginal Land Rights Act 1983</i> ; Office of Environment and Heritage Regional Operations Group; NTS Corp; Darkinjung LALC; Central Coast Council; Greater Sydney Local Land Services	-	18/04/2018	Request for details of Aboriginal individuals or groups who may have an interest in the study area. Request for search of Registered Land Claims. Request for search of Tribunal Registers.	Tessa Bryant
Darkinjung LALC	Amanda Shields	18/04/2018	Email response that Darkinjung would like to register an interest for participation in the project.	Tessa Bryant
NTS Corp	George Tonna	19/04/2018	Letter stating that NTS Corp privacy guidelines prevent providing information on stakeholders but NTS Corp will contact any stakeholders they are aware of to invite them to register an interest in the project directly with Extent Heritage.	Tessa Bryant
NNTT	Enquiries	19/04/2018	Email response – Darkinjung LALC has land claims within the Central Coast LGA. 17 of the lots are not recorded in the non-Freehold data.	Tessa Bryant
GS LLS	Margaret Bottrell	23/04/2018	Email response that GSLLS do not maintain a register of potential Aboriginal stakeholders and recommends contacting OEH.	Tessa Bryant
OEH Hunter Central Coast Branch	Steven Cox	23/04/2018	Email response with OEH Aboriginal stakeholder register for Central Coast attached	Tessa Bryant
ORALA	Troy Lancaster	06/07/2018	Email response that three properties within the subject area were affected by Aboriginal Land Claims pursuant to sections 36 or 37 of the Aboriginal Land Rights Act 1983, and recommended that Darkinjung LALC be contacted.	Tessa Bryant
Project Notification				

Organisation/Group	Representative	Date	Comments	Extent Heritage Contact
Central Coast Express Advocate		10/05/2018 17/05/2018	Advertisement was supposed to be published. Date advertisement actually published with request for registration by the 31 st May.	Tessa Bryant
Guringai Tribal Link Aboriginal Corporation Lower Hunter Aboriginal Incorporated Awabakal Traditional Owners Aboriginal Corporation Awabakal Descendants Traditional Owners Kevin Duncan Kawul Pty Ltd trading as Wonn1 Sites Wattaka Wonnarua CC Service Widescope Indigenous Group David Pross YInarr Cultural Services	various	9/05/2018	Email with notification of project and invitation to register an interest. Registrations requested by 23 rd May 2018.	Tessa Bryant
Roger Mathews Consultancy	Roger Mathews	9/05/2018	Letter posted with notification of project and invitation to register an interest. Registrations requested by 23 rd May 2018.	Tessa Bryant
Project Registration				
Darkinjung LALC	Amanda Shields	18/04/2018	Email response that Darkinjung would like to register an interest for participation in the project.	Tessa Bryant
Widescope Indigenous Group	Steven Hickey	14/05/2018	Email response that Widescope group would like to register an interest in participation (fieldwork and meetings) in the project. Insurances attached.	Tessa Bryant
Amanda Hickey Cultural Services	Amanda Hickey	15/05/2018	Email response that ACHS would like to register an interest in participation (consultation and fieldwork) in the project.	Tessa Bryant
A1 Indigenous Services	Carolyn Hickey	15/05/2018	Email response that A1 would like to register an interest in participation (consultation and fieldwork) in the project.	Tessa Bryant

Organisation/Group	Representative	Date	Comments	Extent Heritage Contact
David Pross		22/05/2018	Email response that David would like register an interest in participation (meetings and fieldwork) in the project. Insurances to be provided at a later date.	Tessa Bryant
Wattaka Wonnarua CC Service	Des Hickey	23/05/2018	Email response that WWCCS would like register an interest in the project.	Tessa Bryant
Valley ELM Corp	Des Hickey on behalf of Irene Ardler	23/05/2018	Email response that Valley ELM Corp would like to register an interest in the project.	Tessa Bryant
Yinarr Cultural Services	Kathleen Steward Kinchela	24/05/2018	Email registration of interest in the project	Tessa Bryant
Guringai Tribal Link Aboriginal Corporation	Tracey Howie	05/06/2018	Called to apologise for not registering sooner, and to register an interest in the project.	Laessa Barry
Australia Post	-	No Date	Received Return to Sender Notice, stating that Roger Matthews was not living at the address supplied.	Laessa Barry
OEH	Steven Cox	16/10/2018	Distribution of RAP list to OEH in accordance with Section 15 of the consultation requirements.	Laessa Barry
Darkinjung LALC	Anthony Freeman	16/10/2018	Distribution of RAP list to LALC in accordance with Section 15 of the consultation requirements.	Laessa Barry
ACHAR methodology Review and Feedback				
Darkinjung LALC	Amanda Shields	05/06/2018	Distributed survey methodology letter. Requested feedback by 4 th July 2018.	Laessa Barry
Widescope Indigenous Group	Steven Hickey	05/06/2018	Distributed survey methodology letter. Requested feedback by 4 th July 2018.	Laessa Barry
Amanda Hickey Cultural Services	Amanda Hickey	05/06/2018	Distributed survey methodology letter. Requested feedback by 4 th July 2018.	Laessa Barry
A1 Indigenous Services	Carolyn Hickey	05/06/2018	Distributed survey methodology letter. Requested feedback by 4 th July 2018.	Laessa Barry
	David Pross	05/06/2018	Distributed survey methodology letter. Requested feedback by 4 th July 2018.	Laessa Barry
Wattaka Wonnarua CC Service	Des Hickey	05/06/2018	Distributed survey methodology letter. Requested feedback by 4 th July 2018.	Laessa Barry
Valley ELM Corp	Des Hickey on behalf of Irene Ardler	05/06/2018	Distributed survey methodology letter. Requested feedback by 4 th July 2018.	Laessa Barry

Organisation/Group	Representative	Date	Comments	Extent Heritage Contact
Yinarr Cultural Services	Kathleen Steward Kinchela	05/06/2018	Distributed survey methodology letter. Requested feedback by 4 th July 2018.	Laressa Barry
Guringai Tribal Link Aboriginal Corporation	Tracey Howie	05/06/2018	Distributed survey methodology letter. Requested feedback by 4 th July 2018.	Laressa Barry
Amanda Hickey Cultural Services	Amanda Hickey DeZwart	05/06/2018	Responded to support and endorse the project methodology.	Laressa Barry
A1 Indigenous Services	Carolyn Hickey	05/06/2018	Responded to support and endorse the project methodology.	Laressa Barry
Widescope Indigenous Group	Steven Hickey	13/06/2018	Email response in support of the survey methodology.	Laressa Barry
Guringai Tribal Link Aboriginal Corporation	Tracey Howie	02/07/2018	Email response in support of the survey methodology.	Laressa Barry
Draft ACHAR review				
All RAPS	-	16/10/2018	Distributed draft ACHAR to RAPs for their comment and feedback.	Laressa Barry
Amanda Hickey Cultural Services	Amanda Hickey	17/10/2018	Amanda provided a brief email response in support of the report and its recommendations, and she looks forward to hearing from us in the future.	Laressa Barry
	Sharon Hodgetts	22.10.2018	Sharon provided a detailed cultural heritage assessment in response to the ACHAR, which included information about the importance of the study area as a cultural landscape. With regards to management, Sharon recommended further assessment of outcropping sandstone on the eastern and western foreshores/Peats Island, as well as the creation of an exclusion zone or similar around Aboriginal sites for their protection (but did not specify an exact distance). She also advocated for the preparation of an Aboriginal Cultural Heritage Management Plan for the identified sites.	Laressa Barry
	Sharon Hodgetts	23.10.2018	Again, Sharon stressed the importance of preparing an Aboriginal Cultural Heritage Management Plan for the archaeological and cultural resource of the site, which would allow for the stakeholders to work through the most	Laressa Barry

Organisation/Group	Representative	Date	Comments	Extent Heritage Contact
			appropriate options to protect and conserve cultural heritage sites.	
Guringai Tribal Link Aboriginal Corporation	Tracey and Kyle Howie	26.10.2018	Met with Kyle and Tracey Howie to discuss the findings of the ACHAR, and to get their preliminary thoughts on possible management strategies for Aboriginal sites in the study area. Tracey discussed the cultural importance of some engravings along the western foreshore, especially the “eel” motif. Discussed the installation of fencing and signage around sites on the Mooney Mooney foreshore and western edge of Peat Island, with further investigation of sandstone outcrops and some sub-surface archaeological testing. Also advocated for the preparation of Management Plans.	Laressa Barry and Fenella Atkinson
All RAPs	Various	05.11.2018	Sent a follow up reminder that the deadline for stakeholder comments on the draft ACHAR was one week away, on 13 November.	Laressa Barry
Guringai Tribal Link Aboriginal Corporation	Tracey Howie	19.11.2018	Extent sent a follow up email to Tracey, to create some written documentation (“meeting minutes”) of what was discussed during meeting with GTLAC on 26.10.2018. A request was made for GTLAC to review a series of bullet points to confirm their accuracy, and to make any amendments if I had misunderstood any aspects.	Laressa Barry
Guringai Tribal Link Aboriginal Corporation	Tracey Howie	19.11.2018	Tracey Howie responded on behalf of GTLAC to confirm the accuracy of the “meeting minutes” summary, and requested that a few points be added.	Laressa Barry

Organisation/Group	Representative	Date	Comments	Extent Heritage Contact
			Our on site discussions were summarised and incorporated into the final ACHAR.	
	Sharon Hodgetts	13.12.2018	Sharon provided updated site card details for the two Aboriginal rockshelter sites she and Amanda (Darkinjung) identified during the survey.	Laressa Barry
OEH	Nicole Davis	16.01.2019	Requested non-redacted copy of the Peat Island ACHAR for review. Georgia supplied OEH with copy.	Georgia Burnett
Property NSW	Sarah Selth	29.01.2019	Sarah indicated that PNSW wanted to organise a guided site walk for residents and invited individuals, to be held on 10 February. Asked if Extent would have someone available to attend.	Laressa Barry
Property NSW	Sarah Selth	06.02.2019	Alan indicated his availability to attend the guided site walk, and provided an overview of content of the discussion: <ul style="list-style-type: none"> • General summary of colonisation of Australia c. 50,000 years ago, with focus on main river corridors • References to sites found in the study area, with general descriptions about rock shelters and rock engravings and their content, and what they tell us about people living here Reference to the fact that the majority of the sites would remain unaffected by the proposed development.	Alan Williams
Property NSW	Sarah Selth	10.02.2019	Attended guided walk tour of the study area.	Alan Williams
Property NSW	Eric Yu	20.02.2019	Requested transcript of discussions from guided walk tour.	Alan Williams

Organisation/Group	Representative	Date	Comments	Extent Heritage Contact
Property NSW	Sarah Selth	10.02.2019	Attended guided walk tour of the study area.	Alan Williams
Property NSW	Eric Yu	20.02.2019	Requested transcript of discussions from guided walk tour.	Alan Williams
Property NSW	Sarah Selth	06.03.2019	Emailed to advise she was leaving PNSW and provided contact details for Peat Island project.	Laressa Barry
ACHAR review				
All RAPS	-	13.11.2020	Distributed draft ACHAR to RAPs for their comment and feedback. Feedback requested by 14 December.	Tom Sapienza
Yinarr Cultural Services	-	13.11.2020	Email bounceback, email address no longer found.	Tom Sapienza
A1 Indigenous Services	Carolyn Hickey	15.11.2020	Read, reviewed and support the report.	Tom Sapienza
Amanda Hickey Cultural Services	Amanda Hickey	15.11.2020	Read, reviewed and support the report.	Tom Sapienza
Widescope Indigenous Group	Steven Hickey	16.11.2020	Read, reviewed and support the report.	Tom Sapienza
Property and Development NSW	Tiffany Heath	15.06.2021	Tiffany requested we follow up responses from DLALC and GTLAC on the ACHAR. Report was resent to these groups for their review and feedback.	Coral Hardwick
Guringai Tribal Link Aboriginal Corporation	Sharon Hodgetts	02.07.2021	Sharon provided an email response to the ACHAR	Coral Hardwick
Guringai Tribal Link Aboriginal Corporation	Tracey Howie	14.07.2021	Tracey provided a letter response to the ACHAR	Coral Hardwick
Darkinjung LALC	Adina Duncan	21.07.2021	Adina provided a letter response to the ACHAR.	Coral Hardwick

Appendix 2-2. List of identified potential Aboriginal stakeholders

Darkinjung Local Aboriginal Land Council

David Ahoy

Kerrie Brauer

Kevin Duncan

Arthur Fletcher

Des Hickey

Steven Hickey

Sharon Hodgetts

Tracey Howie

Peter Leven

Roger Matthews

David Pross

Kathleen Steward Kinchela

Appendix 2-3. List of Registered Aboriginal Parties

Darkinjung Local Aboriginal Land Council

Widescope Indigenous Group

Amanda Hickey Cultural Services

A1 Indigenous Services

David Pross

Wattaka Wonnarua CC Service

Valley ELM Corp

Yinarr Cultural Services

Guringai Tribal Link Aboriginal Corporation

Sharon Hodgetts.

Appendix 2-4. Pre-Notification Documentation sent and responses received

18 April 2018

Attention: **Name**

Organisation

Organisation Address

Re: Request for Information on Aboriginal Stakeholders for an Aboriginal Cultural Heritage Assessment for rezoning of surplus government land near Peats Ferry Road, Mooney Mooney, NSW

Dear **Name**,

Extent Heritage has been commissioned by Property NSW, to develop an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the proposed rezoning of surplus government land near Peats Ferry Road, Mooney Mooney, including Peat Island, NSW (**Figure 1**). The purpose of the assessment is to characterise the archaeological resource of the area, to assess the potential impact of the proposed rezoning, and form the basis for management recommendations for the site.

The study area is within the Central Coast Local Government Area. The proponent is Property NSW, and the project contact is Stacey Fishwick (Director Major Projects), Level 4, 66 Harrington Street, Sydney NSW 2000; ph. (02) 9219 3275.

In accordance with the NSW Office of Environment and Heritage's (OEH) *Aboriginal cultural heritage consultation requirements for proponents 2010*, I am writing to you to seek information on relevant Aboriginal individuals and/or communities that you are aware of, who may hold cultural knowledge for the area relevant to determining the significance of Aboriginal objects and/or places. It would be appreciated if you could provide this information to me as soon as possible, at the Sydney address below or by email to [REDACTED]

Please don't hesitate to contact me on (02) 9555 4000 if you have any queries or concerns.

Yours Sincerely,

[REDACTED]

Dr. Tessa Bryant – Heritage Advisor

EXTENT

HERITAGE ADVISORS
TO AUSTRALIA AND
THE ASIA PACIFIC

Peat Island Mooney Mooney Rezoning Aboriginal Cultural Heritage Assessment Subject Area

 Subject Area

Drawn by: Tessa Bryant
Checked by: Alan Williams
Date: 17 April 2018
Projection: GDA 94 / MGA Zone 56
Data sources: Extent, LPI, DPE, OpenStreetMap

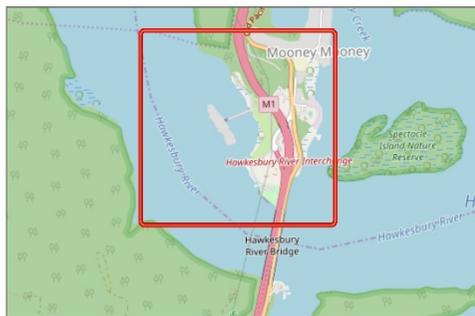


Figure 1. Mooney Mooney subject area.



DOC18/237092

Dr Tessa Bryant
Extent Heritage Pty Ltd
[REDACTED]

Dear Tessa

Rezoning surplus government land near Peats Ferry Road, Mooney Mooney, NSW

In response to your request under Section 4.1.2(a) of the *Aboriginal cultural heritage consultation requirements for proponents* (DECCW 2010), please find attached a list of known Aboriginal parties that have self-nominated for the Central Coast Council Local Government Area (LGA). Please note the following information with respect to Aboriginal consultation for your project.

Aboriginal stakeholder lists maintained by OEH are comprised of self-nominated individuals and organisations

Please note that the attached list is comprised only of self-nominated individuals and Aboriginal organisations who could have an interest in your project. The list is not vetted by OEH. As the list comprises only of self-nominated individuals and Aboriginal organisations, it is not necessarily an exhaustive list of all Aboriginal parties who may hold an interest in the project. Further consultation in accordance with step 4.1.2 of the *Aboriginal cultural heritage consultation requirements for proponents* (DECCW 2010) is required to identify Aboriginal people who may hold either cultural or historical knowledge relevant to determining the significance of Aboriginal objects or places within your proposed project area.

Ensure you document the consultation process

Please ensure all consultation undertaken in accordance with the *Aboriginal cultural heritage consultation requirements for proponents* (DECCW 2010) is documented within an Aboriginal Cultural Heritage Assessment Report (ACHAR). This must include copies of all correspondence sent to or received from all Registered Aboriginal Parties (RAPs) throughout the entire consultation process. Omission of these records in the final ACHAR may cause delays in the assessment of an Aboriginal Heritage Impact Permit (AHIP) application or a major project Aboriginal cultural heritage assessment, and could require parts of the consultation process to be repeated if the evidence provided to OEH does not demonstrate that the consultation process has been conducted in accordance with our consultation requirements.

Demonstrate that reasonable consultation attempts have been made

Please ensure you provide evidence to demonstrate that reasonable attempts have been made to contact the relevant parties identified through step 4.1.2 of the *Aboriginal cultural heritage consultation requirements for proponents* (DECCW 2010). If this evidence is not provided, OEH may deem that the

consultation process has not complied with the consultation requirements. Similarly, the proponent is required to record all feedback received from RAPs, along with the proponent's response to the feedback. Where concerns or contentious issues are raised by RAPs during the consultation process, OEH expects that reasonable attempts are made to address and resolve these matters, however OEH acknowledges that in some cases, this may not be achievable. In the case where conflict cannot be resolved, it is the responsibility of the proponent to record these differences and provide the necessary information in their ACHAR with their AHIP application or major project ACHAR.

Consultation should not be confused with employment

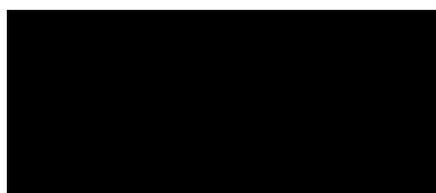
As outlined in Section 3.4 of the *Aboriginal cultural heritage consultation requirements for proponents* (DECCW 2010), the consultation process involves getting the views of, and information from, Aboriginal people and reporting on these. It is not to be confused with other field assessment processes involved in preparing a proposal and an application. OEH does not have any role with respect to commercial engagement. Where RAPs are engaged commercially to provide field services as part of an assessment process, that is a matter for the proponent to manage as they see fit. However, if a proponent is proposing to undertake consultation processes or elicit cultural information from RAPs during the course of conducting a field survey, OEH considers this to form part of the consultation process, and expects that all RAPs would be afforded the opportunity to be involved in the process.

Contacting our office

To ensure we can respond to enquiries promptly, please direct future correspondence to our central mailbox: rog.hcc@environment.nsw.gov.au.

Should you require any further information, please do not hesitate to contact us.

Yours sincerely



STEVEN COX
Senior Team Leader Planning
Hunter Central Coast Branch
Regional Operations Division

23 April 2018



Attachment A

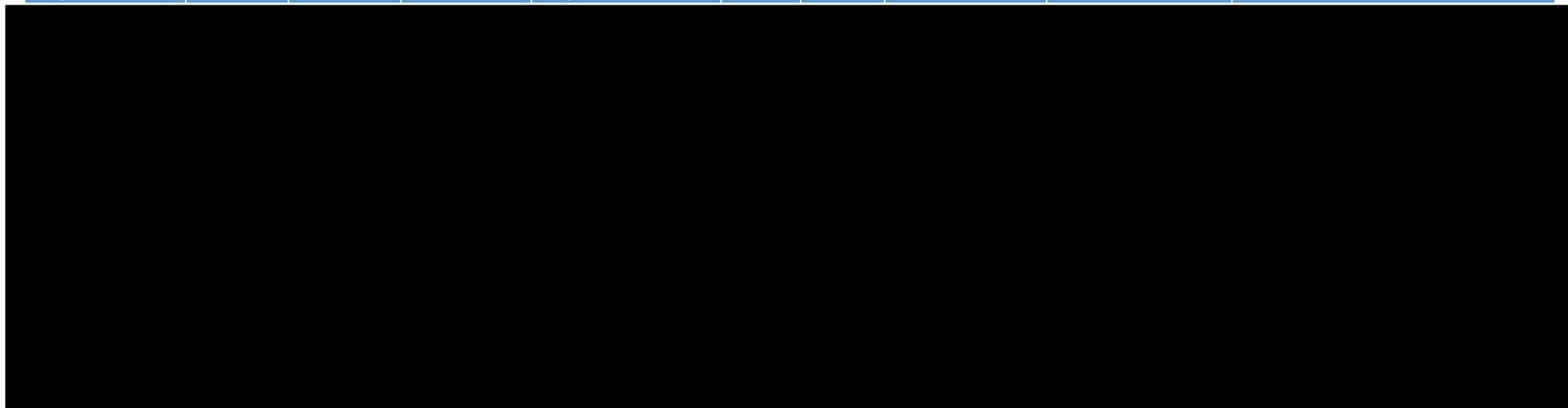
Hunter Central Coast Branch - Aboriginal Stakeholder Register for Central Coast Council LGA

Please note that this list is valid at the time of sending only, and should not be used for subsequent projects.

Organisation	First name	Surname	Address 1	City	State	Post code	Landline	Mobile	Email
--------------	------------	---------	-----------	------	-------	-----------	----------	--------	-------

[Redacted content]									
--------------------	--	--	--	--	--	--	--	--	--

Organisation	First name	Surname	Address 1	City	State	Post code	Landline	Mobile	Email
--------------	------------	---------	-----------	------	-------	-----------	----------	--------	-------



From: [Steven Cox](#)
To: [Tessa Bryant](#)
Cc: [OEH ROD Hunter Central Coast Mailbox](#)
Subject: RE: Mooney Mooney - Aboriginal Cultural Heritage Assessment - Request for Information
Date: Monday, 23 April 2018 4:08:29 PM
Attachments: [image001.png](#)
[LETTER - OEH to EXTENT HERITAGE - Rezoning of Merry Road MOONEY MOONEY - Central Coast Council Aboriginal stakeholder register.pdf](#)

Hi Tessa,

Please find attached an Aboriginal stakeholder list for your project.

Regards

Steven

Steven Cox

Senior Team Leader Planning
Hunter Central Coast Branch
Regional Operations Division

Office of Environment & Heritage

Level 4/26 Honeysuckle Drive Newcastle NSW 2300

Locked Bag 1002 Dangar NSW 2309

T 02 4927 3140

M [REDACTED]

From: Tessa Bryant [mailto:[REDACTED]]
Sent: Wednesday, 18 April 2018 3:58 PM
To: OEH ROD Hunter Central Coast Mailbox <rog.hcc@environment.nsw.gov.au>
Subject: Mooney Mooney - Aboriginal Cultural Heritage Assessment - Request for Information

Dear Sir/Madam,

Extent Heritage has been engaged to undertake an Aboriginal Cultural Heritage Assessment for the proposed rezoning of surplus government land at Mooney Mooney, NSW. In accordance with OEH's consultation guidelines, I am writing to you to request information on Aboriginal individuals and/or organisations that you may be aware of in the area; and who may be interested in the project. Please find a letter attached providing more information.

Thanks for your assistance.

Kind Regards

Tessa

Dr. Tessa Bryant | Heritage Advisor

EXTENT Heritage Pty Ltd

www.extent.com.au | [REDACTED]

P: 02 9555 4000

[Find us on Facebook](#) | [Connect with us on LinkedIn](#)

From: [Amanda Shields](#)
To: [Tessa Bryant](#)
Subject: RE: Mooney Mooney - Aboriginal Cultural Heritage Assessment - Request for Information
Date: Wednesday, 18 April 2018 4:12:51 PM
Attachments: [image002.png](#)
[image003.png](#)
[image004.jpg](#)
[image005.jpg](#)
[image006.jpg](#)
[image007.png](#)

Hi Tessa,

Darkinjung would like to register their interest in this.

Thank you

Kind Regards,



Amanda Shields | Project Officer

P [REDACTED] **F** [REDACTED]
A [REDACTED]
M [PO Box 401 Wyong NSW 2259](#)
W [darkinjung.com.au](#)

cid:image002.png@01D3B61F.9007D470



I acknowledge that the land on which I work is the traditional land of the Darkinjung people. I pay my respect to the Elders, both past and present.

From: Tessa Bryant [mailto:[REDACTED]]
Sent: Wednesday, 18 April 2018 3:58 PM
To: Amanda Shields
Subject: Mooney Mooney - Aboriginal Cultural Heritage Assessment - Request for Information

Dear Amanda,

Extent Heritage has been engaged to undertake an Aboriginal Cultural Heritage Assessment for the proposed rezoning of surplus government land at Mooney Mooney, NSW. In accordance with OEH's consultation guidelines, I am writing to you to request information on Aboriginal individuals and/or organisations that you may be aware of in the area; and who may be interested in the project. Please find a letter attached providing more information.

Thanks for your assistance.

Kind Regards
Tessa

From: [Margaret Bottrell](#)
To: [Tessa Bryant](#)
Subject: Re: Mooney Mooney - Aboriginal Cultural Heritage Assessment - Request for Information
Date: Monday, 23 April 2018 9:26:25 AM
Attachments: [image001.png](#)

To Tessa Bryant,

RE: Request for Information on Aboriginal Stakeholders for an Aboriginal Cultural Heritage Assessment for rezoning of surplus government land near Peats Ferry Road, Mooney Mooney, NSW

Thank you for your letter dated 18 April 2018, requesting assistance with identifying Aboriginal stakeholder groups or persons who may have an interest in your project area.

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

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

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

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

Regards,

On 18 April 2018 at 16:01, Tessa Bryant  wrote:

Dear Margaret,

Extent Heritage has been engaged to undertake an Aboriginal Cultural Heritage Assessment for the proposed rezoning of surplus government land at Mooney Mooney, NSW. In accordance with OEH’s consultation guidelines, I am writing to you to request information on Aboriginal individuals and/or organisations that you may be aware of in the area; and who may be interested in the project. Please find a letter attached providing

19 April 2018 ref: OE&H : 19-4-2018/45

Extent Heritage
3/73 Union Street
Pymont NSW 2009

Dear Sir or Madam

Aboriginal Cultural Heritage Assessment

Rezoning of surplus government land - Peats Ferry Road, Mooney Money.

I refer to your letter of 18 April 2018 regarding the above matter.

We acknowledge that section 4.1.2 of the Office of Environment & Heritage's *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* require you to contact us in order to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining the cultural significance of Aboriginal objects and/or places.

However, we advise that NTSCORP's privacy guidelines restrict us from providing proponents with contact details of traditional owners who may have such an interest or hold such knowledge.

Please be advised that, in response to your notification, we will forward your correspondence to any individuals, groups and organisations whom NTSCORP is aware assert traditional interests within or hold cultural knowledge about the relevant area. Recipients of our correspondence will be invited to register their interest in the project directly with you ASAP.

Please be aware that NTSCORP cannot make a guarantee or undertaking that the recipients of our correspondence represent the entirety of traditional owners for the relevant area.

Yours faithfully,

A handwritten signature in blue ink, appearing to read "G. Tonna", is written over the typed name and extends downwards into the signature block.

George Tonna
Land & Notifications Officer
NTSCORP Limited

Tse Siang Lim

From: Jodie Rikiti [REDACTED]
Sent: Wednesday, 4 July 2018 9:53 AM
To: Dr Tessa Bryant
Subject: Extent Heritage Advisors - Mooney Mooney
Attachments: Extent Heritage Advisors - Mooney Mooney.docx

Dear Dr Bryant

Please see attached search as requested.

Regards
Jodie Rikiti
Administrative Support Officer,
Governance
Office of The Registrar ARLA 1983
Phone: 02 8633 1263
Email: [REDACTED]
P.O Box 5068
PARRAMATTA NSW 2124
Website: www.oralra.nsw.gov.au

This message is intended for the addressee named and may contain
privileged information or confidential information or both. If you
are not the intended recipient please delete it and notify the sender.

2 July 2018

Dr Tessa Bryant
Extent Heritage Advisors
3/73 Union Street
PYRMONT NSW 2009

Dear Dr Bryant

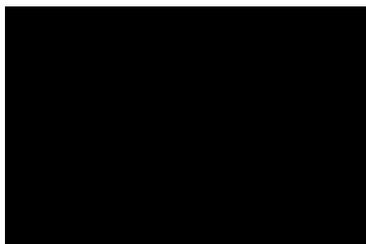
Re: Request - Search for Registered Aboriginal Owners

I refer to your email dated 18 April 2018 regarding an Aboriginal Cultural Heritage Assessment for the proposed rezoning of surplus government land near Peats Ferry Road, Mooney Mooney in NSW.

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

I suggest that you contact the Darkinjung Local Aboriginal Land Council on 02 4351 2930 regarding this project. They may also be able to assist you in identifying other Aboriginal stakeholders that wish to participate.

Yours sincerely



Jodie Rikiti
Administration Officer
Office of the Registrar, ALRA

6 July 2018

Tessa Bryant
Extent Heritage Pty Ltd
3/73 Union Street
PYRMONT NSW 2009

Via email: lberehowyj@extent.com.au

Dear Tessa,

Request - Search for Aboriginal Land Claims

I refer to the request forwarded to us on 26 June 2018 (dated 18 April 2018), to search the Register of Aboriginal Land Claims (**the Register**) database in relation to lands which appear on **Annexure A**, as described by you.

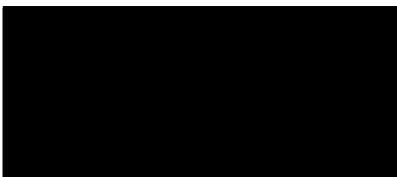
A search of the Register has been conducted and the following properties appear as being affected by Aboriginal Land Claims pursuant to sections 36 or 37 of the *Aboriginal Land Rights Act 1983*:

ALC number	Date of claim	Lot	DP
17433	27/02/2009	7011	1057994
37267	31/10/2014	10	1157280
37514	31/10/2014	11	1157280
39720	14/12/2015	10	1157280
44428	03/07/2017	10	1157280
44610	03/07/2017	11	1157280
44701	03/07/2017	10	1157280
44724	03/07/2017	10	1157280

We would suggest you contact the Darkinjung Local Aboriginal Land Council on (02) 4351 2930 to discuss this matter further.

Please contact our office on (02) 8633 1266 if you require further assistance.

Yours sincerely,



Troy Lancaster
Senior Manager
Office of the Registrar, ALRA

Please Note:

1. Search requests should not be made over privately owned land. Crown Land is the only land in NSW that is likely to be affected by an ALC under the Aboriginal Land Rights Act. If an ALC has been made over privately owned land it would be refused as soon as this is known.

2. Land across NSW with older land descriptors such as "portion, REF & TSR" have been allotted new descriptors over the last 10 years & many of these now have "Lot & DP" numbers. The ORALRA database lists the land descriptor at lodgement & may not include an updated land descriptor. If this may affect the land that you've described, we advise that you contact the Aboriginal Land Claims Investigation Unit on (02) 6883 3396.

Union Street

LOT	DP	PARISH	COUNTY
2	239249	Cowan	Northumberland
7	1180499	Cowan	Northumberland
12	1158746	Cowan	Northumberland
10	1157280	Cowan	Northumberland
11	1157280	Cowan	Northumberland
8	1180499	Cowan	Northumberland
9	1180499	Cowan	Northumberland
9	863305	Cowan	Northumberland
11	863305	Cowan	Northumberland
14	1158746	Cowan	Northumberland
1	107391	Cowan	Northumberland
13	1158746	Cowan	Northumberland
7011	1057994	Cowan	Northumberland
2	1205588	Cowan	Northumberland
1	945014	Cowan	Northumberland
1	431780	Cowan	Northumberland
21	836628	Cowan	Northumberland

Appendix 2-5. Notification Documentation sent and documentation received

8 May 2018

Attention: **Name**

Organisation

Organisation Address

Re: Project Notification and Request for Registrations of Interest for an Aboriginal Cultural Heritage Assessment for rezoning near Peats Ferry Road, Mooney Mooney NSW.

Dear **Name**,

In accordance with the NSW Office of Environment and Heritage's (OEH) *Aboriginal Cultural Heritage Consultation Requirements for Proponents, 2010*, I am writing to notify you that we have been engaged by Property NSW, to undertake an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the proposed rezoning of surplus government land near Peats Ferry Road, Mooney Mooney, and including Peat Island, NSW. The study area comprises various lots on the eastern and western sides of the M1 motorway at Mooney Mooney including Peat Island, within the Central Coast Local Government Area (**Figure 1**). The proponent is Property NSW, and the project contact is Stacey Fishwick (Director Major Projects), Level 4, 66 Harrington Street, Sydney NSW 2000; ph.0411 267 340.

Extent Heritage will be undertaking the ACHAR in accordance with the relevant OEH *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* guidelines. An important part of the assessment will be Aboriginal community consultation that aims to identify Aboriginal cultural heritage within the study area, including the cultural values and places of importance to the Aboriginal community.

We are inviting registrations from Aboriginal individuals and/or organisations, who may hold relevant cultural knowledge for determining the Aboriginal cultural heritage of the area, and who wish to be involved in the community consultation process. If you or your organisation is interested in being part of the consultation process, please provide a registration of interest to:

Tessa Bryant

Address: Level 3, 73 Union Street, Pyrmont NSW 2009

Phone: (02) 9555 4000

Email: [REDACTED]

Registrations are requested by **23 May 2018**.

Built & Urban Heritage | Aboriginal Heritage | Archaeology | Interpretation | Intangible Cultural Heritage | World Heritage

EXTENT HERITAGE PTY LTD

ABN 24 608 666 306 ACN 608 666 306

info@extent.com.au

extent.com.au

SYDNEY

3/73 Union Street

Pyrmont

P 02 9555 4000

MELBOURNE

13/240 Sydney Road

Coburg

P 03 9388 0622

BRISBANE

Level 7, 757 Ann Street

Fortitude Valley

P 07 3667 8881

PERTH

312 Onslow Road

Shenton Park

P 08 9381 5206

To assist us with communicating project information effectively, it would be appreciated if you could include the following information in your registration of interest:

1. A clear identification of the organisation registering an interest in the project. Please provide all relevant details of your organisation, including physical address/location, contact details, relevant personnel, etc;
2. Your preferred method of communication with Extent Heritage and the proponent during consultation for this project, including a nominated contact person and their contact details;
3. Comment on the level of consultation/project involvement you require (Do you wish to attend any meetings or fieldwork? Do you simply want a copy of the final report?);
4. If you wish to be involved in any meetings or fieldwork, please ensure we have current copies of your public liability, workers compensation and professional indemnity (if available) insurances.

As part of the consultation process, we are obliged to provide the contact details of organisations and individuals who register an interest to the Office of Environment & Heritage and the Darkinjung Local Aboriginal Land Council, unless instructed otherwise. Please advise us if you do not wish this to occur.

Please also consider the following, but note that these issues can also be discussed over the course of the project:

1. Guidance on the protocols, sensitivity, use and/or distribution of any cultural information that you provide to Extent Heritage/the proponent as part of this project;
2. Identification of any Aboriginal objects or places of cultural significance that you are aware of within or in the vicinity of the proposed development area.

Please don't hesitate to contact me on (02) 9555 4000 if you have any queries or concerns.

Yours Sincerely,



Dr. Tessa Bryant – Heritage Advisor

EXTENT

HERITAGE ADVISORS
TO AUSTRALIA AND
THE ASIA PACIFIC

Peat Island Mooney Mooney Rezoning Aboriginal Cultural Heritage Assessment Subject Area

 Subject Area

Drawn by: Tessa Bryant
Checked by: Alan Williams
Date: 17 April 2018
Projection: GDA 94 / MGA Zone 56
Data sources: Extent, LPI, DPE, OpenStreetMap



0 90 180 270 360 450
Metres

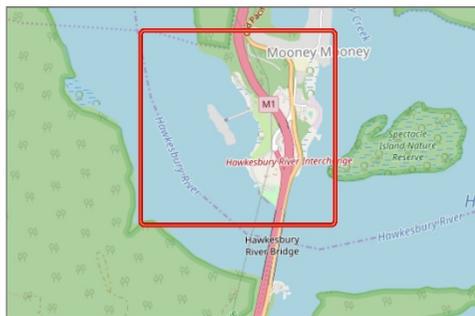


Figure 1. Mooney Mooney subject area.

Tse Siang Lim

From: [REDACTED]
Sent: Tuesday, 15 May 2018 9:46 AM
To: Tessa Bryant
Subject: Fw: Mooney Mooney Rezoning - Project Notification

((AHCS)) Amanda Hickey Cultural Services

Contact : Amanda Hickey

Address : [REDACTED]

Mobile : [REDACTED]

ABN : 498 242 132 40

A1 Indigenous Services

Contact: Carolyn

M: [REDACTED]

E: [REDACTED]

A: [REDACTED]

ABN: 20 616 970 327

Hi

A1 and AHCS would like to register for consultation and an field work for this project.

thank you

Carolyn Hickey

Amanda Hickey DeZwart

From: Tessa Bryant [REDACTED]
Sent: Wednesday, May 9, 2018 10:44:03 AM
Subject: Mooney Mooney Rezoning - Project Notification

Good Morning

On behalf of Property NSW, Extent Heritage is undertaking an Aboriginal Cultural Heritage Assessment (ACHA) for the proposed rezoning of surplus government land near Peats Ferry Road at Mooney Mooney, NSW. As part of the ACHA process, we are undertaking Aboriginal consultation, and are seeking your interest in being consulted with on this project. I provide further details of the project, and consultation process in the attached letter.

Best wishes

Tessa

Dr. Tessa Bryant | Heritage Advisor

Tse Siang Lim

From: david pross [REDACTED]
Sent: Monday, 21 May 2018 6:41 PM
To: Tessa Bryant
Subject: Re: Mooney Mooney Rezoning - Project Notification

Hello Tessa

Hello Tessa,

Thank you for your email and sorry for the late reply I have moved and it has been hectic as, my new address: [REDACTED], home phone [REDACTED] mobile still the same [REDACTED]

1.. A clear identification of the organisation registering an interest in the project. Please provide all relevant details of your organisation, including physical address/location, contact details, relevant personnel, etc;

As Above

2. Your preferred method of communication with Extent Heritage and the proponent during consultation for this project, including a nominated contact person and their contact details;

Myself and as above

3. Comment on the level of consultation/project involvement you require (Do you wish to attend any meetings or fieldwork? Do you simply want a copy of the final report?);

I wish to attend meetings and fieldwork

4. If you wish to be involved in any meetings or fieldwork, please ensure we have current copies of your public liability, workers compensation and professional indemnity (if available) insurances.

With the moving I cannot find any paper work as yet on insurances, I am leaving for Coff's Harbor tonight and will back on the weekend. I will phone you while I am away

Best regards

David Pross

On Wed, May 9, 2018 at 10:44 AM, Tessa Bryant [REDACTED] wrote:

Good Morning David,

On behalf of Property NSW, Extent Heritage is undertaking an Aboriginal Cultural Heritage Assessment (ACHA) for the proposed rezoning of surplus government land near Peats Ferry Road at Mooney Mooney, NSW. As part of the ACHA

Tse Siang Lim

From: [REDACTED]
Sent: Wednesday, 23 May 2018 6:03 PM
To: Tessa Bryant
Subject: Letter of interest
Attachments: Valley ELM Corp Letter Head.pdf

Hi Tessa please see attachment letter of interest
Thank you"
Irene for Valley ELM Corp



[FREE Animations for your email - by IncrediMail!](#)

[Click Here!](#)

Valley ELM Corp

Aboriginal Corporation Email: [REDACTED]

Ph: [REDACTED] ABN: 42289115689 Irene Ardler secretary and contact person.

Date: 23rd May 2018

To: EXTENT Heritage Advisors

Re: Project Notification and Request for Registration of Interest for an Aboriginal Cultural Assessment for Rezoning Near Peats Farry, Mooney Mooney

Attn: Tessa Bryant

Email: [REDACTED]

Dear Trssa

Please register our corporation in the project please let me know if you need further information.

Regards

Irene Ardler
Secretary for Valley ELM Corp

From: [REDACTED]
To: [Tessa Bryant](#)
Subject: Re: Mooney Mooney Rezoning - Project Notification
Date: Wednesday, 23 May 2018 5:47:43 PM
Attachments: [17.jpg](#)
[image0011.png](#)
[IMSTP9.gif](#)
[Wattaka letter head.pdf](#)

Hi Tessa please find attachment letter of interest for project
Thanks"
Des

-----Original Message-----

From: [Tessa Bryant](#)
Date: 9/05/2018 10:44:10 AM
To: [REDACTED]
Subject: Mooney Mooney Rezoning - Project Notification

Good Morning Des,

On behalf of Property NSW, Extent Heritage is undertaking an Aboriginal Cultural Heritage Assessment (ACHA) for the proposed rezoning of surplus government land near Peats Ferry Road at Mooney Mooney, NSW. As part of the ACHA process, we are undertaking Aboriginal consultation, and are seeking your interest in being consulted with on this project. I provide further details of the project, and consultation process in the attached letter.

Best wishes

Tessa

Dr. Tessa Bryant | Heritage Advisor

EXTENT Heritage Pty Ltd

www.extent.com.au | [REDACTED]

P: 02 9555 4000

[Find us on Facebook](#) | [Connect with us on LinkedIn](#)



Wattaka Wonnarua Cultural Consultancy Services

Ph: [REDACTED] email: [REDACTED]

Des Hickey manager ABN: 57914734012

Date: 22 May 2018

To: EXTENT Heritage Advisors

Re: Project Notification and Request for Registration of Interest for an Aboriginal Cultural Heritage Assessment for Rezoning Near Peats Farry, Mooney Mooney NSW.

Attn: Tessa Bryant

Dear Trssa

**My group wish to register our interest in the above said project
Please call or email if you require any further information.**

Regards

**Des Hickey
Manager**

Tse Siang Lim

From: WIDESCOPE [REDACTED]
Sent: Monday, 14 May 2018 10:21 AM
To: Tessa Bryant
Subject: RE: Mooney Mooney Rezoning - Project Notification
Attachments: Widedcope WC 2017..2018[15677].pdf; Widescope Insurance 2017-2018.pdf

Hi Tessa,

Thank you, please register my interest in the Mooney Mooney Project.
I hold cultural connection and have cultural knowledge of aboriginal objects and places.
I would like to be involved in community meetings and survey field work. Please email for correspondence.
Please contact Donna (admin) : [REDACTED] Mob: [REDACTED] or Steven on [REDACTED]
Insurances Attached

Thank you
Steven Hickey

From: Tessa Bryant [REDACTED]
Sent: Wednesday, May 9, 2018 10:44:03 AM
To: [REDACTED]
Subject: Mooney Mooney Rezoning - Project Notification

Good Morning Steven,

On behalf of Property NSW, Extent Heritage is undertaking an Aboriginal Cultural Heritage Assessment (ACHA) for the proposed rezoning of surplus government land near Peats Ferry Road at Mooney Mooney, NSW. As part of the ACHA process, we are undertaking Aboriginal consultation, and are seeking your interest in being consulted with on this project. I provide further details of the project, and consultation process in the attached letter.

Best wishes
Tessa

Dr. Tessa Bryant | Heritage Advisor
EXTENT Heritage Pty Ltd
www.extent.com.au | [REDACTED]
P: 02 9555 4000
[Find us on Facebook](#) | [Connect with us on LinkedIn](#)



SYDNEY | MELBOURNE | BRISBANE | PERTH

Laressa Barry

From: Sharon Hodgetts [REDACTED]
Sent: Thursday, 7 June 2018 7:26 PM
To: Laressa Barry
Cc: Tracey Howie; Dr Tessa Bryant
Subject: RE: Mooney Mooney Rezoning - Project Notification
Attachments: Rock engraving Site Mooney Point.JPG

Hi Larissa

Was nice to chat to you yesterday. Sorry I cannot seem to find the information about any sites on Peats Island. Best to ask the LALC. In relation to Aboriginal sites at Mooney, I haven't surveyed the area, but have visited Peats Island with Sean and Lynne and some other people. I think a lot of Peats Island is reclaimed land. There could be something on the western side though.

There are a number of sites recorded at Mooney but these require ground trothing. On the western side of Mooney, there are rock engravings on a rock platform just south of the entrance of the bridge/walkway to Peats Island (see attached pic- site is yellow cross). This site is not marked in the correct location. I suspect this is site [REDACTED] and could have been re-recorded by Bluff in 1989 as [REDACTED]. The site does require further investigation, clearing of the encroaching veg and debris and night recorded. I would be happy to be involved in night recording. I do get every second Friday as RDO so I might be available for survey if required, if not please keep me updated and any further information I can provide I will forward to you.

I think this area was a main crossing point for Aboriginal people over the river and a main travel route up and into the Central Coast Hinterland, this required further research of course but it certainly fits with other research I have done. My initial feeling about this area is that no further development should take place or at least limited low impact development.

Talk again soon,

Regards

Sharon

Sent from [Mail](#) for Windows 10

From: Tessa Bryant [REDACTED]
Sent: Wednesday, May 9, 2018 10:44:08 AM
To: [REDACTED]
Subject: Mooney Mooney Rezoning - Project Notification

Good Morning Sharon,

On behalf of Property NSW, Extent Heritage is undertaking an Aboriginal Cultural Heritage Assessment (ACHA) for the proposed rezoning of surplus government land near Peats Ferry Road at Mooney Mooney, NSW. As part of the ACHA process, we are undertaking Aboriginal consultation, and are seeking your interest in being consulted with on this project. I provide further details of the project, and consultation process in the attached letter.

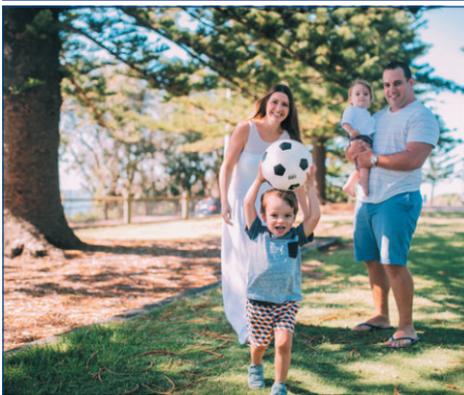
Best wishes

Tessa

Dr. Tessa Bryant | Heritage Advisor
EXTENT Heritage Pty Ltd

Appendix 2-6. Newspaper Advertisement

General Vacancies



Central Coast Council is an exciting and dynamic place to work. Working close to home means more time to spend with those you care about whilst helping to create a strong future for your own community. **Build your career with us today!**

The following career opportunities are currently available with Council:

• Councillor and Meeting Support Officer

Closing Date: 23 May 2018.

• Crew Member Operator

• Development Planners

• Facilities Contract Officer

• Strategic Planners

Closing Date: 27 May 2018.

Take your career to a new place.

To apply, visit www.centralcoast.nsw.gov.au



Telephone Sales Role

We are seeking motivated sales people to join our sales team. Do you have a passion to earn lots of money? Are you sales minded? Do you love talking to clients over the phone? Then act now to secure your interview!

Catering to a large market with a variety of products and services, we offer a friendly, fun and down to earth environment with structure, excellent training and incentives.

In this role you will be responsible for managing a portfolio of customer accounts and building on existing business while also looking for new opportunities and sales.

Interaction with customers over the phone, providing different services, sales solutions and gaining new business will be part and parcel of the role.

Ideal candidates we are seeking will have:

- ✓ A team player and self motivated
- ✓ Goal orientated, resilient and determined to succeed
- ✓ Strong communication skills both verbal and written

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NOTICE BOARD

General Notices



Property NSW

Notice of Aboriginal Cultural Heritage Assessment and Invitation for Registrations of Interest - Rezoning of surplus government land near Peats Ferry Road, Mooney Mooney, Central Coast LGA.

Property NSW is proposing to undertake an Aboriginal Cultural Heritage Assessment for the rezoning of surplus government land at Mooney Mooney including Peat Island, Peats Ferry Road, Mooney Mooney NSW. Contact details for the project are: Stacey Fishwick (Director Major Projects), Level 4, 66 Harrington Street, Sydney NSW 2000; ph. 0411 267 340.

Registrations are invited from Aboriginal individuals and organisations who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area, and who wish to be involved in the consultation process. The consultation will be used to inform the Aboriginal Cultural Heritage Assessment and obtain any subsequent approvals that may be required for the rezoning.

Registrations of interest should be provided by no later than 31 May 2018 to Tessa Bryant of Extent Heritage: (post) Level 3, 73 Union Street Pyrmont 2009; (email) [redacted] or (phone) (02) 9555 4000.

Attention Justices of the Peace !

His Excellency General The Honourable David Hurley AC DSC (Ret'd) Governor of NSW, Mrs Hurley, NSW Attorney General Mark Speakman SC, MP Emma McBride MP Det. Supt. Deborah Wallace APM, and other prominent Guest Speakers are attending the NSW Justices Association State Conference at Mingara Recreation Club, Saturday May 19th, 2018.

ALL JPs are invited to attend a FREE 3 pm to 5 pm educational training session, presented by Dr John Brodie JP PhD, a man with a lifetime of education, training experience is set to share his knowledge with JPs of the Central Coast.

A great opportunity for all JPs to learn how to deal with difficult documents and situations.

RSVP - Bruce, to secure a seat.

tuggerhakes@nswja.org.au or txt/call 0418 493 388

Expressions of Interest for Use of Mangrove Creek Recreation Reserve No. 37386

The Mangrove Creek Reserve Trust seeks Expressions of Interest (EOI) from parties who wish to apply for a license to use the Recreation Reserve. The proposed use must be for a recreational purpose and is subject to certain conditions.

The Mangrove Creek Reserve is located on Wisemans Ferry Road at Mangrove Mountain, Lot 72 DP755253 and Part Lot 229 DP 727251.

Interested parties are invited to submit a written application to the Trust Board. Applications must include details as to intended use (frequency of usage, number of users, etc). Use will be subject to a long term license agreement and annual fees. Applications should be submitted to: mcrr.trust@gmail.com prior to Friday, 1st June 2018

Community Garden Volunteers Wanted

Tuggerah Lake Reserve Trust is seeking passionate volunteers to help promote and manage a purpose built community garden in the Wyong area. To obtain a copy of the volunteer description or to arrange a site inspection. Please email ccwcommunitygarden@gmail.com or phone (02) 4352 1199

Tenders

School Canteen Tender
Tenders are called for the licence of the School Canteen for the school year commencing Term 3, 2018 and for a term of approximately 5 years. Annual school enrolments will be approximately 450. General enquiries and requests for a Tender Information Package should be referred to:

Owen Dalkeith
Principal
Telephone: 0243331022

Tenders must be submitted in a sealed envelope marked "Confidential - School Canteen Tender" and sent to: The Principal, Brooke Avenue Public School, 96 Brooke Avenue, KILLARNEY VALE NSW 2261. Tenders close at 3pm on 24th May, 2018. A tender visit and briefing session is planned to be held in the near future. 7th May, 2018 at 9:30am All applicants must make themselves familiar with clause 2 of the tender offer.

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Appendix 2-7. Further information sent to OEH and Darkinjung LALC



16 October 2018

Office of Environment and Heritage
Regional Operations Division
Hunter Central Coast Branch
Locked Bag 1002
Dangar NSW 2309

Attention: **Steven Cox** (Senior Team Leader Planning)

Aboriginal Cultural Heritage Assessment Report for Peat Island and Mooney Mooney: Registered Aboriginal Parties

Dear Steven,

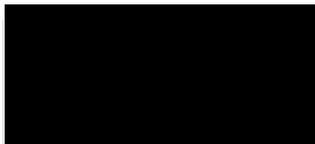
On behalf of Property NSW, Extent Heritage is preparing an Aboriginal Cultural Heritage Assessment Report for the proposed redevelopment of surplus Government land at Peat Island and Mooney Mooney, NSW. As part of the ACHAR, we are following the *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW 2010). I am writing to provide you with a list of the Registered Aboriginal Parties (RAPs) for the project, in accordance with Section 4.1.6 of the Requirements.

The RAPs for the project are the following:

- Darkinjung Local Aboriginal Land Council
- Widescope Indigenous Group
- Amanda Hickey Cultural Services
- A1 Indigenous Services
- David Pross
- Wattaka Wonnarua CC Service
- Valley ELM Corp
- Yinarr Cultural Services
- Guringai Tribal Link Aboriginal Corporation
- Sharon Hodgetts

A copy of the project notification is also enclosed. Please don't hesitate to contact me on (02) 9555 4000 if you have any queries or concerns.

Yours sincerely,



Laressa Barry
Heritage Advisor | Extent Heritage



16 October 2018

Darkinjung Local Aboriginal Land Council
PO Box 401
Wyong NSW 2259

Attention: **Anthony Freeman** (Culture & Heritage Project Officer)

Aboriginal Cultural Heritage Assessment Report for Peat Island and Mooney Mooney: Registered Aboriginal Parties

Dear Anthony,

On behalf of Property NSW, Extent Heritage is preparing an Aboriginal Cultural Heritage Assessment Report for the proposed redevelopment of surplus Government land at Peat Island and Mooney Mooney, NSW. As part of the ACHAR, we are following the *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW 2010). I am writing to provide you with a list of the Registered Aboriginal Parties (RAPs) for the project, in accordance with Section 4.1.6 of the Requirements.

The RAPs for the project are the following:

- Darkinjung Local Aboriginal Land Council
- Widescope Indigenous Group
- Amanda Hickey Cultural Services
- A1 Indigenous Services
- David Pross
- Wattaka Wonnarua CC Service
- Valley ELM Corp
- Yinarr Cultural Services
- Guringai Tribal Link Aboriginal Corporation
- Sharon Hodgetts

A copy of the project notification is also enclosed. Please don't hesitate to contact me on (02) 9555 4000 if you have any queries or concerns.

Yours sincerely,



Laressa Barry
Heritage Advisor | Extent Heritage

Appendix 2-6. ACHAR sent out and review responses received

13 November 2020

Attention: **Name**
Organisation
Organisation Address

Re: Peats Ferry Road, Mooney Mooney, NSW – Proposed Aboriginal Cultural Heritage Assessment Report Methodology

Dear **Name**,

Thank you for your registration of interest in the Aboriginal Cultural Heritage Assessment Report (ACHAR) for the proposed rezoning of surplus government land near Peats Ferry Road, Mooney Mooney, and including Peat Island, NSW (**Figure 1**, hereafter referred to as the 'study area'). Your interest in the project has been formally registered in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*.

The proponent is Property NSW, and the project contact is Eric Yu (Property NSW Major Projects Officer), Level 4, 66 Harrington Street, Sydney NSW 2000; ph. [REDACTED]

Enclosed is the proposed methodology for the project, which includes archaeological survey. I would like to invite you to review the methodology and provide any comments you may have by **4 July 2018**.

If you have any questions, please do not hesitate to contact me on (02) 9555 4000, or by email at [REDACTED]

Sincerely,

[REDACTED]

Dr Tessa Bryant • Heritage Advisor
Extent Heritage • Sydney

Background

Property NSW is proposing to amend the Gosford LEP 2014 to rezone surplus government land at Mooney Mooney from SP2 Hospital, SP2 Educational Establishment and RE1 Public Recreation to R1 General Residential, R2 Low Density Residential, B2 Local Centre, RE1 Public Recreation and E1 National Park and Nature Reserves (**Figure 2**). The proposal is seeking to explore the feasibility of residential development, community facilities, a neighbourhood retail centre, recreation, a marina, relocation of existing emergency services facilities and addition of land to Popran National Park. This planning proposal has Gateway approval from Department of Planning and Environment (PP_2017_CCOAS_006_00) subject to several conditions. With regards to Aboriginal heritage, the Gateway conditions require updates to the Planning Proposal to demonstrate consistency with Section 117 Directions (2.3 Heritage Conservation) following consultation with public authorities and community organisations (Office of Environment and Heritage, Darkinjung Local Aboriginal Land Council and Guringai Tribal Link Aboriginal Corporation).

In 2014 and 2016, Artefact Heritage undertook a due diligence assessment and archaeological survey of the study area in advance of the proposed rezoning. Four Aboriginal sites were identified during the survey, which comprised three previously recorded rock engraving sites along a sandstone platform overlooking the Hawkesbury River (#45-6-0476, #45-6-1837 and #45-6-2757), and one newly recorded rock engraving site on a sandstone ledge in the Mooney Mooney Public School (#45-5-3135). A further five previously recorded sites comprising two shelters with art sites (#45-6-2500 and #45-6-2501), two shelters with midden (#45-6-1836 and #45-6-1990), and a shelter with archaeological deposit (#45-6-0479) could not be located during the survey (**Figure 3**). The assessment concluded that there were large portions of the study area where intact landforms occurred with potential to contain Aboriginal sites, either in sub-surface contexts or on sandstone platforms and sandstone overhangs. It recommended that further archaeological investigation of the study area be undertaken in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010) and *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010).

Extent has been engaged to undertake the next phase of investigation, namely an Aboriginal Cultural Heritage Assessment report (ACHAR). Below, we provide the assessment methodology we propose to adopt to complete the ACHAR.

Proposed Assessment Methodology

Extent Heritage proposes to develop an ACHAR in accordance with the following guidelines:

- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (Office of Environment and Heritage [OEH] 2011);
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010);

- *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010)

Development of the ACHAR will include the following tasks:

- Aboriginal community consultation.
- Desktop research.
- Archaeological survey (further detail is provided below). This component would be undertaken in conjunction with representatives of the RAPs, based on selective commercial engagements determined by the proponent.
- Preparation of the ACHAR. This incorporates Aboriginal consultation and any cultural information provided, outlines the findings of the archaeological survey, assesses potential impacts to Aboriginal heritage, and makes recommendations on any Aboriginal heritage sites and/or objects that may be present within the proposed study area.

It has been noted that a number of previously recorded Aboriginal sites were not located during the 2014-2016 assessment, and that these sites may be duplicates, or their spatial coordinates have been incorrectly recorded in the AHIMS database. Therefore, other key tasks include the updating of existing (previously recorded) site cards to verify their locations, nature, spatial extent and condition, and the preparation of new AHIMS site recording forms for any newly identified sites.

Archaeological Survey Methodology

We propose to undertake an archaeological survey in accordance with the requirements of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010). The survey will aim to identify any visible Aboriginal objects (material traces and evidence of Aboriginal occupation), as well as identify those areas where it can be inferred that, although not visible, material traces or evidence of Aboriginal land use have a likelihood of being present under the ground surface (potential archaeological deposits [PADs]).

The survey will be carried out by the archaeological team and RAP site officers over a two day period, and will include:

- Inspection of a sample of all landforms present within the study area, with a proportionate emphasis on those landforms deemed to have archaeological potential;
- Pedestrian survey of pre-determined transects;
- Taking representative photographs of survey transects and landforms where informative;
- Recording landform and general soil information for each survey unit;

- Recording the land surface and vegetation conditions encountered during the survey (accounting as appropriate for things like vegetation, rock outcrops, coarse fragments, etc.), and how these impact on the visibility of objects;
- Identification of previously recorded Aboriginal sites, and recording of any newly identified Aboriginal sites observed during the survey; and
- Recording of spatial information suitable for mapping according to Code requirements and the calculation of survey coverage.

The archaeological survey is designed to sample the study area in a systematic manner by targeting areas of ground surface visibility and including a representative sample of all landforms. Any areas of sandstone outcrop will be examined for evidence of Aboriginal engravings and grinding grooves, and any sandstone overhangs will be examined for the presence of pigmented art, or occupational deposits. Any areas of ground exposure will be examined for archaeological evidence such as stone artefacts, charcoal and shell. Ground surfaces and cut-and-fill features will also be examined to determine the degree of soil disturbance, erosion and potential for subsurface archaeological deposits.

Due to the presence of degraded rock art on sandstone exposures within the study area, the survey will likely require several visits at different times of the day; morning, twilight and night with a spotlight, targeting areas of sandstone outcrop.

The archaeological survey will involve a five-stage approach:

- Stage 1:** In conjunction with the proponent, Extent Heritage will arrange a date on which the archaeological survey of the study area will be conducted. Extent will also seek advice on any possible access issues.
- Stage 2:** An analysis of topographic maps and aerial photographs will be undertaken prior to the survey to identify landforms across the study area and to identify areas of sandstone outcrop as well as areas of ground surface exposure, in the form of tracks, unsealed roads, dams, cuttings and areas of ground exposure. Areas that meet these requirements will be targeted during the survey.
- Stage 3:** Upon entering the property, we will familiarise ourselves with the landscape and target areas of sandstone outcrop and ground surface visibility.
- Stage 4:** Following the initial scoping work, ground inspection will be conducted via pedestrian survey transects. Where possible, areas of sandstone outcrop and ground surface visibility will be comprehensively surveyed. Targeted ground inspection of sandstone outcrop will occur at various times of the day, with the aid of spotlights and other equipment, to facilitate recording of engraving sites.
- Stage 5:** Any engraving and art sites, surface artefact scatters and potential archaeological deposits found during the survey will be recorded in detail. The location and extent of each site will be recorded with a GPS. Field notes will be made and photographs taken in order to document landscape configuration, soil profiles, soil disturbances, ground visibility and vegetation types.

Please note that the survey strategy above has been based on desktop research and previous recommendations (e.g. Artefact Heritage 2016), but may prove inappropriate once initial results from the inspection are assessed or due to information that only becomes clear once on site. In such a situation, the survey methodology may be revised by the principal archaeologist present, in consultation with the RAPs present on site.

Timeframes

Extent Heritage proposes the following indicative timeframes for the project:

- Distribution of this document to Registered Aboriginal Parties: **5 June 2018**.
- End of review period for the proposed methodology: **4 July 2018**.
- Field survey to be undertaken: **mid July 2018**.
- Distribution of the draft report to Registered Aboriginal Parties for review: **mid August 2018**.

Information Sought

Extent Heritage would appreciate your feedback on the methodology proposed above for the investigation and assessment of the study area.

In returning your answers, please include the following where appropriate:

- Any protocols that you would like adopted during the project;
- Identification of any Aboriginal objects of cultural significance and/or importance that you are aware of within the activity area, and how you wish them to be dealt with during the project;
- Identification of any places of cultural significance and/or importance that you are aware of within the study area, and how you wish them to be dealt with during the project;
- Guidance on the protocols, sensitivity, use and/or distribution of any cultural information that you provide to Extent Heritage;
- Whether you require any further information prior to Extent Heritage proceeding with the project.

It is important that you understand that Extent Heritage will compile and forward information for review by the proponent, but we do not decide who will be involved in fieldwork in any paid capacity.

If you would like to arrange for any elders or other community members to be able to visit the site during the work, please let us know.

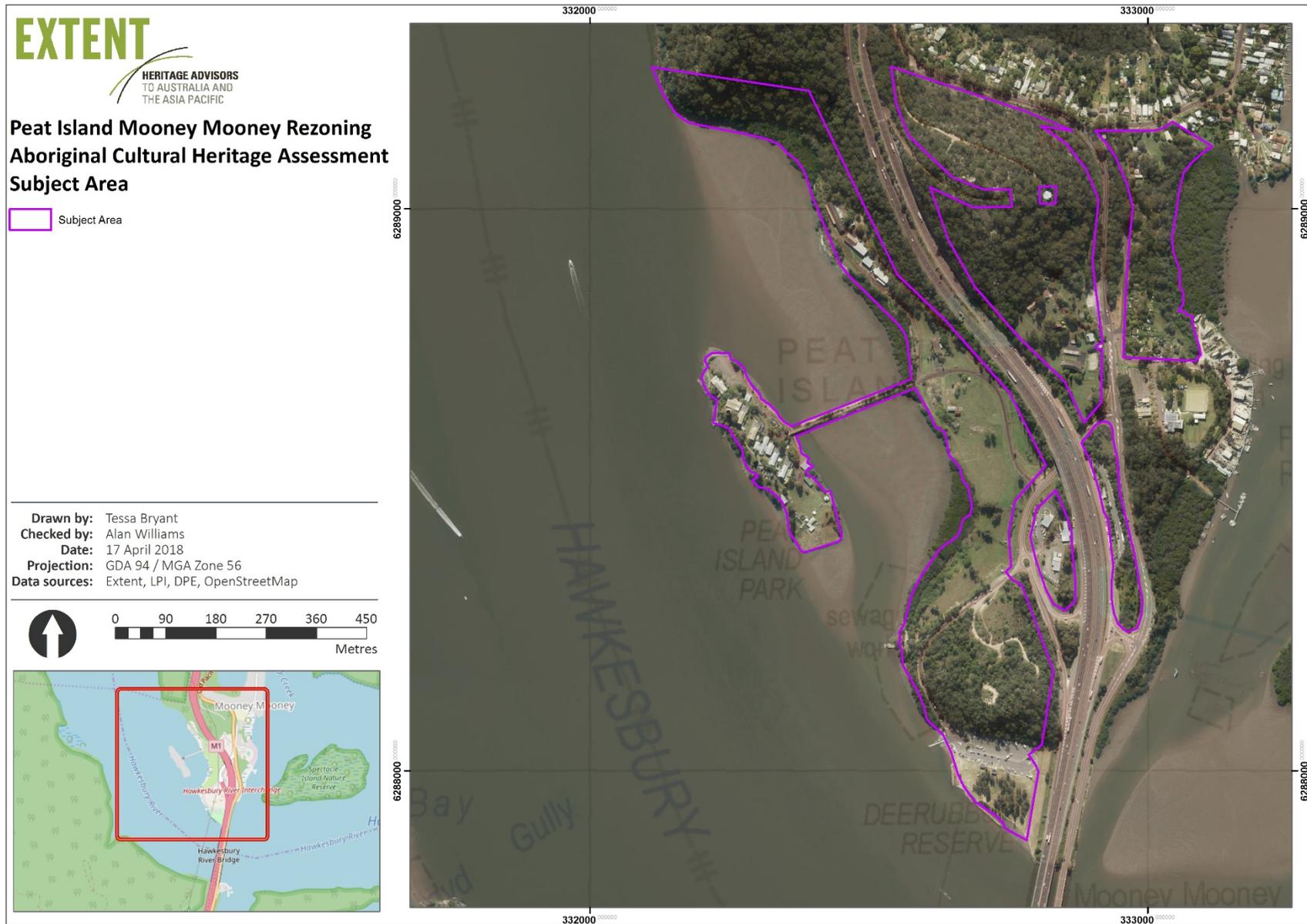


Figure 1. The study area comprising government land near Peats Ferry Road, Mooney Mooney (and including Peat Island) proposed for rezoning.

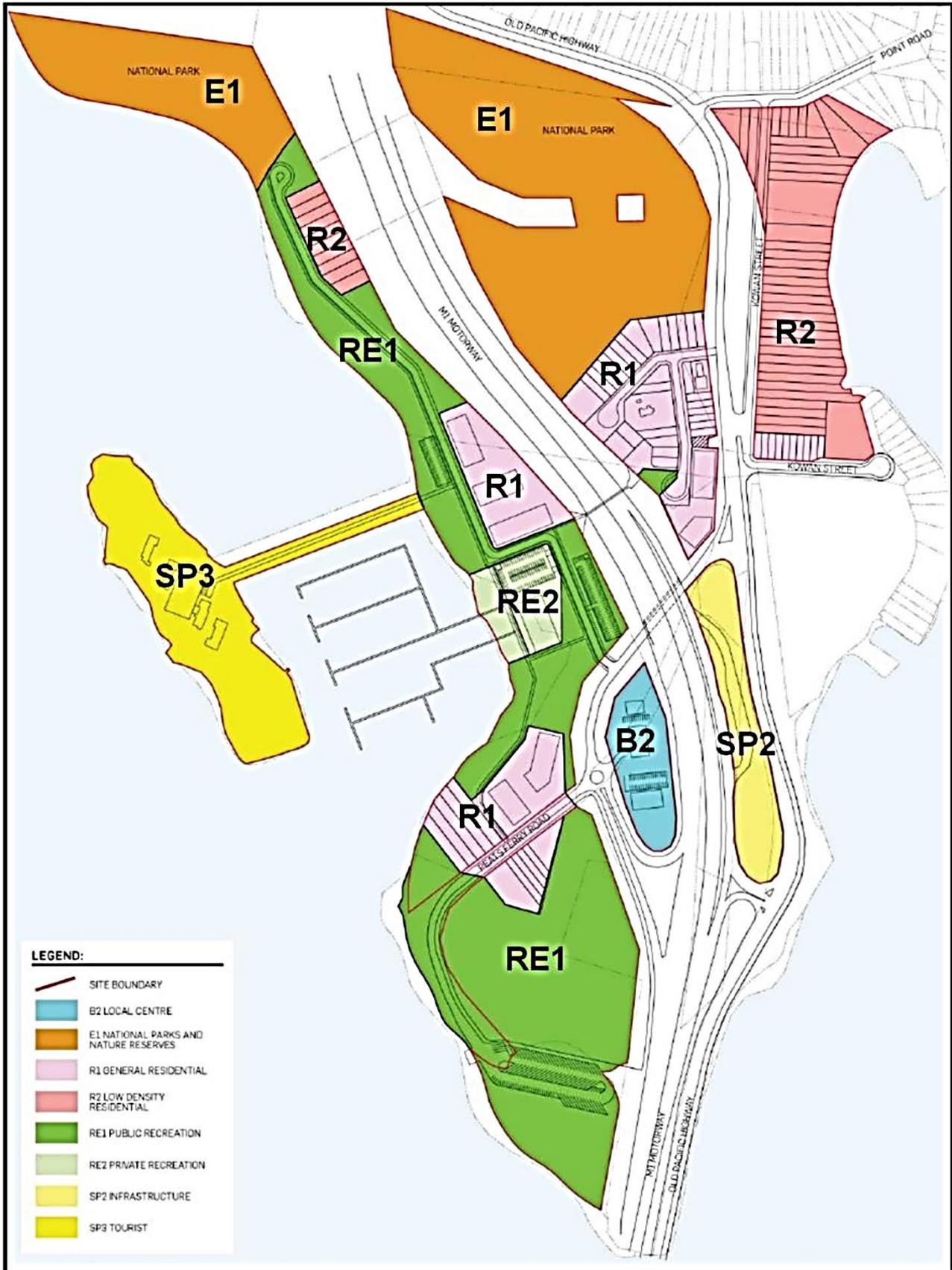


Figure 2. Proposed land rezoning map for the study area

Figure 4: OEH AHIMS site register results and sites identified during site inspection (background © Google 2014)



Figure 3. Previous and newly identified Aboriginal sites recorded during previous assessment (Artefact Heritage 2016:13).

Laressa Barry

From: Caza X [REDACTED]
Sent: Tuesday, 5 June 2018 7:19 PM
To: Laressa Barry; [REDACTED]
Subject: Fwd: Aboriginal Cultural Heritage Assessment Methodology - Peat Island, Mooney Mooney, NSW

((AHCS)) Amanda Hickey Cultural Services
Contact : Amanda Hickey
Address : [REDACTED]
Mobile : [REDACTED]
ABN : 498 242 132 40

A1 Indigenous Services

Contact: Carolyn

M: [REDACTED]

E: [REDACTED]

A: [REDACTED]

ABN: 20 616 970 327

Hi

A1 Indigenous Services and AHCS Amanda Hickey Cultural Services support and endorse the project methodology for Peat Island, Mooney Mooney, NSW

Thank you

Carolyn Hickey

Amanda Hickey DeZwart

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From: Laressa Barry
Sent: Tuesday, June 5, 5:30 PM
Subject: Aboriginal Cultural Heritage Assessment Methodology - Peat Island, Mooney Mooney, NSW
To: [REDACTED]

Dear Carolyn,

I am sending this email on behalf of my colleague, Dr Tessa Bryant, who is managing this project.

Firstly, I want to thank you for your registration of interest in the Aboriginal Cultural Heritage Assessment of surplus government land near Peat Island, Mooney Mooney, NSW.

Your interest in the project has been formally registered in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*.

Enclosed is a letter detailing the proposed methodology for the project, which includes archaeological survey. I would like to invite you to review the methodology and provide any comments you may have by **4 July 2018**.

Laressa Barry

From: WIDESCOPE . [REDACTED]
Sent: Wednesday, 13 June 2018 8:29 AM
To: Laressa Barry
Subject: RE: Aboriginal Cultural Heritage Assessment Methodology - Peat Island, Mooney Mooney, NSW

Hi Laressa,

I have received the Aboriginal Cultural Heritage Assessment Methodology for Peat Island, Mooney Mooney, NSW

I have review and support the Methodology outlined for the project.

I look forward to assisting Extent with the cultural side of the project

Regards

Steven Hickey

From: Laressa Barry [REDACTED]
Sent: Tuesday, June 5, 2018 5:29:14 PM
To: [REDACTED]
Subject: Aboriginal Cultural Heritage Assessment Methodology - Peat Island, Mooney Mooney, NSW

Dear Steven,

I am sending this email on behalf of my colleague, Dr Tessa Bryant, who is managing this project.

Firstly, I want to thank you for your registration of interest in the Aboriginal Cultural Heritage Assessment of surplus government land near Peat Island, Mooney Mooney, NSW.

Your interest in the project has been formally registered in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*.

Enclosed is a letter detailing the proposed methodology for the project, which includes archaeological survey. I would like to invite you to review the methodology and provide any comments you may have by **4 July 2018**.

If you have any questions, please do not hesitate to contact me or Tessa, on (02) 9555 4000, or by email at [REDACTED]

Looking forward to working with you again,
Kind regards,

Laressa Barry | BA (Hons)
Heritage Advisor/Archaeologist
T 02 9555 4000
[REDACTED]

extent.com.au

Connect with us on:



Laressa Barry

From: Sharon Hodgetts <[REDACTED]>
Sent: Friday, 15 June 2018 11:06 AM
To: Laressa Barry
Cc: Dr Tessa Bryant
Subject: RE: Mooney Mooney Rezoning - Project Notification
Attachments: Sharon Hodgetts Quote 3..pdf

Hi Laressa

Thank you for the information. Wow the European trip sound great!

I will register my interest in the project. If it works for me then I will participate if not please just keep me informed. Im particularly interested in that area, night recording may reveal some interesting pieces of information. Im happy for you to use the information, the main crossing point and Aboriginal use of the area etc. I am also happy with the Methodology for the project.

I have attached a quote for my Rates.

Talk soon
Sharon

Sent from [Mail](#) for Windows 10

From: Laressa Barry [REDACTED]
Sent: Thursday, June 14, 2018 12:26:55 PM
To: Sharon Hodgetts
Cc: Dr Tessa Bryant
Subject: RE: Mooney Mooney Rezoning - Project Notification

Hi Sharon,

No problem at all, and thank you for the information below. From the Artefact Heritage due diligence report there looks to be a fair few engravings along that sandstone outcrop along the river's edge, plus some other sites, but as you've previously pointed out they didn't really spend much time through there – they only went looking for known sites.

Our methodology for this survey has time set aside for night recording and early morning recording etc over a period of two days, so I think we will do a sweep of the entire study area and then go back and target particular areas at the different times of the day. We will take out massive maps of the study area and we can mark all over them as we go along. I have attached a copy of the methodology letter – it reads as if you've registered as that is in our standard proforma letter, but if you don't feel comfortable to be formally registered I am happy to keep sending you information about the project outside of the formal consultation process, as we are going along.

We aren't able to undertake the survey until after the 4th July based on when the methodology was distributed, and then we have a pretty small window after that – as both Tessa and I will be going on holidays to Europe (separately) from the 14th and 20th July until August. So hopefully it can happen some time between the 4-14 July but we will just have to see who is available, and when. Otherwise perhaps Fenella can undertake the survey!

Alan has asked me to enquire about what your rate would be for the survey, so we can send an accurate costing for the survey to the client – could I please ask you to send through information about your charge out rate, daily rate and up to how many hours of work that includes? Note that there would be some night time work too. I think to make it easiest, what would be your daytime (9am-5pm) rate, and what would be your out-of-hours (5pm-9pm and 5am-9am) rate?

And finally, I think it is important to mention in our report that the mainland point encompassing the study area would have been a crossing point over the River for Aboriginal people. I can certainly do more research on this, but I think it is important that I acknowledge this information is coming from you, the Aboriginal community – would you feel comfortable in allowing me to include that in the report? If not that is totally cool, I can certainly leave it out if you'd prefer.

Hope that isn't too much information to digest at once!

Cheers,
Laressa

Laressa Barry | BA (Hons)
Heritage Advisor/Archaeologist
T 02 9555 4000



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From: Sharon Hodgetts [redacted]
Sent: Thursday, 7 June 2018 7:26 PM
To: Laressa Barry [redacted]
Cc: Tracey Howie [redacted] Dr Tessa Bryant [redacted]
Subject: RE: Mooney Mooney Rezoning - Project Notification

Hi Larissa

Was nice to chat to you yesterday. Sorry I cannot seem to find the information about any sites on Peats Island. Best to ask the LALC. In relation to Aboriginal sites at Mooney, I haven't surveyed the area, but have visited Peats Island with Sean and Lynne and some other people. I think a lot of Peats Island is reclaimed land. There could be something on the western side though.

There are a number of sites recorded at Mooney but these require ground trothing. On the western side of Mooney, there are rock engravings on a rock platform just south of the entrance of the bridge/walkway to Peats Island (see attached pic- site is yellow cross). This site is not marked in the correct location. I suspect this is site [redacted] and could have been re-recorded by Bluff in 1989 as [redacted]. The site does require further investigation, clearing of the encroaching veg and debris and night recorded. I would be happy to be involved in night recording. I do get every second Friday as RDO so I might be available for survey if required, if not please keep me updated and any further information I can provide I will forward to you.

I think this area was a main crossing point for Aboriginal people over the river and a main travel route up and into the Central Coast Hinterland, this required further research of course but it certainly fits with other research I have done. My initial feeling about this area is that no further development should take place or at least limited low impact development.

Talk again soon,

Laressa Barry

From: Tracey Howie [REDACTED]
Sent: Monday, 2 July 2018 10:39 AM
To: Laressa Barry; Dr Tessa Bryant
Subject: Re: Aboriginal Cultural Heritage Assessment Methodology - Peat Island, Mooney Mooney, NSW

Dear Tessa & Laressa,

Guringai Tribal Link Aboriginal Corporation (GTLAC) have read and discussed the Proposed Methodology for the Peat Island, Mooney Mooney Aboriginal Cultural Heritage Assessment and agree with the content as set out by Extent Heritage.

Should you have any questions in regards to this notice, please don't hesitate to contact me.

Kind regards
Tracey Howie
Guringai TLAC

M: [REDACTED]

> On 5 Jun 2018, at 5:29 PM, Laressa Barry [REDACTED] wrote:

>

> <SYD18100 Peat Island Survey Methodology GTLAC.pdf>

Coral Hardwick

From: Tom Sapienza
Sent: Friday, 13 November 2020 5:07 PM
To: Tom Sapienza
Subject: Report Review - Rezoning near Peats Ferry Road, Mooney Mooney

Hello,

Ages ago, in May 2018, your organisation registered an interest in an Aboriginal Cultural Heritage Assessment for rezoning near Peats Ferry Road, Mooney Mooney NSW. Per Heritage NSW's *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW)*, I am writing to inform you that our draft version of the report is finally complete – and that it's available for your organisation to review and send back comments about.

REPORT DOWNLOAD LINKS

I'm afraid as is the case with many reports for big projects, the report is too large to email. The report is too large to email, but you can view and download it from the following links.

The high resolution version of the draft report is 85 megabytes, and can be downloaded from this link:

Full report (237 pages; 85 megs)

<https://extentheritage.wetransfer.com/downloads/a77ebb22cd0cda930666e8403c22e93b20201113054644/f9e2c6f19a9139fac143f98305cd5b4d20201113054644/7dbf3e>

If you'd rather download less, I've compressed the report as much as I can and you can download the main report (23 megabytes) and the appendices (7 megabytes) from these links:

Main report (115 pages; 23 megs)

<https://extentheritage.wetransfer.com/downloads/9add926dc0c7c076489d6230fbde30c220201113055336/47133285530e2cfc145957868cbbd72b20201113055336/a28d2f>

Appendices only (122 pages; 7 megs)

<https://extentheritage.wetransfer.com/downloads/06b301e2527ea82e126ca88fbaa2a76a20201113055427/8c3cc8e068ded37c73f94ff4223d1f6d20201113055427/527f24>

QUESTIONS COMMENTS ETC

If you should have any problems accessing or viewing the file, please let me know and I'll try to work something out to get it to you.

If you would prefer to be sent a hard copy version of the report, please let me know and I'll get one in the post.

Per the consultation guidelines, it's a 28-day report review period, but since I'm sending this to you as a weekend starts up let's push that out to 30. I ask that you get any review comments back to us by **Monday, December 14**.

The easiest way to leave comments is by phone, so don't hesitate to give me a ring (02 9555 4000), but I also welcome any comments by email or post at this address or to 3/73 Union St Pyrmont NSW 2009.

Thank you, and have lovely weekend!

Tom

Coral Hardwick

From: Carolyn .H <cazadirect@live.com>
Sent: Sunday, 15 November 2020 2:01 PM
To: Tom Sapienza
Subject: Re: Report Review - Rezoning near Peats Ferry Road, Mooney Mooney



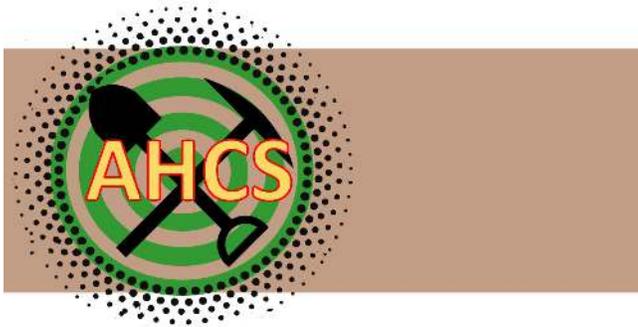
INDIGENOUS SERVICES PTY LTD

Contact: Carolyn Hickey
M: 0411650057
E: Cazadirect@live.com
A: 10 Marie Pitt Place, Glenmore Park, NSW 2745
ACN: 639 868 876
ABN: 31 639 868 876

Hi Tom,
I have reviewed the documents and support the Report for Peats Ferry Road, Mooney Mooney.
Kind Regards
Carolyn Hickey

Coral Hardwick

From: Amanda DeZwart <amandahickey@live.com.au>
Sent: Sunday, 15 November 2020 2:06 PM
To: Tom Sapienza
Subject: Re: Report Review - Rezoning near Peats Ferry Road, Mooney Mooney



Contact: Amanda DeZwart
Mobile: 0434 480 558
Address: 57 Gough St, Emu Plains, NSW 2750
ABN: 498 242 132 40

Hi Tom,
Thank you for your email, I have read through the document and support the report.
Thank you
Amanda

Coral Hardwick

From: WIDESCOPE . <widescope.group@live.com>
Sent: Monday, 16 November 2020 3:09 PM
To: Tom Sapienza
Subject: Re: Report Review - Rezoning near Peats Ferry Road, Mooney Mooney



Widescope Indigenous Group

ABN : 85 534 438 671

Contact : Steven Hickey

Address H/O: 73 Russell St, Emu Plains NSW 2750

E-mail : Widescope.group@live.com

Mobile : 0425 230 693

Hi Tom,

I have reviewed the document and support the project Information and Report.

Widescope would like to be included in any future field work.

Thank you

Steven Hickey

From: Adina Duncan <adina.duncan@dlalc.org.au>
Sent: Wednesday, 21 July 2021 11:09 AM
To: Tiffany Heath <tiffany.heath@property.nsw.gov.au>
Subject: Peat Island Mooney Mooney Proposal

Good Morning Tiffany,

The following information relates to the ACHAR undertaken by Extent Heritage in 2018 about the Peat Island Mooney Mooney rezoning proposal.

Coral Hardwick

From: Sharon Hodgetts <sharonhodgetts@hotmail.com>
Sent: Friday, 2 July 2021 8:33 PM
To: Coral Hardwick
Subject: RE: Report Review - Rezoning near Peats Ferry Road, Mooney Mooney

Hi Coral

I am so sorry I have not replied before 25 June. Your email when to my junk and then I forgot all about it.

I am relatively happy with the recommendations within the 'Peat Island and Mooney Mooney Planning Proposal Aboriginal Cultural Heritage Assessment (October 2020-Version 4) and the incorporation of my recommendations.

I would like to reiterate that I believe that the western side of the study area, and in particular Peats Island should not undergo any further destructive development. Further development of this kind will compromise or block relationships between sites which identify pieces of important cultural stories and at worse destroy the cultural and social values of the remaining Aboriginal sites, places and the cultural landscape. I am of the understanding that Islands hold a unique and special sacredness to many Aboriginal people. Often small island are sacred places were spirits returned home to the spirit world. Considering the Aboriginal sites on the island foreshore and surrounds. I am of the believe that Peat Island is highly likely one of these places. Therefore, Peat Island could be revealed as a very significant place, and a place where Aboriginal people were buried. At a minimum, the island holds important stories relating to Aboriginal law and ceremony. I feel past development and reclamation on Peat Island has already caused irreparable damage to the area's cultural values and any further disturbance on the island and the western foreshore of the study area will have a culminative effect, slowly destroying the areas rich culture, history, landscape and environment.

Thank you again for inviting my response and I look forward to reading the final report.

Ngaaya-ga dhu nuu!

(Ngiyampaa for see you later)

Sharon

Sent from [Mail](#) for Windows 10

From: [Coral Hardwick](#)
Sent: Tuesday, 22 June 2021 4:27 PM
Subject: RE: Report Review - Rezoning near Peats Ferry Road, Mooney Mooney

Hi All,

We are following up on below responses to the ACHAR developed for rezoning near Peats Ferry Road, Mooney Mooney NSW. The client has asked specifically for any input from your group. Please find the report in the WeTransfer Link below:

<https://we.tl/t-ogbVfPrvM>



Guringai Tribal Link

Aboriginal Corporation

ABN 18 351 198 069. ICN 4270

*(Traditional Owners of the NSW Central Coast
& Sydney's Northern Beaches)*

PO Box 4061,
Wyongah NSW 2259

Phone: (02) 4396 8743

Mobile: 0404 182 049

Email: admin@guringai.com.au

8th July, 2021

Carol Harwick
Heritage Advisor
EXTENT HERITAGE Pty.Ltd.
Emailed to: chardwick@extent.com.au

Dear Carol,

Re: PEAT ISLAND - MOONEY MOONEY PLANNING PROPOSAL

Guringai Tribal Link Aboriginal Corporation (GTLAC) have read and discussed the content of the Draft Aboriginal Cultural Heritage Assessment Report for the Peat Island - Mooney Mooney Planning Proposal by Property and Development NSW.

The study area is owned and managed by several stakeholders, including Property and Development NSW, the Mooney Mooney Reserve Trust, Department of Education and Transport for NSW (TfNSW) and includes, NSW Government land on the east and west of the M1 Pacific Motorway at Mooney Mooney and encompasses an area of approximately 38 hectares and include Lot 2 DP239249, Lot 4 DP239249, Lot 1 DP431780, Lot 21 DP836628, Lot 12 DP836305, Lot 1 DP945014, Lot 10 DP1157280, Lot 11 DP1157280, Lot 12 DP1158746, Lot 13 DP1158746, Lot 14 DP1158746, Lot 7 DP1180499, Lot 2 DP1205588.

The study area is within the Central Coast Local Government Area (LGA), in the Parish of Cowan, County of Northumberland.

The study area is currently used for the Hawkesbury River Ambulance Station, SES Marine Rescue, Mooney Mooney RFS, a public wharf and carparking area, the Durrubin Reserve, various uncleared areas and several abandoned buildings associated with the former Peat Island Mental Health Facility.

GTLAC understand that Property and Development NSW are proposing several amendments to the provisions of the Gosford LEP 2014, to facilitate the future redevelopment of the site for a mix of residential, community, tourism and employment generating land uses. This will include amending Clause 2.1 Land Use Zones of the Gosford LEP 2014 to include SP3 Tourist zone under the Special Purpose Zones, and amending the Gosford LEP 2014 "Land Zoning Map", "Height of Buildings Map", "Lot Size Map" and "Additional Permitted Uses Map" as they apply to the study area. The intention is to rezone SP2 Infrastructure and RE1 Public Recreation zones to E2 Environmental Conservation, R1 General Residential, R2 Low Density Residential, RE1 Public Recreation, RE2 Private Recreation and SP3 Tourist zones.

Given the presence of extremely significant creator being engravings and the cultural and spiritual significance of the study area, GTLAC strongly recommend that this area be retained for all to enjoy and not become an exclusive holiday home area with a sea of mansions and locked gates. This area contains Aboriginal sites that should be visited and maintained by the bloodline custodians and the stories shared with younger generations. It is an extremely important cultural landscape that deserves to be celebrated and protected.

GTLAC recommend that the study area be utilised as a 'Cultural Hub' with cultural experiences, historical education and events and a marine education facility to share the historical, cultural, maritime and marine life knowledge of this spectacular area. As the bloodline custodians and direct descendants of Bungaree and Matora and descendants of James Webb and Sarah Peat, daughter of George Peat of Peats Ferry, we can **not** support the proposal by Property and Planning NSW to rezone this unique and culturally significant landscape for housing and associated facilities.

Please don't hesitate to contact us if you require further information in regards to this matter.

Kind regards,
Tracey Howie
Director

Coral Hardwick

From: Tiffany Heath <tiffany.heath@property.nsw.gov.au>
Sent: Wednesday, 21 July 2021 11:14 AM
To: Coral Hardwick; Dr Madeline Shanahan
Cc: Alison O'Loughlin
Subject: FW: Peat Island Mooney Mooney Proposal
Attachments: Peat Island Mooney Mooney ACHA comments_Jul 2021.docx

Dear Coral,

Please find **attached** and below correspondence of Darkinjung's review and feedback of the ACHAR undertaken by Extent.

Could Extent please review and incorporate this feedback into the revised Report.

Noting DLALC comment below: *apart from general observations across the report such as the word "settler" [sic] and reference to Guringai, the report is archaeologically sound and there is broad agreement to the recommendation made by the archaeologists.*

Please don't hesitate to give me a call if you have any questions.

Regards,

Tiffany Heath
A/Project Manager, Commercial Development
Property & Development NSW

Housing and Property | Department of Planning, Industry and Environment
M 0419 566 150 | **E** tiffany.heath@property.nsw.gov.au
Level 5, 4 Parramatta Square, 12 Darcy Street, Parramatta NSW 2150
www.dpie.nsw.gov.au



**Planning,
Industry &
Environment**

The Department of Planning, Industry and Environment acknowledges that it stands on Aboriginal land. We acknowledge the traditional custodians of the land and we show our respect for elders past, present and emerging through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

From: Adina Duncan <adina.duncan@dlalc.org.au>
Sent: Wednesday, 21 July 2021 11:09 AM
To: Tiffany Heath <tiffany.heath@property.nsw.gov.au>
Subject: Peat Island Mooney Mooney Proposal

Good Morning Tiffany,

The following information relates to the ACHAR undertaken by Extent Heritage in 2018 about the Peat Island Mooney Mooney rezoning proposal.

Peat Island and Mooney Mooney Planning Proposal

ACHA

Dated October 2020

Prepared by Extent Heritage.

Executive Summary

Land is Crown Land. Three parcels are subject to a land claim.

1.1 Project description

Land is Crown Land. Three parcels are subject to a land claim.

2.2 This Project

Noted in Table 2 that Review of draft report was completed on 13 Nov 2018, prior to my engagement with DLALC.

2.3 Aboriginal Stakeholder Feedback

Whilst DLALC did not provide feedback during the consultation period it agrees in principle to the feedback provided by the RAPS during the consultation period.

3.2 Geology, geomorphology and soils

Concur that B horizon is archaeologically sterile.

3.2.1 Geotechnical information

Further geotech to require an AHIP.

3.3 Hydrology

Change European settlement to invasion/incursion/occupation/colonisation.

Whilst material evidence may have been washed away during major inundation events, the cultural significance of the land remains.

3.5 Existing disturbance

Change settlers to colonists/colonisers.

4.1 Key findings

It is disputed that this was the traditional area of a group known as the Guringai or Wannagine. It is argued by Darkinjung LALC that this was the traditional lands of the Darkinjung people.

Change settlers to colonisers/colonists

4.2 Regional ethnographic information

Change settlers to colonisers/colonists.

4.2.1 The Guringai People

There is argument that claims that this is the traditional lands of a group known as the Guringai is not historically correct.

<https://www.aboriginalheritage.org/history/filling-a-void-history-of-word-guringai/>

4.3 The Study Area

There is argument that claims that this is the traditional lands of a group known as the Guringai is not historically correct.

<https://www.aboriginalheritage.org/history/filling-a-void-history-of-word-guringai/>

Change settlers to colonisers/colonists

5 Archaeological Record

No comments to add

6 Archaeological Survey

No comments to add

7 The Archaeological and Cultural Record

No comments to add

8 Preliminary Significance Assessment

Social and cultural values are high for all heritage features within the landscape.

9 Conclusion and Recommendations

Agree with the recommendations made except as they relate to those parcels subject to land claim resolution.

Recommend that sub surface investigations occur across the site.

Recommend that an ACHMP be completed in consultation with Darkinjung LALC.

Appendix 3: Archaeological Background

A3.1. Site Type Information

Aboriginal Sites

Aboriginal sites are classified in a number of ways. At the most basic level, sites are recorded as 'closed sites' or 'open sites'. Closed sites are associated with rock shelters, and include other evidence of Aboriginal occupation that may be present, such as accumulated cultural deposit within the shelter ('potential archaeological deposit' or PAD), faunal remains (animal bone or shell), and rock art on the shelter walls (paintings or engravings). Open sites are broadly defined, and encompass all other types of Aboriginal sites identified where there is no rock shelter. The most common types of open sites found in NSW include artefacts, which can occur almost anywhere in the landscape, grinding grooves, rock art across formations, culturally modified trees, and shell deposits (middens) (OEH 2012:7). The presence or absence of stone artefacts is often a defining factor, although it is worth pointing out that almost any site is likely to have at least some associated artefacts, as discard or loss of this most ubiquitous and practically indestructible marker of Aboriginal archaeology is likely to have occurred anywhere that Aboriginal people stopped or gathered for any length of time.

Any one site (or close group of linked sites described as a 'site complex') can contain several different site features. For example, a shelter may have art on the walls, artefacts on the floor surface or outside the shelter, and be predicted to contain faunal remains and further artefacts in the accumulated deposit inside.

A description of terms used to describe different site features recorded within and in the vicinity of the study area is provided in **Table A3-1-1**. Other features or types of Aboriginal cultural sites that do not necessarily leave physical evidence may exist or have once existed in the area, however such sites have not previously been recorded reflecting the archaeological focus of the past studies and the loss of traditional knowledge of such places in this area. Similarly there may be places of contemporary significance to Aboriginal people in the precincts and this will require consultation with the Aboriginal community to identify such places.

Table A3-1-1. Aboriginal site feature definitions (OEH 2012:4-5)

Site Feature	Definition
Artefact	Objects such as stone tools, and associated flaked material, spears, manuports, grindstones, discarded stone flakes, modified glass or shell demonstrating evidence of use of the area by Aboriginal people.
Art (pigment or engraved)	Art is found in shelters, overhangs and across rock formations. Techniques include painting, drawing, scratching, carving, engraving, pitting, conjoining, abrading and the use of a range of binding agents and the use of natural pigments obtained from clays, charcoal and plants.
Potential archaeological deposit (PAD)	An area where Aboriginal objects may occur below the ground surface. The term 'potential archaeological deposit' was first applied in Sydney regional archaeology in the 1980s, and referred to rock shelters that were large enough and with enough accumulated deposit to allow archaeologists to presume that subsurface cultural material was highly likely to be present. Since then it has come to include open sites where the same prediction can be made.
Modified tree (carved or scarred)	Trees which show the marks of modification as a result of cutting of bark from the trunk for use in the production of shields, canoes, boomerangs, burials shrouds, for medicinal purposes, foot holds etc., or alternately intentional carving of the heartwood of the tree to form a permanent marker to indicate ceremonial

Site Feature	Definition
	use/significance of a nearby area, again these carvings may also act as territorial or burial markers.

Stone Artefacts

Aboriginal stone artefacts are an important source of archaeological information because stone is preserved for long periods of time whereas organic materials such as bone, shell, wood and plant fibres often decay. Stone artefacts provide valuable information about technology, economy, cultural change through time and settlement patterning. Stone has also been used for 'relative' dating of sites where direct methods such as radiocarbon dating cannot be applied. A technological sequence for stone artefacts for the region was first described in the late 1940s by Fred McCarthy and has since been refined over time by Hiscock and Attenbrow (Hiscock and Attenbrow 1998, 2005) into the 'Eastern Regional Sequence':

- Capertian – is distinguished by large uniface pebble tools, core tools, horse-hoof cores, scrapers and hammerstones. Backed artefacts occasionally present. Generally dates to before 5,000 years BP.
- Early Bondaian – Aspects of the Capertian assemblage continue, but backed artefacts and ground-edged artefacts increase. Artefacts during this period were predominantly made from fine-grained siliceous stone such as silcrete and tuff. Generally dated from 5,000 BP to 2,800 BP.
- Middle Bondaian – Characterised by backed artefacts, particularly Bondi Points and ground-edged artefacts. Artefacts made from siliceous materials, however quartz becomes more frequent. Generally dated from 2,800 BP to 1,600 BP.
- Late Bondaian – characterised by bipolar technology, eloueras, ground-edged artefacts, and bone and shell artefacts. Bondi points are virtually absent and artefacts are predominantly made from Quartz. Generally dated from 1,600 BP to European contact.

Survivability of the Archaeological Record

The following observations can be made about the nature and survivability of the archaeological record across the Cumberland subregion:

- Archaeological material is often found in areas of sub-surface exposure, such as those caused by erosion.
- Surface evidence (or the absence of surface evidence) does not necessarily indicate the potential, nature or density of sub-surface material. Extensive excavations have shown that areas with no surface evidence often contain sub-surface deposits buried beneath current ground surfaces (JMCHM 2001; Kohen 1984).
- Due to the limitations of surface surveys, test excavation is often required to establish the nature and density of archaeological material.

- Aboriginal cultural material is more likely to survive in areas that contain remnant portions of the pre-European soil profile, in contrast to landforms that have been impacted by historical or recent disturbances.
- The potential for survival of any archaeological sites will largely depend on the degree of past disturbance.
- Past disturbance to the soil profile can be due to European activity such as clearing, ploughing, grazing, and urban development and/or due to environmental factors such as flooding events, erosion and colluvial movement. These activities may disturb, erode or remove the natural soil profile completely.
- Aboriginal stone artefacts are more likely to survive because stone is preserved for long periods of time whereas organic materials such as bone, shell, wood and plant fibres decay.
- A major impact of more than 200 years of post-contact settlement on Aboriginal sites would have been the destruction of carved and scarred trees, which would have been removed as part of clearing for agricultural activities and the construction of infrastructure such as buildings and roads. However, there is some potential for culturally modified trees to survive in areas where there are stands of remnant native vegetation.

A3.2. AHIMS Site Search

A copy of the AHIMS search is provided in the following pages.

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-2005	Long island 15;	AGD	56	333300	6286900	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1333
	Contact	Recorders	Warren Bluff					Permits		
45-6-3197	Spectacle Island Engraving 3	GDA	56	333790	6288556	Open site	Valid	Art (Pigment or Engraved) : -		
	Contact	Recorders	Mr.Tim Stewart					Permits		
45-6-3758	Long Island 27	GDA	56	334164	6287173	Closed site	Valid	Shell : -		
	Contact	Recorders	AMBS Ecology & Heritage, Miss.Petra Balanzategui					Permits		
45-6-3761	Long Island 24	GDA	56	334466	6287203	Closed site	Valid	Shell : -		
	Contact	Recorders	AMBS Ecology & Heritage, Miss.Petra Balanzategui					Permits		
45-6-2608	Engraving 1	GDA	56	334188	6288697	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	Contact	Recorders	Anthony English, Mr.Tim Stewart					Permits		
45-6-2609	Engraving 2	AGD	56	334387	6288200	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	Contact	Recorders	Anthony English					Permits		
45-6-2610	Spectacle Island Shelter 1	GDA	56	333650	6288250	Closed site	Valid	Artefact : -, Shell : -	Shelter with Deposit	
	Contact	Recorders	Mr.Phil Hunt, Mr.Tim Stewart					Permits		
45-6-2611	Midden 3	AGD	56	333620	6287910	Open site	Valid	Shell : -, Artefact : -	Midden	
	Contact	Recorders	Mr.Phil Hunt					Permits		
45-6-2612	Midden 6 & Shelter 2	GDA	56	334107	6288682	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	Contact	Recorders	Anthony English, Mr.Tim Stewart					Permits		
45-6-2613	Midden 2	AGD	56	333360	6288070	Open site	Valid	Shell : -, Artefact : -	Midden	
	Contact	Recorders	Mr.Phil Hunt					Permits		
45-6-2614	Midden 1	AGD	56	334013	6288547	Open site	Valid	Shell : -, Artefact : -	Midden	
	Contact	Recorders	Anthony English					Permits		
45-6-2615	Midden 4	AGD	56	334181	6288420	Open site	Valid	Shell : -, Artefact : -	Midden	
	Contact	Recorders	Anthony English					Permits		
45-6-2607	Midden 5	AGD	56	334129	6288509	Open site	Valid	Shell : -, Artefact : -	Midden	
	Contact	Recorders	Anthony English					Permits		
45-6-0454	Kangaroo Point Reserve	GDA	56	332775	6287250	Closed site	Valid	Artefact : -, Shell : -	Shelter with Deposit	
	Contact	Recorders	ASRSYS, Mr.Tim Stewart					Permits		
45-6-0456	KARIONG PENINSULA	GDA	56	333970	6290442	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	Contact	Recorders	ASRSYS, Ms.Collette Douchkov					Permits		

Report generated by AHIMS Web Service on 29/09/2020 for Laessa Barry for the following area at Datum :GDA, Zone : 56, Eastings : 331000 - 334500, Northings : 6286500 - 6290500 with a Buffer of 0 meters. Additional Info : Background research for ACHAR. Number of Aboriginal sites and Aboriginal objects found is 52

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

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-0465	Long Island;	AGD	56	334334	6286699	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	Contact	Recorders	Australian Museum					Permits		
45-6-0476	Spectacle Island;Mooney Mooney;	AGD	56	332667	6287764	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	Contact	Recorders	ASRSYS					Permits		
45-6-0477	Mooney Mooney;	AGD	56	332732	6289137	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	Contact	Recorders	ASRSYS					Permits		
45-6-0479	Mooney Mooney point	GDA	56	332848	6287940	Open site	Valid	Artefact : -, Art (Pigment or Engraved) : -, Shell : -	Shelter with Deposit	
	Contact	Recorders	ASRSYS,Mr.Tim Stewart,Guringai Tribal Link Aboriginal Corporation,Mrs.Tracey H					Permits		
45-6-1990	Hawksbury	GDA	56	332760	6288130	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1333
	Contact	Recorders	Warren Bluff,Mr.Tim Stewart					Permits		
45-6-1996	Long Island 6;	GDA	56	334467	6287185	Open site	Valid	Shell : -, Artefact : -	Midden	1333
	Contact	Recorders	Warren Bluff,AMBS Ecology & Heritage,Miss.Petra Balanzategui					Permits		
45-6-1997	Long Island 7	GDA	56	334201	6287179	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1333
	Contact	Recorders	Warren Bluff,AMBS Ecology & Heritage,Miss.Petra Balanzategui					Permits		
45-6-1998	Long island 8;	AGD	56	334350	6286960	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1333
	Contact	Recorders	Warren Bluff					Permits		
45-6-1999	Long island 9;	AGD	56	333890	6286970	Open site	Valid	Shell : -, Artefact : -	Midden	1333
	Contact	Recorders	Warren Bluff					Permits		
45-6-2000	Long island 10;	AGD	56	333850	6286970	Closed site	Valid	Shell : -, Artefact : -, Art (Pigment or Engraved) : -	Shelter with Art,Shelter with Midden	1333
	Contact	Recorders	Warren Bluff					Permits		
45-6-2001	Long Island 11;	GDA	56	333245	6287149	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1333
	Contact	Recorders	Warren Bluff,AMBS Ecology & Heritage,Miss.Petra Balanzategui					Permits		
45-6-2002	Long Island 12	GDA	56	333223	6287110	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1333
	Contact	Recorders	Warren Bluff,AMBS Ecology & Heritage,Miss.Petra Balanzategui					Permits		
45-6-2003	Long Island 13;	GDA	56	333148	6287125	Open site	Valid	Shell : -, Artefact : -	Midden	1333
	Contact	Recorders	Warren Bluff,AMBS Ecology & Heritage,Miss.Petra Balanzategui					Permits		
45-6-2004	Long Island 14;	GDA	56	333172	6287084	Open site	Valid	Shell : -, Artefact : -	Midden	1333

Report generated by AHIMS Web Service on 29/09/2020 for Laessa Barry for the following area at Datum :GDA, Zone : 56, Eastings : 331000 - 334500, Northings : 6286500 - 6290500 with a Buffer of 0 meters. Additional Info : Background research for ACHAR. Number of Aboriginal sites and Aboriginal objects found is 52

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

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Warren Bluff,AMBS Ecology & Heritage,Miss.Petra Balanzategui					Permits		
45-6-2006	Long island 16;	AGD	56	333530	6286950	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	1333
	Contact	Recorders	Warren Bluff					Permits		
45-6-0492	Spectacle Island;	AGD	56	333845	6288336	Open site	Valid	Shell : -, Artefact : -	Midden	
	Contact	Recorders	ASRSYS					Permits		
45-6-0786	Spectacle Island;	AGD	56	334029	6288248	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	Contact	Recorders	ASRSYS					Permits		
45-6-1835	Muogamarra;	AGD	56	331350	6287970	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1333
	Contact	Recorders	Warren Bluff					Permits		
45-6-1836	Cabbage Point;	AGD	56	332250	6288980	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1333
	Contact	Recorders	Warren Bluff					Permits		
45-6-1837	Peats Point;	AGD	56	332320	6288780	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	1333,102142
	Contact	Recorders	Warren Bluff					Permits		
45-6-1839	Olga Bay 2; Muogamarra	GDA	56	331540	6288085	Closed site	Valid	Shell : -, Artefact : -, Art (Pigment or Engraved) : -, Grinding Groove : -	Shelter with Art,Shelter with Midden	
	Contact	Recorders	Warren Bluff,Tegan Burton,DPIE					Permits		
45-6-0910	Long Island C;	AGD	56	333500	6286940	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	1333
	Contact	Recorders	Warren Bluff,Mr.Bob Conroy					Permits		
45-6-0911	Long Island D;	AGD	56	333670	6286950	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	
	Contact	Recorders	Warren Bluff,Mr.Bob Conroy					Permits		
45-6-2757	Peat Island	AGD	56	332320	6288780	Open site	Deleted	Art (Pigment or Engraved) : 1		
	Contact	Recorders	Warren Bluff					Permits		
45-6-0455	Kangaroo Point;	GDA	56	332816	6287251	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	Contact	Recorders	Margrit Koettig,Mr.Tim Stewart					Permits		
37-6-3874	GH AFT 1	GDA	56	333956	6286866	Open site	Valid	Artefact : -		103955,103957
	Contact	Recorders	Kelleher Nightingale Consulting Pty Ltd,Kelleher Nightingale Consulting Pty Ltd,Mr					Permits	4326	
45-6-3585	Mooney Mooney public school	GDA	56	333098	6289176	Open site	Valid	Grinding Groove : -		

Report generated by AHIMS Web Service on 29/09/2020 for Laressa Barry for the following area at Datum :GDA, Zone : 56, Eastings : 331000 - 334500, Northings : 6286500 - 6290500 with a Buffer of 0 meters. Additional Info : Background research for ACHAR. Number of Aboriginal sites and Aboriginal objects found is 52

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Recorders								Permits
45-6-3586	Peat island grinding groove	GDA	56	332607	6288354	Open site	Valid	Grinding Groove : -		
	Contact	Recorders								Permits
45-6-3587	Peat island engraving	GDA	56	332595	6288482	Open site	Valid	Art (Pigment or Engraved) : -		
	Contact	Recorders								Permits
45-6-3643	Mooney-Kowan Site 1	GDA	56	333047	6288985	Open site	Valid	Aboriginal Resource and Gathering : -, Aboriginal Ceremony and Dreaming : -, Shell : -		
	Contact	Recorders								Permits
45-6-3644	Mooney-Kowan Site 2	GDA	56	333025	6288885	Open site	Valid	Aboriginal Resource and Gathering : -, Aboriginal Ceremony and Dreaming : -, Shell : -		
	Contact	Recorders								Permits
45-6-3584	Mooney Mooney shelter/cultural landscape	GDA	56	332871	6288360	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	Contact	Recorders								Permits
45-6-3135	Point Road Engravings Site 1	GDA	56	333000	6289089	Open site	Valid	Art (Pigment or Engraved) : -		
	Contact	Recorders								Permits
45-6-3347	MOONEY CK IRON NAILS SWA	GDA	56	333876	6290411	Closed site	Valid	Art (Pigment or Engraved) : -		
	Contact	Recorders								Permits
45-6-3329	COGRA BAY REDARC SWA	GDA	56	333891	6289537	Closed site	Valid	Art (Pigment or Engraved) : -		
	Contact	Recorders								Permits
45-6-3348	COGRA BAY LONGEEL SWA	GDA	56	333947	6289564	Closed site	Valid	Art (Pigment or Engraved) : -		
	Contact	Recorders								Permits
45-6-3328	COGRA BAY REDHND SWA	GDA	56	334157	6289656	Closed site	Valid	Art (Pigment or Engraved) : -		
	Contact	Recorders								Permits

Report generated by AHIMS Web Service on 29/09/2020 for Laessa Barry for the following area at Datum :GDA, Zone : 56, Eastings : 331000 - 334500, Northings : 6286500 - 6290500 with a Buffer of 0 meters. Additional Info : Background research for ACHAR. Number of Aboriginal sites and Aboriginal objects found is 52

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

A3.3. AHIMS Site Cards

A copy of the relevant AHIMS site cards is provided.

Mooney Mooney (N) (IV) 7130 SI 56-5 S1/56-5 SYDNEY 45-6-476
4201 - 8565 Mooney Mooney BROKEN BAY Sparkle Island Locality ROCK ENGRAVINGS

Military map/other reference Broken Bay 201-565 Series 2 Group 127
163,360
Pastoral or other property, park Mooney Mooney Sydney 1:250,000 4201.8562

Description of site On a number of flat rock surfaces along the waters edge on the foreshore of the bay on the western side of Mooney Mooney Point, Hawkesbery River.The main group of figs. starts abt. 800 feet north of series 1.
See attached list.

Length of site

Direction site faces

Width

Height

Dimensions of decorated areas

Estimated number of figures 32



45-6-0476

Nearest water supply

Techniques

abraded grooves

conjoined puncture

pecked

Styles

abraded grooves

outline

outline with design

linear ○

pecked linear

pecked intaglio

combined pecked and linear

Subjects 2men; 1whale; 3circles; 9indeterminate; 3partial figs; 4fish; 1boomerang; 1club; 1goanna; 1skate or ray; 1speared echidna; 1emu; 1eel; 2wallaby; 1kangaroo.

Superimpositions

X

Ass

- (a) a man;
(b) 20' north of the man: a whale;
Nat (c) 20' north-east of the man: 3 small circles, 3 small indeterminate objects & part of another figure.
(d) 100' north of the last: a fish, boomerang, and 3 indeterminate figures;
Ani (e) 90' west of last: a club;
(f) 20' west of last: a man with an indeterminate object above his head;
Hun (g) 3' north of last: a goanna;
(h) 30' south of (f): a skate or ray;
(i) 50' south of last: An incomplete forked figure, and an indeterminate figure;
Pho (j) 40' west of (f): a speared echidna and a small fish;
Sea (k) 70' north-west of (f): an emu;
(l) 12' north of the last: a curved line and parts of figures weathered away;
Hls (m) 60' north-west of the last: a fish;
(n) 60' north-west of the last: an eel and several lines;
(o) 20' north of the last: a fish;
(p) 45' north-west of the last: a wallaby and a kangaroo;
Ab: (q) 120' north of the last: a small wallaby.

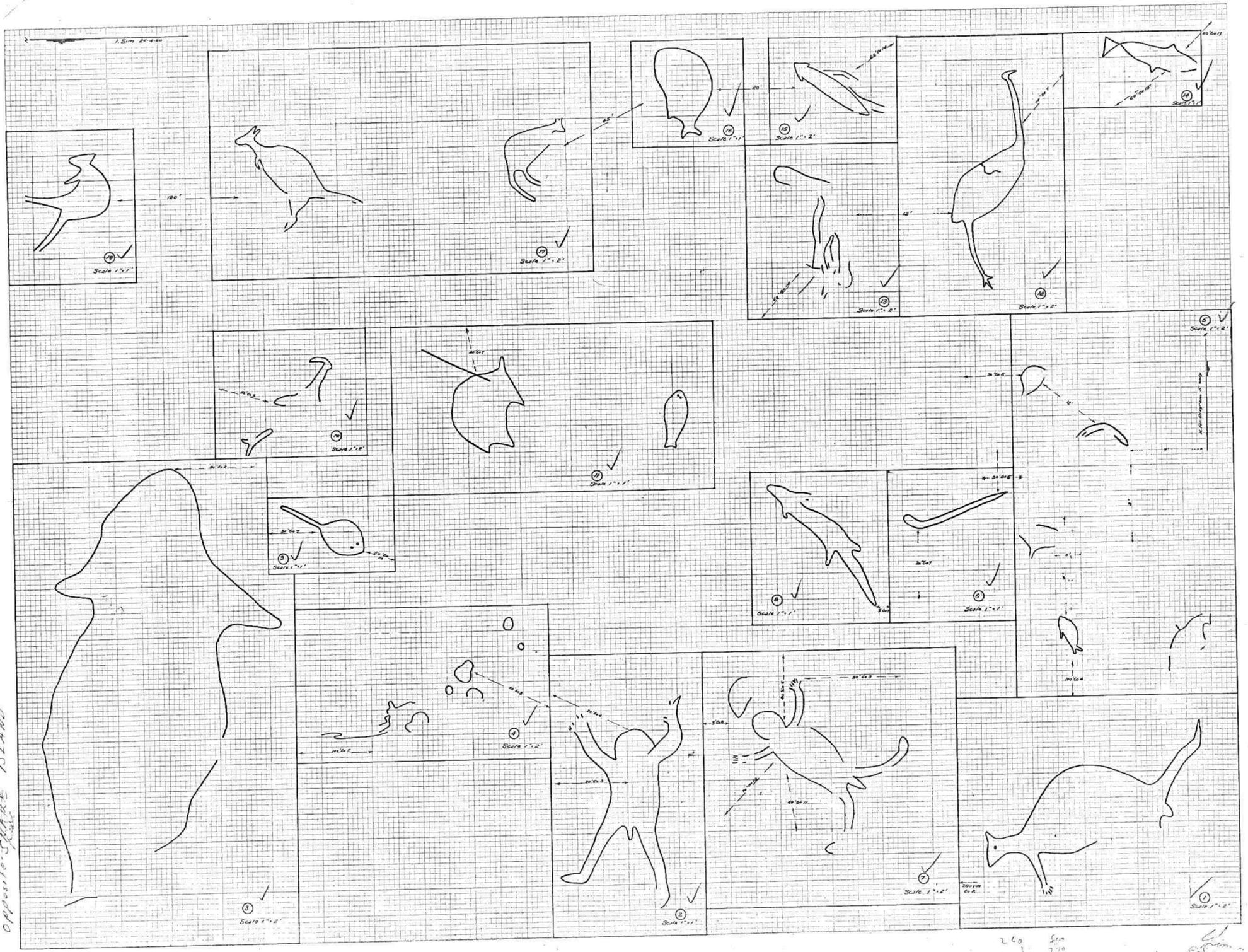
Published reference Mankind Vol.6 No.2. R.J.Martin & I.Sim, 16th-18th April, 1960.

Remarks

v. poor state of preservation

0

W. Side Mooney Moony Point
Opposite SHARPE ISLAND



Sim collection
"Group 127 Mooney Moony Nov 16

260
3
263

W. Side
Mooney Moony Point
Opposite SHARPE ISLAND

53

C.S. Vale

45-6-476

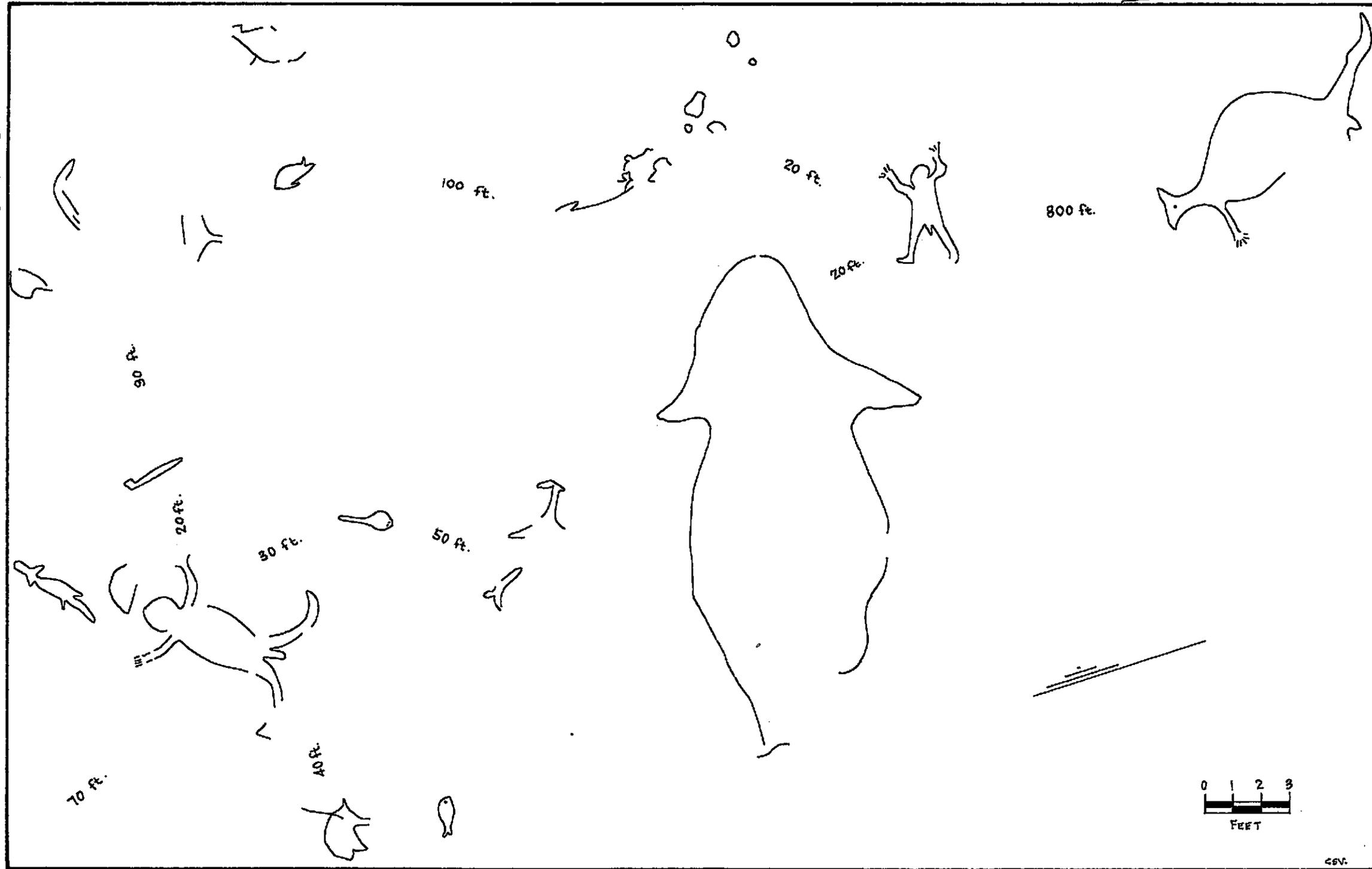
REGISTER COPY

BB. 201. 565.

ROCK ENGRAVING

GRID... 4201-8565

MOONEY MOONEY / Spectacle
MAP... BROKEN BAY LS.



Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville 2220 NSW

AHIMS site ID:

Date recorded:

Site Location Information

Site name:

Easting: Northing: Coordinates must be in GDA (MGA)

Horizontal Accuracy (m):

Zone: Location method:

Recorder Information

(The person responsible for the completion and submission of this form)

Title	Surname	First name
<input type="text" value="Mr"/>	<input type="text" value="walker"/>	<input type="text" value="jackson"/>

Organisation:

Address:

Phone: E-mail:

Site Context Information

Land Form Pattern: Land Use:

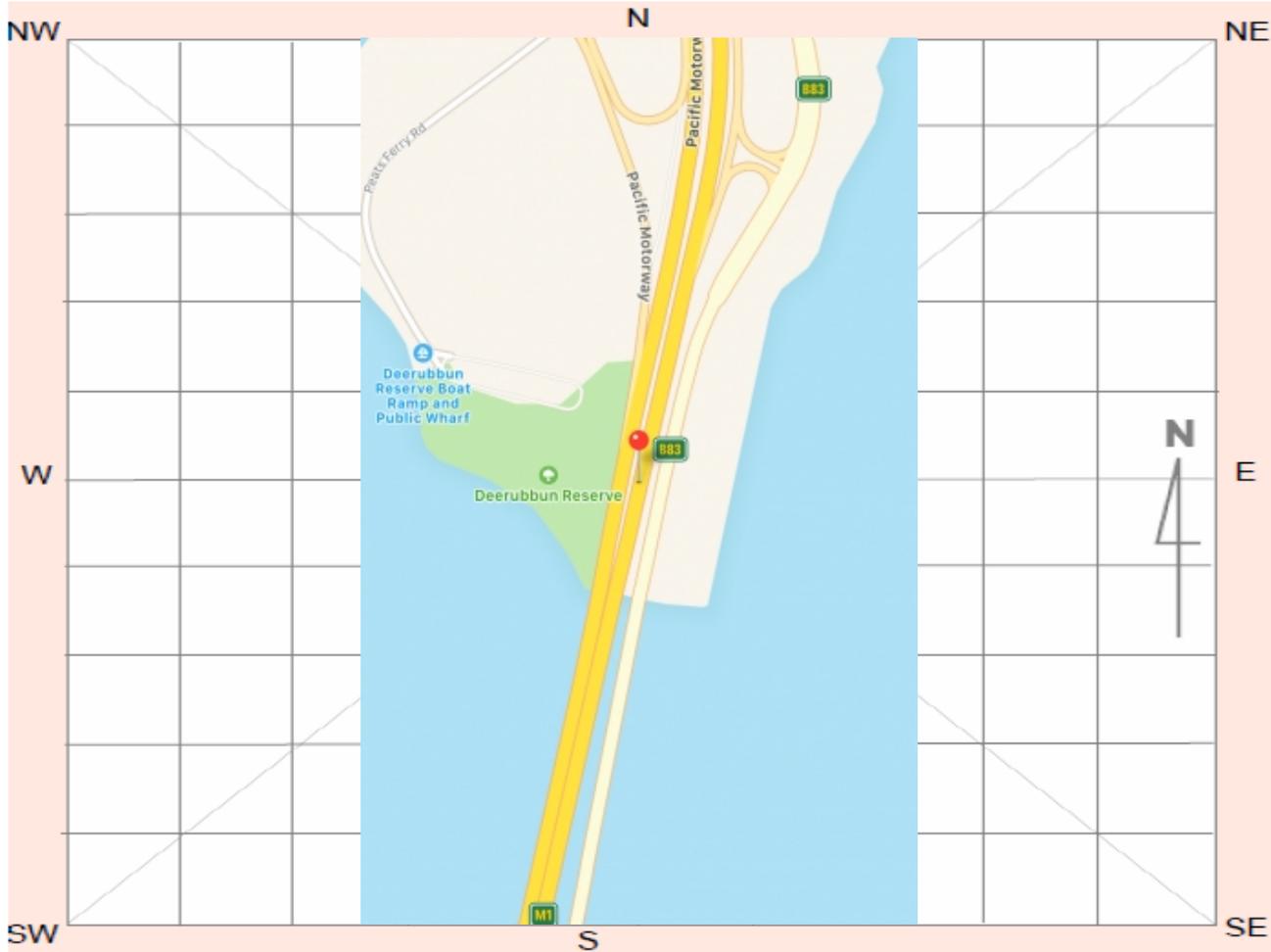
Land Form Unit: Vegetation:

Distance to Water (m): Primary Report:

How to get to the site:

Other site information:

Site location map



Site contents information

open/closed site:

Site condition:

Features:

1.	Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
					Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
1.	Shell	100	90	7	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Shelter containers midden wraps around ridge top

Features:

2.	Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
					Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
2.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

3.

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:

4.

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:

5.

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

Description:

Other Site Info:

Large rock shelter. 360deg visual aspect

Site plan



Site photographs



Description: south facing shelter



Description: large oyster shell in south facing shelter



Description: north facing shelter containing midden



Description: modern rubbish

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:

[] New recording

[] Additional Info



National Parks and Wildlife Service

Box 1967, Hurstville NSW 2220. Tel: (02) 585 6444
Standard Site Recording Form Revised 5/88



45-6-1836

1:250,000 map sheet: SUDNEY NPWS Code 14, 51

AMG Grid reference 332250 mE 6288980 mN

Full reference - please include leading digits

Scale of map used for grid reference 25K, 50K (preferred) 100K 250K
Please use largest scale available

1:25K, 50K, 100K map name: Cowan Isted.

HEAD OFFICE USE ONLY: 1836

NPWS Site no: 45-6-1836

Site types: MIDDEN SHELTER

Accessioned by: [Signature] Date: 18/5/89

Data entered by: [Signature] Date: 22/5/89

Site name: Cabbage Point Locality/property name:

NPWS District: Georges Region: Central

Reason for investigation: private

Portion no: Cowan

Parish: Cowan

Photos taken? yes

How many attached? 2

How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff, etc.)
(Draw diagram on separate sheet.) from bay can anchor in front of site. climb up along to rock face line, not difficult.

Other sites in locality? yes Site Types include: Engarooms

Are sites in NPWS Register? yes

Have artefacts been removed from site? When?
By whom? Deposited where?

Is site important to local Aborigines?
Give contact(s) name(s) + address(es)

Contacted for this recording? NOT KNOWN
(Attach additional information separately) If not, why not?

Verbal/written reference sources (including full title of accompanying report):

NPWS Report Catalogue # e/1333

Checklist: surface visibility, damage/disturbance/ threat to site

Condition of site: Weathering

Recommendations for management & protection (attach separate sheet if necessary):

Site recorded by: W.T. Bleeff Date: 3/89

Address/institution: Mont dale

+

SITE POSITION & ENVIRONMENT

OFFICE USE ONLY: NPWS site no: _____

1. Land form a. beach/hill slope/ridge top, etc: b. site aspect: 174° c. slope: steep
 d. mark on diagram provided or on your own sketch the position of the site: e. Describe briefly:

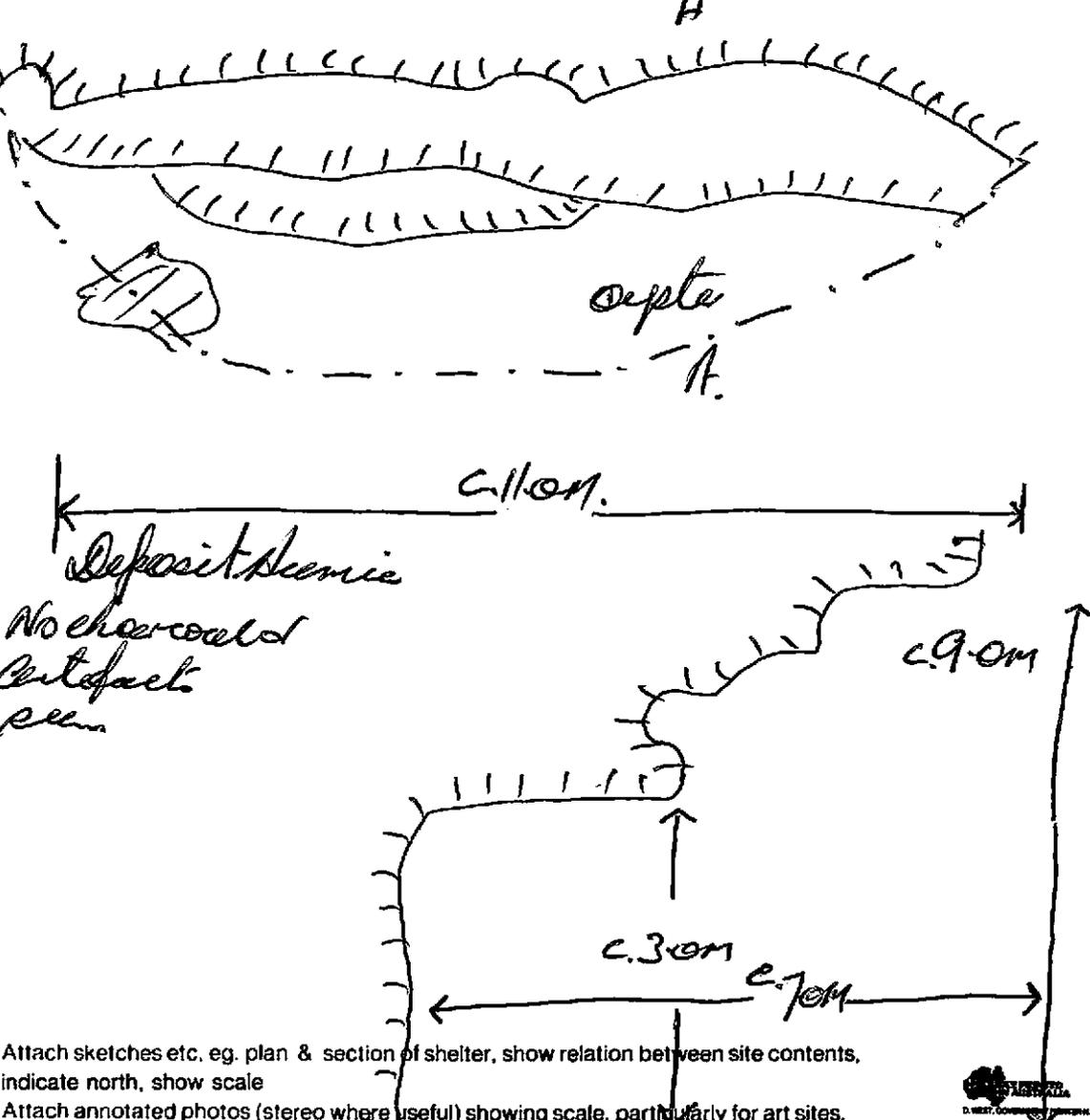


- f. Local rock type: Acacia g. Land use/effect:
 2. Distance from drinking water: c. 100m Source: Severance Creek
 3. Resource Zone associated with site (estuarine, riverine, forest etc):
 4. Vegetation: Sapling, pepper tree, Angophora, Slacks Bay, etc. Casuarina
 5. Edible plants noted: Leaves of beans, Scaevola, Casuarina, Blackberry, etc.
 6. Faunal resources (include shells): Minic, water, Macropod, reptile, etc.
 7. Other exploitable resources (river pebbles, ochre, etc):

Site type:
shelter
shelter

DESCRIPTION OF SITE & CONTENTS.
 Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.

- 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









National Parks and Wildlife Service

Box 1967, Hurstville NSW 2220. Tel: (02) 585 6444
Standard Site Recording Form Revised 5/88



45-6-1837

1:250,000 map sheet: <u>SUDNEY</u> NPWS Code <u>1451</u>		HEAD OFFICE USE ONLY: <u>1837</u>	
AMG Grid reference <u>332320</u> mE <u>6288780</u> mN		NPWS Site no: <u>45-6-1837</u>	
Full reference - please include leading digits		Site types: <u>ENGRAVINGS</u>	
Scale of map used for grid reference <input checked="" type="checkbox"/> 25K, 50K (preferred) <input type="checkbox"/> 100K <input type="checkbox"/> 250K		Accessioned by: <u>[Signature]</u> Date: <u>18/5/89</u>	
Please use largest scale available		Data entered by: <u>[Signature]</u> Date: <u>22/5/89</u>	
1:25K, 50K, 100K map name: <u>Cowan Isled.</u>		Owner/Manager:	
Site name: <u>Peet Island</u> Locality/property name:		Address:	
NPWS District: <u>Geoford</u> Region: <u>Central</u>			
Reason for investigation <u>private</u>			
Portion no:		Photos taken? <u>yes</u>	
Parish: <u>Cowan</u>		How many attached? <u>12.</u>	
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff. Best access by (Draw diagram on separate sheet.) boat from anchor at site. Jetty extends from cliff along and left building, to the left building in a northerly direction right on the waterfront.			
Other sites in locality?		Site Types include:	
Are sites in NPWS Register?			
Have artefacts been removed from site?		When?	
By whom?		Deposited where?	
Is site important to local Aborigines?			
Give contact(s) name(s) + address(es)			
Contacted for this recording?		<u>Not known.</u>	
(Attach additional information separately) If not, why not?			
Verbal/written reference sources (including full title of accompanying report).			NPWS Report Catalogue #
			<u>C/1333</u>
Checklist: surface visibility, damage/disturbance/ threat to site	Condition of site: <u>Weathering</u>		
Recommendations for management & protection (attach separate sheet if necessary):			
Site recorded by: <u>W. T. Bluff</u>		Date: <u>3/89</u>	
Address/institution: <u>Mortdale</u>		<u>+</u>	

SITE POSITION & ENVIRONMENT

OFFICE USE ONLY: NPWS site no: 100004

1. Land form a. beach/hill slope/ridge top, etc: b. site aspect: *N-S* c. slope: *Flat.*
 d. mark on diagram provided or on your own sketch the position of the site: e. Describe briefly:



f. Local rock type: *Acworthsburg* g. Land use/effect:

2. Distance from drinking water: *c. 150M* Source: *Seasonal creek*

3. Resource Zone associated with site (*estuarine, riverine, forest* etc):

4. Vegetation: *Casuarina*

5. Edible plants noted: *Mangroves, Casuarina*

6. Faunal resources (include shells): *shells, gastropods, Murex, Murex, Murex*

7. Other exploitable resources (river pebbles, ochre, etc): *pebbles*

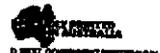
Site type:
Engraving

DESCRIPTION OF SITE & CONTENTS.
 Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.

- 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

Echidna best preserved of c.
number of engravings conjoined pits
man snake? emu fish
weathering badly
area should be night recorded

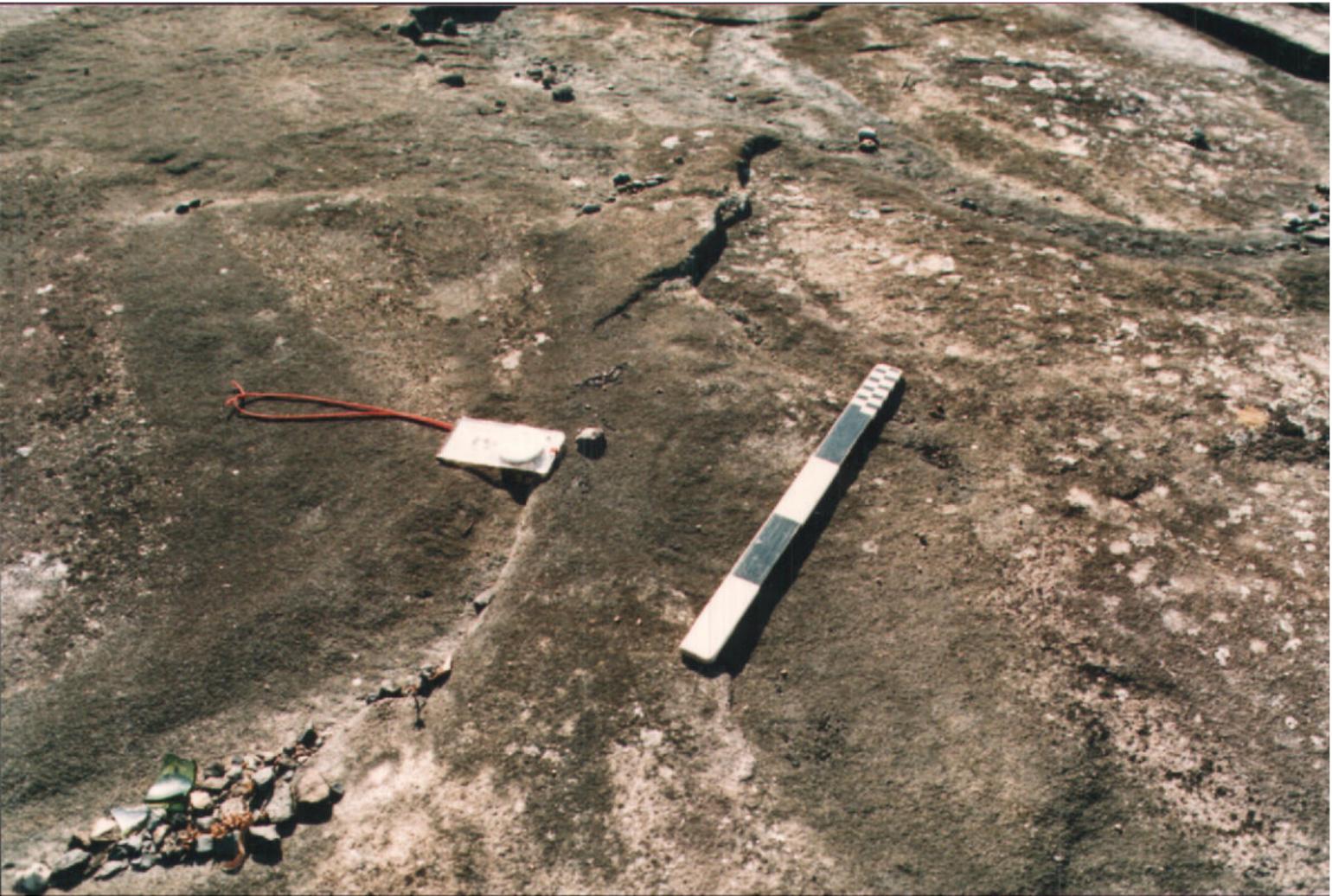
Attach sketches etc, eg. plan & section of shelter, show relation between site contents, indicate north, show scale.
 Attach annotated photos (stereo where useful) showing scale, particularly for art sites.

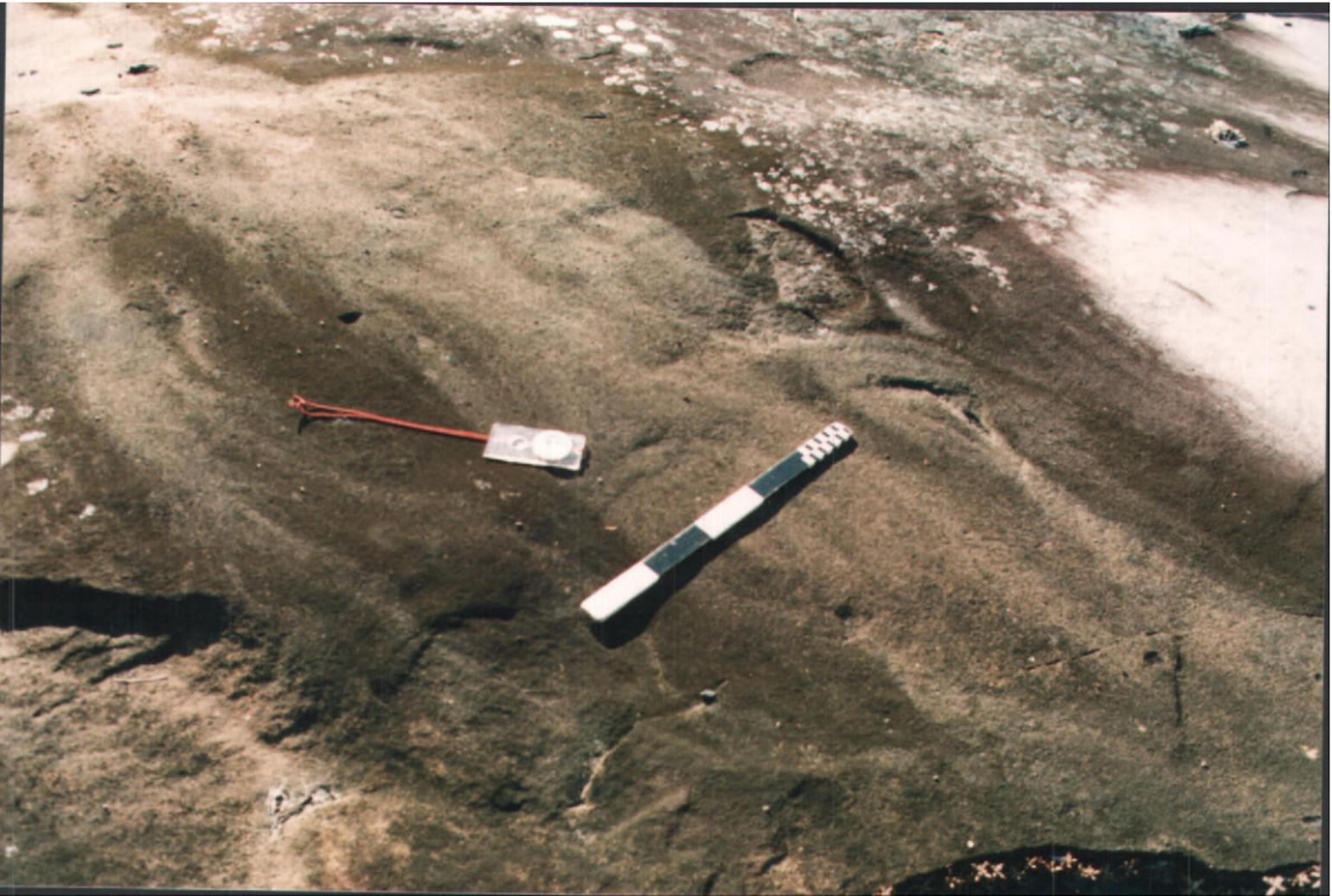












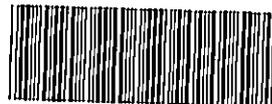
[] New recording

[] Additional Info



National Parks and Wildlife Service

Box 1967, Hurstville NSW 2220. Tel: (02) 585 6444
Standard Site Recording Form Revised 5/88



45-6-1990

NPWS Code

1:250,000 map sheet: _____

AMG Grid reference 302650 mE 6287950 mN

Full reference - please include leading digits

Scale of map used for grid reference [] 25K, 50K (preferred) [] 100K [] 250K

Please use largest scale available

1:25K, 50K, 100K map name: Coroon 1st ed.

HEAD OFFICE USE ONLY:

NPWS Site no: 45-6-1990

Site types: SHALLEN MIDDEN

Accessioned by: R. Chy Date: 27.2.90

Data entered by: R. Chy Date: 12.3.90

Owner/Manager:

Address:

Site name: Arwhedbery Locality/property name:

NPWS District: Arwhedbery Region: Central

Reason for investigation

private

Portion no: _____
Parish: Coroon Northumberland

Photos taken? yes

How many attached? 7

How to get to the site (refer to prominent features, give best approach to site eg. from above, below, along cliff face that tower 1:250000)
(Draw diagram on separate sheet) 30 SE 800m follow track under power line until track divides, cut across concrete (3) areas follow the track toward power pole. sandstone boulder on left side > 50m from here on left. site directly south > 30m old granite stone (FRANCES Peat. Died 22.3.1842)

Other sites in locality? yes Site Types include: Engaving Middle Shells.

Are sites in NPWS Register? yes

Have artefacts been removed from site? _____ When? _____
By whom? _____ Deposited where? _____

Is site important to local Aborigines?
Give contact(s) name(s) + address(es)

Contacted for this recording? _____
(Attach additional information separately) If not, why not? NOT KNOWN.

Verbal/written reference sources (including full title of accompanying report).

NPWS Report Catalogue #

4/1733

Checklist: surface visibility, damage/disturbance/ threat to site

Condition of site:

used by camp

Recommendations for management & protection (attach separate sheet if necessary):

Site recorded by: W.T. Bluff
Address/institution: Mortdale

Date: 10/89

X

SITE POSITION & ENVIRONMENT

OFFICE USE ONLY: NPWS site no: 45-6-1990

1. Land form a. ~~beach~~/hill slope/~~ridge top~~, etc: b. site aspect: 342° c. slope: *Med.*
 d. mark on diagram provided or on your own sketch the position of the site: e. Describe briefly:



f. Local rock type: *Newbury* g. Land use/effect:

2. Distance from drinking water: Source:

3. Resource Zone associated with site (estuarine, riverine, forest etc):

4. Vegetation: *Bloodwood Casuarina Grey Gum Dodonaea Pittosporum*

5. Edible plants noted: *Breadfruit Macadamia honey Eucalyptus sap Sida sp. leaf*

6. Faunal resources (include shellfish): *Aburrua Creatura Macrofauna Leptodactylus*

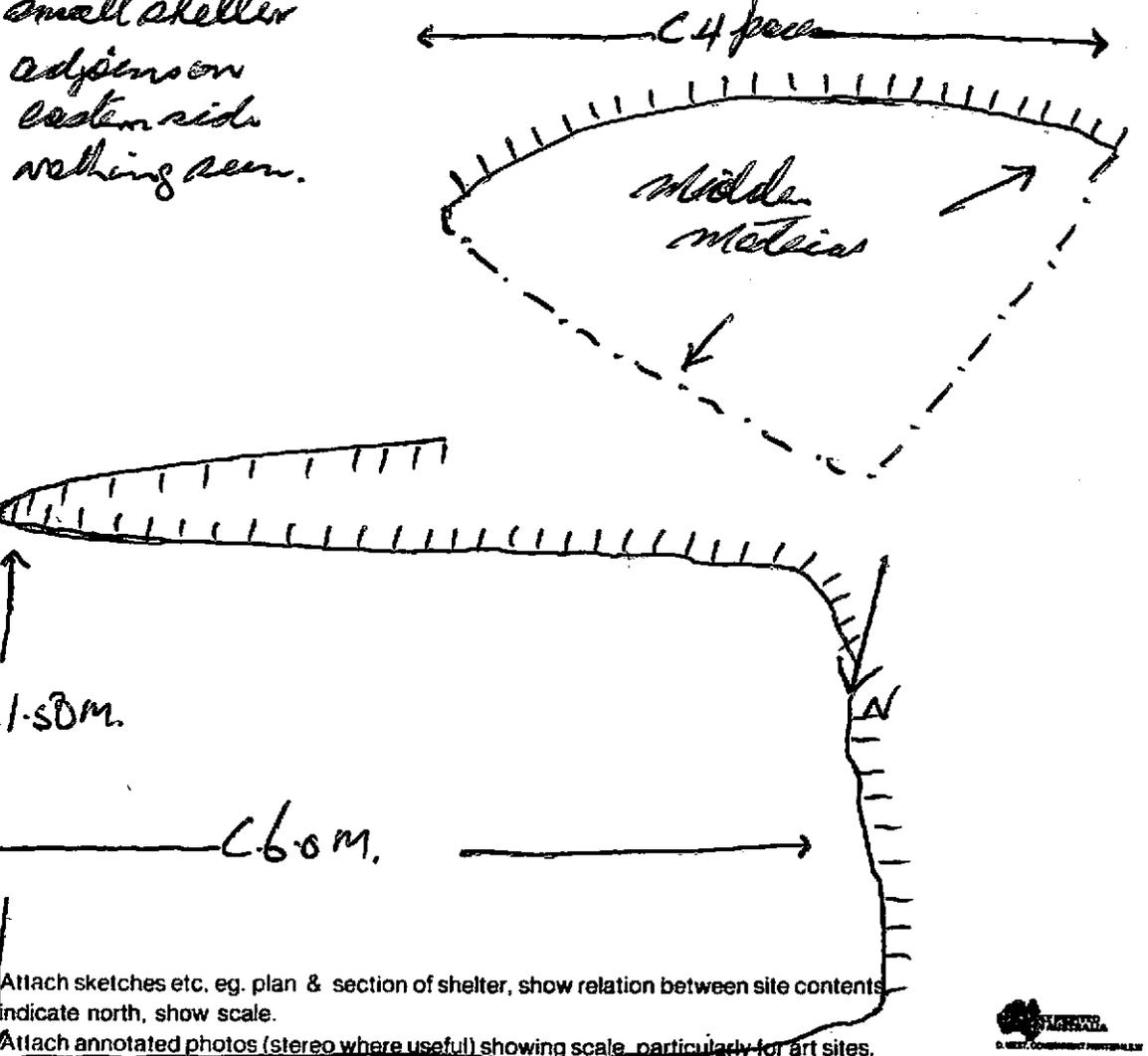
7. Other exploitable resources (river pebbles, ochre, etc):

Site type: *Medulla Shelter*

DESCRIPTION OF SITE & CONTENTS.
 Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.

Deftalander in sandy rocky clay, humic deposit roof much blackened. Graffiti + possible bar roof small shelter

- 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



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.





Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville 2220 NSW

AHIMS site ID:

Date recorded:

Site Location Information

Site name:

Easting: Northing: Coordinates must be in GDA (MGA)

Horizontal Accuracy (m):

Zone: Location method:

Recorder Information

(The person responsible for the completion and submission of this form)

Title	Surname	First name
<input type="text" value="Mr."/>	<input type="text" value="Stewart"/>	<input type="text" value="Timothy"/>

Organisation:

Address:

Phone: E-mail:

Site Context Information

Land Form Pattern:

Land Form Unit:

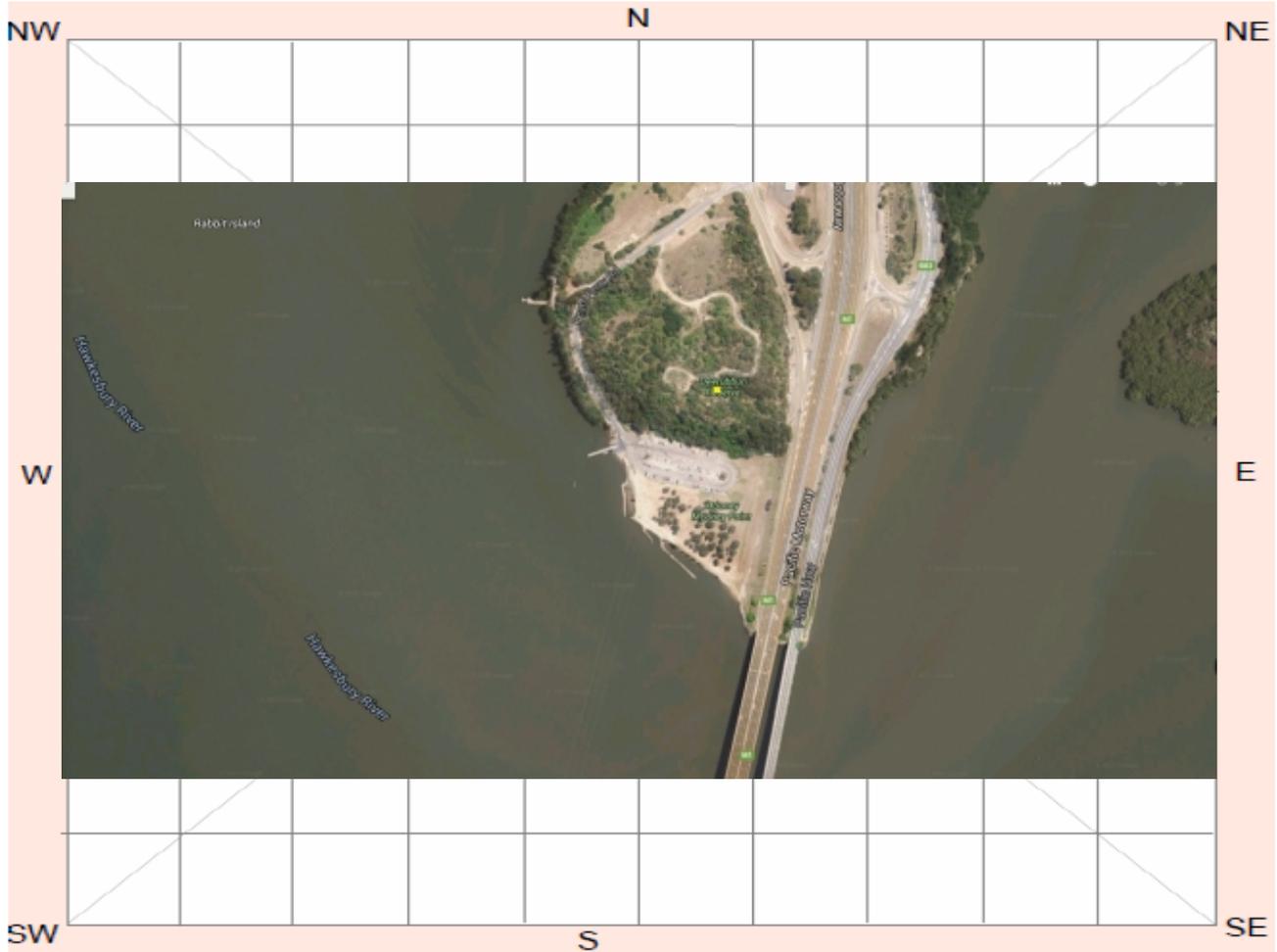
Vegetation:

Distance to Water (m):

Primary Report:

How to get to the site:

Site location map



Site contents information

open/closed site:

Site condition:

Features:

Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
				Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
1. <input type="text" value="Shell"/>	<input type="text" value="10000"/>	<input type="text" value="10"/>	<input type="text" value="10"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

North facing shelter at crest of hill, about 10 m long x 4 m deep. There is an extensive midden extending down below the cave towards the grave site of Francis Peat, although it has been disturbed over the decades.

Features:

Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
				Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
2. <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

3.

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:

4.

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:

5.

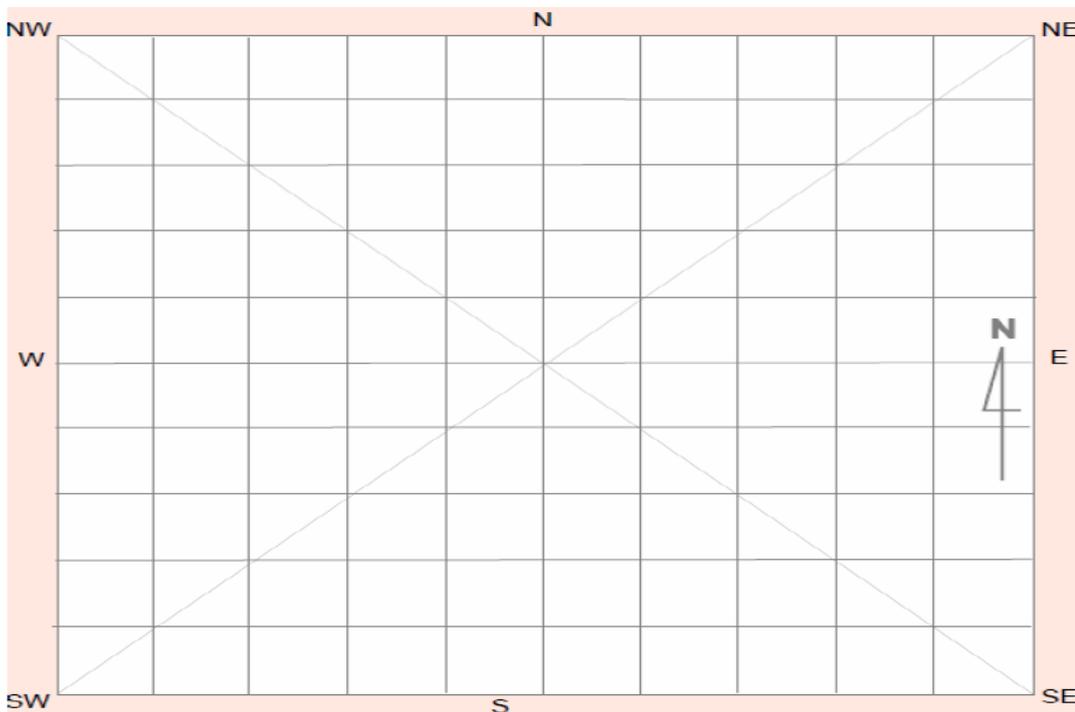
Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Other Site Info:

There are other small shelters nearby that face south. The shelter and the surrounding area has been heavily disturbed by campers, power lines. George Peat's "Fairview" residence was located about 100 metres downhill towards the NW, and the whole peninsula was farmed and turned over from the 1840s.

Site plan



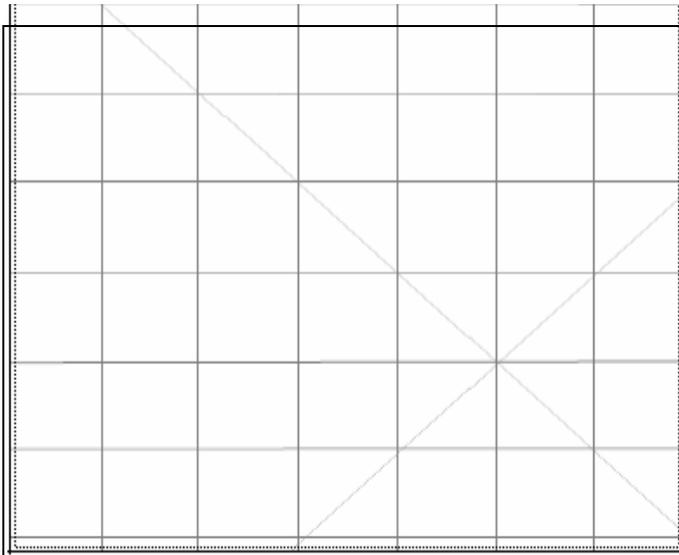
Site photographs



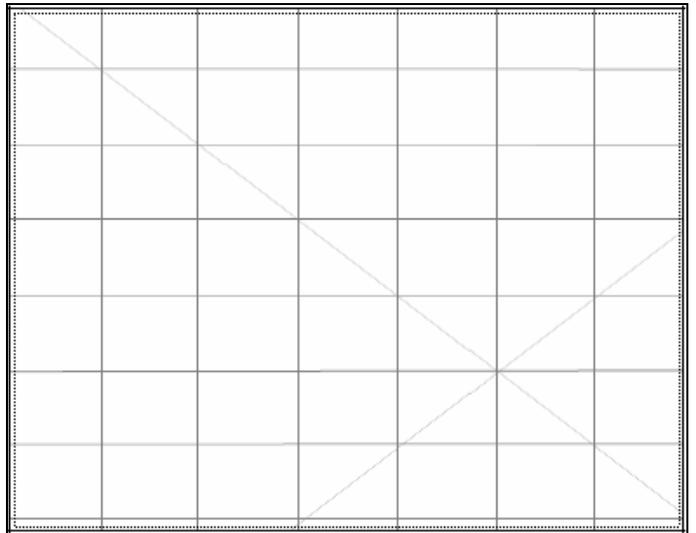
Description:



Description:



Description:



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:



Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville 2220 NSW

AHIMS site ID:

Date recorded:

Site Location Information

Site name:

Easting: Northing: Coordinates must be in GDA (MGA)

Horizontal Accuracy (m):

Zone: Location method:

Recorder Information

(The person responsible for the completion and submission of this form)

Title	Surname	First name
<input type="text" value="Mr"/>	<input type="text" value="Symons"/>	<input type="text" value="Josh"/>
Organisation:	<input type="text" value="43"/>	
Address:	<input type="text" value="PO Box 772 Rose Bay NSW 2029"/>	
Phone:	<input type="text" value="92325371"/>	E-mail: <input type="text" value="josh.symons@artefact.net.au"/>

Site Context Information

Land Form Pattern:

Land Form Unit:

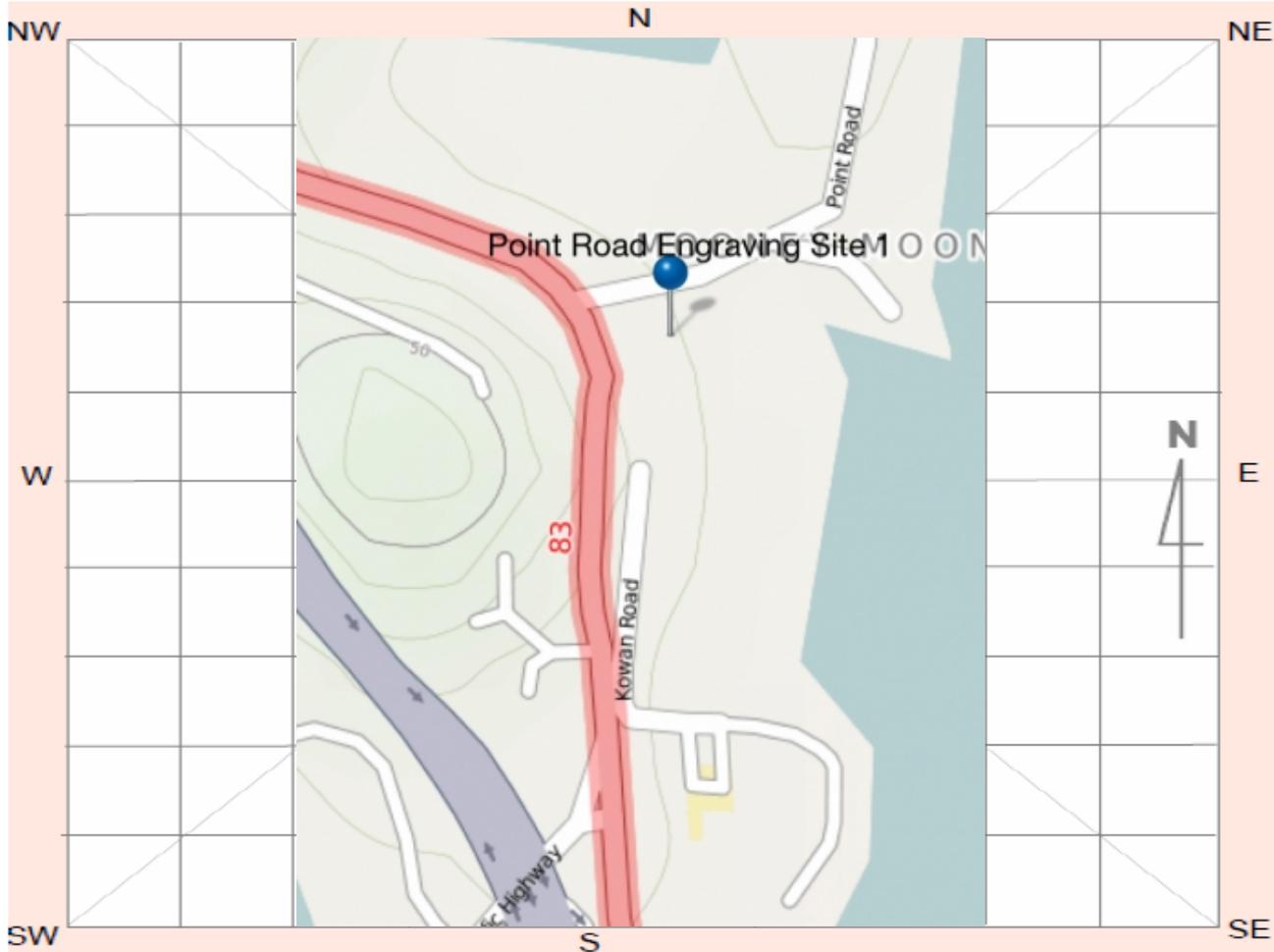
Vegetation:

Distance to Water (m):

Primary Report:

How to get to the site:

Site location map



Site contents information

open/closed site:

Site condition:

Features:

Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
				Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
1. <input type="text" value="Art"/>	<input type="text" value="3"/>	<input type="text" value="3"/>	<input type="text" value="3"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Site consists of three identified engravings. This includes an engraving of a water fowl, measuring (max dimensions) 700mm x 550mm. Approximately 2 metres southeast of the water fowl were located an engraving of a human footprint and a point spaced 200mm apart. The footprint measures 240mm x 90mm. The point (half an arrow?) measures 230mm x 80mm.

Features:

Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
				Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
2. <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

3.

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:

4.

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:

5.

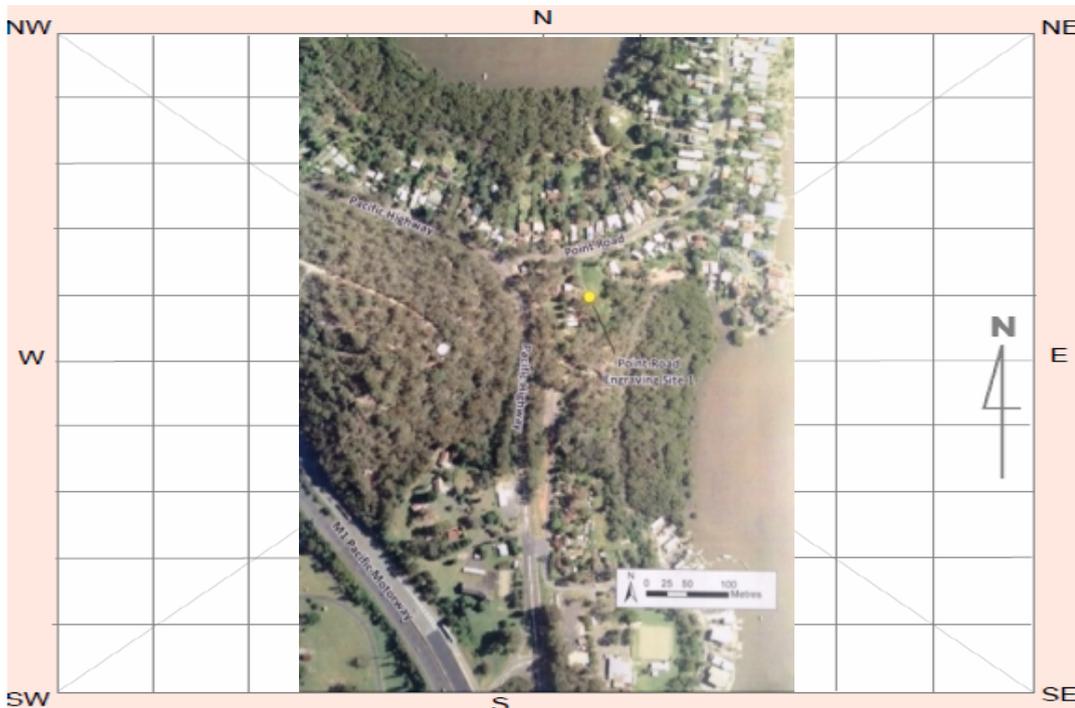
Scarred Trees			
Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Other Site Info:

These engravings would be an excellent subject for comparative research with other engravings recorded in the area, due to the apparent stylistic uniqueness of each item and possible association with post-European contact time period.

Site plan



Site photographs



Description:



Description:



Description:



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:



Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville 2220 NSW

AHIMS site ID:

Date recorded:

Site Location Information

Site name:

Easting: Northing: Coordinates must be in GDA (MGA)

Horizontal Accuracy (m):

Zone: Location method:

Recorder Information

(The person responsible for the completion and submission of this form)

Title	Surname	First name
<input type="text" value="Mr."/>	<input type="text" value="Stewart"/>	<input type="text" value="Timothy"/>

Organisation:

Address:

Phone: E-mail:

Site Context Information

Land Form Pattern:

Land Form Unit:

Vegetation:

Distance to Water (m):

Primary Report:

How to get to the site:

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="Art"/>	<input type="text" value="12"/>	<input type="text" value="4"/>	<input type="text" value="2.5"/>

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

Description:

Refer to site plan. Motifs 1,2,3 & 4 - Waterfowl and chicks, Motif 5 - 2.5m long eel(?), Motif 6 - small stingray(?), Motif 7 - human right foot, Motif 8 - Possible head in profile, Motif 9 - human right hand, Motif 10 - stylized heart. Also present are 2 arrows or spears within the eel.

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 Length (cm)	Scar Width (cm)
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Scar shape	<input type="text"/>		Tree Species <input type="text"/>

Description:

Features:

3.

Description:

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

Features:

4.

Description:

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

Features:

5.

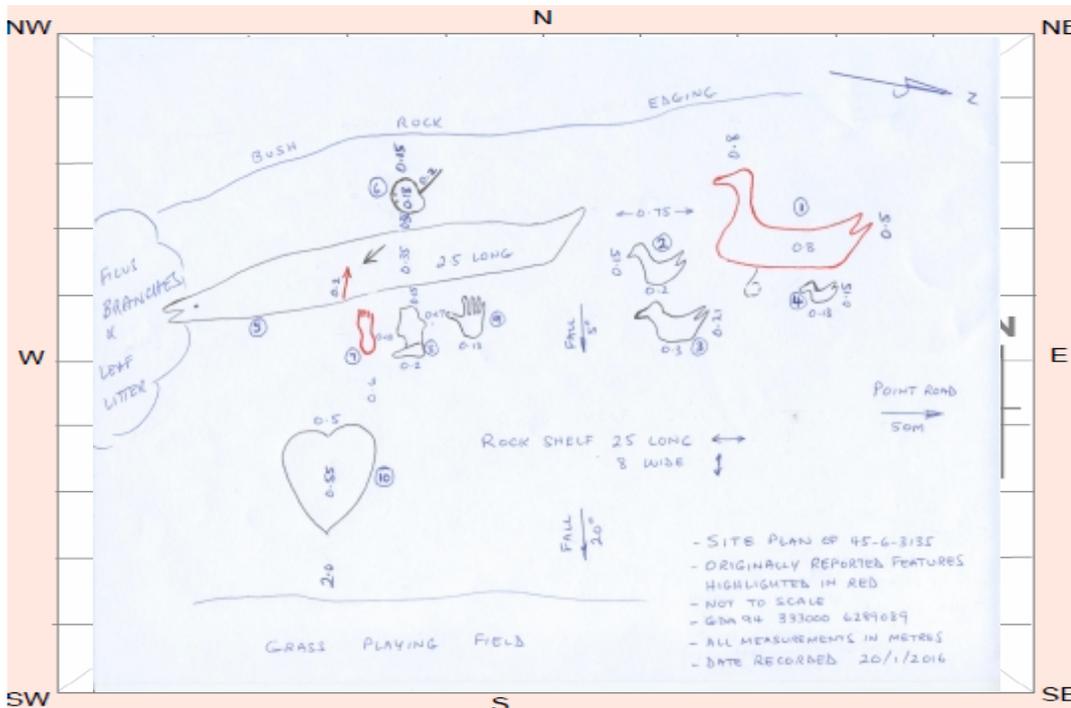
Description:

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

Other Site Info:

The foot and hand are proportionally the same as an adult. At first glance the heart and arrows seem more European than indigenous, but the motifs do exhibit the same conjoined pit method of engraving as the other motifs, and all of the them are heavily weathered, the adult waterfowl is clearest.

Site plan



Site photographs



Description:



Description:



Description:



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:



Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville 2220 NSW

AHIMS site ID:

Date recorded:

Site Location Information

Site name:

Easting: Northing: Coordinates must be in GDA (MGA)

Horizontal Accuracy (m):

Zone: Location method:

Recorder Information

(The person responsible for the completion and submission of this form)

Title	Surname	First name
<input type="text" value="Mr"/>	<input type="text" value="walker"/>	<input type="text" value="jackson"/>

Organisation:

Address:

Phone: E-mail:

Site Context Information

Land Form Pattern: Land Use:

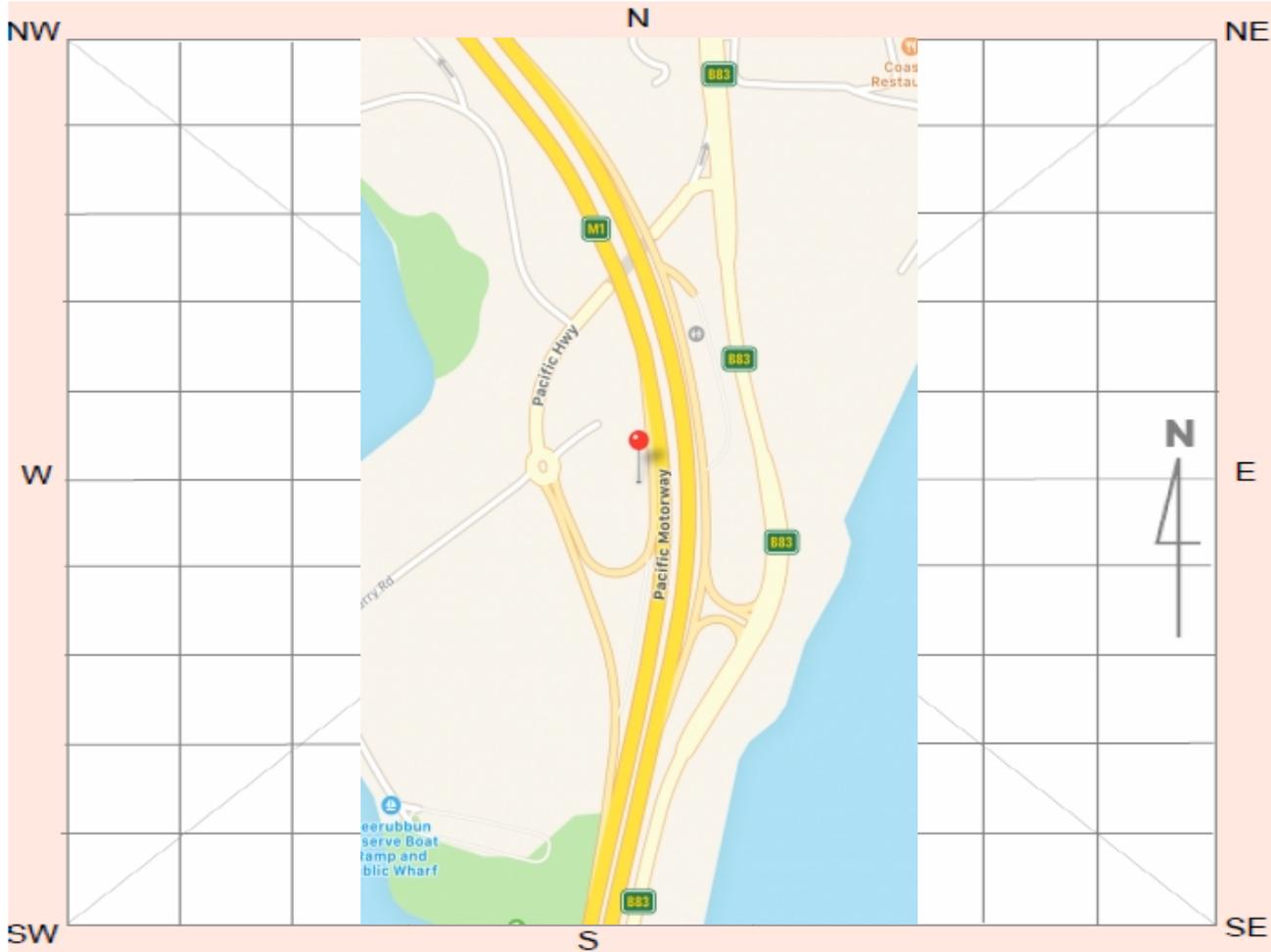
Land Form Unit: Vegetation:

Distance to Water (m): Primary Report:

How to get to the site:

Other site information:

Site location map



Site contents information

open/closed site:

Open

Site condition:

Exposed Archaeo

Features:

1.	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
				Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
Potential Archaeological Deposit		12	4				

Description:

Shelter with midden south facing approx 20mts from car park

Features:

2.	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
				Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species

Description:

Features:

3.

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:

4.

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:

5.

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

Description:

Other Site Info:

Shelter with midden approx 20mts north of car park

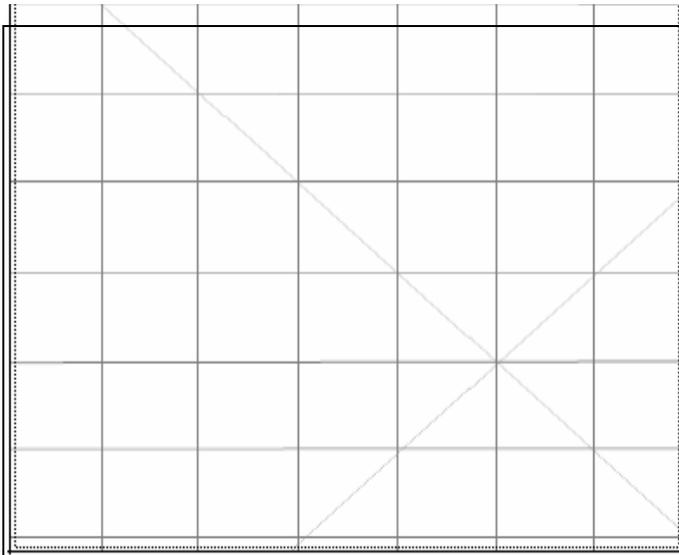
Site plan



Site photographs



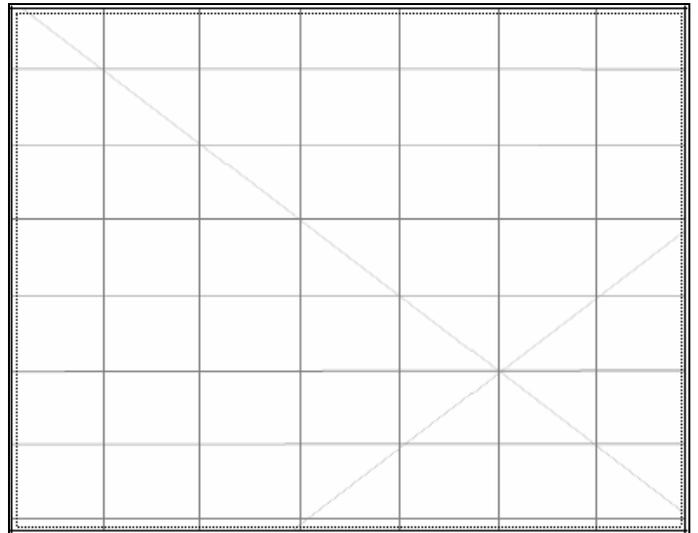
Description:



Description:



Description:



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:



Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville 2220 NSW

AHIMS site ID:

Date recorded:

Site Location Information

Site name:

Easting: Northing: Coordinates must be in GDA (MGA)

Horizontal Accuracy (m):

Zone: Location method:

Recorder Information

(The person responsible for the completion and submission of this form)

Title	Surname	First name
<input type="text" value="Mr"/>	<input type="text" value="walker"/>	<input type="text" value="jackson"/>

Organisation:

Address:

Phone: E-mail:

Site Context Information

Land Form Pattern: Land Use:

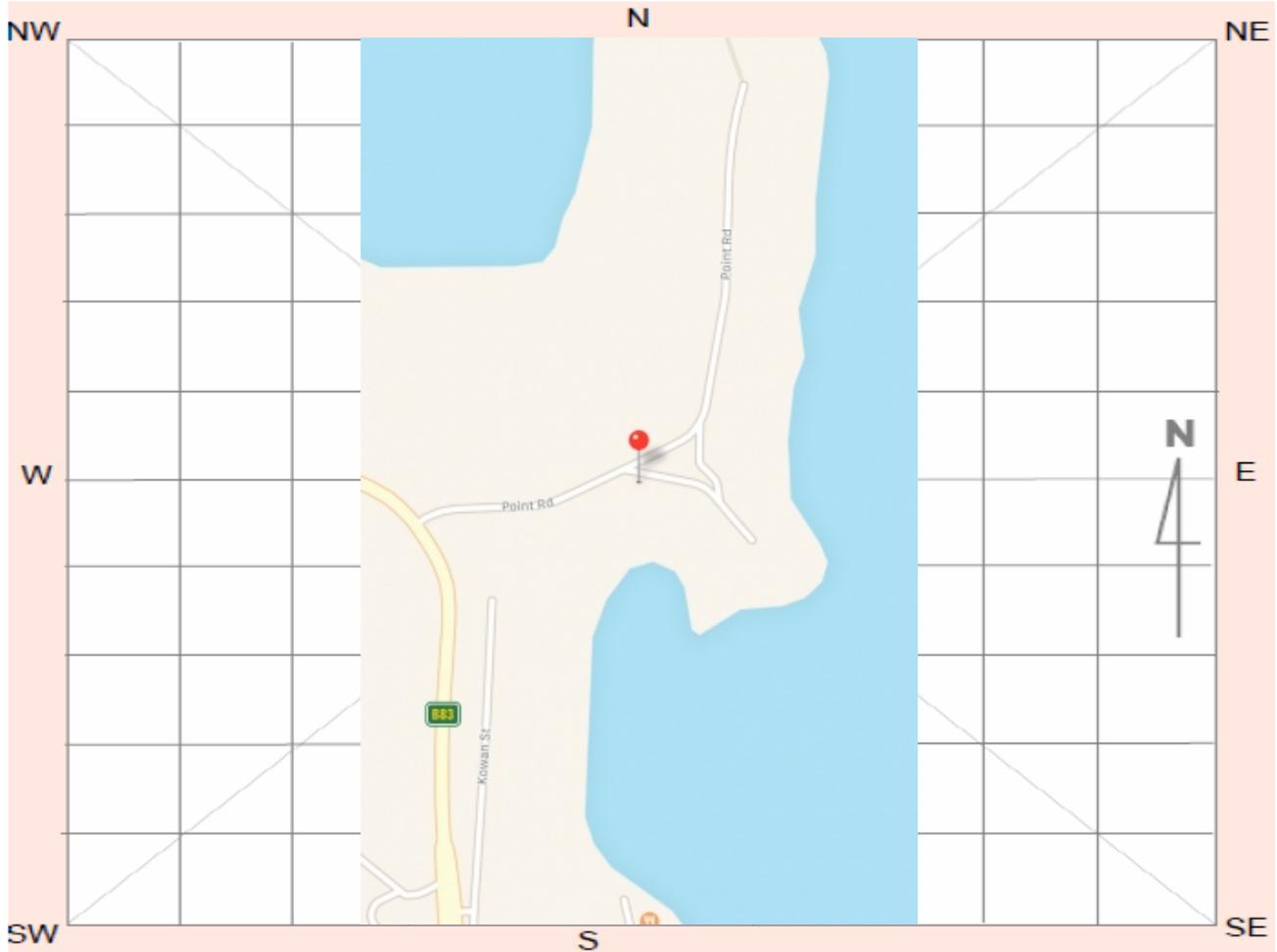
Land Form Unit: Vegetation:

Distance to Water (m): Primary Report:

How to get to the site:

Other site information:

Site location map



Site contents information

open/closed site:

Site condition:

Features:

1.	Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
					Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
	<input type="text" value="Grinding Groove"/>	<input type="text" value="5"/>	<input type="text" value="028"/>	<input type="text" value="016"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

2.	Features:	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
					Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

3.

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:

4.

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:

5.

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

Description:

Other Site Info:

Lower section of Mooney Mooney public school

Site plan



Site photographs



Description: over view of water channel



Description: groove 1



Description: grooves 2 & 3



Description: grooves 4 & 5 with impact damage

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:



Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville 2220 NSW

AHIMS site ID:

Date recorded:

Site Location Information

Site name:

Easting: Northing: Coordinates must be in GDA (MGA)

Horizontal Accuracy (m):

Zone: Location method:

Recorder Information

(The person responsible for the completion and submission of this form)

Title	Surname	First name
<input type="text" value="Mr"/>	<input type="text" value="walker"/>	<input type="text" value="jackson"/>

Organisation:

Address:

Phone: E-mail:

Site Context Information

Land Form Pattern: Land Use:

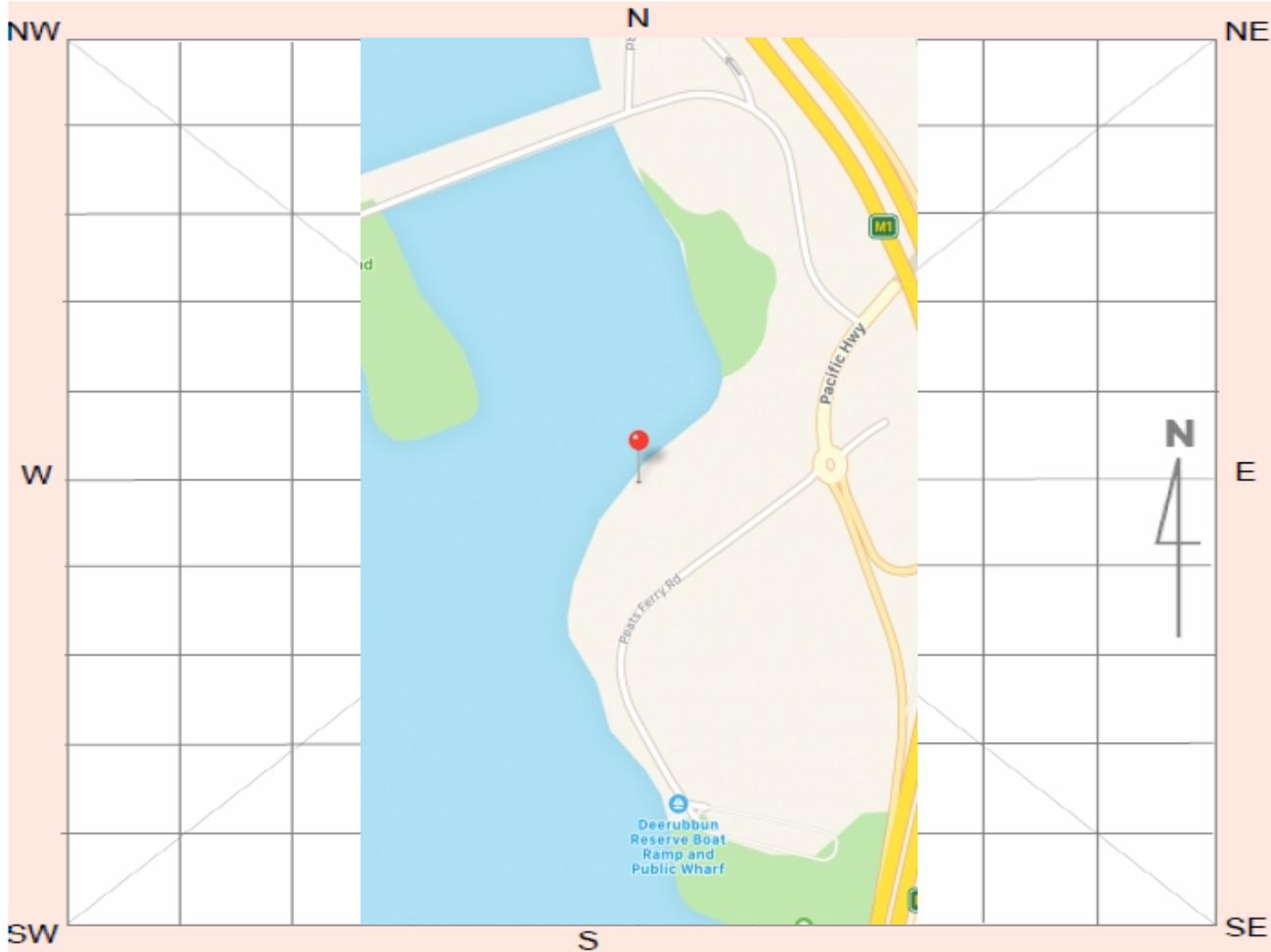
Land Form Unit: Vegetation:

Distance to Water (m): Primary Report:

How to get to the site:

Other site information:

Site location map



Site contents information

open/closed site:

Site condition:

Features:

1.	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
				Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text" value="Grinding Groove"/>	<input type="text" value="2"/>	<input type="text" value="035"/>	<input type="text" value="015"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

2.	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
				Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

3.

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:

4.

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:

5.

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

Description:

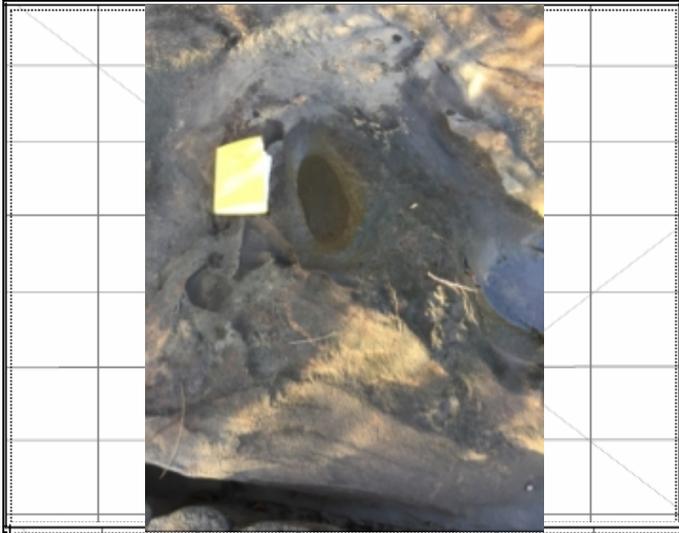
Other Site Info:

Below high tide mark

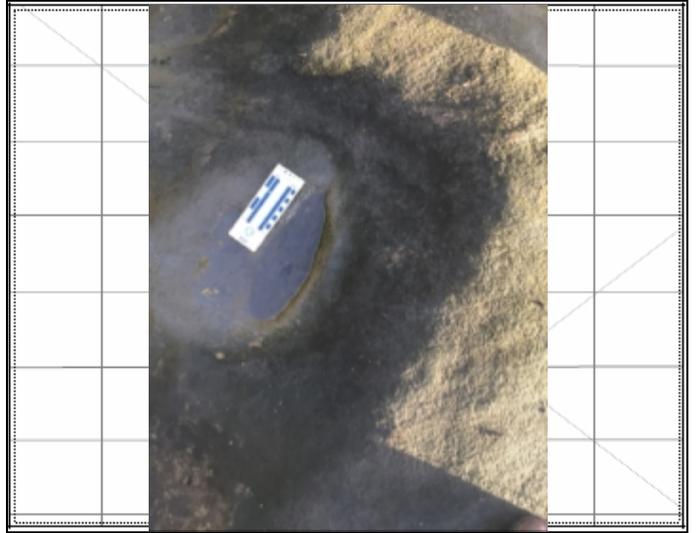
Site plan



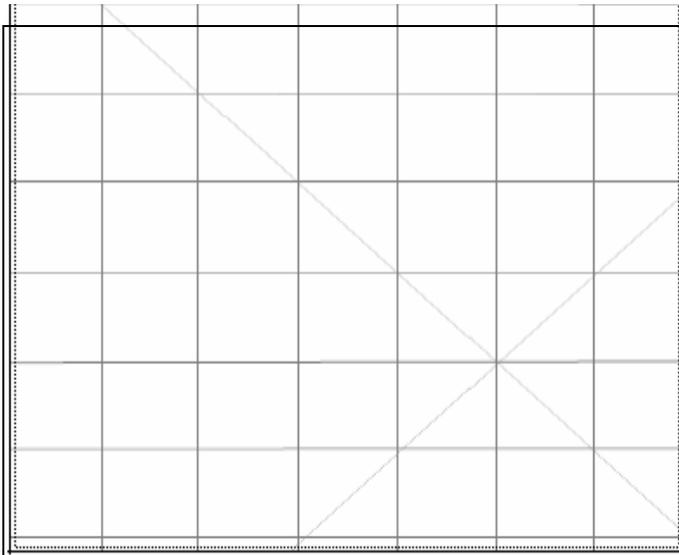
Site photographs



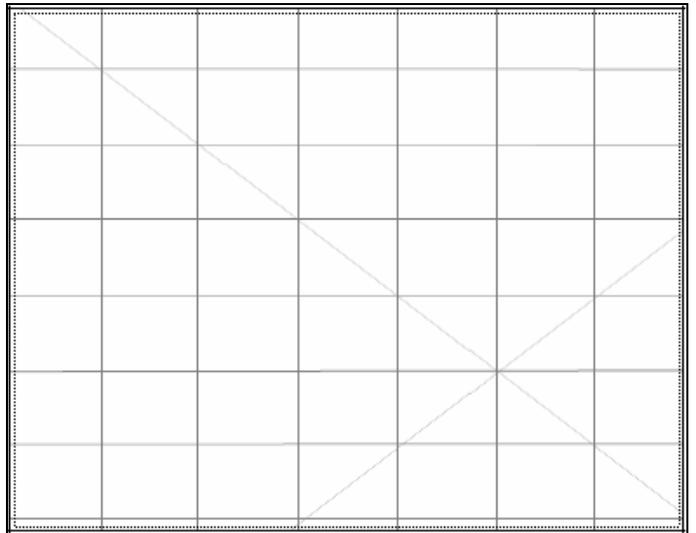
Description: groove 1



Description: groove 2



Description:



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:



Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville 2220 NSW

AHIMS site ID:

Date recorded:

Site Location Information

Site name:

Easting: Northing: Coordinates must be in GDA (MGA)

Horizontal Accuracy (m):

Zone: Location method:

Recorder Information

(The person responsible for the completion and submission of this form)

Title	Surname	First name
<input type="text" value="Mr"/>	<input type="text" value="walker"/>	<input type="text" value="jackson"/>

Organisation:

Address:

Phone: E-mail:

Site Context Information

Land Form Pattern: Land Use:

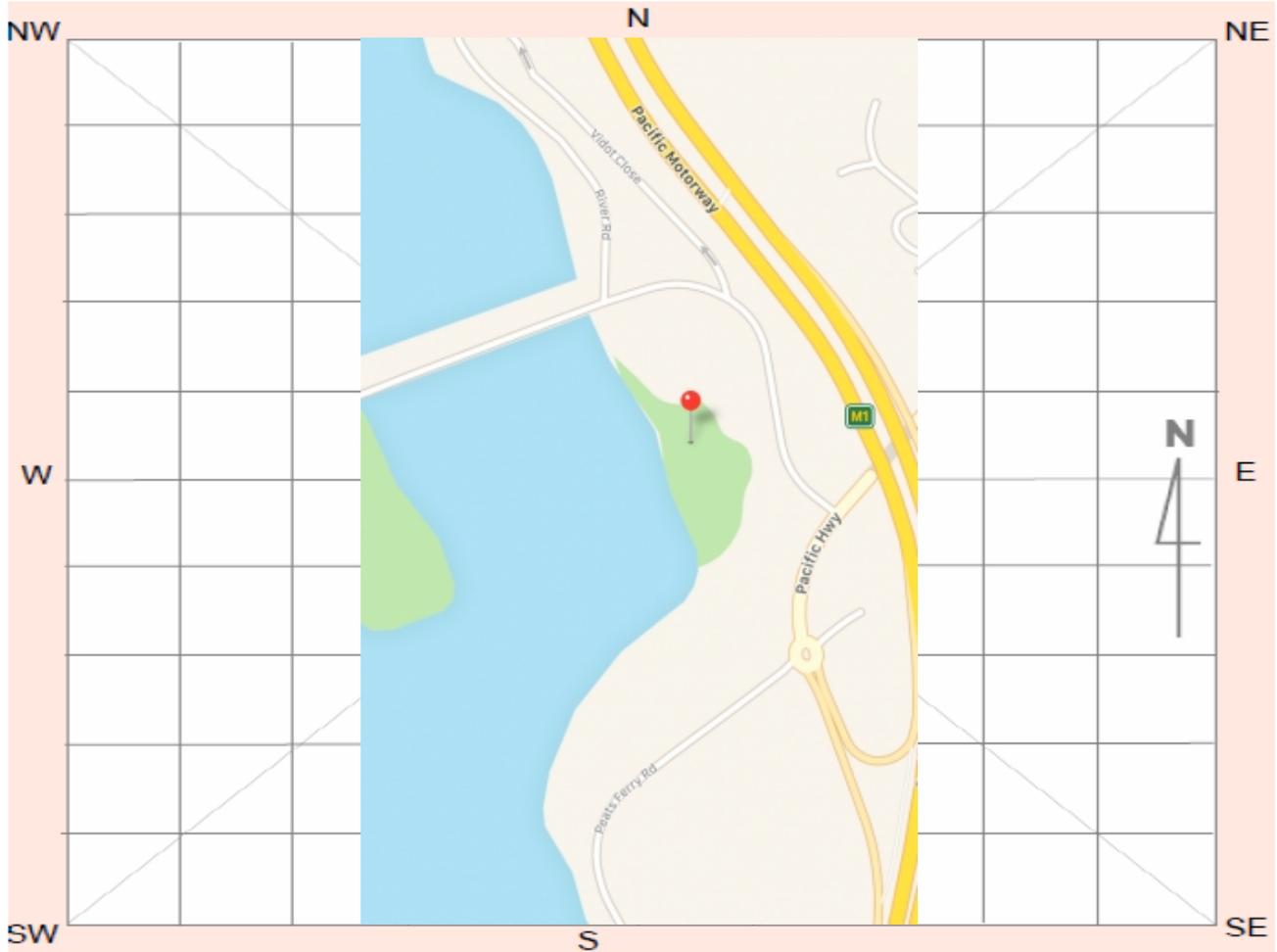
Land Form Unit: Vegetation:

Distance to Water (m): Primary Report:

How to get to the site:

Other site information:

Site location map



Site contents information

open/closed site:

Site condition:

Features:

1.	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
				Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text" value="Art"/>	<input type="text" value="1"/>	<input type="text" value="028"/>	<input type="text" value="018"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

2.	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
				Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Description:

Features:

3.

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:

4.

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:

5.

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

Description:

Other Site Info:

Eroding from wash up from deerabin

Site plan



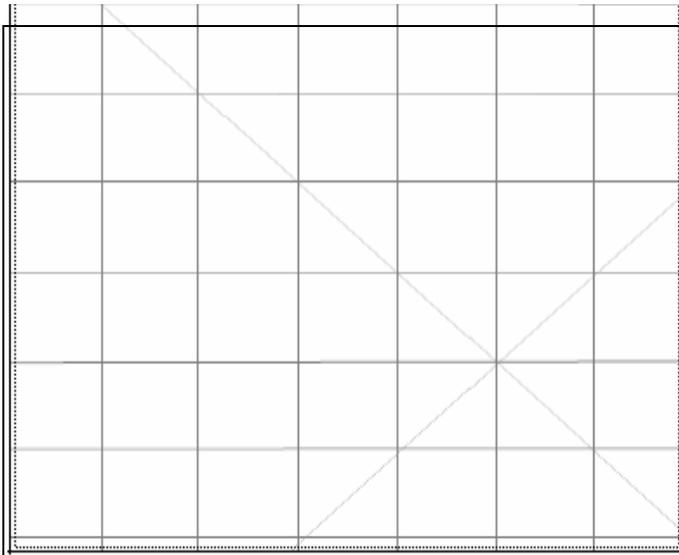
Site photographs



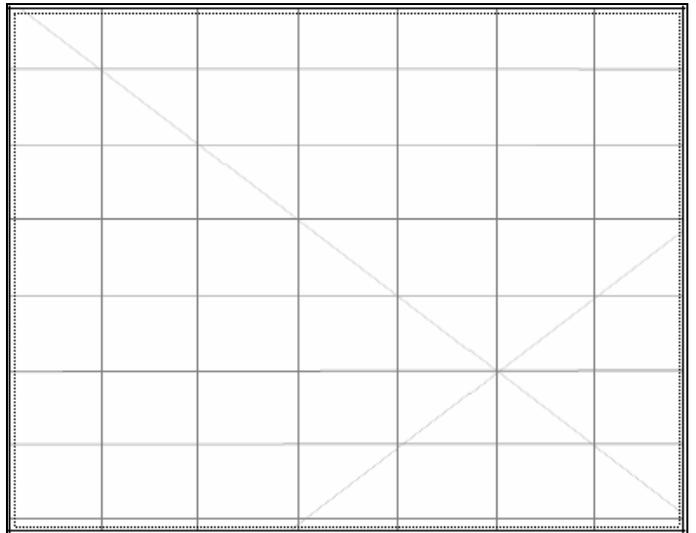
Description: engraving



Description: location shot



Description:



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

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Appendix 4: How Significance was Assessed

General

While all Aboriginal objects in NSW are protected under NSW legislation, the NPW Act, 1974 recognises that the destruction of sites may be necessary to allow other activities or developments to proceed. In order for the State regulator to make informed decisions on such matters, a consideration of the significance of cultural heritage places and objects is an important element of the cultural heritage assessment process. The heritage significance of Aboriginal archaeological sites can be assessed using the four criteria outlined in the Burra Charter; aesthetic, historic, scientific, and social or spiritual (Australia ICOMOS, 2013).

Significance Levels and Thresholds

Most cultural places and objects are of cultural value to at least some individuals or community groups. The assessment process requires the analysis and ranking of significance. Australia has a four tiered system of heritage protection that has been implemented across all levels of government i.e. Commonwealth, State and Local governments (see **Appendix 1** for details on legislation). While heritage in NSW is managed under NSW legislation it is compliant with this four tiered system. Under this system, cultural heritage places and objects once identified are assessed according to their significance at World, National, State and Local levels and whether they are above or below threshold for listing or protection. For ease of discussion here we can set aside discussion of world heritage places as such places must meet a threshold of 'Outstanding Universal Value' (OUV) and such places are unlikely to occur in the study area. It is a requirement of this process that the higher levels will meet and exceed the thresholds for the level below. In other words a place or object of World Heritage Significance will also be of National significance and so on. This process can be visualised as shown in **Figure A6-1** where each of the protected categories of Local, State and National are subset of each other and indeed a broader inventory of places that have been assessed and considered. It can be seen that places that meet the threshold for a particular level of significance will have met the thresholds for the levels below: e.g. nationally significant places will as a pre requisite have satisfied the thresholds for State significance and Local significance.

In NSW 'State heritage significance', in relation to a place, building, work, relic, moveable object or precinct, means significance to the State in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item, and 'Local heritage significance', in relation to a place, building, work, relic, moveable object or precinct, means significance to an area in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item (S 4A, NSW Heritage Act 1977).

In assessing the significance of sites aspects such as rarity and representativeness and the integrity (sometimes referred to as the intactness of the site) must be considered. Generally speaking a site or object that is rare will have a heightened significance although a site that is suitable of conservation as 'representative' of its type will also be significant. Conversely an extremely rare site may no longer be significant if its integrity has been sufficiently compromised. For example a rare Pleistocene era site that would normally be considered of high scientific significance may be below threshold if the site has suffered substantial subsurface damage.

A summary of these values is presented in **Table A4-1**.



Figure A4-1. The tiered heritage system operating in Australia.

Aesthetic Significance

This criterion refers to aspects of sensory perception and the ability of the site to elicit emotional responses referred to as sensory or sensori-emotional values. The guidelines to the Burra Charter note that assessment may include consideration of the form, scale, colour, texture and material of the item or place, as well as sounds and smells. With regard to pre-contact Aboriginal cultural heritage sites, the placement within the landscape would be considered under this criterion as would memoryscapes and the ability of the site to transmit such memories. It is important to consider that sensori-emotional values are not always equated with “beauty”; for example massacre sites or sites of incarceration may have value under this criterion. Individual artefacts, sites and site features may also have aesthetic significance.

Table A4-1. A summary of criteria and rankings used to determine a site's significance

Criterion	Threshold indicators State	Threshold indicator local	Below threshold for significance
Aesthetic	<p>The site or object elicits a strong emotional response and is part of a state or national narrative.</p> <p>Is set within a landscape that inspires awe.</p>	<p>The site is known or suspected of eliciting strong responses from the local community.</p> <p>While similar sites may exist elsewhere they are rare in the local area.</p>	<p>The site or object does not elicit a relevant sensori-emotional response; or</p> <p>The site has been disturbed to the extent that it can no longer elicit a relevant sensori-emotional response.</p>
Historic	<p>The site or object is important in representing an aspect of history important to the State or National as reflected in the Australian (and State) Historical Thematic Framework</p>	<p>The site or object is rare in the local area; and</p> <p>Would provide strong opportunities for interpretation to the public.</p> <p>The site illustrates elements of the history of the local area</p>	<p>The site is common in the local area, does not provide opportunities for interpretation to the public and does not contribute substantially to an understanding the historic themes relevant to the local area and/or the State.</p> <p>(Note – individuals may still feel attachment for sites below threshold)</p>
Cultural and or spiritual	<p>The site or object is important to an understanding of pre or post contact Aboriginal cultural life in NSW.</p> <p>The site or object is part of a Dreaming story or track.</p> <p>The site or object is part of ongoing ceremony or ritual.</p> <p>Substantial cultural knowledge about this site exists within the relevant Aboriginal community or custodians for this site or has been previously documented.</p>	<p>The site is important to local Aboriginal community, or subset of the community, and this importance can be articulated.</p>	<p>There is little or no knowledge in the Aboriginal community about this site or object.</p> <p>The knowledge that does exist falls into the category of family history and is not generally relevant to the broader Aboriginal community, and/or Aboriginal historical narrative.</p> <p>(Note – individuals may still feel attachment for sites below threshold)</p>
Scientific (archaeological)	<p>The site or object has potential to answer key questions about Aboriginal culture and society in NSW or Australia as a whole pre or post contact.</p> <p>The site or object is unique and/or rare and intact; or</p> <p>The site is the best representative (and intact) example of a type of site that may be common, but not conserved elsewhere.</p>	<p>The site or object is rare in the local area; and</p> <p>It provides potential to learn more about a little understood aspect of Aboriginal cultural or society in the local area.</p> <p>The site has a high artefact density, and is large enough in size to be used to interpret larger scale questions about technology and occupation in the local area.</p>	<p>The site or object is common in the local area and/or the state.</p> <p>The site does not have excavation /research potential or the site is common but has some potential information to be salvaged.</p>

Historic Significance

The guidelines to the Burra Charter include the following discussion of historic significance:

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

In relation to Aboriginal cultural heritage, many post-contact places and sites would have historic value. Pre-contact places and items may also be significant according to this criterion, although the association with historic figures, events, phases or activities may be more difficult to establish. Places of historic significance may include sacred or ceremonial sites, sites of resistance battles and massacres, and archaeological sites with evidence of technological developments.

Social and Spiritual Significance

In Aboriginal heritage this criterion concerns the relationship and importance of sites to the contemporary Aboriginal community. Aspects of social and spiritual significance include people's traditional and contemporary links with a place or object as well as an overall concern by Aboriginal people for sites and their continued protection. Aboriginal cultural values may partially reflect or follow on from archaeological values, historic values, aesthetic values or be tied to values associated with the natural environment. This criterion requires the active participation of Aboriginal people in the assessment process as it is their knowledge and values that must be articulated.

Scientific Significance

Scientific value is associated with the research potential of a site. Rarity and representativeness are also related concepts that are taken into account. Research potential or demonstrated research importance, is considered according to the contribution that a heritage site can make to present understanding of human society and the human past. Heritage sites, objects or places of high scientific significance are those which provide an uncommon opportunity to provide information about the specific antiquity of people in an area, or a rare glimpse of artistic endeavour or a chronological record of cultural change of continuity through deep archaeological stratigraphy.

The comparative rarity of a site is a consideration in assessing scientific significance. A certain site type may be "one of a kind" in one region, but very common in another. Artefacts of a particular type may be common in one region, but outside the known distribution in another.

The integrity of a site is also a consideration in determining scientific significance. While disturbance of a topsoil deposit with artefacts does not entirely diminish research value, it may limit the types of questions that may be addressed. A heavily cultivated paddock may be unsuited to addressing research questions of small-scale site structure, but it may still be suitable for answering more general questions of implement distribution in a region and raw material logistics.

The capacity of a site to address research questions is predicated on a definition of what the key research issues are for a region. In the region including the study area, the key research issues revolve around the chronology of Aboriginal occupation and variability in stone artefact manufacturing technology. Sites with certain backed implements from the Holocene are very common, but sites with Pleistocene evidence are extremely rare, and hence of extremely high significance if found.