

**PROPOSED DEVELOPMENT AT  
ROBYN'S NEST AND STAGE 5  
BELLBIRD RIDGE ESTATE,  
MERIMBULA, BEGA VALLEY SHIRE,  
FAR SOUTH COAST OF NEW SOUTH WALES:  
ABORIGINAL CULTURAL HERITAGE ASSESSMENT**

A report to

**Sea Eagle Estate Pty Limited,  
Mr Michael Britten and Mrs Robyn Savage**

PO Box 204  
Merimbula NSW 2548

by

**Peter Kuskie  
SOUTH EAST ARCHAEOLOGY Pty Limited**  
ACN 091 653 048

***[www.southeastarchaeology.com.au](http://www.southeastarchaeology.com.au)***

24 Bamford Street  
HUGHES ACT 2605

Telephone: 02-6260 4439

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## EXECUTIVE SUMMARY

This Aboriginal cultural heritage assessment has been prepared by South East Archaeology Pty Ltd for Sea Eagle Estate Pty Ltd, Mr Michael Britten and Mrs Robyn Savage.

Sea Eagle Estate, Mr Michael Britten and Mrs Robyn Savage are proposing to construct a residential subdivision with approximately 32 allotments and supporting roads, essential services and ancillary works, along with additional cottages and infrastructure for an expansion to the Robyn's Nest tourist facility (the 'Proposal'). Development Approval for part of the proposed works has been granted by Bega Valley Shire Council, with approval for the remainder of the works pending. Approval is being sought under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The investigation area comprises a portion of the existing Robyn's Nest tourist facility and the proposed Stage 5 of the Bellbird Ridge Estate residential subdivision, an area of approximately 8.8 hectares. It is situated on the northern margin of Merimbula Lake, immediately west of the urban area of Merimbula, on the Far South Coast of New South Wales. It is located within the Bega Valley Shire local government area and comprises the whole of Lot 881 DP 1148672 and part of Lot 1882 DP 1014185, Merimbula Drive.

The investigation area comprises two adjoining properties, Robyn's Nest and Stage 5 Bellbird Ridge Estate, which have been the subject of Aboriginal heritage investigations prior to the introduction in 2010 of key changes to the *National Parks and Wildlife Act 1974* (NP&W Act) and supporting policies, guidelines and regulations. These have included survey assessments by South East Archaeology of Stage 5 (Kuskie and Gutierrez 2000) and by Godden Mackay Logan (GML 2008) of Robyn's Nest, and test excavations within Stage 5 (Kuskie 2005).

Following discussion with the Office of Environment and Heritage (OEH) in the Department of Premier and Cabinet (formerly the Department of Environment, Climate Change and Water {DECCW}), it is the intention of the current assessment to build on the existing detailed assessments and to address to the extent feasible (given the history of investigations and consultation to date, including test excavations) the OEH guidelines relevant to the subsequent lodgement of a Section 90 Aboriginal Heritage Impact Permit (AHIP) application for the Proposal. These guidelines include the:

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

It is not the intention of this report to repeat in detail the methodology and results of the previous investigations (refer to Kuskie 2005, Kuskie and Gutierrez 2000 and GML 2008).

The principal aims of this assessment were therefore to, in consultation with the local Aboriginal community, reinspect the identified Aboriginal heritage evidence within the investigation area, reassess the potential impacts of the Proposal on this evidence, reassess the significance of this evidence, and formulate revised recommendations for the management of this evidence.

The investigation proceeded by recourse to the archaeological and environmental background of the locality, followed by consultation with the Aboriginal community and a field inspection undertaken with the assistance of representatives of the registered Aboriginal parties, in accordance with the relevant OEH requirements.

The field inspection was undertaken on 28 July 2011 with representatives of two of the three registered Aboriginal parties, the Bega Local Aboriginal Land Council and Yukembuk Merung Ngarigo Consultancy Pty Ltd. Representatives from these organisations have been continuously involved in the assessments of the Proposal area since 2000. A third registered party, Mr Lionel Mongta, did not request participation in the field inspection. The investigation occurred in accordance with the methodology dated 7 March 2011 that was provided to and accepted by the registered Aboriginal parties.

The investigation area has been subdivided into 12 survey areas, all of which were inspected for Aboriginal heritage evidence. The environmental contexts surveyed include the three landform elements and three classes of slope present. Test excavations have also previously been conducted within Stage 5, and within similar contexts to the present investigation area in the nearby Stage 3 of the Bellbird Ridge subdivision.

Eleven loci of visible Aboriginal heritage evidence are known to occur within or immediately adjacent to the investigation area. These sites comprise six loci of open artefacts and shell midden, three open artefact loci and two shell midden loci (without associated artefacts). Two site loci, MC10/B and MC10/C, occur marginally to the south of the investigation area, but may extend to within the impact area and could be subject to impacts from use of the vehicle track on which they are located.

No Aboriginal heritage sites are listed on any other heritage registers or planning instruments. The registered Aboriginal stakeholders did not disclose any specific knowledge of any traditional or historical cultural values/places (for example, sites of traditional cultural significance or historically known places or resource use areas) within the investigation area.

During the present reinspection, 27 artefacts were recorded in the investigation area, mostly in sites MC10-12. Shell was present in eight of the site loci and comprises estuarine shellfish species (predominantly cockle), readily available from the adjacent drowned estuarine embayment of Merimbula Lake.

The evidence from sites RN1, RN3, RN5 - MC10/A, MC10/B, MC10/C and MC11/A is related to both the procurement and consumption of shellfish and stone knapping, consistent with hunting/gathering without camping. The evidence from sites RM4, MC6/C and MC12/A represents transitory movement and/or hunting and/or gathering without camping. The evidence at sites RN2 and RN6 is predominantly related to the procurement and consumption of shellfish from the adjacent Merimbula Lake.

The potential for further Aboriginal heritage evidence to occur within the investigation area is summarised as follows:

- ❑ The potential for bora/ceremonial, carved tree, grinding groove, lithic quarry, rock shelter, scarred tree and stone arrangement sites to occur is negligible;
- ❑ The potential for mythological or traditional sites to occur is very low or negligible;
- ❑ The potential for burial sites to occur is very low, but cannot be discounted;

- ❑ Within the zone extending approximately 80 metres inland from the shore of Merimbula Lake there is a high potential for sub-surface deposits of artefacts and midden to occur, including deposits that may be of research value. This includes the location of sites RN1, RN2, RN5 - MC10/A, RN6, MC10/B, MC10/C, MC11/A and MC12/A and the lower portions of survey areas MC10, MC11, MC12 and MCRN15-18;
- ❑ There is also a high potential for further artefact evidence to occur on the level to gentle crests further than 80 metres from the lake margin (survey areas MC11, MCRN16, MCRN18 and MCRN20); and
- ❑ In the remainder of the investigation area, the potential for artefact deposits or middens of research value or significance is low, but a low-density distribution of artefacts consistent with 'background discard' may be present and occasional, small midden deposits cannot be discounted.

Site MC11 has been assessed as being of moderate to potentially high scientific significance within a local context, sites MC10/B, MC10/C and MC12/A as being of potentially moderate scientific significance, sites RN1 and RN2 as being of low to potentially moderate scientific significance, and sites RN3, RN4, RN6 and MC6/C as being of low scientific significance. It is important to observe that all heritage evidence tends to have some contemporary significance to Aboriginal people, because it represents an important tangible link to their past and to the landscape.

The registered Aboriginal parties were provided with a copy of the draft report and comment was requested. The only comments received were from the Yukembuk Merung Ngarigo Consultancy who agreed with the recommendations.

The following recommendations are made on the basis of legal requirements under the NP&W Act, the results of the investigation and consultation with the registered Aboriginal parties:

- 1) Measures to minimise or avoid impacts to the zone within 80 metres of Merimbula Lake should be implemented where feasible. This may include:
  - a) A reduction of the size of the proposed residential allotments fronting Merimbula Lake (modifying the southern boundary such that it is a further distance back from the lake margin);
  - b) An adjustment northward of the proposed location of the sewer and fire trail; and/or
  - c) The use of construction methods to minimise ground disturbance.

The foreshore of Merimbula Lake (outside of the Robyn's Nest and Stage 5 property boundaries) should continue to be protected;

- 2) If impacts cannot be avoided to the identified Aboriginal sites and/or areas of potential, prior to any impacts occurring the proponent must obtain from the OEH a Section 90 AHIP for this evidence, in consultation with the registered Aboriginal parties. The AHIP should be obtained over the entire impact area and include the following mitigation strategies:
  - a) The surface collection of identified artefacts from within the impact zone prior to any impacts occurring;
  - b) Systematic mechanical exposure of samples of the potential deposit from within the impact zone, with controlled hand excavation of any features of significance (eg. middens or dense artefact clusters) that may be identified. This would involve two separate strategies:



- i. Surface scrapes in a sample of the areas of high potential for sub-surface deposits of artefacts and midden to occur, including deposits that may be of research value; and
    - ii. If the sewer remains in its present location, controlled excavation using a backhoe or similar machinery of the section between points 5 and 7;
  - c) Reinspection by Aboriginal community representatives of the cleared surface of the development impact area after the initial vegetation removal, with any identified evidence recorded and collected and with controlled hand excavation conducted with a qualified archaeologist of any features of significance that may be identified. This strategy may be most appropriate in a sample of the areas of high potential that are not subject to surface scrapes, and within a sample of the areas of low potential;
  - d) Any evidence not directly conserved or salvaged will consequently be subject to unmitigated impact, permissible under a Section 90 AHIP;
- 3) Archaeological investigations should only be undertaken by archaeologists qualified and experienced in Aboriginal heritage (in accordance with the requirements of Section 1.6 of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*), in consultation with the registered Aboriginal parties who have sought further involvement, and occur prior to any development impacts occurring;
  - 4) Where impacts will be avoided to the identified heritage evidence, appropriate protective measures should be implemented for those sites in close proximity to the construction works;
  - 5) During detailed design, the potential for indirect impacts to the sites adjacent to Merimbula Lake and for the zone between the property boundary and lake margin, through subsequent increased recreational use and human visitation to the area, should be addressed. In consultation with the registered Aboriginal parties who have sought further involvement, this may entail the facilitation of cultural tourism opportunities;
  - 6) As a general principle, all relevant contractors and staff engaged on the Proposal should receive heritage awareness training prior to commencing work on-site;
  - 7) Further consultation should be pursued with the registered Aboriginal parties who have sought further involvement in relation to the Proposal and the continued involvement of these parties in the ongoing management of the heritage resources within the investigation area should be promoted;
  - 8) Should any previously unrecorded Aboriginal sites or objects be detected prior to or during the course of development which are not covered by a Section 90 AHIP, work in the immediate vicinity of those objects would need to promptly cease and the finds be reported to the OEH and advice sought as to the appropriate course of action. If skeletal remains are identified, the proponent is required to immediately stop work and notify the appropriate authorities, including the Police and the OEH;
  - 9) No activities or work should be undertaken within the Aboriginal site areas as described in this report without a valid Section 90 AHIP; and
  - 10) Single copies of this report should be made available to each registered Aboriginal party and three copies forwarded to the OEH.

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## 1. INTRODUCTION

This Aboriginal cultural heritage assessment has been prepared by South East Archaeology Pty Ltd for Sea Eagle Estate Pty Ltd, Mr Michael Britten and Mrs Robyn Savage.

The investigation area comprises a portion of the existing Robyn's Nest tourist facility and the proposed Stage 5 of the Bellbird Ridge Estate residential subdivision, an area of approximately 8.8 hectares. It is situated on the northern margin of Merimbula Lake, immediately west of the urban area of Merimbula, on the Far South Coast of New South Wales (Figures 1 and 2). It is located within the Bega Valley Shire local government area and comprises the whole of Lot 881 DP 1148672 and part of Lot 1882 DP 1014185, Merimbula Drive, Merimbula.

The present proposal by Sea Eagle Estate, Mr Michael Britten and Mrs Robyn Savage, (the 'Proponent') that is the subject of this heritage assessment, involves the creation of a residential subdivision with approximately 32 allotments and supporting roads, essential services and ancillary works, along with additional cottages and infrastructure for an expansion to the Robyn's Nest tourist facility (refer to Figure 3). These proposed works are herein referred to as the 'Proposal'.

Development Approval for part of the proposed works has been granted by Bega Valley Shire Council, with approval for the remainder of the works pending. Approval is being sought under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), with assistance being provided by Caddey Searl and Jarman.

### 1.1 Background

The investigation area comprises two adjoining properties, 'Robyn's Nest' and Stage 5 Bellbird Ridge Estate, which have been the subject of previous Aboriginal heritage investigations prior to the changes to the *National Parks and Wildlife Act 1974* (NP&W Act) and the introduction of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010b) and *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* policy (DECCW 2010c) in 2010.

As Aboriginal objects and areas of potential for objects occur, a Section 90 Aboriginal Heritage Impact Permit (AHIP) is needed prior to any development impacts occurring that may affect the identified Aboriginal objects or areas with potential for objects.

#### Robyn's Nest:

Sea Eagle Estate Pty Ltd owns land extending north from the margin of Merimbula Lake to Merimbula Drive. The Robyn's Nest tourist facility is situated on the southern portion of the land, close to the lake, and comprises a large guest house, cottage accommodation and ancillary facilities, such as a swimming pool, tennis court, conference centre and various outbuildings. A sealed access road connects the resort with Merimbula Drive.

Godden Mackay Logan (GML) (2008) undertook an Aboriginal heritage assessment of proposed extensions to the facility and surrounding areas, being part Lot 881 and part Lot 1882. An initial survey was undertaken with representatives of the Bega Local Aboriginal Land Council (LALC) in October 2008 and six Aboriginal heritage sites were identified (refer to Section 3).

### Stage 5 Bellbird Ridge Estate:

The eastern part of the present investigation area, being part of Lot 881, represents Stage 5 of the Bellbird Ridge Estate residential subdivision. Stages 3, 4 and 5 of Bellbird Ridge, located off Lakewood Drive, Merimbula, were previously owned by Ridge Consolidated Pty Ltd. Stage 5 has subsequently been purchased by Mr Michael Britten and Mrs Robyn Savage, Directors of Sea Eagle Estate Pty Ltd, and forms part of the present proposal. Stage 3 has been purchased by Specialised Earthworks Pty Ltd and is the subject of a separate development approval process and heritage investigation by South East Archaeology. Stage 4 has been constructed.

South East Archaeology undertook an initial Aboriginal heritage impact assessment of Stages 3-5 of Bellbird Ridge Estate in 2000, involving a survey with representatives of the Bega Traditional Aboriginal Elders Council (BTAEC) and Bega LALC (Kuskie and Gutierrez 2000). Six Aboriginal heritage sites, comprising fourteen spatially separate loci of evidence, were located within Stages 3 and 5 of the development (refer to Section 3).

A program of sub-surface testing was undertaken by South East Archaeology for Stages 3 and 5 of Bellbird Ridge Estate in 2004, on behalf of Ridge Consolidated. A Section 87 Permit (#2032) was obtained from the then Department of Environment and Conservation<sup>1</sup> and the test excavations were completed in October 2004 and reported by Kuskie (2005). An additional locus of evidence was identified in Stage 5 during the testing.

## **1.2 Description of the Proposal**

Sea Eagle Estate, Mr Michael Britten and Mrs Robyn Savage are proposing to obtain further development approvals from Bega Valley Shire Council in order to:

- ❑ Subdivide the investigation area and construct approximately 32 residential allotments, with four allotments measuring over 4,000 square metres each in area, and most of the remainder measuring less than 1,000 square metres each;
- ❑ Extend Lakewood Drive west of Stage 4 to provide access to these allotments;
- ❑ Construct four additional tourist cottages (each comprising two adjoining units) immediately to the east of the existing Robyn's Nest facility, with vehicle access extending off the current access to the guest house; and
- ❑ Provide essential services and other ancillary works, including landscaping and drainage control (refer to Figure 3).

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<sup>1</sup> Prior to April 2011 the Office of Environment and Heritage (OEH) in the Department of Premier and Cabinet was known as the Department of Environment, Climate Change and Water (DECCW), and previously as the Department of Environment and Climate Change (DECC) and Department of Environment and Conservation (DEC).



### 1.3 Objectives and Purpose of this Report

As Aboriginal objects and areas of potential for objects occur within the investigation area, a Section 90 AHIP must be obtained from the Office of Environment and Heritage (OEH) in the Department of Premier and Cabinet (formerly the Department of Environment, Climate Change and Water {DECCW}) prior to any development impacts occurring that may affect the identified Aboriginal objects or areas with potential for objects.

As identified in Section 1.2 and discussed in further detail in Section 3, both the Robyn's Nest and Stage 5 Bellbird Ridge portions of the investigation area have been the subject of Aboriginal heritage investigations prior to the introduction in 2010 of key changes to the NP&W Act and supporting policies, guidelines and regulations (DECCW 2010b, 2010c).

Following discussions with the OEH (Dr Philip Boot, *pers. comm.*, 2011), it is the intention of the current assessment to build on the existing detailed assessments and to address to the extent feasible (given the history of investigations and consultation to date, including the conduct of test excavations under an OEH AHIP) the OEH guidelines relevant to the subsequent lodgement of a Section 90 AHIP application for the Proposal. These guidelines include the:

- ❑ DECCW (2010b) *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*;
- ❑ DECCW (2010c) *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* policy; and
- ❑ OEH (2011a) *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*.

In order to address the above objectives, the primary aims and tasks of this Aboriginal cultural heritage assessment were to:

- ❑ Undertake updated register searches, research, Aboriginal community consultation and an archaeological inspection and if required excavations to record/re-record Aboriginal heritage evidence or areas of potential evidence or cultural values within the investigation area, building upon the detailed assessments already completed;
- ❑ Reassess the potential impacts of the Proposal upon identified or potential Aboriginal heritage evidence or cultural values;
- ❑ Reassess the significance of the Aboriginal heritage evidence or cultural values identified;
- ❑ Provide details of any newly identified Aboriginal heritage evidence in accordance with the OEH requirements;
- ❑ Consult with the Aboriginal community as per the OEH policy entitled *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*;
- ❑ Present updated recommendations for the management of the identified Aboriginal heritage evidence and potential heritage resources or cultural values; and
- ❑ Prepare a formal archaeological report to meet the requirements of the client, Bega Valley Shire Council and the OEH (primarily consistent with the 2010 *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*) with a view to the Proponent's subsequent submission of a Section 90 AHIP application for the investigation area.

For the purposes of this Aboriginal cultural heritage assessment, the investigation area comprises an area of approximately 8.8 hectares, as marked on Figure 2.

## 1.4 Authorship

This assessment has been prepared by Peter Kuskie, an archaeologist with a BA (Honours) degree in Aboriginal archaeology and over 20 years experience in the conduct of Aboriginal cultural heritage assessments throughout Australia. It builds on, with acknowledgements as appropriate, the following assessments previously conducted within the investigation area:

- ❑ Kuskie and Gutierrez (2000), *An Archaeological Assessment of the Proposed Merimbula Cove Residential Development, Far South Coast of New South Wales*;
- ❑ Kuskie (2005), *Sub-Surface Archaeological Investigation of Stages 3 and 5 of the Proposed Bellbird Ridge Residential Development at Merimbula Cove, Merimbula, Far South Coast of New South Wales*; and
- ❑ Godden Mackay Logan (2008), *Robyn's Nest, Merimbula, Aboriginal Archaeological Assessment*.



Figure 1: Approximate location of investigation area (Whereis 2010).



Figure 2: Location of investigation area (Pambula 8824-2S 1:25,000 MGA topographic map, reduced).



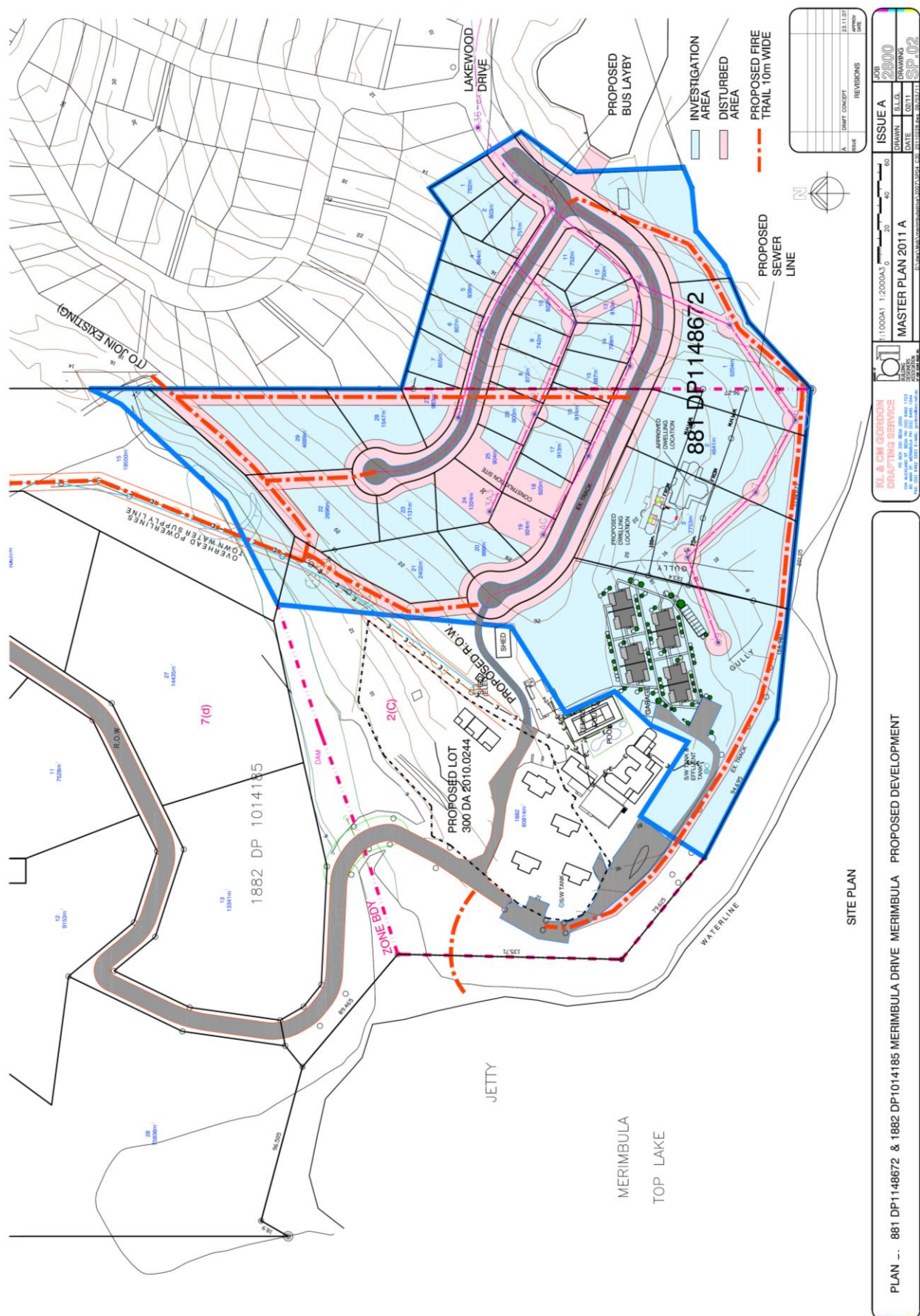


Figure 3: Plan of Proposal showing investigation area (blue border) (courtesy Sea Eagle Estate).

## 2. ENVIRONMENTAL CONTEXT

The investigation area is located immediately west of the urban area of Merimbula, on the Far South Coast of New South Wales. It is situated between MGA grid references 757180 and 757640 east and 5913370 and 5913820 north on the Pambula 8824-2-S 1:25,000 topographic map (Figure 2).

The terrain within the investigation area predominantly comprises simple slopes and associated spur crests descending to Merimbula Lake from a prominent ridgeline north of the investigation area. Elevation ranges between 0 and 30 metres above sea level.

The investigation area can be subdivided into five environmental contexts (after Kuskie and Gutierrez 2000, Kuskie 2005 and GML 2008). Landform units present comprise simple slopes (approximately 51.2% of the investigation area), spur crests (37.4%) and drainage depressions (11.5%) (refer to Table 3). The slopes are largely of moderate or steep gradient ( $>5.45^\circ$ ), with this category (defined after McDonald *et al* 1984) comprising 61.8% of the investigation area. Areas of level or very gentle gradient ( $<1.45^\circ$ ) comprise 11.5% and areas of gentle gradient ( $1.45-5.45^\circ$ ) comprise 26.8% of the investigation area.

The investigation area is all located within 450 metres of the margin of Merimbula Lake, and mostly within 300 metres. Merimbula Lake is a drowned estuarine embayment that is open to the sea. The stationary Merimbula barrier system stabilised approximately 5,000 years ago (Thom *et al* 1978:38-40). After this period, when the sea had reached its present level, a second phase of development produced the dunes on the coastal margin that partially enclose the lake.

The investigation area and land to the north of Merimbula Lake is underlain by sandstone, siltstone and shale of the Upper Devonian Merimbula Formation (Hughes 1983:3). The A horizon soil of the investigation area tends to comprise a sandy loam with angular quartz and sedimentary gravel present. The investigation area comprises areas that are anticipated to be depositional contexts (for example, the lower portions of slopes) and areas that are anticipated to be erosional contexts (for example, the upper portions of slopes), however it is noted that soil formation processes are complex and can vary over time in any locality (for example, episodes of major erosion in a typically depositional context).

Vegetation cover varies within the investigation area, but predominantly the native vegetation has been removed and presently consists of grass or in places, particularly in Stage 5, regrowth forest (refer to plates in Appendices 1, 3 and 4). Regrowth forest dominated by Blackbutt (*Eucalyptus pilularis*), Wattle (*Acacia* spp.), Swamp Paperbark (*Melaleuca ericifolia*) and Oak (*Casuarina* spp.) is present in Stage 5, with several mature trees. The ground cover is predominantly Bracken, with some shrubs, grass and leaf litter. The cover of vegetation acts to reduce ground surface visibility and thereby reduces the potential to identify archaeological evidence during a field survey. Most open artefact occurrences or shell middens are only identified when visible on exposures created by erosion or ground disturbance.

Recent non-Aboriginal land-use practices have affected the investigation area. The regrowth presently covering portions of the property post-dates land clearance that took place prior to 1985 (Mr Chris Maxted, *pers. comm.* 2000). Prior to this, corn was grown within Stage 5, in order to supply a corn mill that once operated in the locality. A vehicle track traverses the southern section of Stage 5 and extends into the Robyn's Nest property. A shed built to house construction equipment and a sedimentary pond is located on the eastern boundary of Stage 5. A number of vehicle tracks traverse the Robyn's Nest portion of the investigation area and widespread clearing of vegetation has previously occurred.

The environment of the locality of the investigation area has changed substantially over the past 30,000 years. During the last glacial maximum about 24,000 to 17,000 years ago, the environment was colder and dryer than present, and the coastline was situated at least 15 kilometres further east of its current location, as sea levels were considerably lower than they are today (Roy *et al* 1995). Drainage lines therefore extended out to this more easterly coastline and the base level for river valley channels was in excess of 100 metres lower than at present. Hence, at this time, the investigation area was probably located some distance from any major watercourse, and Merimbula Lake would not have been present.

Deglaciation and melting of ice sheets occurred rapidly from 18,000 years ago as global temperatures rose. Post-glacial sea levels rose rapidly and then stabilised in the mid to late Holocene (c. 7,000 - 1,500 years ago), potentially up to 1-2 metres above their current level at times during this period. A broad estuary would have formed in the mid-late Holocene and the land adjacent to the investigation area became inundated with marine water (present Merimbula Lake). As coastal barrier dunes formed in the Holocene and fluvial and marine sedimentation occurred, the estuarine environment decreased in size. However, while saline then brackish swamps probably replaced the estuary in places, adjacent to the investigation area Merimbula Lake has remained present.

Hence, prior to the early Holocene, the investigation area represented a generally colder, dryer environment, further distant from estuarine or marine resources. However, subsequent to the rise of the sea to around its present level in the mid-Holocene, the investigation area has been located adjacent to estuarine subsistence resources and closer to marine resources.





Figure 4: Location of investigation area (orange borders) and relevant previously recorded Aboriginal heritage sites (red stars) (500 metre MGA grid; site data courtesy OEH AHIMS but not guaranteed to be free from error or omission; refer to Figure 7 for accurate mapping of Aboriginal sites within the investigation area).



Table 1: Previously recorded Aboriginal sites within the investigation area.

<b>OEH AHIMS #</b>	<b>Site Name</b>	<b>Site Type</b>	<b>Recorder</b>
62-6-0690	Robyns Nest 1 (RN1)	open artefact scatter and midden	GML 2008
62-6-0691	Robyns Nest 2 (RN2)	midden	GML 2008
62-6-0692	Robyns Nest 3 (RN3)	open artefact scatter and midden	GML 2008
62-6-0693	Robyns Nest 4 (RN4)	open artefact scatter	GML 2008
62-6-0694	Robyns Nest 5 (RN5) = Merimbula Cove 10/A (MC10/A)	open artefact scatter and midden	GML 2008, Kuskie and Gutierrez 2000
62-6-0695	Robyns Nest 6 (RN6)	midden	GML 2008
62-6-0632	Merimbula Cove 6/C (MC6/C)	open artefact scatter	Kuskie 2005
62-6-0470	Merimbula Cove 10 (MC10/B)	open artefact scatter and midden	Kuskie and Gutierrez 2000
62-6-0470	Merimbula Cove 10 (MC10/C)	open artefact scatter and midden	Kuskie and Gutierrez 2000
62-6-0469	Merimbula Cove 11 (MC11/A)	open artefact scatter and midden	Kuskie and Gutierrez 2000
62-6-0471	Merimbula Cove 12 (MC12/A)	open artefact scatter	Kuskie and Gutierrez 2000

NB: It is noted that there are numerous errors and inconsistencies within the OEHS AHIMS database, including in relation to site types, site grid references and datums. The above 'site type' descriptions have been corrected. The sites have been listed in accordance with the visible loci of evidence (the MC10, MC11 and MC12 sites were listed as broad site areas incorporating in the case of MC10 multiple loci of visible evidence).

### 3. ABORIGINAL ARCHAEOLOGICAL CONTEXT

#### 3.1 Heritage Register Searches

A search was undertaken on 14 June 2011 of the OEH Aboriginal Heritage Information Management System (AHIMS), between MGA grid coordinates 753000 and 762000 east and 5911000 and 5916000 north, to update earlier searches for the investigation area (GML 2008, Kuskie and Gutierrez 2000, Kuskie 2005). A total of 79 Aboriginal sites and/or Potential Archaeological Deposits (PADs) are listed on the OEH register within this area of 45 square kilometres, which encompasses the present investigation area. The sites identified in the broad search area<sup>2</sup> comprise:

- ❑ 32 open artefact sites;
- ❑ 26 shell middens;
- ❑ 6 shell middens and artefact sites;
- ❑ 2 burials;
- ❑ 2 burial and middens;
- ❑ 2 scarred tree sites;
- ❑ 1 'hearth, shell, artefact' site;
- ❑ 1 'artefact, earth mound, shell' site;
- ❑ 1 'modified tree, artefact, shell' site;
- ❑ 1 'earth mound, shell , art' site;
- ❑ 1 'PAD, artefact, shell' site;
- ❑ 1 'PAD, artefact' site;
- ❑ 1 'PAD, shell' site;
- ❑ 2 PADs.

Ten Aboriginal heritage sites, comprising 11 loci of visible evidence<sup>3</sup>, have previously been recorded within or immediately adjacent to the investigation area. These sites are listed in Table 1 and their locations are marked on Figure 4 with the AHIMS provided grid references. Updated and corrected grid references are shown in revised mapping of the site locations in Figure 7. Full descriptions of these sites are presented in Appendix 1 for the sites recorded by GML (2008) and Appendix 3 for the sites recorded by South East Archaeology (Kuskie and Gutierrez 2000, Kuskie 2005). The sites comprise six loci of open artefacts and shell midden, three open artefact loci and two shell midden loci (without associated artefacts).

No Aboriginal heritage sites are listed on the State Heritage Register, Register of the National Estate, National Heritage List or Commonwealth Heritage List under the *Environment Protection and Biodiversity Conservation Act 1999* or on the *Bega Valley Local Environmental Plan 2002* or under the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* within the investigation area.

A search of the Native Title Tribunal on 27 January 2011 identifies that no determinations of Native Title, registered Native Title Determination applications (Claimants) or Indigenous Land Use Agreements (ILUAs) apply to the investigation area.

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<sup>2</sup> It is noted that there are numerous errors and inconsistencies with the OEH AHIMS database, including in relation to site types, and site grid references and datums.

<sup>3</sup> Sites MC10, MC11 and MC12 were listed on AHIMS as broad area sites, which in the case of MC10 incorporates multiple loci (MC10/A, MC10/B and MC10/C) of visible evidence. One of these loci corresponds to RN5 recorded by GML (2008).

## 3.2 Previous Archaeological Research

The Robyn's Nest portion of the investigation area has previously been the subject of an assessment by GML (2008), while the Bellbird Ridge Stage 5 portion of the investigation area has been investigated by South East Archaeology (Kuskie and Gutierrez 2000, Kuskie 2005). A number of other Aboriginal heritage investigations have also been undertaken within the vicinity of the investigation area, principally for Environmental Impact Assessments relating to development proposals. Discussion of the most relevant investigations will highlight the range of site types and variety of site contents in the region, identify typical site locations, and assist with the construction of a predictive model of site location for the investigation area.

### 3.2.1 Stages 3-5 Bellbird Ridge Initial Investigation

Kuskie and Gutierrez (2000) investigated Stages 3-5 of Bellbird Ridge in 2000. Stages 3, 4 and 5 of Bellbird Ridge, located off Lakewood Drive, Merimbula, were previously owned by Ridge Consolidated Pty Ltd. Stage 5 has subsequently been purchased by Mr Michael Britten and Mrs Robyn Savage, Directors of Sea Eagle Estate Pty Ltd, and forms part of the present proposal. Stage 3 has been purchased by Specialised Earthworks Pty Ltd and is the subject of a separate development approval process and heritage investigation by South East Archaeology. Stage 4 has been constructed.

The study area was subdivided into fourteen survey areas, all of which were sampled with representatives of the Bega Traditional Aboriginal Elders Council and Bega LALC. Total survey coverage (ground physically inspected for heritage evidence) equated to approximately 17% of the study area. Total effective survey coverage (visible ground surface physically inspected) equated to about 3.5% of the study area. Dense vegetation constrained visibility within and away from the surveyed areas (Kuskie and Gutierrez 2000).

Six Aboriginal heritage sites were identified by Kuskie and Gutierrez (2000), comprising fourteen spatially separate loci of evidence. An additional locus was identified marginally outside of the study area. The identified sites (MC1, MC2, MC3, MC10, MC11 and MC12) occurred within Stages 3 and 5 of the study area, although the latter three lay outside of the area of proposed development impact. The sites are described below (from Kuskie 2005, updated with the results of the subsequent sub-surface testing) and revised mapping of the survey areas and site locations is presented in Figure 5.

#### *Site Merimbula Cove 1 (MC1; #62-6-474):*

Site MC1 is an artefact scatter and shell midden that extends across the level/very gentle spur crest bordering Lakewood Drive in Stage 3.

Locus MC1/A was recorded during the initial survey (Kuskie and Gutierrez 2000) around AMG grid reference 757800:5912975 on the Pambula 8824-2-S 1:25,000 topographic map. It comprises a sparse scatter of whole and fragmented cockle shell and a single artefact (banded rhyolite flake) visible within a 20 x 3 metre exposure. Archaeological visibility at the time of the survey (Kuskie and Gutierrez 2000) was 40%. Bricks, animal bone and plastic pipe fragments are also present within the exposure.

Locus MC1/B was recorded during the initial survey (Kuskie and Gutierrez 2000) around AMG grid reference 757790:5912973 on the Pambula 8824-2-S 1:25,000 topographic map. It comprises a sparse scatter of whole and fragmented cockle shell and a single artefact (banded rhyolite flake portion) visible within a 4 x 3 metre exposure. Archaeological visibility at the time of the survey (Kuskie and Gutierrez 2000) was 80%. Recent ground disturbance was evident and some modern refuse has been deposited.

Sub-surface testing within the broad area of site MC1 was undertaken by Kuskie (2005), including units A-15 to A15 in Transect A and units B-10 to B15 in Transect B. An additional 27 artefacts were identified in these test units within MC1, predominantly flakes (37%) and flake portions (59%), with one retouched flake. Minor cockle shell was identified in units A15, B10 and B15.

Within the broad site area there remains a high potential for additional sub-surface deposits of artefacts and shell to occur in the A unit soil, although the distribution and density will vary and some evidence may have been impacted by recent land-use practices.

*Site Merimbula Cove 2 (MC2; #62-6-473):*

Site MC2 is an artefact scatter and shell midden that extends across the gentle simple slope in Stage 3.

Locus MC2/A was recorded during the initial survey (Kuskie and Gutierrez 2000) around AMG grid reference 757790:5912940 on the Pambula 8824-2-S 1:25,000 topographic map. It comprises a sparse scatter of whole and fragmented cockle shell, with minor mud oyster, visible within a 2 x 2 metre exposure. Archaeological visibility at the time of the survey (Kuskie and Gutierrez 2000) was 50%. The exposure is a small graded area that has partially overgrown with grass.

Locus MC2/B was recorded during the initial survey (Kuskie and Gutierrez 2000) around AMG grid reference 757780:5912920 on the Pambula 8824-2-S 1:25,000 topographic map. It comprises a sparse scatter of fragmented cockle shell, one mud oyster fragment, and a single artefact (quartz core) visible within a 12 x 10 metre exposure. Archaeological visibility at the time of the survey (Kuskie and Gutierrez 2000) was 5%.

Sub-surface testing within the broad area of site MC2 was undertaken, including units A20 to A55 in Transect A, units B20 to B70 in Transect B and units C0 to C85 in Transect C. An additional 128 artefacts were identified in these test units within MC2, predominantly flakes (58%) and flake portions (29%), but also including nondescript cores, nondescript core fragments, lithic fragments, a microblade core, bipolar flakes, a bondi point and retouched flakes.

Midden shell was identified in every test unit along Transect A within site MC2, including a dense concentration in unit A30. Minor cockle shell was identified in only three test units along Transect B, close to Lakewood Drive. Midden shell was identified in 78% of the test units along Transect C within site MC2, including a dense concentration in unit C55.

Within the broad site area of MC2 there remains a high potential for additional sub-surface deposits of artefacts and shell to occur in the A unit soil, although the distribution and density will vary and some evidence (particularly closer to Lakewood Drive) may have been impacted by recent land-use practices.

*Site Merimbula Cove 3 (MC3; #62-6-472):*

Site MC3 is an artefact scatter and shell midden extending across the moderate simple slope in Stage 3 and the adjacent Public Reserve leading towards Merimbula Lake.

Locus MC3/A was recorded during the initial survey (Kuskie and Gutierrez 2000) around AMG grid reference 757745:5912855 on the Pambula 8824-2-S 1:25,000 topographic map. It comprises a sparse to moderately dense midden, predominantly of whole and fragmented cockle shell, but also minor mud oyster and mud whelk, and a single artefact (quartz core) visible within a 45 x 3 metre exposure. Archaeological visibility at the time of the survey (Kuskie and Gutierrez 2000) was 10% along the walking track leading to the lake.

Locus MC3/B was recorded during the initial survey (Kuskie and Gutierrez 2000) around AMG grid reference 757795:5912800 on the Pambula 8824-2-S 1:25,000 topographic map. It comprises a sparse scatter of whole and fragmented cockle shell, visible within a 8 x 5 metre exposure. Archaeological visibility at the time of the survey (Kuskie and Gutierrez 2000) was 15%.

Locus MC3/C was recorded during the initial survey (Kuskie and Gutierrez 2000) around AMG grid reference 757730:5912860 on the Pambula 8824-2-S 1:25,000 topographic map. It comprises a sparse to dense midden, predominantly of cockle shell, but also minor mud oyster, visible within a 45 x 1 metre exposure. Archaeological visibility at the time of the survey (Kuskie and Gutierrez 2000) was 50% along the walking track.

Locus MC3/D was recorded during the initial survey (Kuskie and Gutierrez 2000) between AMG eastings 757650-757730 and northings 5913000-5912840 on the Pambula 8824-2-S 1:25,000 topographic map. It comprises a series of mounded shell middens within an area of approximately 150 x 30 metres, most of which lies in the Reserve outside of Stage 3. The mounds are generally about 4 x 2 metres each in area and in one, a dense concentration of whole and fragmented cockle and mud oyster shell is exposed.

Locus MC3/E was recorded during the initial survey (Kuskie and Gutierrez 2000) around AMG grid reference 757720:5913070 on the Pambula 8824-2-S 1:25,000 topographic map. It comprises a very sparse scatter of cockle shell fragments and a single artefact (porphyritic rhyolite flake), visible within a 1 x 1 metre exposure on a vehicle track, 10 metres south of Lakewood Drive. Archaeological visibility at the time of the survey (Kuskie and Gutierrez 2000) was 10%.

Locus MC3/F was recorded during the initial survey (Kuskie and Gutierrez 2000) around AMG grid reference 757740:5913045 on the Pambula 8824-2-S 1:25,000 topographic map. It comprises a sparse scatter of stone artefacts visible within a 5 x 4 metre portion of a 30 x 4 metre exposure adjacent to Lakewood Drive. Archaeological visibility at the time of the survey (Kuskie and Gutierrez 2000) was 20%. Three artefacts are present, a quartz flake, a chert flake and a banded rhyolite flake portion.

Sub-surface testing within the broad area of site MC3 was undertaken, including units A60 to A110 in Transect A, units B75 to B85 in Transect B and units C90 to C120 in Transect C. An additional 61 artefacts were identified in these test units within MC3, predominantly flakes (39%) and flake portions (46%), but also including a geometric microlith, a microblade core fragment and retouched flakes.

Midden shell was identified in six test units along Transect A within site MC3 (54% of the total within this site area), including a dense concentration in unit A60. Minor cockle and mussel shell was identified in two test units along Transect C.

Within the broad site area of MC3 there remains a high potential for additional sub-surface deposits of artefacts and shell to occur in the A unit soil, although the distribution and density will vary and some evidence may have been impacted by recent land-use practices.

*Site Merimbula Cove 10 (MC10; #62-6-470):*

Site MC10 is an artefact scatter and shell midden comprising three separate loci of visible evidence on the moderate simple slope bordering Merimbula Lake in the Stage 5 buffer zone and adjacent land (Figure 5).

Locus MC10/A is situated around AMG grid reference 757335:5913230 on the Pambula 8824-2-S 1:25,000 topographic map. It is located marginally outside of the Stage 5 area. Locus MC10/A comprises a midden exposed on a vehicle track, with a 1.5 metre wide lens of *in situ* mud oyster shell exposed in a 0.25 metre deep road cutting, and scattered shell in adjacent areas. Archaeological visibility at the time of the survey (Kuskie and Gutierrez 2000) was 90%.

Locus MC10/B is situated around AMG grid reference 757350:5913230 on the Pambula 8824-2-S 1:25,000 topographic map. It comprises a sparse scatter of whole and fragmented cockle shell visible within a 2 x 1 metre exposure on a vehicle track in the Stage 5 buffer zone. Archaeological visibility at the time of the survey (Kuskie and Gutierrez 2000) was 70%.

Locus MC10/C is situated around AMG grid reference 757375:5913245 on the Pambula 8824-2-S 1:25,000 topographic map. It comprises a scatter of fragmented cockle shell of varying density (including high) and seven stone artefacts visible within a 20 x 3 metre exposure on a vehicle track. Archaeological visibility at the time of the survey (Kuskie and Gutierrez 2000) was 70%. The artefacts include a quartz core fragment, acid volcanic flake and banded rhyolite flakes, core fragment and microblade core.

At the recorded loci and within the broader site area there remains a high potential for sub-surface deposits of artefacts and shell to occur in the A unit soil, including deposits that may be *in situ* (Kuskie and Gutierrez 2000).

*Site Merimbula Cove 11 (MC11; #62-6-469):*

Site MC11 is an artefact scatter and shell midden comprising one locus of visible evidence on the gentle spur crest descending to Merimbula Lake in the Stage 5 buffer zone (Figure 5). The spur crest terminates at a steep slope (relic shoreline) adjacent to the lake.

Locus MC11/A is situated around AMG grid reference 757395:5913250 on the Pambula 8824-2-S 1:25,000 topographic map. It comprises a midden with artefacts exposed on a 15 x 3 metre portion of a vehicle track on the spur crest. Dense, mostly fragmented cockle shell is present in places, with scattered shell elsewhere. Ten stone artefacts were visible, including banded and porphyritic rhyolite flakes, microblade portions, a microblade and a microblade core, and a single chalcedony flake. Archaeological visibility at the time of the survey (Kuskie and Gutierrez 2000) was 70%.

At the recorded loci and within the broader site area there remains a high potential for sub-surface deposits of artefacts and shell to occur in the A unit soil, including deposits that may be *in situ* (Kuskie and Gutierrez 2000).

*Site Merimbula Cove 12 (MC12; #62-6-471):*

Site MC12 is an isolated artefact comprising one locus of visible evidence on the moderate simple slope descending to Merimbula Lake in the Stage 5 buffer zone (Figure 5).

Locus MC12/A is situated around AMG grid reference 757420:5913250 on the Pambula 8824-2-S 1:25,000 topographic map. It comprises a single artefact, a porphyritic rhyolite flake, exposed on a vehicle track. Archaeological visibility at the time of the survey (Kuskie and Gutierrez 2000) was 90%.

At the recorded locus and within the broader site area there remains a high potential for sub-surface deposits of artefacts and shell to occur in the A unit soil, including deposits that may be *in situ* (Kuskie and Gutierrez 2000).

#### *General Comments:*

The identified evidence from the sites predominantly consisted of shell middens, with an artefact scatter and an isolated artefact also recorded. All of the middens comprised estuarine shellfish species, predominantly cockle, with mud oyster also present and minor mud whelk. These species were all readily available from the adjacent drowned estuarine embayment of Merimbula Lake. Mounded midden deposits also occur at one site (MC3). Twenty-seven lithic items were identified, mostly of the locally available stone materials rhyolite and quartz. These represent non-specific flaking activities and microblade production (Kuskie and Gutierrez 2000).

Kuskie and Gutierrez (2000) concluded that there was a strong trend for activities to have been undertaken on the level to moderately inclined simple slopes and spur crests bordering Merimbula Lake, particularly within 100 metres or so of the lake margin. Mostly this evidence represents the procurement and consumption of shellfish from the adjacent Merimbula Lake. The possibility of camping by small extended families or hunting or gathering parties could not be discounted, although would appear to be constrained by the presence of only temporary, minor potable water sources.

Sites MC3, MC10, MC11 and potentially MC12 were assessed as being of high scientific significance within a local context and potentially moderate to high significance within a regional context. Sites MC1 and MC2 were assessed as being of low to moderate scientific significance within a local context (Kuskie and Gutierrez 2000).

Recommendations were presented by Kuskie and Gutierrez (2000) for the conservation and management of the heritage evidence. It was recommended that a proposed buffer zone along the lake shore in Stage 5 be extended to include all land within 100 metres of the Merimbula Lake high water mark. Alternatively, if substantial development impacts could not be avoided in this zone, sub-surface testing was recommended to test for the presence of heritage evidence and permit an adequate assessment of the nature, scope and significance of any evidence. Similarly, in the Stage 3 area, Kuskie and Gutierrez (2000) recommended that either a buffer zone be established to include all land within 100 metres of the Merimbula Lake high water mark, or if that were not feasible, a buffer zone be established 60-70 metres north of the high water mark and a sample of heritage evidence within the zone 60-70 to 100 metres north of the high water mark be subject to salvage. The Bega Traditional Aboriginal Elders Council requested that sub-surface test excavations be undertaken, particularly within Stage 3, to allow the Aboriginal community to be better informed about the potential impacts of the development. The BTAEC also recommended monitoring of the development works.

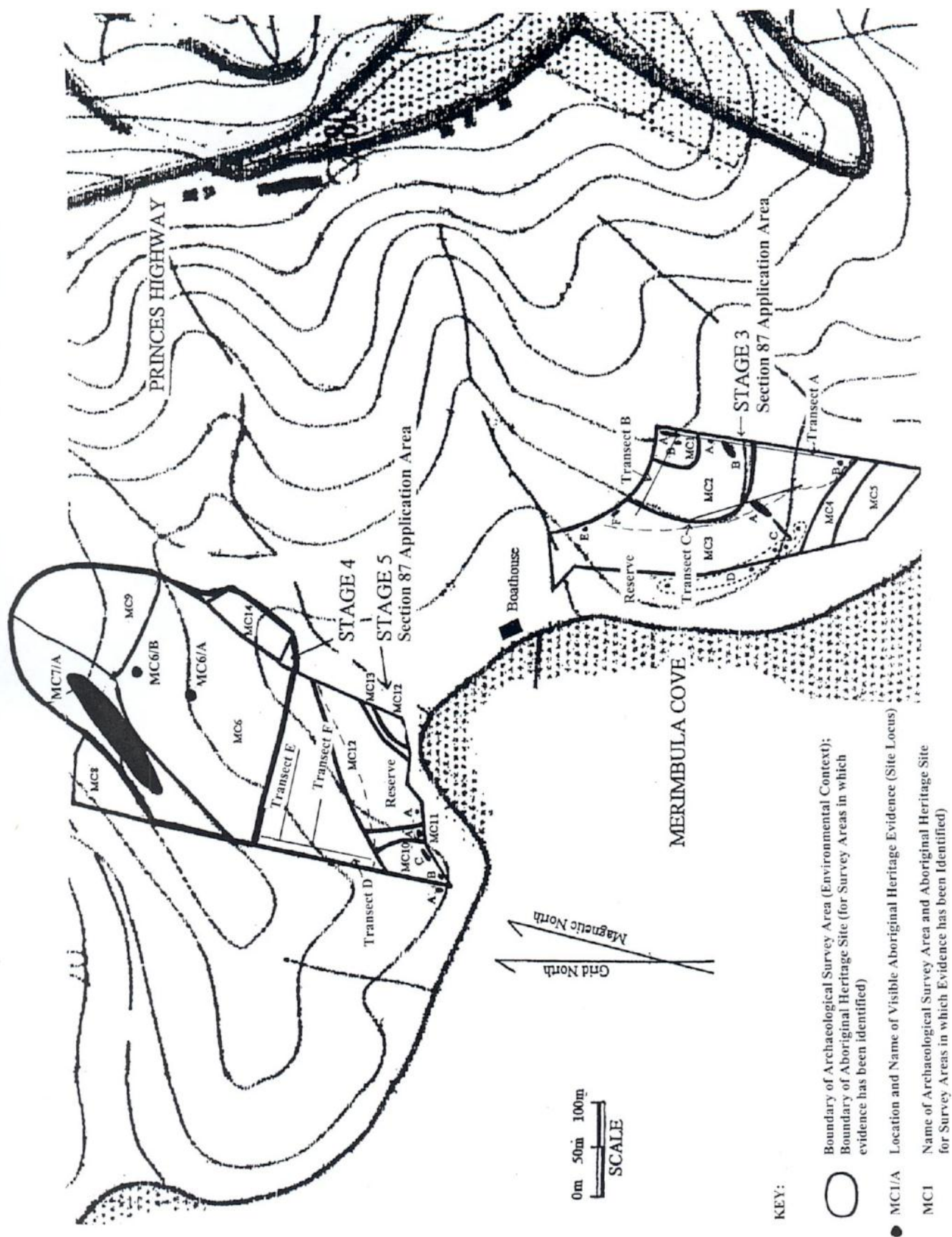


Figure 5: Location of survey areas and Aboriginal heritage evidence in Bellbird Ridge Stages 3-5 (Kuskie 2005; modified after Kuskie and Gutierrez 2000 and Kuskie 2004).



### 3.2.2 Stages 3-5 Bellbird Ridge Sub-Surface Investigation

South East Archaeology was commissioned by Ridge Consolidated Pty Ltd to undertake a sub-surface archaeological investigation of Aboriginal heritage within the proposed Stages 3 and 5 of Bellbird Ridge. Comprehensive details of the investigation are presented in Kuskie (2005) and will not be repeated here.

The testing was conducted in order to retrieve a suitable sample of evidence from within Stages 3 and 5 to permit:

- ❑ Identification of the distribution of heritage evidence across the study area and in relation to hypothetical environmental/cultural contexts and occupation models;
- ❑ Identification of the nature of heritage evidence within the study area, including the activities represented and the potential for this evidence to address locally and regionally relevant research questions;
- ❑ Clarification of the integrity of deposits and identification of any means in which the effects of post-depositional processes could be controlled for;
- ❑ Through this information, permit a robust assessment of the significance of the identified and potential Aboriginal heritage resources of the study area; and
- ❑ Provide a satisfactory basis from which to formulate strategies for the management of the Aboriginal heritage resource.

The sub-surface investigation proceeded by recourse to the archaeological and environmental background of the locality, followed by a ten day program of test excavations undertaken with the assistance of the BTAEC. Section 87 Permit #2032 was issued by the then DEC for this purpose.

Test excavations were undertaken along six separate transects measuring 610 metres in total length, three each in Stage 3 and Stage 5. A total of 128 units were excavated. Each test unit measured 0.5 x 0.5 metres in area, resulting in a total area excavated of 32 m<sup>2</sup>. Soil was excavated in successive levels or 'spits' of 10 centimetres depth, with between one and four spits excavated in each unit. A total of 310 excavation unit spits were excavated and 9.35 m<sup>3</sup> of soil sieved.

A total of 218 artefacts were recovered from the test excavations, all but one from Stage 3. Artefacts were present in 70% of the Stage 3 test units at a relatively low mean density of 41.3/m<sup>3</sup>. However, only one artefact was present in the Stage 5 test units at a very low mean density of 0.244/m<sup>3</sup>. An additional artefact was located on the surface in Stage 5. As the results from Stages 3 and 5 are substantially different, they were largely subject to separate analysis and discussion.

Midden shell was recovered from 36 test units within Stage 3 (51% of units excavated). Shell was only identified in two test units in Stage 5 and could not be conclusively determined to be of Aboriginal origin, given its fragmentary nature and very sparse distribution.

Based on analysis of the history of land use and natural processes, distributions of stone artefacts and shell, and inferred associations between artefacts, it was concluded that within Stage 3 relatively *in situ* heritage evidence is present and has potential to exist in the areas not directly sampled. However, a portion of the heritage evidence has been subject to post-depositional impacts resulting in horizontal or vertical displacement of items. Bioturbation, erosion and recent human impacts are assumed to be the main agents of disturbance. Limited heritage evidence was identified within Stage 5. Levels of ground disturbance appear to be moderate within Stage 5 and the presence of any *in situ* deposits is far less certain, although cannot be discounted.

A total of five different categories of stone material were identified in the test excavation lithic assemblage. Rhyolite was the most common material (53.46% of the Stage 3 assemblage), followed by silcrete (22.58%), quartz (19.35%), chert (3.69%) and basalt (0.92%). Evidence exists that a proportion of the silcrete artefacts were made from stone that was intentionally thermally altered, although no specific evidence was recovered to indicate that this process was undertaken on-site.

A total of 14 categories of artefacts were identified. The Stage 3 test excavation assemblage is overwhelmingly dominated by flakes (50.2%) and flake portions (37.3%). The remainder of the assemblage comprises very low frequencies of items, including lithic fragments (synonymous with 'flaked pieces', 2.3%), retouched flakes (4.6%), bipolar flakes (0.9%), nondescript core fragments (1.8%), nondescript cores (0.9%) and a single microblade core, microblade core fragment, geometric microlith and bondi point.

Many of the categories represent debris from stone knapping (eg. flakes and flake portions). The knapping can be non-specific (eg. flakes) or demonstrably relate to the production of microblades. Several of the artefact categories denote formal tool types (eg. bondi point and geometric microlith). Therefore while it can be inferred that a proportion of the Aboriginal activity within the study area relates to the production of microblades (and by inference, microliths), presumably to arm spears, much of the stone artefact evidence represents debitage from which the specific activities cannot be reliably inferred. No tools or activity areas indicative of encampments were identified.

Three distinct loci of concentrated shell midden evidence, along with other less dense distributions of shell, were identified within the test excavations in Stage 3. These are in addition to the previously recorded surface expressions of shell. Five species of shellfish were recovered. Cockle was predominant, representing by a substantial margin the highest highest number of whole items (516), greatest total weight of whole items (4.15 kilograms) and greatest total weight of fragments (12.8 kg). Mud oyster formed a minor proportion and mud whelk, mussel and pipi comprised very small proportions of the shell content.

The three main clusters of midden represent the procurement of shellfish obtained almost entirely from the adjacent Merimbula Lake, and transport of the shellfish from the lake to the nearby spur and slope where food preparation and consumption occurred. One of these clusters involved two quite temporally unrelated episodes of occupation. Elsewhere across Stage 3, the minor shell evidence intersected by some test units may either represent dispersal of the contents of the main midden loci by erosion and/or bioturbation or the margins of other dense midden loci.

The spatial distribution of evidence within Stage 3 was examined to determine whether there are focal points of activity or particular relationships between Aboriginal behaviour and aspects of the locality's environment. There is a higher density and range of evidence in site MC2 (gentle simple slope) than in site MC3 (moderate simple slope) and site MC1 (level/very gentle spur crest). However, these results are inferred to represent the relative differences in sample sizes.

Shell samples from the deposits have been radiocarbon dated to 845±35 years BP (Before Present) (*Wk15889*), 874±33 years BP (*Wk15888*), 1063±35 years BP (*Wk15883*), 1225±49 years BP (*Wk15884*), 1635±42 years BP (*Wk15886*), 1881±41 years BP (*Wk15882*), 2007±34 years BP (*Wk15887*), 2398±34 years BP (*Wk15885*) and 2408±35 years BP (*Wk15890*). The ages calibrated to two standard deviations (95.4% probability) range between 2270 - 300 calBP (320 BC -1650 AD). These dates place the Stage 3 midden evidence firmly within the late Holocene period, but prior to non-indigenous settlement of the region. Artefact typological analysis also supports a late Holocene age for the Stage 3 evidence.

The nature of the evidence from Stages 3 and 5 of Bellbird Ridge was compared with other sites in the locality in order to provide a framework for interpreting representativeness within a regional context. Despite the numerous problems and constraints, comparison reveals that on a general level a number of similarities and differences can be identified. Substantially more midden evidence appears to occur in Stage 3 than in Stage 4 (further from Merimbula Lake) or Stage 5. No specific aspects of the Bellbird Ridge Stage 5 or Stage 3 evidence appear to be rare or unusual or not replicated elsewhere within a regional context, other than the mounded midden deposits in site MC3. These are comparable to deposits observed in the adjacent Merimbula Heights Estate and around Pambula Lake, however such deposits are otherwise relatively rare in the region.

Occupation of Stage 3 appears to have primarily involved hunting/gathering without camping, undertaken over a number of separate episodes of occupation over the past 2,000 years or so. Many of the episodes may have involved small groups of people and been for short durations of time. The primary activities represented are the consumption of meals, involving shellfish obtained from the adjacent Merimbula Lake, and stone knapping. The locality was not well suited to large-scale use or long term camping because of the absence of permanent potable water. Several locations on the moderate simple slope bordering Merimbula Lake were repeatedly visited, leading to the formation of mounded midden deposits.

The significance of the heritage evidence was assessed against criteria widely used in Aboriginal heritage management, derived from the relevant aspects of the ICOMOS Burra Charter and the State Heritage Inventory Evaluation Criteria and Management Guidelines.

Sites MC1, MC2, MC3 and MC6/C do not surpass the threshold for significance in relation to aesthetic, educational or historic criteria. It is important to observe that all heritage evidence tends to have some contemporary significance to Aboriginal people, because it represents an important tangible link to their past and to the landscape, and representatives of the Bega Traditional Aboriginal Elders Council have expressed an interest in the evidence.

Sites MC1 and MC6/C were assessed as being of low scientific significance within both local and regional contexts. Site MC2 was assessed as being of high scientific significance within a local context and low to potentially moderate scientific significance within a regional context. Site MC3 was assessed as being of high scientific significance within a local context and potentially high scientific significance within a regional context.

The primary recommendation arising from the investigation was that the proponent should obtain a Section 90 Consent with Salvage permit for the development impact area, inclusive of all identified Aboriginal heritage evidence within this area, in consultation with the BTAEC. A combination of strategies of salvage, conservation, monitoring and unmitigated impact should be implemented, including:

- ❑ Conduct a program of controlled mechanical surface scrapes and localised hand excavations within the zone of development impact in Stage 3 to enable the inspection for, identification of, and salvage prior to development impact of any significant, unexpected or unusual features;

- ❑ Conduct a program of monitoring of initial vegetation removal and ground disturbance works and localised hand excavation of any features of significance uncovered within the zone of development impact in Stage 5 to enable the inspection for, identification of, and salvage prior to development impact of any significant, unexpected or unusual features;
- ❑ Retrieve samples of the identified heritage evidence (ie. from the known surface site loci) where requested by the Bega Traditional Aboriginal Elders Council to assist in mitigating the impacts of development on the cultural values of the evidence; and
- ❑ Formally establish the proposed Public Reserves between Stages 3 and 5 and the adjacent Merimbula Lake as conservation areas in order to protect and conserve a sample of Aboriginal heritage evidence, including the regionally significant mounded midden deposits in site MC3. A management plan should be prepared for these areas specifying policies and actions relating to the ongoing protection of the identified and potential Aboriginal heritage evidence during and after the Stage 3 and Stage 5 development.

### **3.2.3 Robyn's Nest Initial Investigation**

Godden Mackay Logan (2008) undertook an Aboriginal heritage assessment of proposed extensions to the Robyn's Nest facility and surrounding areas, being part Lot 881 and part Lot 1882. The investigation area and evidence located is marked on Figure 6. Comprehensive details of the investigation are presented in GML (2008) and will not be repeated here.

Initially, in response to interest expressed in an advertised development application, the proponent invited Mr John Dixon and Mr Ross Thomas of Ngarigo Consultancy Pty Ltd (representing the Bega LALC), to inspect the property. Two shell middens and stone artefacts were identified, leading to the commissioning of GML for a formal archaeological investigation. BTAEC representatives had previously identified stone artefacts along a vehicle track adjacent to the foreshore at Robyn's Nest in relation to an inspection for a proposed jetty (GML 2008:25).

An initial survey was undertaken by Ms Laura Farquharson of GML and Mr Ross Thomas in October 2008, with approximately 40% total coverage achieved (GML 2008). The study area was divided into four 'land use' zones, with different levels of visibility.

Six Aboriginal heritage sites (RN1 - RN6) were identified. Details of these sites are presented in Appendix 1. The sites comprised 19 stone artefacts (refer to Table 2), predominantly flakes and flaked pieces, but also flake portions, a core, a hammerstone and a manuport. The stone materials were reported as mainly 'pink and grey banded quartzite' (which may be banded rhyolite or silcrete), silcrete and chert. Five locations of shell midden evidence were also identified. GML (2008) combined this evidence into six sites (RN1 - RN6) on the basis of proximity and density of evidence (refer to Figure 6).

Although the OEH consultation guidelines in-force at the time were not implemented, the present consultation process (refer to Section 6) did not identify any additional stakeholders beyond the Bega LALC and Mr Dixon's tribal consultancy organisation (now operating as Yukembuk Merung Ngarigo Consultancy Pty Ltd).

GML (2008) assessed the area extending 40 metres north of the southern property boundary (ie. up to 55 metres from the lake shore) as being an area of archaeological potential, along with 'the central midline crest', a zone which generally equates to the northern portion of the current survey area MCRN18 and all of MCRN20 (refer to Figures 7 and 8).

GML (2008) assessed the significance of the six sites. All were assessed as being of low aesthetic or educational value. Sites RN5 and RN6 were assessed as being of low scientific significance, RN1, RN3 and RN4 as being of moderate scientific significance, and RN2 as being of moderate to high scientific significance. The cultural significance of the sites was not determined.

At the time of the GML (2008) assessed, the proposed impacts were limited to extensions to the existing Robyn's Nest facilities. These included the proposed construction of four cabin buildings (each with two adjoining units), two small car parks, an access road, associated infrastructure and landscaping. The works were primarily to be confined to the south-western portion of the study area, adjacent to the main Robyn's Nest building. Based on these assessed impacts, the primary GML (2008) recommendations included that the proponent obtain a Section 90 AHIP for the impact area, with:

- ❑ Collection of artefacts at site RN1 and monitoring of the associated area of potential where a driveway was proposed;
- ❑ Further investigation of sites RN3 and RN4 (and associated PADs) may be appropriate, for future subdivision plans;
- ❑ Further consultation with the Aboriginal community in accordance with the OEH guidelines; and
- ❑ Protection of site RN2 and other sites that would not be impacted, with further assessment should the development plans change.

Mr John Dixon, on behalf of the Ngarigo Consultancy Pty Ltd, Bega LALC and traditional owners, responded to the draft report and endorsed the recommendations.



Figure 6: Location of GML's (2008) Robyn's Nest study area (blue border), Aboriginal sites (blue shapes) and artefacts (green dots) (GML 2008: Figure 6.5).

Table 2: Stone artefacts recorded within Robyn's Nest by GML (2008: Appendix C).

Artefact ID #	Site	Waypoint	Easting	Northing	Photo ID	Artefact Type	Material	Colour	Grain Size	Cortex	Max dimension (cm)	# Flake scars (core)	Notes
1	RN1	4	757188	5913533	6,7	Flake	Banded quartzite	Dark grey with pink/red bands	Fine	-	3.5	-	On fire trail - 80% visibility, occasional shell fragments.
2	RN1	5	757205	5913521	8	Flake - bulb	Quartzite	Pink grey	Fine	-	1.5	-	On fire trail
3	RN1	6	757213	5913521	9	Flaked piece	Quartzite	Grey	fine	-	1.5	-	On fire trail - 80% visibility, occasional shell fragments.
4	RN1	7	757219	5913519	9	Flaked piece	Quartzite	Grey	Fine	-	1	-	On fire trail - 80% visibility, occasional shell fragments.
5	RN1	8	757200	5913528	11	Flaked piece	Quartz	White	Very fine	-	3	-	Not natural - looks like it has been worked but no bulb
6	RN1	9	757198	5913502	12	Elongated flake	Quartzite	Pink grey	Fine	-	3	-	Fairly intact, tip broken off, no retouch.
7	RN1	10	757195	5913491	13-14	Hammerstone	River cobble Quartzite	Brown grey		-	6	-	Possible hammerstone. Evidence of usewear including pitting and smoothing
8	RN2	13	757275	5913473	25	Manuport	Quartzite with cream banding	Grey/cream	Fine with large inclusions	-	8.5	-	Manuport
9	RN3	14	757369	5913562	32	Core	Quartzite	Grey	Fine	40-60%	2.5	4	On firetrail/track NE of lavender
10	RN3	15	757368	5913574	33	Mid section of flake	Silcrete	Pale grey	Fine	-	1.5	-	Broken flake, bulb detached
11	RN3	16	757353	5913587	35	Flake	Quartzite	Grey	Fine	-	4	-	Fine grained with larger inclusions. On north edge of east row of lavender
12	RN3	17	757353	5913594	37	Flaked piece	Chert	Light grey	Very fine	-	2.5	-	
13	RN3	18	757348	5913594	38	Broken flake	Chert	Light grey	Very fine	-	2	-	Not retouched. (part of) finished flake.
14	RN3	19	757348	5913590	39	Flake	Silcrete	Very light grey/white	Fine	-	2	-	
15	RN3	20	757346	5913593	40	Broken flake	Silcrete	Red	Fine	-	1.5	-	Broken flake, bulb detached. Part of finished tool.
16	RN3	21	757366	5913603	44	Flaked piece	Silcrete	Pink grey	Fine	-	2.5	-	
17	RN3	22	757367	5913602	45	Flaked piece	Chert	Grey	Very fine	-	2	-	
18	RN4	23	757449	5913590	59	Flake	Silcrete	White	Very fine	-	2	-	
19	RN4	24	757454	5913547	61	Flake	Silcrete	White	Fine	-	2	-	

### 3.2.4 Stage 4 Bellbird Ridge Salvage

Construction of Stage 4 of the subdivision commenced in 2003, following receipt of Development Approval. Representatives of the BTAEC reinspected the area following the removal of vegetation and exposure of much of the natural ground surface and upper soil unit. BTAEC representatives identified shell midden and artefact deposits on the ridge crest in Stage 4 (site MC7/A) (Figure 5). On 25 November 2003, BTAEC representatives assisted Peter Kuskie of South East Archaeology to record the evidence. During this inspection further evidence was identified on the slope in Stage 4 (sites MC6/A, a midden, and MC6/B, an isolated artefact) (Figure 5).

South East Archaeology was subsequently commissioned by Ridge Consolidated to undertake a salvage of Aboriginal heritage evidence within Stage 4. A Section 90 Consent and Salvage Permit (#1796) was issued by the Department of Environment and Conservation for this purpose, encompassing the Stage 4 development area and the identified Aboriginal heritage sites MC6/A, MC6/B and MC7/A. The Bega Traditional Aboriginal Elders Council endorsed the Section 90 Consent for the Stage 4 development area, subject to the undertaking of a program of archaeological salvage and monitoring within Stage 4 and a program of sub-surface testing within Stages 3 and 5 (Kuskie 2004).

The salvage was conducted over two days in December 2003 with the assistance of representatives of the BTAEC. Eighteen 0.5 x 0.5 metre units were excavated at site MC6/A, for a total area of 4.5 m<sup>2</sup> and total volume of deposit sieved of 0.709 m<sup>3</sup>. The evidence at sites MC6/B and MC7/A was relocated and recorded and the stone artefacts collected. Samples of shell from site MC6/A and four midden loci within site MC7/A were collected and submitted for radiocarbon dating (Kuskie 2004). The revised site descriptions are as follows:

*Site Merimbula Cove 6/A (MC6/A; #62-6-533):*

Site MC6/A is a shell midden situated around AMG grid reference 757530:5913480 on the Pambula 8824-2-S 1:25,000 topographic map. The site was initially recorded as a shell midden exposed by vegetation removal in Stage 4 of the Merimbula Cove residential subdivision. It is located on a moderately inclined (6-7°) simple slope with an easterly aspect. The machinery used to remove the vegetation had disturbed the upper portion of the midden, resulting in exposure of a concentration of shell within a surface area of approximately 1.8 x 1.7 metres (Kuskie 2004).

The remaining *in situ* midden deposit was retrieved by excavation. Predominantly shell was retrieved, but two stone artefacts and five bone fragments along with charcoal were also collected. The *in situ* midden deposit formed an approximately circular shape measuring 1.5 metres in diameter. The location of the *in situ* deposit was largely consistent with the distribution of surface shell, but due to the nature of exposure, the surface shell was distributed over a broader area, including areas to the south and south-east where *in situ* deposit was not present. The *in situ* deposit comprised dense shell intermixed with small flecks of charcoal and a charcoal stained soil, predominantly extending from the modified surface (post-vegetation removal) to a depth of 12 centimetres. Only minor quantities of shell were present in the units adjacent to the primary *in situ* deposit (Kuskie 2004).

Notably, charcoal and the dark stained nature of the soil continued in units down-slope to the south and south-east of the *in situ* deposit. This may be indicative of some down-slope movement of soil post-deposition or sweeping out of the ash from the fire at the time of occupation. Otherwise, despite the growth of a recent *Casuarina* tree adjacent to the midden, much of the *in situ* deposit was of high integrity. This is significant given that the steeper gradient (6-7°) is more conducive to post-depositional impacts from erosion, and the high level of impacts from recent land-use practices, which have included the removal of native vegetation and probable growth and harvesting of corn crops (Kuskie 2004).

Cockle (*Anadara trapezia*) was the dominant shellfish species, by both number of whole items (211), total weight of whole items (2.037 kilograms), total weight of fragments (8.155 kg) and the estimate of the Minimum Number of Individuals (249). Mud oyster (*Ostrea angasi*) was modestly represented in the midden. Although no whole items were present, fragments weighing a total of 4.111 kg were recovered and the estimated Minimum Number of Individuals was 43.

A minor frequency of mud whelk (*Pyrazus ebeninus*) was present. This species was represented by five whole items weighing a total of 0.104 kg and 0.12 kg of fragments, for an estimated Minimum Number of Individuals of 13. Edible mussel (*Mytilus planulatus*) comprised an even lower frequency of the midden. This species was represented by 0.106 kg of fragments, for an estimated Minimum Number of Individuals of 32. The only other species represented in the midden is a turban (*Phasianella ventricosa*?). This species was represented by only two whole items, weighing a total of 0.013 kg (Kuskie 2004).

A single cockle shell retrieved from the *in situ* midden deposit 2-10 centimetres below the starting surface was radiocarbon dated to 1192±30 years BP (Before Present) (*Wk14112*), which equates to an age calibrated to two standard deviations (95.4% probability) of 910-620 calBP (1040-1330 AD) (Kuskie 2004).

#### *Site Merimbula Cove 6/B (MC6/B; #62-6-534):*

Site MC6/B is an isolated artefact situated around AMG grid reference 757570:5913520 on the Pambula 8824-2-S 1:25,000 topographic map. The site comprises a single artefact exposed by vegetation removal in Stage 4 of the Merimbula Cove residential subdivision. The artefact is a quartz retouched flake. Levels of ground disturbance were initially recorded as high, with limited potential for an *in situ* sub-surface deposit. Despite extensive surface exposures on the moderately inclined east-facing simple slope, no further evidence was visible either during the initial recording or the Stage 4 salvage (Kuskie 2004). Hence, Kuskie (2004) inferred that the artefact may represent isolated and/or accidental loss or discard, not focused Aboriginal activity.

#### *Site Merimbula Cove 7/A (MC7/A; #62-6-535):*

Site MC7/A is a shell midden and artefact scatter extending between AMG grid references 757580:5913590 and 757460:5913530 on the Pambula 8824-2-S 1:25,000 topographic map. The site was initially recorded as comprising a very low-density artefact scatter and shell midden exposed by vegetation removal in Stage 4 of the Bellbird Ridge residential subdivision. It was first noted as extending over an area of approximately 180 x 20 metres on the saddle portion of a ridge crest. The ridge leads south-west to Merimbula Lake from a major ridgeline on which the Merimbula Drive (former Princes Highway) access to Merimbula is situated. The lake is situated approximately 250 metres from the site.

A total of 16 artefacts and one lithic fragment were identified in the initial recording, despite reasonably high archaeological visibility of 20%. Small, dispersed scatters of shell midden were visible in four separate loci within the site. In locus A, a sparse scatter of whole and fragmented cockle shell was noted across a 10 x 7 metre area. Similar evidence occurs across 8 x 5 metre, 7 x 5 metre and 4 x 3 metre areas at the other locations. In all instances, levels of disturbance were high due to the vegetation clearance works and intact sub-surface midden deposits were not assumed to be present (Kuskie 2004).

The evidence was relocated during the salvage collection in December 2003, recorded and the artefacts collected and shell samples collected for radiocarbon dating. A total of 46 stone artefacts were identified and collected. The assemblage was dominated by rhyolite (54%) and to a lesser extent silcrete (28%), with chert and quartz also present. The artefacts were dominated by flakes (43%), and to a lesser extent flake portions (35%), with low frequencies or single cores, core fragments, microblades, microblade cores, retouched flakes and geometric microliths. The latter item, a symmetrically shaped backed artefact, was identified by trowelling within the *in situ* midden deposit at Locus C. Shell from this deposit has been radiocarbon dated to 807±30 years BP (Before Present) (*Wk14110*), which equates to an age calibrated to two standard deviations (95.4% probability) of 540-290 calBP (1410-1660 AD).



Significantly, microblade technology and microliths are known to disappear from many archaeological sites in Australia between about 1,000 - 2,000 years BP, generally about 1,000 years ago in the south-east, although may have continued until only a few hundred years ago in some regions of the east coast (Mulvaney and Kamminga 1999). The implement in site MC7/A is evidence of the continuation of microlithic technology until at least 540 to 290 years BP in the Merimbula area of the Far South Coast. These small, delicately retouched implements probably functioned as spear barbs (Mulvaney and Kamminga 1999).

A single cockle shell retrieved from the surface of midden Locus A was radiocarbon dated to  $509 \pm 30$  years BP (Before Present) (*Wk14108*), which equates to an age calibrated to two standard deviations (95.4% probability) of 266-0 calBP (1684-1950 AD). Kuskie (2004) inferred that it was probable that the midden was deposited immediately prior to non-indigenous settlement in the region (c. 1684 to early 1800s), or possibly, to around the period of contact (c. early 1800s to mid-late 1800s).

A second midden locus, 'B', was identified about 10-15 metres from Locus A. It comprised a small, dispersed scatter of whole and fragmented cockle shell within an area of approximately 8 x 5 metres. A single cockle shell retrieved from the surface within the main 2 x 2 metre concentration was radiocarbon dated to  $503 \pm 35$  years BP (Before Present) (*Wk14109*), which equates to an age calibrated to two standard deviations (95.4% probability) of 265-0 calBP (1685-1950 AD). This date is virtually identical to that for Locus A and it is feasible that the loci A and B middens represent either the same meal event, or separate meal events that occurred around the same time, or separate meal events that occurred at different times within a period of 170 years or so.

Midden locus C is situated at least 80 metres from loci A and B. It comprised a dispersed scatter of whole and fragmented cockle shell on the surface, mostly within an area of approximately 7 x 5 metres, and a buried *in situ* deposit. The *in situ* deposit of dense cockle shell and charcoal rich soil was partially excavated by trowel to retrieve a suitable sample for dating (single cockle shell from the midst of the *in situ* deposit) and ascertain the nature of the deposit. The shell was radiocarbon dated to  $807 \pm 30$  years BP (Before Present) (*Wk14110*), which equates to an age calibrated to two standard deviations (95.4% probability) of 540-290 calBP (1410-1660 AD).

Midden locus D is situated about 15 metres south-west of locus C. It comprised a small, dispersed scatter of whole and fragmented cockle shell mostly within an area of approximately 4 x 3 metres. A single cockle shell retrieved from the surface was radiocarbon dated to  $561 \pm 37$  years BP (Before Present) (*Wk14111*), which equates to an age calibrated to two standard deviations (95.4% probability) of 332-0 calBP (1618-1950 AD). As for loci A and B, it is highly probable that this midden is of Aboriginal origin, and more than likely predates non-indigenous settlement or at the latest, relates to the early contact period.

The primary results to arise from the Stage 4 salvage investigation (Kuskie 2004) included:

- ❑ Aboriginal occupation of the study area was very infrequent and occurred for very short times on at least three or perhaps five or more separate occasions over the past 900 years or so. Occupation may have been concurrent with early non-indigenous settlement in the early to mid-late 1800s;
- ❑ The primary activities represented in the study area were the consumption of meals, involving shellfish obtained from the adjacent Merimbula Lake, and stone knapping;

- ❑ Shellfish were procured from Merimbula Lake, possibly predominantly by women and children, and transported short distances to the sites where food preparation and consumption occurred. Cockles and mud oysters were mostly collected (as opposed to other shell species) due to their abundance and relative ease of collection. A carrying bag was used to transport the shells. The single meal events possibly involved a small group of people going about their daily hunting/gathering activities. The presence of men is inferred from the presence of certain artefact types. Food preparation may have involved the shellfish being cooked on top of a fire or being placed in the ashes to open the bivalves;
- ❑ Stone materials were mostly procured from the local area, although some may have been obtained from further afield. Rhyolite and to a lesser extent silcrete were typically used, but also chert and quartz. Intentional thermal alteration of silcrete does not appear to have occurred, at least in this small sample;
- ❑ Minimal stone knapping occurred and many of the items do not represent specific activities. Microblades and microliths were made in the region, but not necessarily on-site. A single geometric microlith that was discarded in one midden may indicate the maintenance of a spear at meal-time;
- ❑ The presence of this geometric microlith in a deposit dated to 540-290 calBP (1410-1660 AD) is strong evidence of the continuation of microlith technology until at least 540 to 290 years BP in the Merimbula area of the Far South Coast, which is rarely documented in south-eastern Australia;
- ❑ There are a number of key similarities with other reported heritage sites in the Merimbula locality, particularly in the adjacent Stages 3 and 5 of the Bellbird Ridge development and in the nearby Merimbula Heights residential subdivision; and
- ❑ Despite all of the recent impacts to the study area and the perceived 'high' level of ground disturbance, site MC6/A and midden locus C within site MC7/A both contained *in situ* sub-surface midden deposits. It is inferred from these results that even where levels of ground disturbance initially appear high, sub-surface deposits that are *in situ* and potentially of research value may exist. This finding highlights the fact that controlled excavation is an essential tool in enabling the issue of integrity of deposits to be addressed (Kuskie 2004).

### 3.2.5 Other Relevant Investigations

Nearby, investigations have been undertaken into the Merimbula Heights residential estate, which is situated adjacent to Stage 3 of the Bellbird Ridge residential development. This property extends immediately east from Stage 3 for one kilometre, and north of Merimbula Lake for up to one kilometre to near the Old Princes Highway. The environmental context is very similar to the present investigation area. During surveys of the estate, Hughes (1982a, 1983) located 14 shell middens and one artefact scatter. These sites are described briefly below:

Site 1: Two discrete midden deposits on basal slopes at the base of the low cliff bordering Merimbula Lake. One deposit extends over an estimated area of 30 x 10 metres and contains local concentrations of densely packed shell. Estuarine species were dominant, particularly rock oyster, mud oyster and cockle. Several stone artefacts were also present. The second deposit lay 30 metres distant and was similar in nature;

- Site 2: Two midden mounds on near level ground and the basal portion of a broad, steep spur, adjacent to the low cliff. The mounds are 45 metres apart. One measures 10 metres in length and is up to 0.3 metres in height, while the second measures 15 metres in length and is up to 0.5 metres in height;
- Site 3: Several small diffuse scatters of shell, within a 50 metre long area of the sandy estuarine flats bordering Merimbula Lake;
- Site 4: A large midden that originally extended over a 100 x 60 metre section of a spur crest/headland, before construction of a residence impacted the site. The site appeared to consist of 0.2-0.6 metres of stratified midden deposit, and a number of low relief mounds were visible. The low cliff also contained midden material. Mud oyster was the dominant shellfish species, while cockle and rock oyster were also relatively common;
- Site 5: Several small patches of cockle shell exposed over a 40 metre section of ground;
- Site 6: A small concentration of cockle and mud oyster shell exposed on a slope;
- Site 7: A compact midden extending over an area of 15 x 10 metres and about 0.15 metres thick on the basal slope above the low cliff bordering Merimbula Lake. Mud oyster and cockle were the dominant types, with very small proportions of mud whelk and rock oyster;
- Site 8: A large midden extending for 65 x 45 metres across a spur crest/headland and slopes and also onto the low cliff bordering Merimbula Lake. On the upper slope portion of the site the midden is estimated to be about 0.15 metres thick, increasing to at least 0.5 metres down-slope near the low cliff. Rock oyster was the dominant shellfish and minor quantities of fish and terrestrial mammal bone and stone artefacts were observed;
- Site 9: Discontinuous midden deposits of up to 0.15 metres thickness along 130 metres of the low cliff bordering the sandy estuarine flats of Merimbula Lake. At least eleven small mounds of shell midden material were also noted. Mud oyster and rock oyster were the primary shellfish types;
- Site 10: A discontinuous compact midden extending along the level crest of the low cliff and the eastern bank of a minor stream. It contains three distinct mounds and is dominated by mud oyster;
- Site 11: Midden extending for 50 x 40 metres over a spur crest and the low cliff;
- Site 12: Extensive complex of midden deposits across the estuarine sand flats, particularly on the two subdued beach ridges along the foreshore;
- Site 13: An artefact scatter extending along 120 metres of a vehicle track on a spur crest, about 200 metres from Merimbula Lake. A total of 46 artefacts were recorded;
- Site 14: A small midden located on a level spur crest. The shell deposits measure five metres in diameter and are up to 0.1 metres thick; and
- Site 15: A small midden located on a gently sloping ridge crest, containing almost entirely cockle shell and measuring two metres in diameter.

The middens described by Hughes (1982a, 1983) were typically comprised of Sydney cockle (*Anadara trapezia*), mud oyster (*Ostrea angasi*), edible mussel (*Mytilus edulis planulatus*) and rock oyster (*Saccostrea cucullata*), with a small proportion of mud whelk (*Pyrazus ebeninus*) also present. The majority of the middens were located at the junction of hill slopes and flats, along the low cliff-line above the lake, although several other middens in a low state of preservation were also found further up the slopes.

Hughes (1982a, 1983) concluded that the complex of shell middens within the Merimbula Heights Estate subdivision was of considerable scientific significance, particularly because of their generally high integrity and representative value. One of few similar site complexes is that recorded by Sullivan (1981, 1982) around Pambula Lake, who concluded that the Pambula sites were one of few remaining intact mounded midden complexes in the entire state. However, Hughes (1983) identified that most of the evidence recorded on the slopes north of the lake was of lower integrity and lower significance. Hughes (1983) presented recommendations involving:

- ❑ Unmitigated impact for several of the sites of low integrity;
- ❑ Mitigated impact (salvage of sites of high significance, MHE 8 and 10);
- ❑ Monitoring (for the presence of skeletal remains on the sandy flats); and
- ❑ Avoidance of impacts (through re-routing a sewerage pipeline and confining the activities of earthmoving machinery).

Salvage excavations of two of the middens in the Merimbula Heights Estate revealed that the sites were first occupied approximately 3,500 years ago (Webb and Cane 1986). Deposits at site MHE10 were dated to 3,570±90 years Before Present (BP) (ANU 5308) and at site MHE8 to 3,610±80 BP (ANU 5000) (Webb and Cane 1986).

Hughes (1982b) surveyed the 24 hectare location of a proposed waterslide development, about 1.5 kilometres north-east of Merimbula Cove. The property comprises the crest and upper slopes of a ridge leading to Merimbula Creek. One small artefact scatter site was located on the level crest, containing several quartz flakes and flaked pieces and an acid volcanic flake.

Aiken (1986) surveyed the proposed Upper Berrambool housing development and located one artefact scatter near Back Lagoon, several kilometres north-east of the present investigation area. A subsequent survey by Lance (1987) resulted in the identification of another small artefact scatter containing twelve items and a dispersed scatter of redeposited midden shell. Williams (1998) investigated a proposed Health Retreat, also adjacent to Back Lagoon, and located only one small artefact scatter site on a spur crest. Three artefacts were present, all rhyolite flakes.

Further to the north of the investigation area around Wallagoot Lake, a number of surveys and excavations have been undertaken by Attenbrow (1982), Boot and Feary (1990), Dibden and Kuskie (1999), Evans (1992), Geering (1983a, 1983b) and Kuskie (1998). These have resulted in the identification of numerous artefact scatter and midden sites.

Other midden sites have been recorded east of the present investigation area at Merimbula Point and Short Point. An Aboriginal burial, containing the remains of two individuals, was unearthed in a residential garden located on a former beach dune in Main Street, Merimbula (OEH site records). The consultant was previously informed by a life-long resident of Merimbula that a skull had been unearthed during construction works at the northern end of the Merimbula Beach Barrier (Smith 1995 *pers. comm.*).

Midden material has also been exposed at a house site on Main Street (Barber 1998). Site #62-6-301/62-6-312 was initially recorded by DEC archaeologist Jackie Taylor (September 1998) during an inspection of Lot 15/A, 22 Beach Street. It was subsequently recorded and assessed by consulting archaeologist Matthew Barber (December 1998). Section 90 Consent (#1183) was issued by DEC for the portion of the site on Lot 15A.

Further investigation of this site occurred after BTAEC representatives were monitoring Bega Valley Shire Council stormwater control works and identified shell midden deposits. Peter Kuskie, of South East Archaeology, assessed the site and Bega Valley Shire Council subsequently applied for a Section 90 Consent. The site comprised two components, a partially *in situ* shell midden deposit and a more broadly distributed scatter of midden shell. The *in situ* deposit was located below Main Street and had largely been excavated and removed, with the soil and shell stockpiled adjacent to Beach Street. It was identified during excavation of a one metre wide by 1.5 metre deep trench adjacent to Lot 15/B, in an area of 4 x 1 metres and extending in adjacent areas below the sealed road and concrete kerb. The shells were excavated from approximately 0.35-0.4 metres below the road surface and were compacted within a lens about 0.15 metres thick. Examination of the evidence retrieved from the midden indicated the presence of at least 283 cockle shells, 25 mud oysters, 8 mud whelks and several fragments of mussel shell. Also present were a grey acid volcanic flake and four small sedimentary rocks with a burnt appearance and minor charcoal and unburnt wood. The shells were predominantly whole pieces and well preserved.

The broadly distributed scatter of shell was primarily visible on the eastern side of Beach Street, extending from Merimbula Lake north for 60 metres to the junction with Main Street. This shell has been exposed by earthmoving works, including excavation and refilling of a trench and installation of facilities. This component of the site was not *in situ*. As a condition of the Section 90 Consent, representatives of the BTAEC continued to monitor ground disturbance works at the site and salvage further evidence exposed during construction.

On the western side of Merimbula Lake, Paton (1985) did not locate any sites during a survey of the proposed Millingandi to Pambula water pipeline. However, Navin (1989) located seven sites to the north-west of the lake during a survey of bypass route options for the Princes Highway. All sites were small artefact scatters, some containing shell, and all were located on elevated landform elements above creeks or wetlands. None of the route options traversed closer than 400 metres to Merimbula Lake. Quartz was the dominant stone material recorded, but silcrete and rhyolite were also relatively common (Navin 1989). Gaffey (1990) surveyed another realignment of the Princes Highway at Wolumla and recorded a midden near Merimbula Creek.

Kuskie and Webster (2001) undertook test excavations at the midden site identified by Gaffey (1990) along the Yellow Pinch to Millingandi deviation of the Princes Highway. The site (#62-6-189) was originally described as a midden located in exposures on a ridge crest overlooking Merimbula Creek, extending over an area of at least 30 x 26 metres. Oyster and mussel shells were identified at a density in excess of 20 per square metre (Gaffey 1990). A program of sub-surface testing was undertaken to obtain further information about the site and enable the BTAEC to consider appropriate management strategies.

The testing program involved the excavation of 22 test units, each measuring 0.25 x 0.25 metres in area, at three metre intervals on two transects placed across the site. In total, an area of 1.375 m<sup>2</sup> was excavated and 0.176 m<sup>3</sup> of soil sieved. Each unit was excavated in successive levels of ten centimetres depth. Cultural material was retrieved and retained for analysis, prior to lodgement with the BTAEC (Kuskie and Webster 2001). A total of 31 shell items were identified in three of the units excavated. No stone artefacts were present. Of the shell material, 83% comprised rock oyster shell and 13% mussel. Three low-density scatters of shell across the surface of the site were also recorded (Kuskie and Webster 2001).

Studies have been undertaken several kilometres south-east of Merimbula Cove, behind Merimbula Beach. Egloff (1988) surveyed land 4-5 kilometres south of the township of Merimbula during an investigation into the Merimbula effluent disposal works. Only one artefact scatter was located, a result Egloff (1988:5) considered was partially due to conditions of low surface visibility. However, Egloff (1988) also located an Aboriginal burial site, comprising three clusters of highly decayed and fragmented bone that was interpreted as evidence of three individual internments.

Kuskie (1995) recorded a scarred tree and a shell midden during a survey of land adjacent to Merimbula Airport, south of Merimbula and two kilometres south-east of the present study area. The survey followed an earlier predictive study by Boot (1993). The midden consisted of pipi (*Plebidonax deltooides*) shell. Sub-surface testing was undertaken but did not yield any further archaeological evidence.

Further south of the current study area lies Pambula Lake, which is comparable in nature to Merimbula Lake. Sullivan (1982, 1984, 1987) undertook surveys and excavations of shell middens around Pambula Lake. The well preserved middens contained high frequencies of mud oyster, in addition to a variety of estuarine and rock platform shell species. Sullivan (1982) excavated one midden to reveal that occupation of the site commenced around 3,000 years ago and continued into the 1800s. The lower shell deposits were primarily mud oyster but the upper deposits consisted largely of edible mussel, with moderate amounts of hairy mussel (*Trichomya hirsutus*) occurring in the middle deposit (Sullivan 1984:6). This provoked considerable debate in the academic literature about the reasons for the changing frequency of mussels (eg. Mackay and White 1987, Sullivan 1984, 1987).

### 3.2.6 Synthesis

Boot (1993:6-7) outlines the currently known scenario for Aboriginal occupation in the Merimbula district.

The earliest known Aboriginal occupation in the area commenced around 3,500 years ago, but occupation of the Merimbula Bay Barrier may have begun as early as 8,000 years ago. The Aboriginal occupants probably camped in small extended family groups around Merimbula Lake, with most camp sites situated on elevated land above the waterline. Some camps were also situated on the beach ridges of the Merimbula Bay Barrier. These locations would have enabled exploitation of the rich estuarine resources of the lake and the surrounding mudflats and wetlands. While evidence for exploitation of the estuarine resources is most common in sites, resources of the beaches, rocky platforms and forests, would also have been within the range of camp sites. Glass artefacts, recent radiocarbon dates and historical records indicate that Aboriginal people continued to live a traditional lifestyle around Merimbula Lake and on the Merimbula Bay Barrier until well into the Nineteenth Century (Boot 1993:6-7).

Sullivan (1978) examined the location of middens along the South Coast in relation to environmental factors. Sullivan (1978) identified that middens tend to be located within 100 metres of rocky shoreline features and contain a high proportion of rock platform shellfish species. For the sites investigated by Sullivan, over 80% were located on the hind section of rock platforms, on headlands or within dunes adjacent to the headlands. Most sites were also situated within 100 metres of potable water. However, fewer middens occurred on Ordovician sedimentary rock outcrops as compared with igneous intrusive rocks. Shell middens, along with open artefact evidence, are the primary site types found in the region.

Occupation of the South Coast region is assumed to date from at least 20,000 years ago, as evidenced by dated sites at Burrill Lake (Lampert 1971) and Bass Point (Flood 1980). The Bulee Brook 2 site, excavated by Boot (1994) in the hinterland ranges, provides evidence that occupation of this zone had occurred by at least 18,000 years ago.

### 3.3 Local Aboriginal Culture

The study area lies within the territory of the Thaua people, a sub-group of the Yuin Nation (Tindale 1974, Boot 2002). Tindale (1974) describes the territory of the Thaua as extending from Green Cape, south of Eden, to north of Merimbula and inland to the peak of the Dividing Range.

Boot (2002) has undertaken a wide-ranging study of ethnohistorical observations relating to the south coast region, based on original archival sources. Boot (2002) lists the following faunal and floral species which have been recorded in the ethnohistorical sources as having been utilised: fish species including bream, trumpeter, whiting, salmon and shark, eel, whales, seals, marine worms, shellfish including oysters and mussels, possum, kangaroo, wombat, birds, goanna, grubs, honey, kangaroo apple, native cranberry, honeysuckle, pigface, macrozamia, cabbage tree, fruit and yams. Observations of use of these food sources were made within ten kilometres of the coast (Boot 2002).

The material culture of the local Aboriginal population would have included a range of items related to subsistence, cultural and social activities and shelter. Ethnohistorical observations along the coast have been made of the following items: huts, gunyahs, canoes, spears, shell-barbed spears, fishing spears, bark/wood shields, waddy/clubs, spear throwers, boomerangs, hatchets, fish-traps, stone heat retainers, kangaroo teeth adornments, pierced nose adornments, bark drawings, possum skin cloaks, shell fish hooks and grass tree resin (Boot 2002). In the archaeological record few of these items survive. Stone, bone and shell are the materials most frequently represented in archaeological sites.

Few direct observations of Aborigines were made by early explorers or settlers in the Merimbula district. However, many observations were recorded of Aboriginal activity around Bega and Twofold Bay. These reports suggest Aboriginal people relied strongly on coastal resources such as fish and shellfish and that camps were located on coastal dunes or in forests within close proximity to the coast (Sullivan 1982). Boot (1993:2-4) summarises this ethnographical information and an extract is presented below:

"The first observation of Aboriginal people on the Far South Coast was made by Cook on April 21st, 1770, when he 'saw the smoak of fire in sever'l places upon the land, a sure sign of its being inhabit'd' (Bladen 1893:11). Observations of the smoke from Aboriginal fires were first made south of Mount Dromedary and were made regularly from that time, as Cook passed northward along the coast".

More specific observations of Aboriginal occupation in the study area were made on January 25, 1822, when Alexander Berry, Hamilton Hume and Lieutenant Robert Johnstone sailed into Merimbula Bay aboard the 'Snapper'. Berry took a boat ashore and recorded that he:

"saw no natives at this place but a considerable number of huts - and on leaving the former had proove of their vicinity - and that they were lurking in the bush - from their fires kindled at our departure" (Berry 1822: no page numbers).

While the 'Snapper' was anchored, William Edwardson made a sketch of the bay (called Barmouth Bay), Merimbula Lake and the Pambula River (called Barmouth Creek). In two locations 'many native huts' were marked on the published version of the sketch (Edwardson 1822). One of these is on the east bank of the Pambula River and the other is on the east side of Merimbula Lake, on the back barrier of the Merimbula Bay barrier system. Edwardson (1822) sketched seven gunyahs, or bark huts, of triangular shape at each location. The huts depicted on the shore of Merimbula Lake appear to have been in close proximity to the present site of the Merimbula Airport.

These huts may represent the camping places of small Aboriginal groups based around an extended family of at least twenty people. A similar number of people, probably a single extended family unit, was regularly recorded as living at Pambula during the 1840s. Land Commissioner Lambie recorded that this group varied in size from 14 to 17 people between 1841 and 1845 (Lambie 1842, 1843, 1844, 1845, 1846). Oswald Brierly encountered a similar sized group when he visited Pambula in 1843. Brierly also recorded that these people were affiliated with country further south:

" . . . about twenty natives from the Twofold Bay tribe were camped here . . ."  
(Brierly 1843:52, quoted in Boot 1993:2-4).

European settlement heralded a period of immense disruption and change to traditional Aboriginal life. After the initial invasion and population decline, the 1850s saw Aboriginal people beginning to find occasional employment with the settlers. In the early days of settlement they had continued access to many lands and maintained many cultural and social traditions (Chittick and Fox 1997:191).

By 1882 Aborigines lived mostly in fringe camps around the growing non-Aboriginal settlements, until 1891 when the Aboriginal Protection Board established the Wallaga Lake Reserve (Byrne 1984b). This became a virtual prison, as efforts were made to prevent the Aboriginal people leading a traditional life (Byrne 1984b). Meanwhile, the settlers continued to exploit the foods, mineral resources and timber of the region. In the 1940s and 1950s the Aboriginal people worked as seasonal labourers in the bean and pea fields and after World War Two in the timber industry.

A large and vibrant Aboriginal population remains in the region today, and takes an active interest in their heritage. Consultation with the local Aboriginal community has formed an integral part of the assessment (refer to Section 6). As discussed in Section 3.5, consultation with the Aboriginal community is essential to identify certain site types and cultural values.

### **3.4 Occupation Model**

In order for any investigation to contribute effectively to the management of the heritage resource, the following key elements of a research design (*cf.* Boismier 1991) are essential:

- 1) Identification of the specific environmental and cultural characteristics of the area;
- 2) Construction of a model of Aboriginal occupation for the locality;
- 3) Definition of the expected nature and distribution of evidence;
- 4) Formation of a methodology to test the predictive model and relevant research questions, in consideration of the expected nature and distribution of evidence; and
- 5) Analytical techniques for the evidence recovered that are appropriate to address the research questions and project objectives.

The environmental context of the investigation area has been outlined in Section 2, and the methodology and analytical techniques are discussed in Section 4. The model of Aboriginal occupation for the locality and expected nature and distribution of evidence are discussed below and in Section 3.5.



Over the past few decades, several broad regional models of occupation have been forwarded to account for the pattern of recorded site distribution on the South Coast. These include for example:

- ❑ Bowdler (1970) argued that occupation of the coast during summer was intensive, with some exploitation of the hinterland when coastal resources were less abundant;
- ❑ Lampert (1971) proposed a mixed economic regime on the coast, involving exploitation of littoral, estuarine and land resources, but with a greater emphasis on the littoral component;
- ❑ Poiner (1976) produced a model of occupation based on a strict seasonal regime: abundant coastal resources were exploited during summer, and the coastline and hinterland were both exploited during winter when resources were far less abundant;
- ❑ Flood (1980) argued that the hinterland was only used when coastal resources were in short supply during the winter season;
- ❑ Attenbrow (1976) proposed a model in which the coast and hinterland were occupied all year round and that movement between the two zones occurred at the family or small group level, rather than at the large population level suggested by Poiner (1976). Attenbrow's model incorporates a higher proportion of terrestrial animal foods in the diet during winter. Hinterland river valleys and highland areas would have been occupied during summer. In winter, the population distribution would have been widespread, based on family groups;
- ❑ Vallance (1983) argued that a range of subsistence strategies would have existed, that varied both within and between seasons and even from year to year. Boot (1994) suggested that if this were the case, larger archaeological sites could be expected in areas where large quantities of food were available on a single occasion or on a regular basis, and smaller sites would be the result of short term occupation during movement between such locations;
- ❑ Byrne (1983, 1984a) after surveying hinterland forests and finding relatively high site densities 13-18 kilometres inland, challenged the assumption that occupation was focused primarily on the coastline. Byrne (1983) found there was an absence of sites 3-10 kilometres from the coastline in the Five Forests study;
- ❑ Walkington (1987) suggested campsites were focused along the coastline and this section of the hinterland (3-10 kilometres distance) was only exploited on daily return journeys. Distances further than 10 kilometres inland would have required overnight camps in the hinterland (Walkington 1987); and
- ❑ Boot (1994, 2002) and Knight (1996) report on the thousands of sites located within the hinterland zone between Moruya and Ulladulla, identified during surveys by Australian National University Honours students and Boot (2002) during doctoral research. These recordings dramatically change the pattern of recorded site distribution and are used to support arguments that the intensity of utilisation of the coastal hinterland is far greater than previously believed and previous researchers may have inadequately accounted for the coastal bias of earlier surveys.

The research of Boot (2002) has demonstrated that the currently available evidence does not lend support to many of the models listed above, with the exception of Vallance (1983). Boot's (2002) research has suggested that Aboriginal occupation tends to be more focused in areas of higher biodiversity and along the boundary or in close proximity to multiple resource zones.

Boot (2002) undertook extensive research into the hinterland of the South Coast. Using a variety of resources, including previous archaeological study results, ethnographic records, theoretical modelling, surface surveys and sub-surface excavations, Boot (2002:319-326) proposed a synthesis of South Coast hinterland occupation. The salient issues identified by Boot (2002) include:

- ❑ When Aboriginal people arrived in the area prior to 20,000 years ago, the (then) coastline may have been a marginal area in terms of the types of resources available. The coast may have been over 20 kilometres east of its present location and dominated by low-lying mud flats and a narrow range of estuarine resources (Boot 2002:321). The harsh Pleistocene environment may also have made occupation of inland rockshelter sites for longer periods of time favourable, with a greater range of resources available within the (then) hinterland;
- ❑ Between 17,000 and 11,000 years ago the intensity of occupation of the area was largely reduced and is associated with decreased rainfall, temperature and sea levels (Boot 2002:321). Fluctuations within this trend occurred (eg. occasional increases in occupation intensity) although this is attributed to higher rainfall episodes temporarily changing the hinterland forest environment;
- ❑ In the early part of the Holocene, the intensity of the (then) hinterland occupation was relatively low, with increased precipitation levels, rising sea levels and increased temperatures (Boot 2002:322). Coastal occupation may have increased with new littoral resources emerging; and
- ❑ By the mid-Holocene, with stabilising sea levels, reduced rainfall and warm and stable temperatures, significantly increased and widespread use of both the coastal and hinterland areas occurred. A range of complex environments developed in the hinterland, including open forests and woodlands with high biodiversity (Boot 2002:323). Small group mobility may have become lower, with the increase in resources available and exploitation of the hinterland by these groups for most of the year. However, congregations of much larger groups during warmer months also occurred. Camping sites for small extended family groups tended to be on open ridges and areas adjacent to creeks, rivers and swamps, especially in open woodlands and forests. Duration of local episodes of occupation is expected to have been less than a week, before people moved on to the next suitable area (Boot 2002:325).

Boot (2002:317-319) offers four new models of South Coast hinterland occupation in terms of temporal trends, subsistence strategies and intensity of site use, along with the types of evidence expected to occur and its locations:

#### 1. Pleistocene occupation:

Identifiable Pleistocene hinterland sites were expected to be in large rockshelters in close proximity to potable water. The sites would contain a variety of evidence, potentially increasing in occupational evidence towards the terminal Pleistocene. Evidence would include a range of artefacts, including large silcrete and volcanic cores, along with small implements. Hinterland occupation during the Pleistocene was extensive and evidence of Pleistocene near-coastal occupation is expected to be rare.

2. Holocene occupation:

Occupation during the Holocene differed somewhat, with less preference for particular habitation sites or seasonal exploitation, although types of preferred locations included flat open areas within river valley woodlands and dry open forests, broad ridges in well watered open forest, tall damp forests adjacent to rainforests and well drained elevated ground above wetlands and swamps. Occupation is expected to have occurred within all topographic contexts, although the intensity of occupation is expected to be lower during the early Holocene than in the late-Pleistocene or late Holocene. The increase of hinterland use during the mid-Holocene is underpinned by favourable changes in the environment leading to an increase in the diversity of resources available.

3. Patterns of resource exploitation:

Subsistence strategies would be reflected by patterns of resource exploitation within a few kilometres of habitation sites and the diversity of evidence at each site would reflect the diversity of resources in the surrounding environment. Small groups of people or family groups travelling in the hinterland are expected to have exploited resources from the immediate surrounds of a site and rarely exported these resources elsewhere. Larger groups of people congregated where abundant short term resources occurred, and subsequently, greater intensity of occupation occurred where these abundant short term resources occurred more frequently. These locations are likely to be in regions of greater biodiversity and may coincide with sacred landscape elements. The range of stone implement types is expected to be narrow, but diverse in potential uses.

4. Changes in intensity of site occupation:

The intensity of site occupation is underpinned by the favourability of an environment to provide reliable, exploitable resources. As locations changed in terms of sustainability, locations more amenable to exploitation were substituted. Higher diversity areas of the hinterland meant that the distance between suitable locations may have been relatively low. Cultural memory of abandonment may have been relatively brief and some locations are expected to have been abandoned for extensive periods of time, while others may have experienced relatively brief hiatuses between occupational episodes.

Boot (2002: 326) has suggested that further archaeological work in the South Coast hinterland is needed in order to test these models and more fully understand occupational use of the region. This work could be in the form of more detailed surveys, functional technological analyses of implements from both open artefact scatters and sub-surface deposits, excavation of open sites and rockshelter sites, mapping of stone material distributions and more detailed and localised environmental reconstruction.

Notwithstanding arguments largely underpinned by material culture, environmental factors and resource variation, Boot (2002:334) observes that *“the economy was secondary to the sacred and that, ultimately, the primary purpose of economic life was to sustain the sacred worlds of the Yuin”*. Significantly, Boot (2002:vii) notes that the descendants of the original inhabitants of the region retain strong attachments to the hinterland’s unique cultural heritage.

Following the survey and test excavations at Bellbird Ridge, and using information from other sources, Kuskie (2005) concluded that:

- ❑ Numerous episodes of occupation occurred within the study area over the past 2,000 years or so, although many may have involved small groups of people and been for short durations of time;

- ❑ The primary activities represented are the consumption of meals, involving shellfish obtained from the adjacent Merimbula Lake, and stone knapping. The locality was not well suited to large-scale use or long term camping because of the absence of permanent potable water;
- ❑ Shellfish were procured from Merimbula Lake, possibly predominantly by women and children, and transported short distances to the sites where food preparation and consumption occurred. Cockles and to a lesser extent mud oysters were mainly collected, due to their abundance and relative ease of collection. A carrying bag was used to transport the shells. The meal events possibly involved small groups of people going about their daily hunting/gathering activities. The presence of men is indicated by certain artefact types. Food preparation may have involved the shellfish being cooked on top of a fire or being placed in the ashes to open the bivalves;
- ❑ Several locations on the moderate simple slope bordering Merimbula Lake were repeatedly visited, leading to the formation of mounded midden deposits;
- ❑ Stone materials were mostly procured from the local area, although some may have been obtained from further afield. Rhyolite and to a lesser extent silcrete and quartz were typically used. Intentional thermal alteration of silcrete appears to have occurred, although not necessarily directly on-site; and
- ❑ Minor frequencies of stone knapping occurred. Many of the discarded items do not represent specific activities, although it appears that at least microblades (and by extension, possibly microliths) were manufactured on-site.

Kuskie (2005) noted that occupation within the study area could represent a variety of circumstances, for example:

- ❑ Transitory movement;
- ❑ Hunting and/or gathering (without camping);
- ❑ Camping by small hunting and/or gathering parties;
- ❑ Nuclear/extended family base camp;
- ❑ Community base camp;
- ❑ Larger congregation of groups; or
- ❑ Ceremonial activity.

The evidence could represent a single episode or multiple episodes of one or more of the above types of occupations. The episodes of occupations could have occurred at different times over the entire time-span of occupation in the region. Each episode of occupation could also have been for a different duration of time.

Unless the archaeological evidence for individual activity events is readily identifiable, it can be highly problematic to determine the types of occupation, number of episodes, and times and duration represented by evidence at a particular site. Suitable circumstances are rarely present in open sites, due to mixing of evidence by post-depositional processes and the superimpositioning of evidence caused by repeated episodes of occupation.

Listed below is a brief description of the nature of each type of occupation and the material circumstances or evidence that may relate to such occupation types within the present investigation area and surrounding locality (*cf.* Kuskie and Kamminga 2000):

*Transitory movement:*

- ❑ May occur when an individual or group of people are moving between base camps, or from a campsite to resources or a ceremonial or other special purpose site;
- ❑ Duration would be less than a day and probably less than a few hours;
- ❑ Total numbers of people would generally be relatively low;
- ❑ Could occur on most topographical units and classes of slope, but possibly more frequently on ridge and spur crests and along watercourses and valley flats;
- ❑ Proximity to potable water was probably not important;
- ❑ Proximity to food resources was probably not important;
- ❑ Evidence may represent accidental discard, repair of hunting or gathering equipment, children's play or knapping activity;
- ❑ Quantity and density of evidence and range of artefact and stone types are expected to be low, consistent with 'background discard', with few discrete activity areas unless repeated episodes have occurred causing superimpositioning. Shell middens are unlikely to be present, despite the proximity of shellfish resources;

*Hunting and/or gathering (without camping):*

- ❑ May occur when an individual, or more likely a small group of closely related people, engage in hunting activities (more likely to be a party of men) or gathering activities (more likely to be women and children);
- ❑ Duration would be less than a day, with people returning to a base to sleep;
- ❑ Total numbers of people would be relatively small;
- ❑ Would be expected to occur where food resources were available, which for different foods may be a seasonal or annual occurrence;
- ❑ Proximity to potable water was probably not important;
- ❑ Evidence may represent accidental discard, loss during use, repair of hunting or gathering equipment, children's play or knapping activity;
- ❑ Quantity and density of evidence and range of artefact and stone types are expected to be low, consistent with 'background discard', possibly with a few discrete activity areas. Loss or discard of specific tool types may be a useful indicator (particularly items with use-wear/residue that are not in association with evidence of their manufacture or maintenance). Repeated visits to particularly food sources may cause a build up of unrelated evidence over a period of time in a specific location. Small shell middens, representing single meal events, would be expected close to shellfish sources, with potentially a build up of temporally unrelated meal events from repeated visits over time.

*Camping by small hunting and/or gathering parties:*

- ❑ May occur when an individual, or more likely a small group of closely related people, that are engaged in hunting activities (more likely to be a party of men) or gathering activities (more likely to involve women and children) camp overnight near the resource being procured;
- ❑ Duration would be one or several days;
- ❑ Total numbers of people would be relatively small;

- ❑ Would be expected to occur close to where food resources were available, which for different foods may be a seasonal or annual occurrence;
- ❑ Proximity to potable water probably was important, although temporary sources may have been sufficient;
- ❑ Evidence may represent accidental discard, repair of hunting or gathering equipment, children's play, stone knapping activity, food processing or temporary camp fires;
- ❑ Quantity and density of evidence and range of artefact and stone types are expected to be low to moderate, and distinguishable from 'background discard', with at least several activity areas. A reasonably broad range of artefact and stone types may be discarded (although not as diverse as expected at a base camp). Shell middens representing single or multiple meal events would be expected close to shellfish sources. Items likely to be cached for future use at a base camp, or unlikely to be carried around on a hunting or gathering journey (eg. grindstones) are not expected to occur. Time-consuming activities like construction and use of ovens or heat treatment pits are also unlikely to have occurred

*Nuclear/extended family base camp:*

- ❑ May occur when a single nuclear family or extended family camps together;
- ❑ Duration uncertain but probably dependent on availability of food resources and potable water in the locality;
- ❑ Total numbers of people would be relatively small;
- ❑ In open sites, probably situated on level or very gently inclined ground, close to potable water and close to food resources;
- ❑ The encampment area in open contexts may consist of a several small huts, dispersed in a spatial patterning depending on the social mix of the people;
- ❑ Evidence may represent accidental discard, repair of equipment, children's play, stone knapping activity, food processing, campfires, heat treatment of silcrete and manufacturing of tools;
- ❑ Quantity and density of evidence and range of artefact and stone types discarded are expected to be high. Shell middens representing multiple meal events would be expected close to shellfish sources, including middens of larger size. Repeated visits to a camp site or stays of long duration may cause a build-up of evidence over a period of time in a specific location. Items are likely to have been cached for future use at a base camp. Specific artefact indicators include grindstones. Evidence of casual knapping and production of tools is expected to be common. The significant differences with a temporary hunter/gatherer's camp include the possible presence of features such as heat treatment pits and ovens, broader range of artefact and stone types, presence of specific artefact indicators, higher density of evidence (reflecting more activity and longer duration of use) and relatively common evidence for the production of tools.

*Community base camp:*

- ❑ May occur when a number of nuclear families camp together;
- ❑ Duration uncertain but probably dependent on availability of food resources;
- ❑ Total numbers of people could be relatively large (30+);
- ❑ Probably situated on level or very gently inclined ground in open contexts;
- ❑ Probably situated close to potable water;
- ❑ Probably situated close to food resources (eg. conjunction of wetlands and forest zones);

- ❑ The encampment area may exceed 100 m<sup>2</sup> and consist of a number of individual groups and huts, dispersed in a spatial patterning depending on the social mix of the groups;
- ❑ Quantity and density of evidence and range of artefact and stone types discarded are expected to be high. Large shell middens representing multiple meal events would be expected close to shellfish sources. Spatially discrete evidence of individual camp sites would be expected (if the resulting evidence has not been affected by disturbance or superimpositioning). Items may not have been cached for future use. Specific artefact indicators include grindstones, relatively more common evidence of food processing and possibly ochre. Evidence of casual knapping and production of tools is expected to be common. However, features such as heat treatment pits may not occur.

*Larger congregation of groups:*

- ❑ May occur in relation to special events (eg. major ceremonies) or when a particularly desirable food was most abundant;
- ❑ Probably of short duration (eg. less than two weeks) but potentially for longer duration (eg. up to several months);
- ❑ Total numbers of people could vary widely, but possibly exceed 100;
- ❑ Probably situated on level or very gently inclined ground in open contexts;
- ❑ Probably situated close to potable water;
- ❑ Probably situated close to food resources;
- ❑ A large area or areas of encampments would be expected, possibly covering hundreds of square metres or more;
- ❑ Spatially discrete evidence of individual camp sites would be expected (if the resulting evidence has not been affected by disturbance or superimpositioning);
- ❑ Quantity and density of evidence and range of artefact and stone types discarded are expected to be high (similar to community base camp). Substantial shell middens representing multiple, contemporaneous meal events would be expected close to shellfish sources. Items may not have been cached for future use. Specific artefact indicators include grindstones, relatively more common evidence of food processing and possibly ochre, and possibly evidence of processing uncommon foods for which the gathering may be related (eg. whale). Evidence of casual knapping and production of tools is expected to be common. However, features such as heat treatment pits may not occur.

*Ceremonial activity:*

- ❑ May occur when a group of people gathers at a particular location to perform a ceremony;
- ❑ Evidence may be present of ceremonial site features such as earthen rings or stone arrangements, or ochre;
- ❑ Evidence of large encampments (similar to that expected for the 'larger congregation of groups' listed below) may be present nearby, including in locations with an aspect towards the ceremonial site.

To distinguish whether single or multiple episodes of occupation occurred, several factors can be examined. Multiple episodes of occupation would tend to exhibit superimpositioning of artefact evidence (eg. mix of unrelated stone materials and artefact types and activity areas). However, identifying which items belong to which activity events can be problematical. Also, distinguishing the effects of post-depositional disturbance from cultural superimpositioning is problematical (Koettig 1994). The analysis of distributions of stone material and artefact types is of benefit in some circumstances. In a stratified deposit, multiple episodes of occupation would be indicated by evidence in different stratigraphic layers, particularly discrete activity areas to exclude the possibility that items have moved vertically through the deposit by bioturbation.

Another indicator of multiple occupation is an expectation of a relatively higher density of artefacts within a locality (combined with superimpositioning as discussed above). Larger areas of occupation may also result, when occupations only partially overlap (eg. Camilli 1989).

Identification of different episodes of occupation over time would require *in situ* deposits with stratified or vertically separated evidence of activity events and datable material (eg. charcoal or midden deposits).

Identification of the duration of individual episodes of occupation may prove very difficult. Where a single episode of occupation has occurred, a greater quantity of items, frequency of discrete activity events and size of contemporaneous shell midden deposit may be indicative of a longer stay.

Identification of the types of occupations when multiple episodes have occurred may prove highly problematical. Unless specific artefact indicators for different types of occupation are present, the superimpositioning of evidence from unrelated occupations (eg. transitory movement over a nuclear family base camp) may not be possible to determine.

### **3.5 Predictive Model of Site Location**

A predictive model of site location was constructed to identify areas of high archaeological sensitivity (ie. locations where there is a high probability of archaeological evidence occurring), so it can be used as a basis for the planning and management of Aboriginal heritage. Predictive modelling involves reviewing existing literature to determine basic patterns of site distribution. These patterns are then modified according to the specific environment of the investigation area to form a predictive model of site location. A sampling strategy is employed to test the predictive model and the results of the survey used to confirm, refute or modify aspects of the model.

The use of land systems and environmental factors in predictive modelling is based upon the assumption that they provided distinctive sets of constraints that influenced Aboriginal land use patterns. Following from this is the expectation that land use patterns may differ between each zone, because of differing environmental constraints, and that this may result in the physical manifestation of different spatial distributions and forms of archaeological evidence (Hall and Lomax 1993:26).

The predictive model was based on information from the following sources:

- ❑ Identification of land systems and landform units;
- ❑ Previous archaeological surveys conducted within the region;



- ❑ Distribution of recorded sites and known site density;
- ❑ Traditional Aboriginal land use patterns; and
- ❑ Known importance of any parts of the investigation area to the local Aboriginal community.

In certain circumstances, such as where low surface visibility or recent sediment deposition precludes effective assessment of the potential archaeological resource, sub-surface testing may be a viable alternative for further testing the predictive model and assessing the investigation area (as occurred in Stage 5: Kuskie 2005).

The following is a brief description of the site types that are known to occur or may occur within the investigation area (revised after the conclusion of the surveys and test excavations).

**ARTEFACT SCATTERS:** In most archaeological contexts, an artefact scatter has been defined as either the presence of two or more stone artefacts within 50 or 100 metres of each other, or a concentration of artefacts at a higher density than surrounding low density 'background scatter'. The definition of an artefact scatter 'site' is often an arbitrary one, which can offer benefits from a heritage management perspective but is a source of theoretical/analytical debate for heritage practitioners.

Due to the nature of the underlying evidence, its identification only within exposures created by erosion or disturbance, and the limited suitability of existing definitions, artefact scatter sites are defined within this study as the presence of one or more stone artefacts within a *survey area* (*cf.* Kuskie 2000). The boundaries of the site are defined by the boundaries of the visible extent of artefacts within the survey area. The *survey areas* are based on discrete, repeated *environmental contexts* termed *archaeological terrain units* (eg. a particular combination of landform unit and class of slope).

An artefact scatter may consist of surface material only, which has been exposed by erosion, or it more typically involves a sub-surface deposit of varying depth. Other features may be present within artefact scatter sites, including hearths or stone-lined fireplaces, and heat treatment pits.

Artefact scatters may represent the evidence of:

- ❑ Camp sites, where everyday activities such as habitation, maintenance of stone or wooden tools, manufacturing of stone or wooden tools, management of raw materials, preparation and consumption of food and storage of tools has occurred;
- ❑ Hunting or gathering events;
- ❑ Other events spatially separated from a camp site (eg. tool production or maintenance); or
- ❑ Transitory movement through the landscape.

The detection of artefact scatters depends upon conditions of surface visibility and ground disturbance and whether recent sediment deposition has occurred (*cf.* Dean-Jones and Mitchell 1993). Vegetation cover and deposition of sediments generally obscures artefact scatter sites and prevents their detection during surface surveys. High levels of ground disturbance can also obscure or remove evidence of a site.

The investigations to date have identified six loci of open artefacts and shell midden, and three open artefact loci, within the investigation area, at distances of up to 250 metres from the lake margin. The potential for further artefact evidence to occur (eg. in areas currently obscured by vegetation and/or soil) has been assessed as high, particularly in the zone within approximately 80 metres of the lake margin, but also on the level to gentle crests (survey areas MC11, MCRN16, MCRN18 and MCRN20; refer to Figure 8).

The test excavations in Stage 5, undertaken at distances between 130 and 240 metres from the lake margin, only identified one artefact on the moderate slope. However, there remains potential for stone artefacts to occur in a widespread distribution of variable density across virtually all landform units in the investigation area. As noted above, a higher density of evidence is expected to occur where more focused and/or repeated Aboriginal occupation has occurred (eg. in close proximity to the lake margin and on the lower gradient crests), although the general absence of potable water may have constrained focused occupation to some extent. Elsewhere occupation may have involved hunting and gathering and transitory movement, resulting in a low-density distribution of artefacts typically consistent with background discard.

**BORA/CEREMONIAL SITES:** Bora grounds are a type of ceremonial site associated with initiation ceremonies. They are usually made of two circular depressions in the earth, sometimes edged with stone. Bora grounds can occur on soft sediments in river valleys and elsewhere, although occasionally they are located on high, rocky ground where they may be associated with stone arrangements.

The potential for bora/ceremonial sites within the investigation area is assessed as being negligible, based on the results of the surveys to date.

**BURIALS:** Human remains tended to be placed in hollow trees, caves or sand deposits. Usually burials are only identified when eroding out of sand deposits or creek banks, or when disturbed by development. Aboriginal communities are strongly opposed to the disturbance of burial sites. The probability of detecting burials during archaeological fieldwork is extremely low.

The potential for burial sites to occur within the investigation area is considered to be very low, although cannot be discounted, particularly in sandy sediments.

**CARVED TREES:** Carved trees were still relatively common in NSW in the early 20th century (Etheridge 1918). They were commonly used as markers for ceremonial or symbolic areas, including burials.

Both vegetation removal and the long passage of time since the practice of tree carving was prevalent have rendered this site type extremely rare. Given these factors and the extent of previous land clearing, along with the results of investigations to date, the potential for carved trees to occur within the investigation area is considered to be negligible.

**GRINDING GROOVES:** Elongated narrow depressions in soft rocks (particularly sedimentary), generally associated with watercourses. The depressions are created by the shaping and sharpening of ground-edge hatchets and grinding of seeds and processing of other plant matter and animal foods.

Grinding grooves are most likely to be located in sedimentary bedrock along watercourses, and their potential to occur within the investigation area is assessed as negligible, due to the general absence of sedimentary bedrock and the results of investigations to date.

**LITHIC QUARRIES:** A lithic quarry is the location of an exploited stone source (Hiscock and Mitchell 1993:32). Sites will only be located where exposures of a stone type suitable for use in artefact manufacture occurs. Reduction sites, where the early stages of stone artefact manufacture occur, are often associated with quarries.

Within the investigation area, lithic quarries only have potential to exist if outcrops of a suitable stone material are present. Considering the results of investigations to date, this potential is assessed as very low or negligible.

**MIDDENS:** Shell middens are a common site type in the coastal region. Middens are deposits of shell, the remains of what formed part of the Aboriginal diet. Middens may also include stone, bone or shell artefacts, charcoal, or the remains of small terrestrial or aquatic fauna, which were also a part of the diet. Middens exhibit wide variation in terms of their size, preservation and contents, and can provide significant information on land-use patterns, diet, chronology of occupation and environmental conditions.

The investigations to date have identified six loci of open artefacts and shell midden, and two shell midden loci (without associated artefacts), within the investigation area, all within 80 metres of the lake margin. The potential for further evidence of middens to occur (eg. in areas currently obscured by vegetation and/or soil) has been assessed as high, particularly in the zone within approximately 80 metres of the lake margin. The test excavations in Stage 5, undertaken at distances between 130 and 240 metres from the lake margin, did not identify any conclusive evidence of middens. However, the adjacent Stage 4 monitoring and salvage results provided evidence of middens in the zone further than 80 metres from the lake margin. Despite all of the recent impacts to the Stage 4 study area and the perceived 'high' level of ground disturbance, several middens contained *in situ* sub-surface midden deposits. It was therefore inferred that even where levels of ground disturbance initially appear high, sub-surface deposits that are *in situ* and potentially of research value may exist (Kuskie 2004).

**MYTHOLOGICAL/TRADITIONAL SITES:** Mythological sites, or sites of traditional significance to Aboriginal people, may occur in any location. Often natural landscape features are the locations of mythological sites. Other sites of contemporary significance include massacre sites (the location of violent clashes between early settlers and local Aboriginals), traditional camp sites and contact sites.

Consultation with the local Aboriginal community is essential to identify these site types. Considering the results of the Aboriginal consultation undertaken to date, this potential is assessed as very low or negligible.

**ROCK SHELTER WITH ART AND/OR OCCUPATION DEPOSIT:** Rock shelters include rock overhangs, shelters or caves, which were used by Aboriginal people. Rock shelter sites may contain artefacts, midden deposits and/or rock art. These sites will only occur where suitable geological formations are present.

Such contexts are not present in the investigation area. Therefore the potential for evidence of rock shelters to occur is assessed as negligible.

**SCARRED TREES:** Scarred trees contain scars caused by the removal of bark for use in manufacturing canoes, containers, shields or shelters.

Mature trees, remnants of stands of the original vegetation, have the potential to contain scars. Considering the long time period elapsed since this practice was prevalent and the extent of previous vegetation removal, , along with the results of investigations to date, the potential for scarred trees to occur within the investigation area is considered to be negligible.

**STONE ARRANGEMENTS:** Stone arrangements include circles, mounds, lines or other patterns of stone arranged by Aboriginal people. Some were associated with bora grounds or ceremonial sites and others with mythological or sacred sites.

Hill tops and ridge crests which contain stone outcrops or surface stone, and have been subject to minimal impacts from recent land use practices, are potential locations for stone arrangements. Considering the geology, along with the results of investigations to date, the potential for stone arrangements to occur within the investigation area is considered to be negligible.

## 4. METHODOLOGY

As outlined in Section 1.1, the investigation area comprises two adjoining properties, Robyn's Nest and Stage 5 Bellbird Ridge Estate, which have been the subject of Aboriginal heritage investigations prior to the introduction in 2010 of key changes to the NP&W Act and supporting policies, guidelines and regulations (DECCW 2010b, 2010c).

Following discussions with the OEH (Dr Philip Boot, *pers. comm.*, 2011), it is the intention of the current assessment to build on the existing detailed assessments and to address to the extent feasible (given the history of investigations and consultation to date, including the conduct of test excavations under an OEH AHIP) the OEH guidelines relevant to the subsequent lodgement of a Section 90 AHIP application for the Proposal. These guidelines include the:

- ❑ DECCW (2010b) *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*;
- ❑ DECCW (2010c) *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* policy; and
- ❑ OEH (2011a) *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*.

It is not the intention of this report to repeat in detail the methodology and results of the previous investigations (refer to Kuskie 2005, Kuskie and Gutierrez 2000 and GML 2008).

GML (2008) undertook an assessment of the Robyn's Nest portion of the investigation area, including register searches, background research, consultation with the Bega LALC, an archaeological survey and preparation of a detailed report outlining the results (refer to Section 3.2.3).

South East Archaeology undertook an initial assessment of Stages 3-5 of Bellbird Ridge Estate in 2000, involving register searches, background research, consultation with the BTAEC and Bega LALC, an archaeological survey with these organisations, and preparation of a detailed report outlining the results (Kuskie and Gutierrez 2000) (refer to Section 3.2.1).

A program of sub-surface testing was undertaken by South East Archaeology for Stages 3 and 5 of Bellbird Ridge Estate in 2004. A Section 87 Permit (#2032) was obtained from the then Department of Environment and Conservation and the test excavations were completed in October 2004 and reported by Kuskie (2005). The testing involved the preparation and acceptance by DEC of a detailed research design (refer to Kuskie 2005: Section 4), test excavations along transects in Stage 5 (a total of 58 units measuring 0.5 x 0.5 metres were excavated at five metre intervals along three transects between 50 and 125 metres in length), full involvement of and consultation with the BTAEC (appointed by the Bega LALC to represent the local Aboriginal community in relation to heritage issues) and preparation of a detailed report outlining the results (Kuskie 2005) (refer to Section 3.2.2).

In order to address the objectives of the present assessment, the following key tasks have been undertaken:

- ❑ Updated searches of the OEH AHIMS and other relevant heritage registers and planning instruments (refer to Section 3.1);
- ❑ Updated background research (refer to Section 3);

- ❑ Aboriginal community consultation as per the OEH policy entitled *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*, including involvement of representatives of the two registered Aboriginal parties, the Bega LALC and Mr John Dixon's tribal consultancy organisation (now operating as Yukembuk Merung Ngarigo Consultancy Pty Ltd) in the survey and assessment (refer to Section 6);
- ❑ Archaeological inspection of the investigation area, focused on updating information for the Aboriginal heritage evidence (refer to Appendices 1 and 3 and Section 5);
- ❑ Reassessment of the significance of the Aboriginal heritage evidence (refer to Section 7);
- ❑ Reassessment of the potential impacts of the Proposal upon the identified and potential Aboriginal heritage evidence and cultural values (refer to Section 9);
- ❑ Presentation of updated recommendations for the management of the identified Aboriginal heritage evidence and potential heritage resources or cultural values (refer to Sections 10 and 11); and
- ❑ Preparation of a formal archaeological report to meet the requirements of the client, Bega Valley Shire Council and the OEH (primarily consistent with the 2010 *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*) to support lodgement of an AHIP application.

Field inspection of the investigation area was undertaken on 28 July 2011, by Peter Kuskie and Birgitta Stephenson of South East Archaeology, assisted by Mr John Dixon of Yukembuk Merung Ngarigo Consultancy Pty Ltd, and Mr Ross Thomas of the Bega LALC (refer to Section 6). Mr Greg Britten was present on behalf of the proponent and provided valuable advice about the nature of proposed works. The investigation occurred in accordance with the methodology dated 7 March 2011 that was provided to and accepted by the registered Aboriginal parties.

The investigation area has previously been subdivided into different *survey areas*, each representing a specific *environmental context*, which is a combination of a landform element and class of slope (for example, a gentle spur crest or level-very gentle flat; following McDonald *et al* 1984) (refer to Appendix 2, Table 3 and Figure 7). The survey areas are discrete, recurring areas of land for which it is assumed that the Aboriginal land use and resultant heritage evidence in one location may be extrapolated to other similar locations (Kuskie 2000). Each survey area is bordered by different survey areas that represent different environmental contexts. This subdivision is based on the assumption that Aboriginal people used different parts of the landscape in different ways, relating to things like the distance to water, distance to resources or type of landform unit.

The previous investigations have surveyed (physically inspect on foot) a sample from every survey area within the investigation area and sampled as much of the proposed impact area as feasible. The survey coverage has been updated here, with each *survey area* in Stage 5 assigned a unique reference code after the Merimbula Cove 'MC' initials (MC6, 10-13) and each *survey area* in Robyn's Nest renamed after the Merimbula Cove Robyn's Nest 'MCRN' initials (MCRN15-21) (refer to Appendix 2, Table 3 and Figure 7). This was assisted by the availability of better contour data and an aerial photograph, compared with the time of the original survey of Stage 5, and as a consequence some minor adjustments to the previously recorded survey areas have been made.

Within each *survey area*, the areas inspected on foot correspond to the DECCW (2010b) definition of *survey units*. The *survey units* typically comprised general transects through vegetated terrain, or coverage of and separate recording of specific exposure types, such as vehicle tracks. Data for each *survey unit* has been recorded separately on the survey area recording forms and representative photographs of survey units and survey areas were taken and are included in Appendix 4 where relevant and informative.

For the purposes of the analysis, *survey unit* data from each *survey area* are combined (refer to Appendix 2), and data from each survey area can be combined with comparable survey areas to analyse coverage and artefact density with respect to environmental variables such as landform element and slope (refer to Table 3). For a thorough discussion of the rationale for use of the individual artefact as the basic unit of analysis, including the problems with open artefact site definitions due to exposure/obscurement issues, and the margins of error, variables and constraints associated with the data collection procedures and analysis, refer to the comprehensive discussion in Kuskie (2000).

Within each survey area:

- ❑ Additional inspection was made for stone artefact and shell midden evidence, focusing on areas with ground surface visibility; and
- ❑ Additional inspection was made for obtrusive site types (such as scarred trees, rock shelters, stone arrangements and grinding grooves).

Records were updated for the environmental conditions of every *survey area* inspected (for example, landform unit, slope, surface visibility, detection limiting factors and levels of ground disturbance) and heritage evidence identified or potentially present.

Registered Aboriginal parties were asked of their cultural knowledge relevant to determining the cultural significance of Aboriginal objects or places within the investigation area. This may include knowledge or cultural values relating to:

- ❑ Sites or places associated with ceremonies, spiritual/mythological beliefs and traditional knowledge, which date from the pre-contact period and have persisted until the present time;
- ❑ Sites or places associated with historical associations, which date from the post-contact period and are remembered by people today (for example, plant and animal resource use areas and known camp sites); and
- ❑ Sites or places of contemporary significance (including areas for which Aboriginal objects remain), for which the significance has been acquired in recent times.

The identified sites were inspected, and their significance, potential impacts and potential management strategies were discussed with the Aboriginal representatives. Site recordings were updated (refer to Appendices 1 and 3).

The results of the investigation are presented in Section 5. Photographs of the identified sites are presented in Appendices 1 and 3 and additional photographs of survey areas and the general investigation area are presented in Appendix 4.

## 5. RESULTS AND DISCUSSION

### 5.1 Survey Coverage

For the purposes of this Aboriginal cultural heritage assessment, the investigation area comprises an area of approximately 8.8 hectares, as marked on Figure 2.

The survey coverage data is reconstructed below from Kuskie and Gutierrez (2000), GML (2008) and the present re-inspection (refer to Table 3). However, this reconstructed data should be viewed as a general estimate only, as the total area sampled and effective survey coverage include portions of survey areas outside of the immediate investigation area (as it was not possible to retrospectively separate out that coverage data) and excludes GML's (2008) coverage data which was not available and/or not possible to incorporate.

The investigation area has been subdivided into 12 survey areas, all of which were inspected for Aboriginal heritage evidence. The environmental contexts surveyed include the three landform elements and three classes of slope present (Table 3). The locations of the individual survey areas are marked on Figure 7 and descriptions are presented in Appendix 2. A summary of the survey coverage is presented in Table 3 for the combined environmental contexts.

The total reconstructed survey coverage (ground physically inspected for heritage evidence) equated to approximately 8,114 m<sup>2</sup>, or 9% of the heritage study area (including minor adjacent areas). As this coverage only refers to an area of several metres width directly inspected by each member of the survey team, the actual coverage for obtrusive site types (eg. scarred trees) was significantly greater than this. The total effective survey coverage (*visible* ground surface physically inspected with potential to host heritage evidence) equated to around 2,963 m<sup>2</sup>, or 3.3% of the heritage study area.

Conditions of surface visibility were generally low across the investigation area, due to the dense cover of grass and other vegetation (refer to Plates in Appendix 4). Archaeological visibility, the actual visible ground surface with potential for heritage evidence (accounts for factors such as ground disturbance and sediment deposition), was generally similar to surface visibility. Exposures tended to be present along the vehicle tracks, and in minor erosion scours or disturbed areas in clearings.

Several mature native trees exist within the investigation area and where identified, these were inspected for evidence of Aboriginal scarring. Virtually no rock is exposed within the investigation area.

Notwithstanding the low surface visibility and resulting low proportion of effective survey coverage as a percentage of the entire investigation area, the level and nature of effective survey coverage is considered satisfactory enough to present an effective assessment of the Aboriginal heritage resources identified and potentially present within the investigation area, particularly given the results of the test excavations in Stages 3 and 5 and salvage excavations and monitoring in Stage 4. The coverage was relatively comprehensive for obtrusive site types, but limited for the less obtrusive stone artefacts.

In view of the predictive modelling and results obtained from the sample of effective coverage and previous excavations, monitoring and salvage, it is concluded that the available evidence provides a valid basis for formulating recommendations for the management of the identified and potential Aboriginal heritage resources.



Table 3: Environmental contexts - survey coverage and artefact summary.

Survey Areas	Slope	Landform Element	Area (m <sup>2</sup> )	% Comprises of Total Heritage Study Area <sup>1</sup>	Total Area Sampled (m <sup>2</sup> ) <sup>2</sup>	% Sampled of Context	Effective Survey Coverage Total (m <sup>2</sup> ) <sup>3</sup>	% Effective Survey Coverage of Context	Total # Artefacts <sup>3</sup>	Artefact Density per m <sup>2</sup> of Effective Survey Coverage
MCRN20	level - very gentle	spur crest	10,430	11.5%	1,200	11.5%	30	0.3%	2	0.067
MC11, MCRN16, MCRN18	gentle	spur crest	23,441	25.9%	2,295	9.8%	431	1.8%	26	0.060
MC6, MC10, MC12, MCRN17, MCRN19, MCRN21	moderate - steep	simple slope	46,299	51.2%	4,044	8.7%	2,308	5.0%	12	0.005
MC13	gentle	drainage depression	793	0.9%	75	9.5%	68	8.6%	0	-
MCRN15	moderate	drainage depression	9,561	10.6%	500	5.2%	126	1.3%	0	-
			90,524 (Total)	100% (Total)	8,114 (Total)	9.0% (Mean)	2,963 (Total)	3.3% (Mean)	40 (Total)	0.013 (Mean)

1. Heritage study area includes the investigation area and minor additional areas of immediately adjacent land that were sampled during the GML (2008) survey and South East Archaeology re-inspection in 2011.

2. The total area sampled and effective survey coverage include portions of survey areas outside of the immediate investigation area (as it is not possible to retrospectively separate out that coverage data) and excludes GML (2008) coverage data which was not available and/or not possible to incorporate. Hence, the reconstructed data should be viewed as a general estimate only.

3. Coverage and artefacts recorded during the 2011 reinspection only.



Figure 7: Location of archaeological survey areas (purple outlines) and Aboriginal heritage evidence (pink shapes) within the investigation area (red border) (100 metre MGA grid; two metre contours; Stage 5 test excavation transects in red).

## 5.2 Aboriginal Heritage Evidence

Eleven loci of visible Aboriginal heritage evidence<sup>4</sup> are known to occur within or immediately adjacent to the investigation area. These sites (with updated MGA references) are listed in Table 4 and revised mapping of their locations is presented in Figure 7. Full descriptions of these sites are presented in Appendix 1 for the sites recorded by GML (2008) and Appendix 3 for the sites recorded by South East Archaeology (Kuskie and Gutierrez 2000, Kuskie 2005).

The sites recorded within the investigation area comprise six loci of open artefacts and shell midden, three open artefact loci and two shell midden loci (without associated artefacts). Two site loci, MC10/B and MC10/C, occur marginally to the south of the investigation area, but may extend to within the investigation area and could be subject to indirect impacts from use of the vehicle track on which they are located.

No Aboriginal heritage sites are listed on any other heritage registers or planning instruments (refer to Section 3.1). The registered Aboriginal stakeholders did not disclose any specific knowledge of any traditional or historical cultural values/places (for example, sites of traditional cultural significance or historically known places or resource use areas) within the investigation area. However, the possibility cannot be excluded that Aboriginal values or associations may exist that were not divulged to South East Archaeology by the persons consulted.

Table 4: Aboriginal site loci present within the investigation area.

Site Name	OEH #	Site Type	MGA Easting	MGA Northing	Survey Area	Landform
RN1	62-6-0690	open artefact scatter and midden	757208	5913518	MCRN18	spur crest
RN2	62-6-0691	midden	757264	5913471	MCRN18	spur crest
RN3	62-6-0692	open artefact scatter and midden	757353	5913594	MCRN18	spur crest
RN4	62-6-0693	open artefact scatter	757449	5913590	MCRN20	spur crest
RN5 = MC10/A	62-6-0694	open artefact scatter and midden	757396	5913411	MCRN17	simple slope
RN6	62-6-0695	midden	757459	5913425	MC11	spur crest
MC6/C	62-6-0632	open artefact scatter	757500	5913618	MC6	simple slope
MC10/B	62-6-0470	open artefact scatter and midden	757407	5913390	MCRN17	simple slope
MC10/C	62-6-0470	open artefact scatter and midden	757470	5913390	MC10	simple slope
MC11/A	62-6-0469	open artefact scatter and midden	757490	5913420	MC11	spur crest
MC12/A	62-6-0471	open artefact scatter	757533	5913434	MC12	simple slope

<sup>4</sup> Sites MC10, MC11 and MC12 were listed on AHIMS as broad area sites, which in the case of MC10 incorporates multiple loci (MC10/A, MC10/B and MC10/C) of visible evidence. One of these loci (MC10/A) equates to site RN5.

### 5.3 Discussion

The results of the investigation are discussed below, including the potential integrity of the evidence, nature of the evidence and interpretations of the evidence, building on the previous assessments of Kuskie and Gutierrez (2000), Kuskie (2005) and GML (2008), but not seeking to repeat the extensive evidence contained within those reports.

#### *Integrity:*

The integrity of the identified sites and the remainder of the investigation area can primarily be assessed for surface evidence only through examination of land use impacts. Controlled excavation enables integrity to be assessed through the horizontal and vertical distribution of artefacts and by conjoining items.

As discussed in Section 2, recent non-Aboriginal land-use practices have had some impacts on the investigation area (Plates 1 - 4, Appendix 4), including impacts from:

- ❑ Vegetation removal;
- ❑ Construction, maintenance and use of vehicle tracks;
- ❑ Construction of the existing Robyn's Nest facilities;
- ❑ Recreational use;
- ❑ Previous corn crops, particularly in Stage 5; and
- ❑ Essential services.

Levels of ground disturbance were recorded during the surveys, after McDonald *et al* (1984) (Appendix 2). The survey areas typically exhibited low to moderate levels of ground disturbance. By virtue of their identification in exposures created by ground disturbance, the identified sites tend to exhibit moderate levels of disturbance. However, at many sites, there exists a high potential for deposits that may be *in situ* and/or of research value, particularly adjacent to the loci and elsewhere in the broader survey areas (refer to Appendices 1 and 3).

As discussed in Section 3 and Appendices 1 and 3, the potential for further evidence of middens to occur (eg. in areas currently obscured by vegetation and/or soil) has been assessed as high, particularly in the zone within approximately 80 metres of the lake margin. The potential for further artefact evidence to occur has also been assessed as high, particularly in this zone within approximately 80 metres of the lake margin, but also on the level to gentle crests (survey areas MC11, MCRN16, MCRN18 and MCRN20; refer to Figure 8). Any sub-surface deposits that do exist may exhibit reasonable integrity. Despite all of the recent impacts to the Stage 4 study area and the perceived 'high' level of ground disturbance, several middens were identified that contained *in situ* sub-surface midden deposits. It was therefore inferred that even where levels of ground disturbance initially appear high, sub-surface deposits that are *in situ* and potentially of research value may exist (Kuskie 2004).

Table 5: Description of stone artefacts recorded during the present heritage inspection.

Site Name	Artefact #	Colour	Stone Material	Lithic Item Type	Size (mm)	Cortex Amount (%)	Cortex Type	Comments
RN3	1	white	quartz	core	35x22x18			c757363:5913572
RN3	2	white	quartz	lithic fragment	-			c757363:5913572
RN4	1	purple	banded rhyolite	flake - distal	22x18x5			c757460:5913536
MC10/A	1	grey/cream	banded rhyolite	flake	39x20x11			on track at junction; c757394:5913403
MC10/A	2	grey/cream	banded rhyolite	flake	35x23x13			on track at junction; c757394:5913403
MC10/B	1	grey	silcrete	lithic fragment	25x18x6			on track; c757407:5913390
MC10/C	1	cream	rhyolite	flake	29x15x6			c757484:5913403; north end of site; on track
MC10/C	2	grey/purple	rhyolite	flake	30x25x6			on track
MC10/C	3	grey/purple	rhyolite	core	38x20x15			on track; 2 scars, 1 platform
MC10/C	4	grey	rhyolite	flake	44x15x9			on track; elongated, tip snapped
MC10/C	5	grey	chert	core	23x15x10			on track; 3 scars, 1 platform
MC10/C	6	dark grey	rhyolite	retouched flake	25x30x10			on track; 2 margins retouch/edge damage 20mm and 15mm, concave
MC10/C	7	cream	rhyolite	flake - longitudinal	17x13x5			on track; c757480:5913400
MC10/C	8	purple	rhyolite	flake	16x13x3			on track
MC10/C	9	purple	banded rhyolite	core	35x34x28			on track; 6 scars, 4 platforms
MC10/C	10	grey	rhyolite	lithic fragment	20x12x5			on track; c757475:5913392
MC10/C	11	grey	rhyolite	flake	35x22x7			on track; c757459:5913383; south end of site
MC11/A	1	grey	rhyolite	core	52x40x26			retouched flake; 4 scars, 1 platform on ventral surface; on track; c757494:5913411
MC11/A	2	dark grey	rhyolite	lithic fragment	16x10x6			on track
MC11/A	3	grey/purple	banded rhyolite	flake	20x17x6			on track
MC11/A	4	cream/purple	banded rhyolite	flake	42x20x13			on track
MC11/A	5	dark grey	rhyolite	lithic fragment	20x12x6			on track; c757491:5913413
MC11/A	6	dark grey	rhyolite	bond point butt	16x12x5			on track; snapped at mid-section
MC11/A	7	dark grey	rhyolite	lithic fragment	24x11x6			on track
MC11/A	8	dark grey	rhyolite	utilised flake	35x26x6			edge damage 25mm one lateral margin
MC11/A	9	cream	rhyolite	flake	44x30x10			c757487:5913412
MC12/A	1	grey	rhyolite	flake	36x20x8			on vehicle track; c757514:5913423

### *Lithic Items:*

GML (2008) recorded 19 stone artefacts within sites RN1 - RN6 (refer to Table 2), predominantly flakes and flaked pieces, but also flake portions, a core, a hammerstone and a manuport. The stone materials were reported as mainly 'pink and grey banded quartzite' (which may be banded rhyolite or silcrete), silcrete and chert.

Kuskie and Gutierrez (2000) recorded 20 artefacts in sites MC10, 11 and 12. Kuskie (2005) recorded two artefacts in site MC6/C during the test excavations, one on the surface and one in a test unit.

During the present reinspection, 27 artefacts were recorded in the total investigation area, mostly in sites MC10-12 (refer to Table 5).

This current assemblage is dominated (89%) by items (eg. flakes, flake portions, lithic fragments and cores) that may represent the fragmented debris of on-site knapping of primary flakes and/or microblades or other on-site fracture, such as accidental breakage, or accidental discard. One retouched flake, one utilised flake and one bondi point portion were also recorded. The latter indicates potential hunting activity on site. While their function is not known with certainty, most archaeologists consider that bondi points (microliths) were used in armatures of hunting and fighting spears (Mulvaney and Kamminga 1999:235-36). Microliths may have served as barbs, or else as lacerators intended to disable an enemy or prey by causing haemorrhage.

The artefacts were predominantly made from rhyolite or banded rhyolite (85%), with two quartz and single chert and silcrete items.

Rhyolite is solidified acid lava containing free quartz. It is the fine-grained volcanic or extrusive equivalent of granite (rich in quartz and alkali-feldspars). Rhyolite is typically light in colour, relatively light in weight and often has a flinty appearance. Two principal varieties can be identified, banded and porphyritic. Banded rhyolite is formed by the rapid cooling of lava and exhibits flow banding, involving swirling layers of different colour and texture. Porphyritic rhyolite contains small, widely spaced crystal inclusions. Sources of rhyolite occur to the north of the investigation area around Wallagoot Lake and to the south around Pambula Lake. Several Aboriginal quarries have been identified in the region (Evans 1992, Geering 1983a) and a local source is inferred.

### *Midden Material:*

Shell was present in eight of the site loci and comprises estuarine shellfish species, predominantly cockle. Cockle, mud oyster and mud whelk were all readily available from the adjacent drowned estuarine embayment of Merimbula Lake. The shores of the lake are shallow and contain extensive sandy flats. Hence, the evidence represents procurement and consumption of shell obtained from within the immediate locality. Much of the shell is weathered and fragmented, but whole items all tend to be within an edible size range.

While some of the midden evidence represents sparse scatters, partially dispersed by post-depositional events, dense concentrations of shell are evident in a number of sites (eg. RN2, RN5, RN6 and MC11/A).



### *Spatial Patterning:*

The identified artefact evidence may only represent a fraction of the entire artefact resource that is present within the investigation area, because the majority of evidence is likely to be currently obscured by vegetation and soil.

Comprehensive studies in other locations (for example, Kuskie 2000) demonstrate that artefacts occur in a widespread distribution across the landscape, with higher artefact densities, representing a greater focus of Aboriginal activity, tending to occur in primary and secondary resource zones than in other contexts. Many major surveys in eastern Australia have identified a virtually continual distribution of artefacts across the landscape, but at varying densities (for example, Hall 1991, 1992, Hall and Lomax 1993, Kuskie 2000, Packard 1991, 1992). The results of large area surveys and major excavation projects (for example, Kuskie and Kamminga 2000, Kuskie and Clarke 2004, Kuskie 2009) lend support to arguments that the landscape should be viewed as an archaeological continuum, in which 'sites' represent points where higher frequencies of activities have occurred (Foley 1981).

However, defining a 'site' is problematical, due to the manner in which the evidence is exposed and the nature of the underlying human behaviour that has created the evidence. Most evidence is exposed within areas of erosion or ground disturbance. Therefore, delineating the extent of an open artefact site is not realistically possible without extensive sub-surface testing. The recorded evidence has typically been affected by post-depositional processes to such an extent that definition of a *cultural site* may not be possible (a discrete, culturally defined unit beyond which cultural material is absent). At such locations where artefacts have been identified, unless the items can be demonstrated to be culturally and temporally associated, the evidence cannot be said to represent a *cultural site*. Instead, the evidence may reflect a number of different occupational events that are spatially superimposed or mixed by post-depositional processes, but are not temporally or culturally related. In addition, the 'site' locations and boundaries would simply reflect the distribution and size of surface exposures. The definition of a 'site' is therefore an arbitrary one, which offers benefits in terms of planning and management, but does not necessarily reflect the underlying human behaviour that created the evidence (*cf.* Dunnell and Dancey 1983).

Many survey assessments have used arbitrary site definitions such as 'two or more artefacts within 50 or 100 metres of each other' or 'concentrations of artefacts at a higher density than *background scatter*'. Neither concept is appropriate in a 'cultural landscape' approach. In recognition of the problems of 'site' definition as discussed above, the definition of an open artefact site 'as the presence of one or more stone artefacts within a *survey area*' is more appropriate (Kuskie 2000). The *survey area* will always equate to a discrete *environmental context* (a particular combination of landform element and class of slope), bounded by different environmental contexts. While the visible site locus boundaries may be defined by the extent of visible evidence, across the entire *survey area* in which a site is identified, there exists a *potential resource* of comparable evidence. This recognition of the potential resource overcomes the problem of the nature of exposure of evidence (ie. 'sites' simply equate to 'surface exposures').

The 'broad-area' approach is based on the assumption that different environmental contexts provided different sets of constraints to Aboriginal occupation, which resulted in different patterns of land use. Following from this is the expectation that land use patterns may differ between environmental contexts and that this may result in the physical manifestation of different spatial distributions and forms of archaeological evidence. It is assumed that if the specific environmental context is repeated elsewhere within the investigation area, that similar evidence would exist in both locations, reflecting the similar underlying behaviour.

Following from these issues, it is apparent that concentrations of artefacts may represent many different and unrelated episodes of occupation. Therefore, by focusing the analysis on individual artefacts, issues of 'intra-site' spatial context become less critical. It is possible to compare the frequency of individual artefact and stone material types (measured against a constant unit of area, such as a square metre of effective survey coverage or a cubic metre of excavated soil sieved) with environmental variables, in order to test and refine a predictive model.

The investigation area has been subdivided into five *environmental contexts* (Table 3). These are discrete, recurring areas of land for which it is assumed that the Aboriginal land use and resultant heritage evidence in one location (for example, one *survey area*) may be extrapolated to other similar locations (for example, another *survey area* within the same environmental context). *Environmental contexts* are defined on the basis of two environmental variables:

- ❑ Firstly, *landform element* (following the definitions of McDonald *et al* 1984) (for example, ridge crest, spur crest, simple slope and flat); and
- ❑ Secondly, *class of slope* (following McDonald *et al* 1984) (for example, level to very gently inclined slopes of less than 1°45'; gently inclined slopes greater than 1°45' and less than 5°45', etc.).

*Environmental contexts* consist of all of the *survey areas* with a particular combination of landform element and slope (for example, three separate *survey areas* may be combined to form the 'gentle spur crest' context - refer to Table 3). As each *survey area* is by definition part of a single *environmental context* (although a number of similar 'survey areas' can make up the total), it is possible to compare and analyse other environmental variables on a fine-scale between each survey area and on a broader-scale between each context.

However, in relation to the present investigation area, the inferences that can be made from this comparison are severely limited by the small nature of the sample.

The site loci identified during the present survey occur on two of the three landform units present (simple slope and spur crest) and on all classes of slope.

Significantly, eight of the 11 sites, including almost all of the shell midden evidence, occurs in the zone within approximately 80 metres of the lake margin. However, as the results demonstrate, artefacts occur at further distances from the lake margin and shell midden evidence has also been identified at a further distance in site RN3 and the adjacent Stage 4 (Kuskie 2004). So while it is apparent from these results (notwithstanding issues relating to sampling and conditions of surface visibility) that there is a focus of evidence, both shell middens and artefacts, within approximately 80 metres of Merimbula Lake, further investigation may reveal information to the contrary.

Examination of artefact counts and densities between the different landform units, classes of slope and environmental contexts (refer to Table 3) typically removes biases created by different conditions of archaeological visibility or different levels of survey coverage. However, for the investigation area, the small sample of artefacts and effective survey coverage limit any conclusions. The artefact densities are very low across the heritage study area (mean of just 0.013 artefacts per square metre of effective survey coverage). There is a tentative trend for higher artefact density on the spur crest than on the simple slope.



### *Site Interpretation:*

The inferences that can be made about the nature of occupation at the identified sites or elsewhere in the investigation area are limited by the small nature of the sample.

Kuskie (2005) inferred that the evidence in site MC6/C, on the moderate simple slope within Stage 5, represents transitory movement and/or hunting and/or gathering without camping, undertaken in one or more episodes each of short duration. As with the same environmental context in Stage 4 (eg. sites MC6/A, MC6/B), the intensity of use of this moderate slope back from the lake margin is inferred to have been relatively low. Similarly, the evidence from RN4 and MC12/A may also represent transitory movement and/or hunting and/or gathering without camping.

The evidence at sites RN2 and RN6 is predominantly related to the procurement and consumption of shellfish from the adjacent Merimbula Lake. At sites RN1, RN3, RN5 - MC10/A, MC10/B, MC10/C and MC11/A, the evidence is related to both the procurement and consumption of shellfish and stone knapping, consistent with hunting/gathering without camping.

The present assessment does not result in any revision to the conclusions of Kuskie (2005), who inferred from the evidence obtained during the survey and test excavations at Bellbird Ridge and from other sources that:

- ❑ Numerous episodes of occupation occurred within the locality of the investigation area over the past 2,000 years or so, although many may have involved small groups of people and been for short durations of time;
- ❑ The primary activities represented are the consumption of meals, involving shellfish obtained from the adjacent Merimbula Lake, and stone knapping. The locality was not well suited to large-scale use or long term camping because of the absence of permanent potable water;
- ❑ Shellfish were procured from Merimbula Lake, possibly predominantly by women and children, and transported short distances to the sites where food preparation and consumption occurred. Cockles and to a lesser extent mud oysters were mainly collected, due to their abundance and relative ease of collection. A carrying bag was used to transport the shells. The meal events possibly involved small groups of people going about their daily hunting/gathering activities. The presence of men is indicated by certain artefact types. Food preparation may have involved the shellfish being cooked on top of a fire or being placed in the ashes to open the bivalves;
- ❑ Several locations on the moderate simple slope bordering Merimbula Lake were repeatedly visited, leading to the formation of mounded midden deposits (in Stage 3 of Bellbird Ridge);
- ❑ Stone materials were mostly procured from the local area, although some may have been obtained from further afield. Rhyolite and to a lesser extent silcrete and quartz were typically used. Intentional thermal alteration of silcrete appears to have occurred, although not necessarily directly on-site; and
- ❑ Minor frequencies of stone knapping occurred. Many of the discarded items do not represent specific activities, although it appears that at least microblades (and by extension, possibly microliths) were manufactured on-site.

Nevertheless, the small sample sizes, in terms of effective survey coverage and numbers of artefacts, are noted. Further detailed investigation (for example, involving excavation) may result in the identification of evidence that leads to a revision of these conclusions.

#### *Regional Context:*

The nature of the evidence from the investigation area and adjacent land can be compared with other studies and sites in the region (refer to Section 3.2). The primary purpose is to identify similarities and differences with other reported evidence, in order to provide a framework for interpreting representativeness and assessing potential cumulative impacts.

On a general level a number of similarities and differences can be identified between the evidence in the investigation area and other regional evidence outlined in Section 3.2, including:

- ❑ Predominance of shell midden evidence, with a relatively low number of stone artefacts, is comparable to the adjacent Merimbula Heights Estate sites (Hughes 1982a, 1983) and other estuarine embayment fringing contexts (eg. Sullivan 1981, 1982);
- ❑ Predominance of cockle in the midden deposits is comparable to the adjacent Merimbula Heights Estate sites (Hughes 1982a, 1983) and other middens bordering Merimbula Lake (Kuskie pers. obs., Barber 1998);
- ❑ Similar stone material and artefact types to those generally reported in the region;
- ❑ Predominance of evidence relating to non-specific stone flaking is comparable to the lithic evidence from the region;
- ❑ Relatively low density of artefacts is comparable to other sites in the region in similar environmental contexts; and
- ❑ Evidence occurs in similar environmental contexts to other locations in the region.

No specific aspects of the Bellbird Ridge Stage 5 or Robyn's Nest evidence appear to be rare or unusual or not replicated elsewhere within a regional context. Mounded midden deposits, such as those present in Stage 3 of Bellbird Ridge, have not been identified within the present investigation area.

#### *Reassessment of Predictive Model of Site Location:*

In view of the history of the project (previous archaeological surveys and test excavations) and nature of the present inspection, further reassessment of the predictive model of site location discussed in Section 3.5 is not warranted. The predictive statements in Section 3.5 remain current for the investigation area. In summary:

- ❑ The potential for bora/ceremonial, carved tree, grinding groove, lithic quarry, rock shelter, scarred tree and stone arrangement sites to occur is negligible;
- ❑ The potential for mythological or traditional sites to occur is very low or negligible;
- ❑ The potential for burial sites to occur is very low, but cannot be discounted;
- ❑ Within the zone extending approximately 80 metres inland from the shore of Merimbula Lake (refer to Figure 8) there is a high potential for sub-surface deposits of artefacts and midden to occur, including deposits that may be of research value. This includes the location of sites RN1, RN2, RN5 - MC10/A, RN6, MC10/B, MC10/C, MC11/A and MC12/A and the lower portions of survey areas MC10, MC11, MC12 and MCRN15-18;

- ❑ There is also a high potential for further artefact evidence to occur on the level to gentle crests further than 80 metres from the lake margin (survey areas MC11, MCRN16, MCRN18 and MCRN20; refer to Figure 8); and
- ❑ In the remainder of the investigation area, the potential for artefact deposits or middens of research value or significance is low, but a low-density distribution of artefacts consistent with 'background discard' may be present and occasional, small midden deposits cannot be discounted.

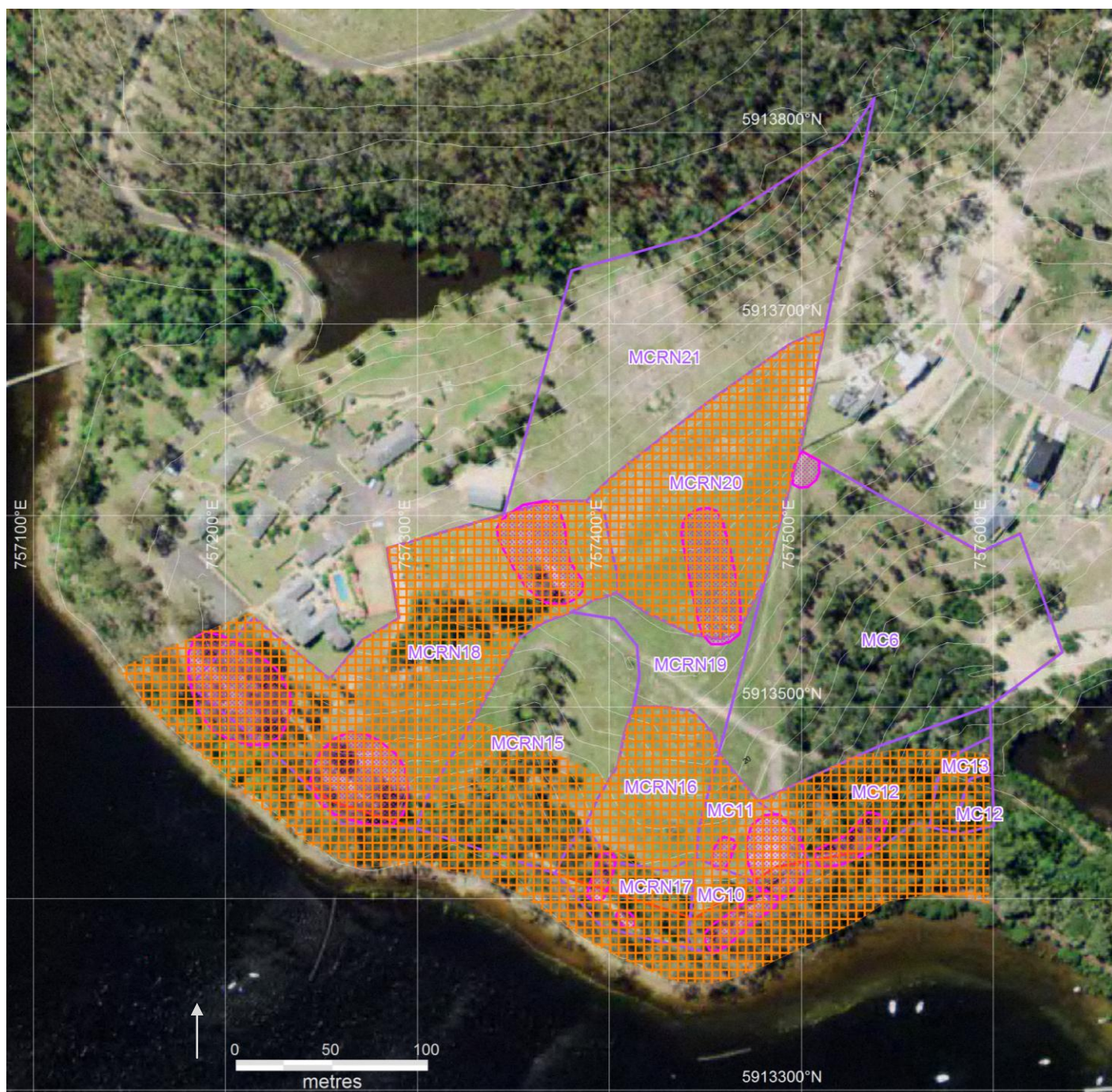


Figure 8: Location of zones of high potential (orange shading), archaeological survey areas (purple outlines) and Aboriginal heritage evidence (pink shapes) (100 metre MGA grid; two metre contours).

## 6. ABORIGINAL CONSULTATION

The investigation area lies within the boundaries of the Bega Local Aboriginal Land Council (LALC) and within an area of interest to other Aboriginal persons and organisations.

The previous heritage investigations have involved considerable consultation with the Aboriginal community, undertaken under the auspices of the then applicable OEH consultation policies:

- ❑ The initial survey assessment of Stage 5 by Kuskie and Gutierrez (2000) involved consultation with and participation in the field survey by the Bega Traditional Aboriginal Elders Council and Bega LALC, particularly John Dixon, David Dixon and Peter Jones;
- ❑ The test excavations in Stage 5 by Kuskie (2005) involved consultation with and participation in the excavations by the BTAEC (appointed by the Bega LALC to represent the local Aboriginal community in relation to heritage issues), particularly John Dixon, Steven Luff, Ross Thomas, Peter Jones and Wayne Bell; and
- ❑ The initial survey assessment of Robyn's Nest by GML (2008) involved consultation with and participation in the field survey by the Bega LALC (then represented by Ngarigo Consultancy Pty Ltd), particularly John Dixon and Ross Thomas.

However, in order to address changes to the NP&W Act and regulations, and to support an application for a Section 90 AHIP, the present Aboriginal cultural heritage assessment has involved another comprehensive program of consultation with the Aboriginal community that complies with the policy requirements of the OEH (refer to consultation database and relevant correspondence in Appendix 5). These requirements are specified in the policy entitled *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010c) and involve the following procedures (numbering follows the DECCW guidelines):

- 4.1.2) In order to identify Aboriginal people who may have an interest in the investigation area and hold knowledge relevant to determining the cultural significance of Aboriginal objects or places, providing written notification of the project to the relevant DECCW Environment, Protection and Regulation Group (EPRG) regional office, LALC, Local Council and Catchment Management Authority (CMA), along with the Registrar of Aboriginal Owners under the *Aboriginal Land Rights Act 1983* (Department of Aboriginal Affairs), National Native Title Tribunal and Native Title Services Corporation Ltd (NTSCORP)<sup>5</sup> including the name and contact details of the proponent, the location and a brief overview of the proposed project, and a request for advice on the contact details of such Aboriginal people, with a minimum 14 day response period;

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<sup>5</sup> Procedures 4.1.2 - 4.1.7 are not required where an approved native title determination exists over the entire investigation area. In this event, consultation is only required with the native title holders.



- 4.1.3) Providing written notification of the project directly to those Aboriginal persons/organisations that were identified in Procedure 4.1.2, along with the LALC, and placing an advertisement in a local newspaper circulated in the general location of the investigation area, explaining the project and its location. The notification includes the name and contact details of the proponent, the location and a brief overview of the proposal, a statement about the purpose of the consultation, an invitation for Aboriginal people with cultural knowledge relevant to the investigation area to register an interest and advice on privacy matters<sup>6</sup>, with a minimum 14 day response period<sup>7</sup>;
- 4.1.6) Providing a record of the names of each Aboriginal person who registered an interest along with a copy of that registration and the notification letter in Procedure 4.1.3 to the relevant DECCW EPRG regional office and LALC within 28 days of the closing date for registrations of interest;
- 4.2 & 4.3) Providing detailed information about the project, heritage impact assessment process and proposed heritage assessment methodology to all registered Aboriginal parties identified in Procedure 4.1, with a minimum 28 day response period for comments;
- 4.2 & 4.3) Considering any input received from the registered parties in finalising the heritage assessment methodology and process, and implementing the methodology in consultation with the registered Aboriginal parties. This included seeking input on knowledge of Aboriginal objects and places of cultural value to Aboriginal people within the investigation area and views on potential management strategies, and incorporated a field inspection of the investigation area;
- 4.3 & 4.4) Preparation of a draft Aboriginal heritage impact assessment report and seeking the views of registered Aboriginal parties on cultural values and potential management strategies through provision of a copy of the draft report to the registered parties, with a minimum 28 day response period for comments; and
- 4.3 & 4.4) Preparation of a final Aboriginal heritage impact assessment report that incorporates the input of the registered Aboriginal parties and the proponent's response to each submission made on the draft report, and making the final report available to the registered Aboriginal parties and the relevant LALC.

Compliance with Procedure #4.1.2 of the DECCW (2010c) policy was achieved through correspondence forwarded to the relevant organisations on 8 March 2011, with the following responses received:

- ❑ The Registrar of Aboriginal Owners responded on 15 March 2011 advising that there are no Registered Aboriginal Owners for this area but that the Bega LALC may be able to assist further;
- ❑ Yukembruk Merung Ngarigo Consultancy Pty Ltd registered their interest in the assessment on 10 March 2011; and
- ❑ DECCW (now the OEH) responded on 8 April 2011 and advised that the Bega LALC, Eden LALC, Merrimans LALC, South East Coast Gadu Elders Aboriginal Corporation, Mr Lionel Mongta, Bega Traditional Aboriginal Elders Council, Yukembruk Merung Ngarigo Consultancy Pty Ltd, Colleen Dixon, Twofold Aboriginal Corporation, Yukkumbruk and Walbunja Aboriginal Corporation should be contacted.

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<sup>6</sup> Procedure 4.1.5.

<sup>7</sup> Procedure 4.1.4.

The Native Title Tribunal was contacted and the registers searched on 27 January 2011. No Determinations of Native Title or registered Native Title Determination applications (Claimants) or Indigenous Land Use Agreements apply to the investigation area.

As a result of the OEH advice, Procedure #4.1.3 of the DECCW (2010c) consultation policy was then implemented by writing to the organisations named above, with an invitation to register an interest. An advertisement was also placed in the Public Notices section of The Merimbula News Weekly on 9 March 2011 (refer to Appendix 5).

At the conclusion of these procedures, two organisations (Bega LALC and Yukembruk Merung Ngarigo Consultancy Pty Ltd) and one individual (Mr Lionel Mongta) had registered an interest in the assessment, as listed in Table 6.

Compliance with procedure #4.1.6 of the DECCW (2010c) consultation policy was achieved on 2 May 2011 by providing copies of the required information to the OEH and Bega LALC.

As per procedures 4.2 and 4.3 of the DECCW (2010c) consultation policy, all three registered parties were consulted about the proposed methodology for the investigation (refer to Appendix 5).

The Bega LALC and Yukembruk Merung Ngarigo Consultancy Pty Ltd responded to the proponent's selection criteria for those registered parties wishing to be considered for paid participation in the investigation within the required response time. Both organisations also agreed with the proposed methodology. Responses from both registered organisations provided details of their respective experience in heritage assessments and traditional and historical connections with the locality (refer to Appendix 5). No response was received from Mr Lionel Mongta.

The proponent engaged a representative from one of the registered parties (Bega LALC) that responded to the selection criteria to assist with the field investigation. The other registered parties, Yukembruk Merung Ngarigo Consultancy Pty Ltd and Mr Lionel Mongta, were invited to attend on an unpaid basis. Yukembruk Merung Ngarigo Consultancy Pty Ltd accepted that invitation.

The field inspection was undertaken on 28 July 2011, by Peter Kuskie and Birgitta Stephenson of South East Archaeology, assisted by Ross Thomas of the Bega LALC and John Dixon of Yukembruk Merung Ngarigo Consultancy Pty Ltd.

Compliance with procedures 4.3 and 4.4 of the DECCW (2010c) consultation policy was achieved by providing copies of the draft heritage assessment report to the three registered Aboriginal parties, with a request for their comment, followed by preparation of this final report incorporating and addressing any input received. The only comments received were from the Yukembruk Merung Ngarigo Consultancy who agreed with the recommendations (refer to Appendix 5).

Copies of the final report will be made available to the registered Aboriginal parties.

Table 6: Summary of registered Aboriginal parties involvement.

<b>Registered Party</b>	<b>Date Registered</b>	<b>Sent Project Information, Methods and Selection Criteria</b>	<b>Responded to Methods and Selection Criteria</b>	<b>Participated in Field Survey</b>
Yukembuk Merung Ngarigo Consultancy Pty Ltd	10/3/11	2/5/11	31/5/11	28/7/11
Bega Local Aboriginal Land Council	16/4/11	2/5/11	31/5/11	28/7/11
Lionel Mongta	26/4/11	2/5/11	-	-



## 7. SIGNIFICANCE ASSESSMENT

### 7.1 Criteria

The information contained within this report, along with an assessment of the significance of the Aboriginal heritage evidence, provides the basis for the OEH to make informed decisions regarding the management and degree of protection which should be afforded to specific Aboriginal heritage sites.

The significance of Aboriginal heritage evidence can be assessed along the following criteria, widely used in Aboriginal heritage management, derived from the relevant aspects of the ICOMOS Burra Charter:

- I. Scientific (Archaeological) value;
- II. Importance to Aboriginal people (Cultural value);
- III. Educational value;
- IV. Historic value; and
- V. Aesthetic value.

Greater emphasis is generally placed on scientific and cultural criteria when assessing the significance of Aboriginal heritage evidence in Australia.

#### Scientific (Archaeological) Value:

Scientific value refers to the potential usefulness of heritage evidence to address further research questions, the representativeness of the evidence, the nature of the evidence and its state of preservation.

#### *Research Potential:*

Research potential refers to the potential for information derived from further investigation of the evidence to be used for answering current or future research questions. Research questions may relate to any number of issues concerning past human culture, human behaviour generally or the environment. Numerous locations of heritage evidence have research potential. The critical issue is the threshold level, at which the identification of research potential translates to significance/importance at a local, regional or national level.

Several key questions can be posed for each location of heritage evidence:

- ☐ Can the evidence contribute knowledge not available from any other resource?
- ☐ Can the evidence contribute knowledge, which no other such location of evidence can?
- ☐ Is this knowledge relevant to general questions about human history, past environment or other subjects?

Assessing research potential therefore relies on comparison with other evidence in local and regional contexts. The criteria used for assessing research potential include the:

- a) Potential to address locally specific research questions;
- b) Potential to address regional research questions;
- c) Potential to address general methodological or theoretical questions;
- d) Potential deposits; and
- e) Potential to address future research questions.

In terms of meeting a threshold level to have significant research potential, the particular questions asked of the evidence should be able to contribute knowledge that is not available from other resources or evidence (either on a local or regional scale) and are relevant to general questions about human history, past environment or other subjects.

#### *Representativeness:*

Representativeness is generally assessed at local, regional and national levels. It is an important criterion, because the primary goal of cultural resource management is to afford greatest protection to a representative sample of Aboriginal heritage evidence throughout a region. The more unique or rare evidence is, the greater its value as being representative within a regional context.

The main criteria used for assessing representativeness include:

- a) The extent to which the evidence occurs elsewhere in the region;
- b) The extent to which this type of evidence is subject to existing or potential future impacts in the region;
- c) The integrity of the evidence compared to that at other localities in the region;
- d) Whether the evidence represents a prime example of its type within the region; and
- e) Whether the evidence has greater potential for educational or demonstrative purposes than at other similar localities in the region.

#### *Nature of Evidence:*

The nature of the heritage evidence is related to representativeness and research potential. The less common the type of evidence is, the more likely it will have representative value. The nature of the evidence is directly related to its potential to be used in addressing present or future research questions. Criteria used in assessing the nature of the evidence include the:

- a) Presence, range and frequency of stone materials;
- b) Presence, range and frequency of artefact types; and
- c) Presence and types of other features.

A broader range of stone and artefact types generally equates to the potential for information to address a broader range of research questions. The presence of non-microlith and microlith tool types also equates to higher potential to address relevant research questions. The presence and frequency of particular stone or artefact types or other features also has relevance to the issue of representativeness (for example, a rare type may be present).

### *Integrity:*

The state of preservation of the evidence (integrity) is also related to representativeness and research potential. The higher the integrity of evidence, the greater the level of scientific information likely to be obtained from its further study. This translates to greater importance for the evidence within a local or regional context, as it may be a suitable example for preservation within a sample representative of the entire cultural resources of a region.

The criteria used in assessing integrity include:

- a) Horizontal and vertical spatial distribution of artefacts;
- b) Preservation of intact features such as midden deposits, hearths or knapping floors;
- c) Preservation of site contents such as charcoal and shell which may enable accurate direct dating or other analysis; and
- d) Preservation of artefacts which may enable use-wear/residue analysis.

Generally, many of these criteria can only be applied to evidence obtained by controlled excavation. High levels of ground disturbance limit the possibility that the evidence would surpass the threshold of significance on the basis of integrity (ie. the area would be unlikely to possess intact spatial distributions, intact features, *in situ* charcoal or shell, etc).

### Aboriginal (Cultural) Significance:

Aboriginal (cultural) significance refers to the value placed upon Aboriginal heritage evidence by the local Aboriginal community.

All heritage evidence tends to have some contemporary significance to Aboriginal people, because it represents an important tangible link to their past and to the landscape. Heritage evidence may be part of contemporary Aboriginal culture or be significant because of its connection to spiritual beliefs or as a part of recent Aboriginal history.

Consultation with the local Aboriginal community is essential to identify the level of Aboriginal significance.

### Educational Value:

Educational value refers to the potential of heritage evidence to be used as an educational resource for groups within the community.

### Historic Value:

Historic value refers to the importance of heritage evidence in relation to the location of an historic event, phase, figure or activity.

### Aesthetic Value:

Aesthetic value includes all aspects of sensory perception. This criterion is mainly applied to art sites or mythological sites.

## 7.2 Significance of Heritage Evidence Within the Investigation Area

Eleven Aboriginal heritage site loci have been identified within or immediately adjacent to the investigation area. The significance of these sites is assessed below in relation to the criteria presented in Section 7.1, and following from earlier assessments by Kuskie and Gutierrez (2000), Kuskie (2005) and GML (2008).

The sites do not surpass the threshold for significance in relation to aesthetic, educational or historic criteria. Partially this is a result of the relatively unobtrusive nature of the evidence itself and partially due to the levels of existing impacts to the natural context of the sites.

All Aboriginal heritage evidence tends to have some contemporary significance to Aboriginal people, because it represents an important tangible link to their past and to the landscape. Consultation with members of the local Aboriginal community was undertaken to identify the level of Aboriginal significance. Representatives of the Bega LALC and Yukembruk Merung Ngarigo Consultancy Pty Ltd expressed a strong interest in the identified heritage evidence and its significance to the Aboriginal community.

In acknowledgment that the Aboriginal community themselves are in the best position to identify levels of cultural significance, the remainder of this assessment focuses on the potential scientific values of the heritage evidence. The statement of scientific significance is in no way intended to prioritise scientific values over cultural values or to lessen the importance of the views of the Aboriginal community.

### *Sites RN1, RN2 and RN5 - MC10/A:*

Sites RN1 and RN2 are assessed as being of low to potentially moderate scientific significance within a local context on the basis that:

- ❑ The sites are of low representative value within a regional context. Similar contexts exist elsewhere around estuarine lakes on the Far South Coast (eg. Merimbula Lake, Pambula Lake and Wallagoot Lake). The context and nature of the identified heritage evidence within the sites are not unique or rare within the locality or the region;
- ❑ The sites exhibit a low range of artefact and stone material types and/or shell content, and a limited range of inferred activity types, with no particularly rare or unusual items;
- ❑ The sites have been affected by post-depositional impacts, and consequently the identified evidence is of a generally low integrity; and
- ❑ There is a high potential for sub-surface deposits of artefacts and midden to occur, including deposits that may be *in situ* and of research value, in areas of lower ground disturbance. If substantial sub-surface deposits are identified, the significance may be upgraded on the basis of research value.

### *Site RN3:*

Site RN3 is assessed as being of low scientific significance within a local context on the basis that:

- ❑ The site is of low representative value within a regional context. Similar contexts exist elsewhere around estuarine lakes on the Far South Coast (eg. Merimbula Lake, Pambula Lake and Wallagoot Lake). The context and nature of the identified heritage evidence within the site is not unique or rare within the locality or the region;

- ❑ The site exhibits a low range of artefact and stone material types and limited shell content, and a limited range of inferred activity types, with no particularly rare or unusual items;
- ❑ The site has been affected by post-depositional impacts, and consequently the identified evidence is of a generally low integrity; and
- ❑ Although there is a high potential for sub-surface deposits of artefacts to occur in areas of lower ground disturbance, these are not anticipated to be of high research value.

*Site RN4:*

Site RN4 is assessed as being of low scientific significance within a local context on the basis that:

- ❑ The site is of low representative value within a regional context. Similar contexts exist elsewhere around estuarine lakes on the Far South Coast (eg. Merimbula Lake, Pambula Lake and Wallagoot Lake). The context and nature of the identified heritage evidence within the site is not unique or rare within the locality or the region;
- ❑ The site exhibits a very low range of artefact and stone material types, and a limited range of inferred activity types, with no rare or unusual items;
- ❑ The site has been affected by post-depositional impacts, and consequently the identified evidence is of a moderate integrity; and
- ❑ Although there is a high potential for sub-surface deposits of artefacts to occur, these are not anticipated to be of high research value.

*Site RN6:*

Site RN6 is assessed as being of low scientific significance within a local context on the basis that:

- ❑ The site is of low representative value within a regional context. Similar contexts exist elsewhere around estuarine lakes on the Far South Coast (eg. Merimbula Lake, Pambula Lake and Wallagoot Lake). The context and nature of the identified heritage evidence within the site is not unique or rare within the locality or the region;
- ❑ The sites exhibits limited shell content and is small in extent;
- ❑ The site has been affected by post-depositional impacts, and consequently the identified evidence is of a low integrity; and
- ❑ Although there is a moderate potential for sub-surface deposits of artefacts to occur, these are not anticipated to be of high research value.

*Site Merimbula Cove 6/C (MC6/C):*

Site MC6/C is assessed as being of low scientific significance within a local context on the basis that:

- ❑ The site is of low representative value within a regional context. Similar contexts exist elsewhere around estuarine lakes on the Far South Coast (eg. Merimbula Lake, Pambula Lake and Wallagoot Lake). The context and nature of the identified heritage evidence within the site is not unique or rare within the locality or the region;

- ❑ The site exhibits a very limited range of artefact and stone material types and limited range of inferred activity types, with no particularly rare or unusual items;
- ❑ The site has been affected by post-depositional impacts, and consequently the identified evidence is of a moderate to low integrity; and
- ❑ Limited sub-surface deposits were identified during testing and there is a low potential for further heritage evidence to occur across the moderate simple slope in Stage 5. Hence, the site has relatively low research potential within a local context.

*Sites MC10/B, MC10/C and MC12/A:*

Sites MC10/B, MC10/C and MC12/A are assessed as being of potentially moderate scientific significance within a local context on the basis that:

- ❑ The sites are of low representative value within a regional context, although the subsequent identification of substantial sub-surface deposits could increase their representative value. Similar contexts exist elsewhere around estuarine lakes on the Far South Coast (eg. Merimbula Lake, Pambula Lake and Wallagoot Lake). The context and nature of the identified heritage evidence within the sites are not unique or rare within the locality or the region;
- ❑ The sites exhibit a low range of artefact and stone material types and/or shell content, and a limited range of inferred activity types, with no particularly rare or unusual items;
- ❑ The sites have been affected by some post-depositional impacts, but the identified evidence is of a generally moderate integrity; and
- ❑ There is a high potential for sub-surface deposits of artefacts and midden to occur, including deposits that may be *in situ* and of research value, in areas of lower ground disturbance. If substantial sub-surface deposits are identified, the significance may be upgraded on the basis of research value.

*Site MC11:*

Site MC11 is assessed as being of moderate to potentially high scientific significance within a local context on the basis that:

- ❑ The site is of some representative value within a regional context, although similar contexts exist elsewhere around estuarine lakes on the Far South Coast (eg. Merimbula Lake, Pambula Lake and Wallagoot Lake). The context and nature of the identified heritage evidence is not unique or rare within the region;
- ❑ The site exhibits a low to modest range of artefact and stone material types and/or shell content, with one less common item;
- ❑ The site has been affected by some post-depositional impacts, but the identified evidence is of a generally moderate integrity; and
- ❑ There is a high potential for sub-surface deposits of artefacts and midden to occur, including deposits that may be *in situ* and of research value, in areas of lower ground disturbance. If substantial sub-surface deposits are identified, the significance may be upgraded on the basis of research value.

## 8. STATUTORY OBLIGATIONS

Commonwealth, State and local legislation relevant to the protection and management of Aboriginal heritage is outlined in the sections below. The investigation area does not contain any heritage items listed for indigenous values under the *Environment Protection and Biodiversity Conservation Act 1999*, *Australian Heritage Council Act 2003*, *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* or *NSW Heritage Act 1977*, but it does contain Aboriginal objects protected under the *NSW National Parks and Wildlife Act 1974*.

### 8.1 Commonwealth

While the primary legislation offering protection to Aboriginal heritage in NSW is enacted by the State (refer to Section 8.2), several Acts administered by the Commonwealth may also be relevant.

*Environment Protection and Biodiversity Conservation Act 1999:*

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is the primary Commonwealth legislation for the protection and management of matters of national environmental significance, which includes heritage places. The primary features of the EPBC Act relating to heritage include:

- ❑ A National Heritage List of natural, indigenous and historic places of national heritage significance;
- ❑ A Commonwealth Heritage List of heritage places owned or managed by the Commonwealth; and
- ❑ Consideration of heritage in the planning and development approvals process.

Commonwealth Heritage places are protected in that:

- ❑ Actions taken on Commonwealth land which are likely to have a significant impact on the environment will require the approval of the Minister;
- ❑ Actions taken outside Commonwealth land which are likely to have a significant impact on the environment on Commonwealth land, will require the approval of the Minister; and
- ❑ Actions taken by the Commonwealth Government or its agencies that are likely to have a significant impact on the environment anywhere will require approval by the Minister.

Australian Government agencies that own or lease heritage places are required to assist the Minister and the Australian Heritage Council to identify and assess the heritage values of these places. They are required to:

- ❑ Develop heritage strategies;
- ❑ Produce a register of the heritage places under their control;
- ❑ Develop a management plan to manage these places consistent with the Commonwealth Heritage Management Principles prescribed in regulations to the Act;

- ❑ Ensure the ongoing protection of the Commonwealth heritage values of the place when selling or leasing a Commonwealth heritage place; and
- ❑ Ask the Minister for advice about taking an action, if the action has, will have, or is likely to have, a significant impact on a Commonwealth heritage place.

The environmental assessment process of the EPBC Act protects matters of national environmental significance (including national heritage places), along with the environment where actions proposed are on, or will affect, Commonwealth land and/or where Commonwealth agencies are proposing to take an action. When a proposal is identified as having the potential to have a significant impact on a matter of national environmental significance, the proponent must refer the project to the Department of Sustainability, Environment, Water, Population and Communities. The matter is made public and referred to the relevant state, territory and Commonwealth ministers for comment. The Minister then decides whether the likely environmental impacts of the project are such that it should be assessed under the EPBC Act. State governments may, under agreement with the Commonwealth, assess actions that may have an impact on matters of national environmental significance. Following assessment, the Minister or their delegate may approve the action (with or without conditions) or not approve the action.

#### *Australian Heritage Council Act 2003:*

The *Australian Heritage Council Act 2003* established the Australian Heritage Council, an independent expert body to advise the Minister on the listing and protection of heritage places and other matters relating to heritage. This Act also enables the continued management of the Register of the National Estate, a list of more than 13,000 heritage places around Australia that has been compiled by the former Australian Heritage Commission since 1976. Places on the Register are protected under the EPBC Act by the same provisions that protect Commonwealth Heritage places.

#### *Aboriginal and Torres Strait Islander Heritage Protection Act 1984:*

The *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* provides for the protection of areas and objects which are of significance to Aboriginal people in accordance with Aboriginal tradition. The Act allows Aboriginal people to apply to the Minister to seek protection for significant Aboriginal areas and objects. The Minister has broad powers to make such a declaration should the Minister be satisfied that the area or object is a significant Aboriginal area or object and is under immediate threat of injury or desecration. An 'emergency declaration' can remain in force for up to 30 days.

## **8.2 State**

#### *National Parks and Wildlife Act 1974:*

The *National Parks and Wildlife Act 1974* (NP&W Act) provides the primary basis for the legal protection and management of Aboriginal heritage in NSW. With respect to development proposals and planning approvals, the *Environmental Planning and Assessment Act 1979* (EP&A Act) is the primary legislation.



Implementation of the Aboriginal heritage provisions of the NP&W Act is the responsibility of the Office of Environment and Heritage (OEH). The rationale behind the NP&W Act is to prevent the unnecessary or unwarranted destruction of Aboriginal objects and to protect and conserve objects where such action is considered warranted (DECCW 2009a, 2009b).

Section 2A of the Act, defines its objects to include 'the conservation of nature, including ...

- (b) the conservation of objects, places or features (including biological diversity) of cultural value within the landscape, including, but not limited to:
  - (i) places, objects and features of significance to Aboriginal people, and
  - (ii) places of social value to the people of New South Wales.

Section 2A also identifies that the objects of the Act are to be achieved by applying the principles of ecologically sustainable development, defined in Section 6 of the *Protection of the Environment Administration Act 1991* as requiring the integration of *economic* and *environmental* considerations (including cultural heritage) in the decision-making process.

In regard to Aboriginal cultural heritage, ecologically sustainable development can be achieved by applying the principle of intergenerational equity and the precautionary principle (DECCW 2009b).

Intergenerational equity is the principle whereby the present generation should ensure the health, diversity and productivity of the environment for the benefit of future generations. In terms of Aboriginal heritage, intergenerational equity can be considered in terms of the cumulative impacts to Aboriginal objects and places in a region. If few Aboriginal objects and places remain in a region, fewer opportunities remain for future generations of Aboriginal people to enjoy the cultural benefits of those Aboriginal objects and places. Information about the integrity, rarity or representativeness of the Aboriginal objects and places proposed to be impacted, and how they illustrate the occupation and use of land by Aboriginal people across the region, are therefore relevant to the consideration of intergenerational equity and the understanding of the cumulative impacts of a proposal (DECCW 2009b:26).

The precautionary principle states that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing cost-effective measures to prevent environmental degradation. In applying the precautionary principle, decisions should be guided by (DECCW 2009b:26):

- ❑ A careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment; and
- ❑ An assessment of the risk-weighted consequences of various options.

The precautionary principle is relevant to the OEH's consideration of potential impacts to Aboriginal cultural heritage where:

- ❑ The proposal involves a risk of serious or irreversible damage to Aboriginal objects or places or to the value of those objects or places; and
- ❑ There is uncertainty about the Aboriginal cultural heritage values or scientific or archaeological values, including in relation to the integrity, rarity or representativeness of the Aboriginal objects or places proposed to be impacted (DECCW 2009b:26).

Where this is the case, the OEH instructs that a precautionary approach should be taken and all cost-effective measures implemented to prevent or reduce damage to the objects/place (DECCW 2009b).

With the exception of some artefacts in collections, the NP&W Act generally defines all Aboriginal objects to be the property of the Crown. The Act then provides various controls for the protection, management of and impacts to these objects. An 'Aboriginal object' is defined under Section 5(1) 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'.

In practice, archaeologists generally subdivide the legal category of 'object' into different site types, which relate to the way Aboriginal heritage evidence is found within the landscape. The archaeological definition of a 'site' may vary according to survey objectives, however it should be noted that even single and isolated artefacts are protected as Aboriginal objects under the NP&W Act.

Under s89A of the NP&W Act, a person who is aware of the location of an Aboriginal object that is the property of the Crown or, not being the property of the Crown, is real property, and does not, in the prescribed manner, notify the Director-General thereof within a reasonable time after the person first becomes aware of that location is guilty of an offence against the Act unless the person believes on reasonable grounds that the Director-General is aware of the location of that Aboriginal object. The 'prescribed manner' is currently taken to be written notice in a form approved by the Director-General, being the Aboriginal Site Recording Forms available on the OEH website. Failure to comply with the requirements may result in a maximum penalty of 100 penalty units and, in the case of a continuing offence, a further 10 penalty units for each day the offence continues, for an individual, with double the fines for a corporation.

Aboriginal places are defined as any place declared to be an Aboriginal place under Section 84 of the Act. Typically these are locations of 'special significance with respect to Aboriginal culture' (for example, traditional or historical cultural value to Aboriginal people), for which identified Aboriginal objects may not be present.

Section 86 of the NP&W Act specifies the offences and penalties relating to harming or desecrating Aboriginal objects and Aboriginal places:

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

Maximum Penalty:

- (a) in the case of an individual - 2,500 penalty units or imprisonment for one year, or both, or (in circumstances of aggravation) 5,000 penalty units or imprisonment for two years, or both, or
- (b) in the case of a corporation - 10,000 penalty units (currently \$1,100,000).

- 2) A person must not harm an Aboriginal object ('strict liability offence').

Maximum Penalty:

- (a) in the case of an individual - 500 penalty units or (in circumstances of aggravation) 1,000 penalty units, or
- (b) in the case of a corporation - 2,000 penalty units (currently \$220,000).

Under Section 86(4) it is an offence for a person to harm or desecrate an Aboriginal place, with maximum penalties of 5,000 penalty units or imprisonment for two years, or both, for individuals and 10,000 penalty units for corporations.

Harm to an Aboriginal object or place is defined under Section 5(1) as any act or omission that:

- (a) destroys, defaces or damages the object or place, or
- (b) in relation to an object—moves the object from the land on which it had been situated, or
- (c) is specified by the regulations, or
- (d) causes or permits the object or place to be harmed in a manner referred to in paragraph (a), (b) or (c), but does not include any act or omission that:
- (e) desecrates the object or place, or
- (f) is trivial or negligible, or
- (g) is excluded from this definition by the regulations.

There are various exemptions and defences to offences under Section 86 of the Act, including:

- ❑ Of most relevance to development proposals generally, the offences under Section 86(1), (2) and (4) have a defence to prosecution under Section 87(1) if the harm or desecration was authorised by an Aboriginal Heritage Impact Permit (AHIP) and the conditions to which that AHIP were subject have not been contravened;
- ❑ The strict liability offence under Section 86(2) has a defence to prosecution under Section 87(2) if the person exercised *due diligence* to determine whether the act or omission constituting the alleged offence would harm an Aboriginal object and reasonably determined that no Aboriginal object would be harmed. Section 87(3) and the regulations associated with the Act (National Parks and Wildlife Regulation 2009) enable due diligence to be achieved through compliance with industry-specific Codes of Practice approved by the Minister. These include the DECCW (2010a) *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* and other approved codes such as the NSW Minerals Industry *Due Diligence Code of Practice for the Protection of Aboriginal Objects* (NSW Minerals Council 2010).

The 'due diligence' process is essentially intended to provide a defence to the strict liability offence under Section 86(2) of the NP&W Act, if an activity were subsequently to unknowingly harm an Aboriginal object in the absence of an AHIP. If Aboriginal objects are present or are likely to be present and an activity will harm those objects, then an AHIP application is required (excluding Part 3A projects). While the DECCW (2010a) *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* sets out procedures to determine whether or not Aboriginal objects are, or are likely to be present, identify whether the activity may harm objects and whether an AHIP is necessary, it does not constitute a level of Aboriginal heritage impact assessment that is typically required to satisfy the assessment requirements for projects under Part 4 and Part 5 of the EP&A Act. However, the conduct of an environmental impact assessment for a Part 4 or Part 5 project that satisfies the requirements of the Code of Practice will satisfy the 'due diligence' defence to Section 86(2) of the NP&W Act;

- ❑ The strict liability offence under Section 86(2) has a defence to prosecution under Section 87(4) if the person shows that the act or omission constituting the alleged offence is prescribed by the regulations as a low impact act or omission.

Clause 80B of the National Parks and Wildlife Regulation 2009 describes low impact acts or omissions as including:

- Maintenance work on land already disturbed (such as maintenance of existing roads, tracks or utilities);
- Farming and land management works on land already disturbed (such as cropping or leaving paddocks fallow, or construction of farm dams, fences, irrigation infrastructure, ground water bores, flood mitigation works, erosion control or soil conservation works, or maintenance of various existing infrastructure);
- Grazing of animals;
- Activity on already disturbed land that comprises exempt development or was the subject of a complying development certificate issued under the EP&A Act;
- Mining exploration work (such as costeaning, bulk sampling or drilling) on land already disturbed;
- Geological mapping, surface geophysical surveys and sub-surface surveys involving downhole logging, sampling or coring using hand-held equipment except where conducted as part of an archaeological investigation (exempted where the DECCW 2010 *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* is followed);
- Removal of isolated dead or dying vegetation if there is minimal ground disturbance;
- On already disturbed land seismic surveying or groundwater monitoring bores;
- Environmental rehabilitation work (such as silt fencing, tree planting, bush regeneration and weed removal, but not erosion control or soil conservation works).

For the purposes of Clause 80B, land is considered to be 'already disturbed' if it 'has been the subject of a human activity that has changed the land's surface, being changes that remain clear and observable' (for example, soil ploughing, construction of rural infrastructure such as dams and fences, construction of roads, tracks and trails, clearing of vegetation, construction of buildings, installation of utilities, substantial grazing involving the construction of rural infrastructure, or construction of earthworks related to the above);

- ❑ The defence of honest and reasonable mistake of fact applies under Section 86(5) to the strict liability offence of Section 86(2) and to offences against Aboriginal places under Section 86(4);
- ❑ The offences under Section 86(1) and (2) do not apply under Section 86(6), with respect to an Aboriginal object that is dealt with in accordance with section 85A (refer below);
- ❑ Exemptions are available under Section 87A to Section 86(1)-(4) for various emergency situations, conservation works and conservation agreements; and
- ❑ Exemptions are available under Section 87B to Section 86(1), (2) and (4) for Aboriginal people in relation to the carrying out of traditional cultural activities.

Consents regarding impacts to Aboriginal objects or areas with potential for Aboriginal objects are managed through the OEH Aboriginal Heritage Impact Permit (AHIP) system, as outlined in Section 90 of the NP&W Act and clauses 80D and 80E of the Regulations. The issuing of an AHIP is dependent upon adequate archaeological assessment and review (cultural heritage assessment report), together with an appropriate level of Aboriginal community liaison and involvement.

Typically, to support an AHIP, an Aboriginal cultural heritage assessment must be undertaken in accordance with the OEH (2011a) *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*, which effectively involves an assessment following the DECCW (2010b) *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* and Aboriginal community consultation in accordance with the DECCW (2010c) *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* policy (refer to Section 6).

The DECCW (2010b) *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* contains detailed requirements for heritage assessments. Key features include:

- ❑ Investigations must be undertaken by people with appropriate skills and experience, specified in Section 1.6 as:
  - 1) A minimum of a Bachelor's degree with honours in archaeology or relevant experience in the field of Aboriginal cultural heritage management, and
  - 2) The equivalent of two years full-time experience in Aboriginal archaeological investigation, including involvement in a project of similar scope, and
  - 3) A demonstrated ability to conduct a project of the scope required through inclusion as an attributed author on a report of similar scope.
- ❑ Archaeological test excavation will be necessary when (regardless of whether or not there are objects present on the ground surface) it can be demonstrated through Requirements 1, 2, 3, 4, and 5 of the Code that sub-surface Aboriginal objects with potential conservation value have a high probability of being present in an area, and the area cannot be substantially avoided by the proposed activity; and
- ❑ A Section 90 AHIP is not required for test excavations undertaken in compliance with the Code (implementation of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* policy is required however).

Under clause 80D of the National Parks and Wildlife Regulation 2009, the cultural heritage assessment report that accompanies the AHIP application must address:

- ❑ The significance of the Aboriginal objects or Aboriginal places that are the subject of the application;
- ❑ The actual or likely harm to those Aboriginal objects or Aboriginal places from the proposed activity that is the subject of the application;
- ❑ Any practical measures that may be taken to protect and conserve those Aboriginal objects or Aboriginal places;
- ❑ Any practical measures that may be taken to avoid or mitigate any actual or likely harm to those Aboriginal objects or Aboriginal places; and
- ❑ Include any submission received from a registered Aboriginal party under clause 80C and the applicant's response to that submission.

The OEH determination of AHIP applications is guided by the OEH (2011a) *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*, OEH (2011b) *Applying for an Aboriginal Heritage Impact Permit: Guide for Applicants*, and OEH (2011c) *Guide to Aboriginal Heritage Impact Permit Processes and Decision-Making* policy.

AHIPs may be issued in relation to a specified Aboriginal object, Aboriginal place, land, activity or person or specified types or classes of Aboriginal objects, Aboriginal places, land, activities or persons. AHIPs may be transferred or varied (subject to conditions and approval of the Director-General). AHIPs may be refused. An application is taken to be refused (unless otherwise granted or refused earlier), 60 days after the date on which the application was received by the Director-General (not including any period during which an applicant is required to supply to the Director-General further information under Section 90F).

The Director-General may attach any conditions seen fit to any AHIP granted. Failure to comply with a condition is deemed under Section 90J to be a contravention of the Act. Such offences may result in a maximum penalty of 1,000 penalty units and/or imprisonment for six months, and, in the case of a continuing offence, a further 100 penalty units for each day the offence continues, for an individual, with double the fines for a corporation.

Under Section 90K of the NP&W Act, in making a decision in relation to an AHIP, the Director-General must consider the following matters (but only these matters):

- a) The objects of the Act;
- b) Actual or likely harm to the Aboriginal objects or Aboriginal place that are the subject of the permit;
- c) Practical measures that may be taken to protect and conserve the Aboriginal objects or Aboriginal place that are the subject of the permit;
- d) Practical measures that may be taken to avoid or mitigate any actual or likely harm to the Aboriginal objects or Aboriginal place that are the subject of the permit;
- e) The significance of the Aboriginal objects or Aboriginal place that are the subject of the permit;
- f) The results of any consultation by the applicant with Aboriginal people regarding the Aboriginal objects or Aboriginal place that are the subject of the permit (including any submissions made by Aboriginal people as part of a consultation required by the regulations);
- g) Whether any such consultation substantially complied with any requirements for consultation set out in the regulations (specified in Section 90N of the NP&W Act and clause 80C of the National Parks and Wildlife Regulation 2009 and in the DECCW *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*);
- h) The social and economic consequences of making the decision;
- i) Any documents accompanying the application and any public submission that has been made under the EP&A Act in connection with the activity to which the permit application relates and that has been received by the Director-General; and
- j) Any other matter prescribed by the regulations.

An appeals process is available under Section 90L of the NP&W Act whereby an applicant, dissatisfied with the refusal of the Director-General to grant a Section 90 AHIP, or with any conditions attached to the AHIP, may appeal to the Land and Environment Court. The appeal must be made within 21 days after notice of the decision that is being appealed. The decision of the Land and Environment Court on the appeal is final and is binding on the Director-General and the appellant.

Under Section 85A of the NP&W Act, the Director-General may 'dispose' of Aboriginal objects that are the property of the crown:

- a) By returning the Aboriginal objects to an Aboriginal owner or Aboriginal owners entitled to, and willing to accept possession, custody or control of the Aboriginal objects in accordance with Aboriginal tradition, or
- b) By otherwise dealing with the Aboriginal objects in accordance with any reasonable directions of an Aboriginal owner or Aboriginal owners referred to in paragraph (a), or
- c) If there is or are no such Aboriginal owner or Aboriginal owners - by transferring the Aboriginal objects to a person, or a person of a class, prescribed by the regulations for safekeeping (typically implemented by way of a Care Agreement between the OEHS and the Aboriginal person or organisation).

Under Section 85A(3) of the NP&W Act, the regulations may make provision as to the manner in which any dispute concerning the entitlement of an Aboriginal owner or Aboriginal owners to possession, custody or control of Aboriginal objects for the purposes of this section is to be resolved.

Under Section 91AA of the NP&W Act, if the Director-General is of the opinion that any action is being, or is about to be carried out that is likely to significantly affect an Aboriginal object or Aboriginal place or any other item of cultural heritage situated on land reserved under the Act, the Director-General may make a stop-work order for a period of 40 days. Various exemptions exist, such as for emergency situations and for approved developments under the EP&A Act. A person that contravenes a stop-work order may be penalised up to 1,000 penalty units and an additional 100 units for every day the offence continues (10,000 units and 1,000 units respectively in the case of a corporation). Under Section 91A, the Director-General may also make recommendations to the Minister for an Interim Protection Order in respect of land which has cultural significance, including Aboriginal objects, for a duration of up to two years. The existence of an AHIP does not prevent the making of a stop-work order or an interim protection order (Section 90O).

Under Section 91L of the NP&W Act the Director-General may direct a person to carry out remediation work to Aboriginal objects or places, if they have been harmed as a result of an offence under the Act. The remediation work may involve protection, conservation, maintenance, remediation or restoration of the harmed Aboriginal object or place. The maximum penalties under Section 91Q for contravening a remediation direction are 2,000 penalty units and 200 penalty units for each day the offence continues for a corporation.

#### *Environmental Planning and Assessment Act 1979:*

The EP&A Act requires that environmental impacts (including those to cultural heritage) be considered in land use planning and decision-making. The Minister administering the EP&A Act may make various planning instruments such as Local Environmental Plans (LEPs) or Development Control Plans (DCPs). These planning instruments may identify places and features of cultural heritage significance and define statutory requirements regarding the potential development, modification and conservation of these items. In general, places of identified significance, or places requiring further assessment, are listed in heritage schedules that form part of an LEP. Listed heritage items are then protected from certain defined activities, unless consent has been gained from an identified consent authority (typically the local government authority).

In determining a Development Application (DA) under Part 4 of the EP&A Act, a consent authority, such as a local government authority, must take into consideration matters such as the provisions of environmental planning instruments (for example, LEPs), DCPs, the likely impacts of that development, including environmental impacts on the natural and built environments, and social and economic impacts on the locality (Section 79C{1}).

If Aboriginal objects are known to exist on the land to which the development application applies prior to the application being made, under Part 4 of the EP&A Act an 'Integrated Development Application' (IDA) must be submitted to the consent authority. Any Development Approval issued for development of this kind must be consistent with the General Terms of Approval (GTA's) or requirements provided by the relevant State Government agency (for example, the OEH).

Under Part 5 of the EP&A Act, public authorities and government agencies that carry out activities have a duty to take into account to the fullest extent possible all matters affecting or likely to affect the environment (including cultural heritage) by reason of that activity. This typically takes the form of a Review of Environmental Factors (REF) or Environmental Impact Statement (EIS), with the agency (proponent) acting as the determining authority.

Part 3A of the EP&A Act has been repealed, but under Division 4.1 of Part 4, 'State Significant Development' is treated in a similar manner to the former Part 3A. The Minister is the Consent authority for State Significant Development applications, although for staged developments, the Minister may determine the local Council as the Consent authority for subsequent stages. As for other development applications under Part 4, the environmental impacts of the proposal need to be considered, including those on heritage. Similar to the previous Part 3A legislation, under Section 89J of Part 4 of the EP&A Act, a Section 90 AHIP to impact Aboriginal objects is not required for an approved State Significant Development or for any investigative or other activities required to be carried out for the purpose of complying with environmental assessment requirements issued in connection with a development application for any such development. Presumably, *in lieu* of a Section 90 AHIP, Aboriginal heritage would need to be managed post-approval under an Aboriginal Heritage Management Plan subject to the approval of the DoPI.

The interplay of the NP&W Act and Regulation and the planning system is complex. For proposed developments, the specific level of Aboriginal heritage impact assessment and Aboriginal community consultation required, and any requirement for an AHIP, is highly dependent upon not just the NP&W Act and Regulation, but the nature of the proposal, the Part and Division of the EP&A Act under which planning approval is required, any specific project approval requirements issued by DoPI and/or the OEH, the presence or otherwise of Aboriginal objects, and the potential for Aboriginal objects to occur.

### 8.3 Local

Under the *Environmental Planning and Assessment Act 1979* (EP&A Act) the Minister may make various planning instruments such as Local Environment Plans, that are administered at a local government level. These plans set out objectives and controls for the development of land in the local government areas.

The *Bega Valley Local Environmental Plan 2002* (LEP) applies to the investigation area and contain several provisions relating to heritage, as specified in Part 10. Under the LEP *relic* includes any deposit, object or material evidence (which may consist of human remains) of any age relating to Aboriginal habitation of the local government area of Bega Valley. However, *heritage items* principally relate to non-indigenous items, and must be listed in Schedule 5 of the LEP, and a number of other key terms are not defined.



The *Bega Valley* LEP (Part 10 clauses 57 and 63) state the following clauses of relevance:

57) The following development may be carried out only with development consent:

- (1) (e) moving a relic, or excavating land for the purpose of discovering, exposing or moving a relic, or
- (1) (f) disturbing or excavating a place of Aboriginal heritage significance or an archaeological site while knowing or having a reasonable cause to suspect that the disturbance or excavation is likely to result in a relic being damaged, disturbed or excavated.

63) Development affecting places or sites of known or potential Aboriginal heritage significance:

Before granting consent for development that is likely to have an impact on a place of Aboriginal heritage significance or a potential place of Aboriginal heritage significance, or that will be carried out on an archaeological site of a relic that has Aboriginal heritage significance, the consent authority must:

- (a) consider a heritage impact statement explaining how the proposed development would affect the conservation of the place or site and any relic known or reasonably likely to be located at the place or site, and
- (b) except where the proposed development is integrated development, notify the local Aboriginal communities (in such way as it thinks appropriate) of its intention to do so and take into consideration any comments received in response within 21 days after the relevant notice is sent.

## 9. POTENTIAL IMPACTS

This Aboriginal cultural heritage assessment has been commissioned in relation to a Proposal by Sea Eagle Estate Pty Ltd, Mr Michael Britten and Mrs Robyn Savage for the creation of a residential subdivision with approximately 32 allotments and supporting roads, essential services and ancillary works, along with additional cottages and infrastructure for an expansion to the Robyn's Nest tourist facility (refer to Figure 3).

Within the investigation area, impacts to the ground surface are anticipated to be substantial and widespread, should the Proposal proceed, particularly in the area further than 75 metres from the lake margin. Impacts would arise from earthmoving and other works, and any identified or potential heritage evidence within the zone of impact would be affected. A restrictive covenant in place for the land limits development within 75 metres of the lake. Effectively, this encompasses much of the zone of high potential and identified evidence within 80 metres of the lake east of the existing Robyn's Nest facility (eg. sites RN5 = MC10/A, MC10/B, MC10/C, RN6, MC11/A and MC12/A), although impacts from the sewer and fire trail and other ancillary works are still permissible and may occur.

Direct impacts are anticipated to occur to all of the identified Aboriginal site loci, with the possible exception of MC10/B and MC10/C, which lie immediately to the south of the property boundary, and the other loci within the zone of high potential adjacent to the lake where impacts do not arise from the proposed sewer, fire trail or other ancillary works. Nevertheless, indirect impacts may occur to these sites during the construction period or post-construction through increased residential and visitor use of the vehicle track and lake foreshore (Table 7).

Table 7: Summary of impact assessment.

Site Name	OEI #	Type of Harm	Degree of Harm	Consequence of Harm
RN1	62-6-0690	Direct and indirect	Partial	Partial loss of value
RN2	62-6-0691	Direct and indirect	Partial	Partial loss of value
RN3	62-6-0692	Direct	Total	Total loss of value
RN4	62-6-0693	Direct	Total	Total loss of value
RN5 = MC10/A	62-6-0694	Direct and indirect	Partial	Partial loss of value
RN6	62-6-0695	Direct	Total	Total loss of value
MC6/C	62-6-0632	Direct	Total	Total loss of value
MC10/B	62-6-0470	Possibly indirect	Possibly partial	Possibly partial loss of value
MC10/C	62-6-0470	Possibly indirect	Possibly partial	Possibly partial loss of value
MC11/A	62-6-0469	Direct and indirect	Partial	Partial loss of value
MC12/A	62-6-0471	Direct and indirect	Partial	Partial loss of value

Impacts may also occur to the potential heritage resource, principally comprising:

- ❑ The zone extending approximately 80 metres inland from the shore of Merimbula Lake (refer to Figure 8) where there is a high potential for sub-surface deposits of artefacts and midden to occur, including deposits that may be of research value. This includes the location of sites RN1, RN2, RN5 - MC10/A, RN6, MC10/B, MC10/C, MC11/A and MC12/A and the lower portions of survey areas MC10, MC11, MC12 and MCRN15-18;

- ❑ The level to gentle crests further than 80 metres from the lake margin (survey areas MC11, MCRN16, MCRN18 and MCRN20; refer to Figure 8) where there is also a high potential for further artefact evidence to occur; and
- ❑ In the remainder of the investigation area, a low-density distribution of artefacts consistent with 'background discard' and small midden deposits of low heritage value which may be present.

Other types of heritage evidence (for example, bora/ceremonial, carved tree, grinding groove, lithic quarry, rock shelter, scarred tree and stone arrangement sites) are not anticipated to occur within the investigation area, albeit skeletal remains cannot totally be discounted. Other traditional or historical Aboriginal cultural values or associations have not been identified during the investigation.

In consideration of the above factors, if impacts (both direct and indirect) cannot be avoided to the identified sites and areas of heritage potential, the overall impacts of the Proposal on Aboriginal heritage will be moderate within a local context, but low to very low within a regional context (given the relatively small size of the impact area).

It is concluded that the cumulative effect of the Proposal on the identified and potential Aboriginal heritage resources of the region would be very low, on the basis that:

- ❑ The impacts of the Proposal itself will be relatively low within a regional context, given its small scope and size;
- ❑ Similar environmental contexts to the investigation area exist in areas immediately adjacent and further afield;
- ❑ Similar heritage resources or potential resources are present in these areas which will not be affected by the Proposal or other current development; and
- ❑ The absence of any regionally representative values directly within the investigation area.

## 10. POTENTIAL MITIGATION AND MANAGEMENT STRATEGIES

General strategies for the management of the identified and potential Aboriginal heritage resources within the investigation area are presented below. A key consideration in selecting a suitable strategy is the recognition that Aboriginal heritage is of primary importance to the local Aboriginal community, and that decisions about the management of the sites should be made in consultation with the registered Aboriginal parties. The recommended strategies are presented in Section 11.

### 10.1 Strategy A (Further Investigation)

In circumstances where an Aboriginal heritage site is identified (particularly an open artefact site, rock shelter or shell midden), but the extent of the site, the nature of its contents, its level of integrity and/or its level of significance cannot be adequately assessed solely through surface survey (generally because of conditions of low surface visibility or sediment deposition), sub-surface testing may be an appropriate strategy to further assess the site. Sub-surface testing may also be appropriate in locations where artefact or midden deposits are predicted to occur (for example, in rock shelters or in open contexts) through application of a predictive model, in order to identify whether such deposits exist and their nature, extent, integrity and significance.

Test excavations can take the form of auger holes, shovel pits, mechanically excavated trenches or surface scrapes. The selection of a methodology (including a sampling strategy) is a process that involves (*cf.* Boismier 1991):

- 1) Identification of the specific environmental/cultural characteristics of the investigation area;
- 2) Construction of a model of Aboriginal occupation for the locality;
- 3) Definition of the expected nature and distribution of evidence (predictive model);
- 4) Formation of research questions and a methodology to retrieve the required data/evidence, in consideration of the expected nature and distribution of evidence; and
- 5) Analytical techniques for the evidence recovered that are appropriate to address the research questions and project objectives.

A Section 90 AHIP is not required for test excavations undertaken in compliance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010b), although implementation of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* policy (DECCW 2010c) is required.

However, under the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*, archaeological test excavation is necessary when (regardless of whether or not there are objects present on the ground surface) it can be demonstrated through Requirements 1, 2, 3, 4, and 5 of the Code that sub-surface Aboriginal objects with potential conservation value have a high probability of being present in an area, and the area cannot be substantially avoided by the proposed activity.

A Section 90 AHIP is also not required under Section 89J of Part 4 of the EP&A Act, for any investigative or other activities required to be carried out for the purpose of complying with environmental assessment requirements issued in connection with a development application for State Significant Development.

In all other circumstances a Section 90 AHIP is normally required from the OEH to undertake sub-surface testing. The OEH determination of AHIP applications is guided by the OEH (2011c) *Guide to Aboriginal Heritage Impact Permit Processes and Decision-Making* policy. Typically, approval of an AHIP can take up to 60 days, following receipt by the OEH of all necessary information.

This is a pro-active strategy, which should result in the identification, assessment and management of the Aboriginal heritage resource prior to any development activity occurring. Following assessment of each Aboriginal site, management strategies as outlined in Sections 10.2 - 10.5 can be applied.

In relation to the investigation area and current Proposal, notwithstanding the low surface visibility and resulting low proportion of effective survey coverage as a percentage of the entire investigation area, the level and nature of effective survey coverage is considered satisfactory enough to present an effective assessment of the Aboriginal heritage resources identified and potentially present. The coverage was comprehensive for obtrusive site types, but limited for the less obtrusive stone artefacts. Nevertheless, in view of the detailed modelling (refer to Section 3) and results obtained from the sample of effective coverage, and in particular the results of the test excavations in Stages 3 and 5 and salvage excavations and monitoring in Stage 4 of Bellbird Ridge, it is concluded that sufficient information exists for the purpose of formulating recommendations for the management of the Aboriginal heritage resources, without the requirement for further investigation by sub-surface testing.

Although impacts will not be avoided to the zone of high potential for sub-surface Aboriginal objects (refer to Figure 8), in general these areas are not necessarily of 'potential conservation value', impacts will only partially occur to this zone (eg. sewer and fire trail) and impacts will not occur to the area between the property boundary and the lake shore. As such, mandatory testing under the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* is not required. Notwithstanding, there are potentially deposits of significance in the zone within 80 metres of Merimbula Lake, that could largely be avoided by minor modifications to the Proposal and/or further consideration of the nature of works during the detailed design phase (refer to Section 10.2).

The potential for skeletal remains is assessed as very low and on this basis further investigation of them is not warranted.

## **10.2 Strategy B (Conservation)**

Conservation is a suitable strategy for all heritage sites, but particularly those of high archaeological significance and/or high cultural significance. Conservation is also appropriate for specific archaeological resources and environmental/cultural contexts, as part of a regional strategy aimed at conserving a representative sample of identified and potential heritage resources.

Options exist within development proposals that can be utilised for the conservation of identified or potential Aboriginal heritage resources, including exclusion of development from zones of high heritage significance or potential, preservation of areas within formal conservation zones, or the re-design of works to avoid specific areas.

The primary factors relevant to assessing the imperative for specific conservation (or mitigation) measures for the Proposal include:

- ❑ Impacts may occur directly and/or indirectly to eleven loci of visible Aboriginal heritage evidence, comprising six loci of open artefacts and shell midden, three open artefact loci and two shell midden loci (without associated artefacts). Site MC11 has been assessed as being of moderate to potentially high scientific significance within a local context, sites MC10/B, MC10/C and MC12/A as being of potentially moderate scientific significance, sites RN1 and RN2 as being of low to potentially moderate scientific significance, and sites RN3, RN4, RN6 and MC6/C as being of low scientific significance;
- ❑ Impacts may occur to a potential heritage resource comprising:
  - The zone extending approximately 80 metres inland from the shore of Merimbula Lake where there is a high potential for sub-surface deposits of artefacts and midden to occur, including deposits that may be of research value. This includes the location of sites RN1, RN2, RN5 - MC10/A, RN6, MC10/B, MC10/C, MC11/A and MC12/A and the lower portions of survey areas MC10, MC11, MC12 and MCRN15-18 (Figure 8);
  - The level to gentle crests further than 80 metres from the lake margin (survey areas MC11, MCRN16, MCRN18 and MCRN20) where there is also a high potential for further artefact evidence to occur (Figure 8); and
  - In the remainder of the investigation area, a low-density distribution of artefacts consistent with 'background discard' and small midden deposits of low heritage value which may be present;
- ❑ If impacts (both direct and indirect) cannot be avoided to the identified sites and areas of heritage potential, the overall impacts of the Proposal on Aboriginal heritage will be moderate within a local context, but low to very low within a regional context (given the relatively small size of the impact area);
- ❑ Similar environmental contexts and potential heritage resources to those of the investigation area occur elsewhere in the region;
- ❑ The cumulative impact of the works on any heritage evidence would be very low within a regional context; and
- ❑ There is scope during the detailed design phase, for minor modifications to the Proposal and/or consideration of specific construction methods (particularly in relation to the fire trail, sewer and any pedestrian walkways in the southern area near Merimbula Lake), such that impacts to the identified and potential deposits of significance in the zone within 80 metres of Merimbula Lake could largely be avoided.

In consideration of these factors, while the imperative for specific conservation measures directly within the investigation area is low (ie. avoidance of development and implementation of formal conservation areas), measures to avoid, minimise or mitigate the potential impacts of development are warranted.

Specifically, the zone within 80 metres of Merimbula Lake contains many of the recorded Aboriginal site loci, including those of potential significance, along with the potential sub-surface deposits that may be of research value and significance. Hence, measures to reduce the impact of development on this zone and the identified and potential heritage resources (refer to Figure 8) should be considered. A restrictive covenant is already in place for the allotments which limits development within 75 metres of the lake. Additional options may include:

- ❑ A reduction of the size of the proposed residential allotments fronting Merimbula Lake (modifying the southern boundary such that it is a further distance back from the lake margin);
- ❑ An adjustment northward of the proposed location of the sewer and fire trail; and/or
- ❑ Use of construction methods (both for the sewer, fire trail and any pedestrian tracks and other works) to minimise ground disturbance. An example is the laying of geotextile fabric and road base over the proposed fire trail and any walkways or other tracks where evidence is present, with excavation minimised.

Although the above modifications are desirable from a heritage perspective, alternative mitigation measures may also be successfully implemented to reduce the impacts of the Proposal (refer to Section 10.3).

Where impacts can be avoided to identified heritage evidence, appropriate protective measures may be required. These may include informing relevant staff and contractors of the nature and location of the heritage evidence and need to avoid impacts, along with the establishment of temporary protective fencing and signage to protect the identified evidence during the construction period.

Indirect impacts may arise to the sites adjacent to Merimbula Lake from the Proposal, through subsequent increased recreational use and human visitation to the area. Some of these sites are in the zone between the property boundary and lake margin. These impacts will need to be managed to ensure that the evidence is not adversely affected. The Aboriginal parties have expressed an interest in the utilisation of these sites for a cultural tourism venture. This may entail the facilitation of opportunities for guests of Robyn's Nest to hire an Aboriginal guide for an exploratory tour along the foreshore, or provision of suitable interpretive material for guests to self-explore and develop a greater knowledge and appreciation of Aboriginal heritage.

The foreshore of Merimbula Lake (outside of the Robyn's Nest and Stage 5 property boundaries) should continue to be protected.

### **10.3 Strategy C (Mitigated Impact)**

In circumstances where an Aboriginal site may be of archaeological and/or cultural significance, but the options for conservation are limited and the surface collection of artefacts or excavation of deposits could yield benefits to the Aboriginal community and/or the archaeological study of Aboriginal occupation, mitigation measures (salvage) may be warranted.

Salvage in these circumstances may include the collection of surface artefacts and/or systematic excavation of artefact or midden deposits. Salvage of other site types may also be warranted, for example scarred trees or grinding grooves. Salvage of a scarred tree may involve cutting and removing the tree or the portion of the tree containing the scar. Similarly, grinding grooves may be salvaged by removal of the freestanding rock they are situated on, or in the case of grooves on open bedrock, cutting and removing the section of bedrock with the grooves.

The imperative for salvage measures can be assessed in relation to:

- ❑ The nature of the identified and expected evidence, its significance and its research potential (ie. the potential for salvage to provide additional, useful evidence that will enhance the overall understanding of the nature of human occupation in the locality);
- ❑ The views of the Aboriginal stakeholders, as salvage may be warranted to minimise the impacts of development on the cultural values of the evidence; and
- ❑ The extent of potential development impacts on particular sites or potential resources.

Under the terms of the NP&W Act it is an offence to harm or desecrate an object that the person knows is an Aboriginal object, or to harm an Aboriginal object. As such, a Section 90 AHIP must normally be obtained from the OEH prior to impacting any Aboriginal objects, including through mitigation activities. The OEH determination of AHIP applications is guided by the DECCW (2009a) policy *Guide to Determining and Issuing Aboriginal Heritage Impact Permits*. Typically, approval of an AHIP can take up to 60 days, following receipt by the OEH of all necessary information.

A Section 90 AHIP is generally not required for impacts to Aboriginal objects where the project is for State Significant Development under Part 4 of the EP&A Act, and commitments relating to the management of and mitigation of impacts to Aboriginal heritage *in lieu* of a Section 90 AHIP (typically in the form of an Aboriginal Heritage Management Plan) are approved by DoPI and implemented.

Salvage typically involves the development of a detailed research design (including the nature of the methodology and sampling strategy, as discussed in Section 10.1). Where an AHIP is required, an Aboriginal heritage impact assessment must be undertaken in accordance with the DECCW (2010b) *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* and Aboriginal community consultation in accordance with the DECCW (2010c) *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* policy (refer to Sections 6 and 8.2).

In relation to the investigation area, a Section 90 AHIP would be required for all areas where Aboriginal objects are present or are likely to be present (all portions of the investigation area where the A unit soil is present) and impacts will occur, to address Section 86(1) and (2) of the NP&W Act. On the basis of the present development plans, this may include all of the identified sites apart from MC10/B and MC10/C, although inclusion of the latter may be necessary if any works are undertaken to protect the sites from indirect impacts.

In the event that impacts cannot be avoided to the identified Aboriginal sites and areas of potential (refer to Figures 7 and 8), components of an appropriate mitigation strategy could include:

- A) The surface collection of identified artefacts from within the impact zone prior to any impacts occurring;
- B) Systematic mechanical exposure of samples of the potential deposit from within the impact zone, to enable investigation of the spatial distribution of artefacts and features over this area, with controlled hand excavation of any features of significance (eg. middens or dense artefact clusters) that may be identified. This may involve two separate strategies:



- i. Surface scrapes in a sample of the areas of high potential for sub-surface deposits of artefacts and midden to occur, including deposits that may be of research value (as shaded orange on Figure 8 and comprising sites RN1, RN2, RN5 - MC10/A, RN6, MC10/B, MC10/C, MC11/A and MC12/A and the lower portions of survey areas MC10, MC11, MC12 and MCRN15-18). This would involve the use of a dozer or similar machinery to systematically expose the A unit soil by progressively removing thin layers of soil, within a designated sample area (eg. a 50 x 20 metre area). After each layer is removed, the surface would be inspected on foot and any visible evidence collected. Where features of potential significance are identified, hand excavation could occur to retrieve the feature. Suitable sample areas may include one in MCRN20 around site RN4 to mitigate impacts to the level-very gentle spur crest over 80 metres from the lake, and one in either MCRN18 around site RN2 or MCRN16-MC11 around site MC11/A to mitigate impacts to the gentle spur crest within 80 metres of the lake (if substantial development impacts cannot be avoided to this zone); and
  - ii. If the sewer remains in its present location, controlled excavation of the section between points 5 and 7 (refer to Figure 3). This would involve use of a backhoe or similar machinery to systematically expose the A unit soil by progressively removing thin layers of soil. After each layer is removed, the surface would be inspected on foot and any visible evidence collected. Where features of potential significance are identified, hand excavation would occur to retrieve the feature;
- C) Reinspection by Aboriginal community representatives of the cleared surface after the initial vegetation removal, as was successfully undertaken in Stage 4, with any evidence identified retrieved and potentially with controlled hand excavation with a qualified archaeologist of any features of significance that may be identified. This strategy may be most appropriate in a sample of the areas of high potential (shaded orange on Figure 8) that are not subject to surface scrapes, and within a sample of the areas of low potential where a low-density distribution of artefacts consistent with 'background discard' and small midden deposits of low heritage value may be present (ie. a sample of areas not shaded orange on Figure 8), which are subject to development impacts.

Procedures for the recording of lithic items, additional analysis (for example, radiometric dating of charcoal samples), and reporting would need to be specified in the research design for the AHIP application. Curation of the recovered evidence would need to be resolved with the registered Aboriginal parties, with potentially a Care Agreement required under Section 85A of the NP&W Act.

## 10.4 Strategy D (Unmitigated Impact)

The strategy of unmitigated impact involves the proponent causing impacts to the heritage evidence without any mitigation measures. This strategy is typically suitable when the heritage evidence is of low scientific and cultural significance, the registered Aboriginal parties hold no objections, and it is unfeasible to implement any other strategy.

Under the terms of the NP&W Act it is an offence to harm or desecrate an object that the person knows is an Aboriginal object, or to harm an Aboriginal object. As such, a Section 90 AHIP must normally be obtained from the OEH prior to impacting any Aboriginal objects. The OEH determination of AHIP applications is guided by the OEH (2011c) *Guide to Aboriginal Heritage Impact Permit Processes and Decision-Making* policy. Typically, approval of an AHIP can take up to 60 days, following receipt by the OEH of all necessary information.

A Section 90 AHIP is generally not required for impacts to Aboriginal objects where the project is for State Significant Development under Part 4 of the EP&A Act, and commitments relating to the management of and mitigation of impacts to Aboriginal heritage *in lieu* of a Section 90 AHIP (typically in the form of an Aboriginal Heritage Management Plan) are approved by DoPI and implemented.

Where an AHIP is required, an Aboriginal heritage impact assessment must be undertaken in accordance with the DECCW (2010b) *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* and Aboriginal community consultation in accordance with the DECCW (2010c) *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* policy (refer to Sections 6 and 8.2).

In relation to the investigation area, given the presence of Aboriginal objects protected under the NP&W Act, a Section 90 AHIP would be required prior to any impacts occurring. Unmitigated impact does not represent a feasible strategy, given the issues discussed in Sections 10.1 - 10.4 and the views expressed by the registered Aboriginal parties. However, unmitigated impact would be feasible for evidence not subject to conservation or mitigation as outlined in these preceding sections.

## **10.5 Strategy E (Monitoring)**

An alternative strategy for zones where archaeological deposits are predicted to occur is to monitor construction, particularly any initial earthmoving and soil removal works, for the presence of artefacts, shell or skeletal remains.

Monitoring is one of the primary strategies for managing the possible occurrence of Aboriginal skeletal remains. Monitoring for the presence of shell and stone artefacts is also often of value to the Aboriginal community, who may be seeking to identify and salvage material that was not visible on the surface during a preliminary study. The sieving of graded deposits is also a practical measure that enhances the benefits of monitoring for artefacts. However, the nature of construction methods (eg. the use of earthmoving machinery to rapidly excavate large quantities of soil) tends to limit the potential for successful identification of heritage evidence during monitoring.

Monitoring for artefacts (in preference to controlled excavation) is not a widely accepted method within the context of a scientific investigation, because it could result in substantial and costly delays to construction (particularly if a Section 90 AHIP or Part 3A approval is not in force), late revisions to development plans, and/or cause undesirable impacts to sites of cultural or scientific significance. However, monitoring for the presence of artefacts and other features during initial earthworks can be of scientific benefit and benefit to the Aboriginal community, by enabling the identification and retrieval of cultural evidence that may not otherwise have been recorded or salvaged.

In relation to the investigation area, monitoring of initial ground disturbance works is not warranted for skeletal remains due to the very low potential for them to be encountered. The nature of construction methods (use of earthmoving machinery to rapidly excavate large quantities of soil without scientifically appropriate spatial control) tends to severely limit the potential for successful identification of heritage evidence during monitoring of such work. As such, the measures proposed in Sections 10.2 and 10.3 would enable far more satisfactory management of the potential impacts of the Proposal on the potential heritage resource, and additional monitoring or monitoring *in lieu* of these measures, is not warranted. Nevertheless, as was successfully undertaken in Stage 4, Aboriginal community reinspection of the cleared surface after the initial vegetation removal may be of benefit in areas of low heritage potential (such as survey area MC6 in Stage 5), and has been requested by the Aboriginal parties (refer to Section 10.3).

## 11. RECOMMENDATIONS

This Aboriginal cultural heritage assessment has been commissioned in relation to the proposed development of Stage 5 of the Bellbird Ridge Estate residential subdivision, along with an expansion to the Robyn's Nest tourist facility (refer to Figure 3). Development Approval for part of the proposed works has been granted by Bega Valley Shire Council, with approval for the remainder of the works being sought under Part 4 of the EP&A Act.

Eleven loci of visible Aboriginal heritage evidence are known to occur within or immediately adjacent to the investigation area and may be subject to impacts from the Proposal. These sites comprise six loci of open artefacts and shell midden, three open artefact loci and two shell midden loci (without associated artefacts). Impacts may also occur to the potential heritage resource, principally comprising:

- ❑ The zone extending approximately 80 metres inland from the shore of Merimbula Lake (refer to Figure 8) where there is a high potential for sub-surface deposits of artefacts and midden to occur, including deposits that may be of research value. This includes the location of sites RN1, RN2, RN5 - MC10/A, RN6, MC10/B, MC10/C, MC11/A and MC12/A and the lower portions of survey areas MC10, MC11, MC12 and MCRN15-18;
- ❑ The level to gentle crests further than 80 metres from the lake margin (survey areas MC11, MCRN16, MCRN18 and MCRN20; refer to Figure 8) where there is also a high potential for further artefact evidence to occur; and
- ❑ In the remainder of the investigation area, a low-density distribution of artefacts consistent with 'background discard' and small midden deposits of low heritage value which may be present.

Other types of heritage evidence (for example, grinding grooves or scarred trees) are not anticipated to occur within the investigation area, albeit skeletal remains cannot totally be discounted. Other traditional or historical Aboriginal cultural values or associations have not been identified during the investigation.

The following recommendations are made on the basis of legal requirements under the NP&W Act, the results of the investigation and consultation with the registered Aboriginal parties:

- 1) Measures to minimise or avoid impacts to the zone within 80 metres of Merimbula Lake should be implemented where feasible. This may include:
  - a) A reduction of the size of the proposed residential allotments fronting Merimbula Lake (modifying the southern boundary such that it is a further distance back from the lake margin);
  - b) An adjustment northward of the proposed location of the sewer and fire trail; and/or
  - c) The use of construction methods (both for the sewer, fire trail and any pedestrian tracks and other works) to minimise ground disturbance. An example is the laying of geotextile fabric and road base over the proposed fire trail and any walkways or other tracks where evidence is present, with excavation minimised.

The foreshore of Merimbula Lake (outside of the Robyn's Nest and Stage 5 property boundaries) should continue to be protected;

- 2) If impacts cannot be avoided to the identified Aboriginal sites and/or areas of potential (refer to Figures 7 and 8), prior to any impacts occurring the proponent must obtain from the OEH a Section 90 AHIP for this evidence, in consultation with the registered Aboriginal parties. The AHIP should be obtained over the entire impact area and include the following mitigation strategies:
  - a) The surface collection of identified artefacts from within the impact zone prior to any impacts occurring;
  - b) Systematic mechanical exposure of samples of the potential deposit from within the impact zone, to enable investigation of the spatial distribution of artefacts and features over this area, with controlled hand excavation of any features of significance (eg. middens or dense artefact clusters) that may be identified. This would involve two separate strategies:
    - i. Surface scrapes in a sample of the areas of high potential for sub-surface deposits of artefacts and midden to occur, including deposits that may be of research value (as shaded orange on Figure 8), using the methodology outlined in Section 10.3, with localised hand excavation of any features of significance identified. Suitable sample areas would include one in MCRN20 around site RN4 to mitigate impacts to the level-very gentle spur crest over 80 metres from the lake, and one in either MCRN18 around site RN2 or MCRN16-MC11 around site MC11/A to mitigate impacts to the gentle spur crest within 80 metres of the lake (if substantial development impacts cannot be avoided to this zone); and
    - ii. If the sewer remains in its present location, controlled excavation using a backhoe or similar machinery of the section between points 5 and 7 (refer to Figure 3), using the methodology outlined in Section 10.3, with localised hand excavation of any features of significance identified;
  - c) Reinspection by Aboriginal community representatives of the cleared surface of the development impact area after the initial vegetation removal, with any identified evidence recorded and collected and with controlled hand excavation conducted with a qualified archaeologist of any features of significance that may be identified. This strategy would be appropriate in a sample of the areas of high potential (shaded orange on Figure 8) that are not subject to surface scrapes, and within a sample of the areas of low potential where a low-density distribution of artefacts consistent with 'background discard' and small midden deposits of low heritage value may be present (ie. a sample of areas not shaded orange on Figure 8), which are subject to development impacts;
  - d) Any evidence not directly conserved or salvaged will consequently be subject to unmitigated impact, permissible under a Section 90 AHIP;
- 3) Archaeological investigations should only be undertaken by archaeologists qualified and experienced in Aboriginal heritage (in accordance with the requirements of Section 1.6 of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*), in consultation with the registered Aboriginal parties who have sought further involvement, and occur prior to any development impacts occurring;
- 4) Where impacts will be avoided to the identified heritage evidence, appropriate protective measures should be implemented for those sites in close proximity to the construction works, including informing relevant staff and contractors of the nature and location of the heritage evidence and need to avoid impacts, along with the establishment of temporary protective fencing and signage to protect the identified evidence during the construction period;

- 5) During detailed design, the potential for indirect impacts to the sites adjacent to Merimbula Lake and for the zone between the property boundary and lake margin, through subsequent increased recreational use and human visitation to the area, should be addressed. In consultation with the registered Aboriginal parties who have sought further involvement, this may entail the facilitation of opportunities for guests of Robyn's Nest to hire an Aboriginal guide for an exploratory tour along the foreshore, or provision of suitable interpretive material for guests to self-explore and develop a greater knowledge and appreciation of Aboriginal heritage;
- 6) As a general principle, all relevant contractors and staff engaged on the Proposal (for example, those involved in initial ground disturbance works) should receive heritage awareness training prior to commencing work on-site, including the presentation of information about the nature of the identified and potential Aboriginal heritage evidence within the locality, heritage management measures and protocols, and legal obligations;
- 7) Further consultation should be pursued with the registered Aboriginal parties who have sought further involvement in relation to the Proposal and the continued involvement of these parties in the ongoing management of the heritage resources within the investigation area should be promoted;
- 8) Should any previously unrecorded Aboriginal sites or objects be detected prior to or during the course of development which are not covered by a Section 90 AHIP, work in the immediate vicinity of those objects would need to promptly cease and the finds be reported to the OEH (in accordance with Section 89A of the NP&W Act) and advice sought as to the appropriate course of action. If skeletal remains are identified, the proponent is required to immediately stop work and notify the appropriate authorities, including the Police and the OEH. If impacts cannot be avoided, a Section 90 AHIP would be required prior to any impacts occurring;
- 9) Under the terms of the NP&W Act it is an offence to harm or desecrate an object that the person knows is an Aboriginal object, or to harm an Aboriginal object ('strict liability offence'). Therefore, no activities or work should be undertaken within the Aboriginal site areas as described in this report and marked on Figure 7 without a valid Section 90 AHIP;
- 10) Single copies of this final report should be made available to each registered Aboriginal party and three copies forwarded to the OEH (South Landscape and Aboriginal Heritage Protection Section). In the event that an AHIP application is lodged with the OEH, copies of this final report and the AHIP application must be made available to the registered Aboriginal parties within 14 days of the application being made.

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- ❑ David Bothamley, Caddey Searl and Jarman;
- ❑ John Dixon, Yukembuk Merung Ngarigo Consultancy; and
- ❑ Jan Dowling, Ross Thomas and members of the Bega Local Aboriginal Land Council.



## DISCLAIMER

The information contained within this report is based on sources believed to be reliable. Every effort has been made to ensure accuracy by using the best possible data and standards available. The accuracy of information generated during the course of this field investigation is the responsibility of the consultant.

However, as no independent verification is necessarily available, South East Archaeology provides no guarantee that the base data (eg. the OEH AHIMS) or information from informants (obtained in previous studies or during the course of this investigation) is necessarily correct, and accepts no responsibility for any resultant errors contained therein and any damage or loss which may follow to any person or party. Nevertheless this study has been completed to the highest professional standards.

# APPENDIX 1: RELEVANT PREVIOUSLY RECORDED SITE RECORDS AND UPDATED DESCRIPTIONS FOR SITES RN1 - RN6<sup>8</sup>

OEH #62-6-690 (Robyns Nest 1 - RN1)

		<b>Aboriginal Site Recording Form</b> AHIMS Registrar PO Box 1967, Hurstville NSW 2220			
<b>Office Use Only</b> Site Number <input type="text"/>					
Date received <input type="text"/>		Date entered into system <input type="text"/>		Date catalogued <input type="text"/>	
Entered by (I.D.) <input type="text"/>					
<b>Information Access</b> <input type="checkbox"/> Gender/male <input type="checkbox"/> Gender/female <input type="checkbox"/> Location restriction <input type="checkbox"/> General restriction <input type="checkbox"/> No access				<b>Office Use Only</b>  Client on system <input type="checkbox"/>	
<b>For Further Information Contact:</b> <input type="checkbox"/> <b>Nominated Trustee</b> Title <input type="text"/> Surname <input type="text"/> First Name <input type="text"/> Initials <input type="text"/> Organisation <input type="text"/> Address <input type="text"/> Phone number <input type="text"/> Fax <input type="text"/>					
<input checked="" type="checkbox"/> <b>Knowledge Holder</b> Title <input type="text"/> Surname <input type="text"/> First Name <input type="text"/> Initials <input type="text"/> Organisation <input type="text"/> Address <input type="text"/> Phone number <input type="text"/> Fax <input type="text"/>					
<b>Aboriginal Heritage Unit or Cultural Heritage Division Contacts</b> <input type="text"/>					
<b>Geographic Location</b> Site Name <input type="text"/> Easting <input type="text"/> Northing <input type="text"/> AGD/GDA <input type="text"/> Mapsheet <input type="text"/> Zone <input type="text"/> Location Method <input type="text"/> Other Registration <input type="text"/>					
<b>Primary Recorder</b> Title <input type="text"/> Surname <input type="text"/> First Name <input type="text"/> Initials <input type="text"/> Organisation <input type="text"/> Address <input type="text"/> Phone number <input type="text"/> Fax <input type="text"/> Date recorded <input type="text"/>					Client on system <input type="checkbox"/>

<sup>8</sup> From GML (2008). Sites recorded by South East Archaeology are presented in Appendix 3.

# NPWS Aboriginal Site Recording Form - Site Information

page 3

## General Site Information

### Closed Site

#### Shelter/Cave Formation

- ☐ Boulder
- ☐ Wind erosion
- ☐ Water erosion
- ☐ Rock collapse

#### Rock Surface Condition

- ☐ Boulder
- ☐ Sandstone platform
- ☐ Silica gloss
- ☐ Tessellated
- ☐ Weathered
- ☐ Other platform

#### Condition of Ceiling

- ☐ Boulder
- ☐ Sandstone platform
- ☐ Silica gloss
- ☐ Tessellated
- ☐ Weathered
- ☐ Other platform

#### Shelter Aspect

- ☐ North
- ☐ North East
- ☐ East
- ☐ South East
- ☐ South
- ☐ South West
- ☐ West
- ☐ North West

### Open Site

#### Site Orientation

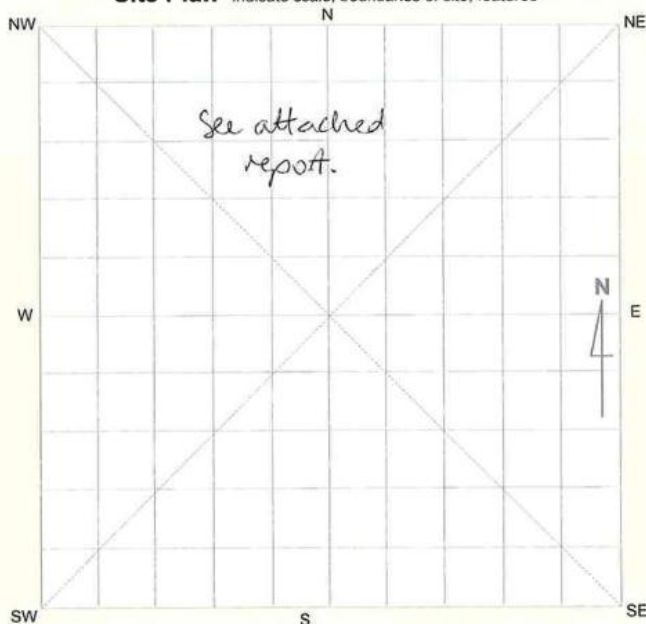
- ☐ N-S
- ☐ NE-SW
- ☐ E-W
- ☐ SE-NW
- ☒ N/A

## Features

- ☐ 1. Aboriginal Ceremony & Dreaming
- ☐ 2. Aboriginal Resource & Gathering
- ☐ 3. Art
- ☒ 4. Artefact
- ☐ 5. Burial
- ☐ 6. Ceremonial Ring
- ☐ 7. Conflict
- ☐ 8. Earth Mound
- ☐ 9. Fish Trap
- ☐ 10. Grinding Groove
- ☐ 11. Habitation Structure
- ☐ 12. Hearth
- ☐ 13. Non Human Bone & Organic Material
- ☐ 14. Ochre quarry
- ☒ 15. Potential Archaeological Deposit
- ☐ 16. Stone Quarry
- ☒ 17. Shell
- ☐ 18. Stone Arrangement
- ☐ 19. Modified Tree
- ☐ 20. Water Hole

## Site Plan

Indicate scale, boundaries of site, features



## Site Dimensions

### Closed Site Dimensions (m)

- Internal length
- Internal width
- Shelter height
- Shelter floor area

### Open Site Dimensions (m)

- Total length of visible site
- Average width of visible site
- Estimated area of visible site
- Length of assessed site area



### 6.2.1 RN1

RN1 is located in the southwest of the study area, on exposed ground along the southernmost fire track (Figure 6.5). The site is spread across a 25 metre portion of the fire track. It comprises seven artefacts (Artefact ID # 1–7) and a small midden, measuring approximately 3 x 2.5m. Identified artefacts included quartzite flakes (eg Figures 6.6 and 6.7), quartzite and quartz flaked pieces, and a hammer stone (Figure 6.8). The midden contains a mixture of Sydney rock oyster, Sydney mud oyster and cockle shell. The shell accumulation is quite disturbed, but does contain a number of whole shell pieces and larger shell fragments (Figure 6.9).



Figure 6.6 Artefact # 1—Dark grey banded quartzite flake.



Figure 6.7 Artefact # 2—Pink grey quartzite flake.



Figure 6.8 Artefact # 7—Brown grey quartzite hammer stone, showing evidence of use-wear including pitting and smoothing.



Figure 6.9 A concentrated scatter of cockle and oyster shells at site RN1.



## RN1 - Additional Description July 2011

Site Type:	<i>Open artefact scatter and midden</i>	MGA Grid Reference:	<i>as per GML (2008)</i>
Date Recorded:	<i>28/7/11</i>	Topographic Map:	<i>Pambula 8824-2S</i>
Recorder:	<i>Peter Kuskie</i>		
Landform Element:	<i>Spur crest</i>	Vegetation:	<i>Cleared</i>
Slope:	<i>Gentle</i>	Ground Disturbance:	<i>Moderate to high</i>
Distance to Water:	<i>&lt;50</i>		

Visible Extent of Surface Exposures: Length (m)	Visible Extent of Surface Exposures: Width (m)	Visible Extent of Evidence: Length (m)	Visible Extent of Evidence: Width (m)	Visible Locus Area (m <sup>2</sup> )	Mean Surface Visibility of Locus (%)	Mean Arch. Visibility of Locus (%)	Effective Locus Area (m <sup>2</sup> )	# of Artefacts	# of Artefacts per m <sup>2</sup> of Effective Locus Area	Sub-Surface Deposit
varies	varies	30	15	450	30	10	45	0	-	probable

### Additional Comments:

- ☐ South of main Robyn's Nest building, all within 70 metres of Merimbula Lake;
- ☐ Vehicle track through site - recently emplaced gravel/fill particularly to east of site and within site south of road;
- ☐ Could not relocate GML (2008) artefacts during July 2011 inspection;
- ☐ Sparse distribution of midden shell visible, c.80% cockle and 20% mud oyster, adjacent to the vehicle track;
- ☐ High potential for sub-surface deposit off vehicle track in areas of lower disturbance.

Site Location: RN1 (July 2011)



Photograph: RN1 (July 2011) - view south to Merimbula Lake.







## Aboriginal Site Recording Form

AHIMS Registrar  
PO Box 1967, Hurstville NSW 2220



### Office Use Only

Site Number

Date received  Date entered into system  Date catalogued

Entered by (I.D.)

### Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

### For Further Information Contact:

#### ☐ Nominated Trustee

Title  Surname  First Name  Initials   
 Organisation   
 Address   
 Phone number  Fax

#### ☒ Knowledge Holder

Title  Surname  First Name  Initials   
 Organisation   
 Address   
 Phone number  Fax

### Aboriginal Heritage Unit or Cultural Heritage Division Contacts

### Geographic Location

Site Name   
 Easting  Northing  AGD/GDA   
 Mapsheet   
 Zone  Location Method

Other Registration

### Primary Recorder

Title  Surname  First Name  Initials   
 Organisation   
 Address   
 Phone number  Fax   
 Date recorded

Office Use Only

Client on system ☐

Client on system ☐

Client on system ☐

# NPWS Aboriginal Site Recording Form - Site Information

page 3

## General Site Information

### Closed Site

#### Shelter/Cave Formation

- ☐ Boulder  
☐ Wind erosion  
☐ Water erosion  
☐ Rock collapse

#### Rock Surface Condition

- ☐ Boulder  
☐ Sandstone platform  
☐ Silica gloss  
☐ Tessellated  
☐ Weathered  
☐ Other platform

### Open Site

#### Site Orientation

- ☐ N-S  
☐ NE-SW  
☐ E-W  
☐ SE-NW  
☒ N/A

#### Condition of Ceiling

- ☐ Boulder  
☐ Sandstone platform  
☐ Silica gloss  
☐ Tessellated  
☐ Weathered  
☐ Other platform

#### Shelter Aspect

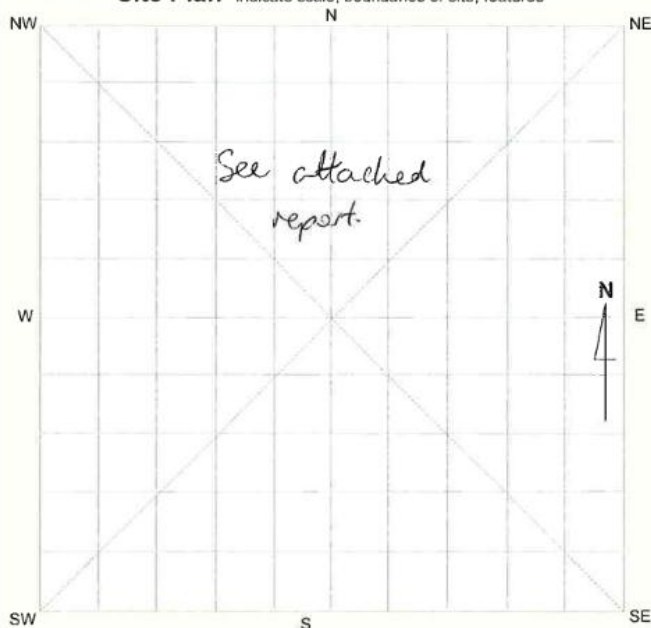
- ☐ North  
☐ North East  
☐ East  
☐ South East  
☐ South  
☐ South West  
☐ West  
☐ North West

## Features

- ☐ 1. Aboriginal Ceremony & Dreaming  
☐ 2. Aboriginal Resource & Gathering  
☐ 3. Art  
☒ 4. Artefact  
☐ 5. Burial  
☐ 6. Ceremonial Ring  
☐ 7. Conflict  
☐ 8. Earth Mound  
☐ 9. Fish Trap  
☐ 10. Grinding Groove  
☐ 11. Habitation Structure  
☐ 12. Hearth  
☐ 13. Non Human Bone & Organic Material  
☐ 14. Ochre quarry  
☒ 15. Potential Archaeological Deposit  
☐ 16. Stone Quarry  
☒ 17. Shell  
☐ 18. Stone Arrangement  
☐ 19. Modified Tree  
☐ 20. Water Hole

## Site Plan

Indicate scale, boundaries of site, features



## Site Dimensions

### Closed Site Dimensions (m)

- Internal length  
 Internal width  
 Shelter height  
 Shelter floor area

### Open Site Dimensions (m)

- Total length of visible site  
 Average width of visible site  
 Estimated area of visible site  
 Length of assessed site area

## 6.2.2 RN2

RN2 is a large shell midden located approximately 60m southeast of RN1 along the same fire track and is situated on a slight hill crest with good views over the lake to the south. The midden stretches across an area of approximately 300m<sup>2</sup>, covering a portion of the fire track as well as land immediately to its north, with a maximum dimension of 24 x 15m (Figure 6.5). The midden is relatively extensive but is of variable surface density, and was observed to be eroding across the fire track (where little original topsoil remains) as well as around the base of a tree (Figures 6.10 and 6.11). It is possible that shell material is being washed downslope. The midden is quite diffuse, with some patches containing higher frequency of shell than others. Shell material includes Sydney cockle and mud oyster (Figure 6.12), and is generally quite fragmented, although a number of large whole oyster shells are present. No artefacts were identified within the extent of the midden exposure; however one manuport of grey banded quartzite was located (Artefact ID # 8) (Figure 6.13).

Given the extensive nature of the visible exposed shell material, it is likely that this midden extends below the topsoil and leaf litter, although the extent of this cannot be detected through surface survey.



Figure 6.10 Shell material visible around exposed tree base.



Figure 6.11 Looking north/northeast from the fire track across RN2.



Figure 6.12 Whole mud oyster and cockle shells exposed within RN2.



Figure 6.13 Artefact # 8—Grey banded quartzite manuport.

## RN2 - Additional Description July 2011

Site Type:	<i>Midden</i>	MGA Grid Reference:	<i>as per GML (2008)</i>
Date Recorded:	<i>28/7/11</i>	Topographic Map:	<i>Pambula 8824-2S</i>
Recorder:	<i>Peter Kuskie</i>		
Landform Element:	<i>Spur crest</i>	Vegetation:	<i>Cleared</i>
Slope:	<i>Gentle</i>	Ground Disturbance:	<i>Moderate</i>
Distance to Water:	<i>&lt;50</i>		

Visible Extent of Surface Exposures: Length (m)	Visible Extent of Surface Exposures: Width (m)	Visible Extent of Evidence: Length (m)	Visible Extent of Evidence: Width (m)	Visible Locus Area (m <sup>2</sup> )	Mean Surface Visibility of Locus (%)	Mean Arch. Visibility of Locus (%)	Effective Locus Area (m <sup>2</sup> )	# of Artefacts	# of Artefacts per m <sup>2</sup> of Effective Locus Area	Sub-Surface Deposit
varies	varies	50	40	2000	15	10	200	0	-	probable

### Additional Comments:

- ☐ South-east of main Robyn's Nest building, all within 70 metres of Merimbula Lake;
- ☐ Vehicle track through site, all fill, high impacts;
- ☐ Impacts elsewhere from vegetation removal and machinery, but still potential for *in situ* deposits;
- ☐ Possibly distributed over broader area than recorded by GML (2008), including to the south of the vehicle track;
- ☐ Generally very sparse distribution of midden shell visible, with several higher density patches, c.50% cockle and 50% mud oyster, with 20% whole and 80% broken;
- ☐ High potential for sub-surface deposit.



Site Location: RN2 (July 2011)



Photograph: RN2 (July 2011) - view south-east to Merimbula Lake with concentration of shell (inset).







## Aboriginal Site Recording Form

AHIMS Registrar  
PO Box 1967, Hurstville NSW 2220



### Office Use Only

Site Number

Date received  Date entered into system  Date catalogued

Entered by (I.D.)

### Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

### For Further Information Contact:

#### ☐ Nominated Trustee

Title  Surname  First Name  Initials   
 Organisation   
 Address   
 Phone number  Fax

#### ☒ Knowledge Holder

Title  Surname  First Name  Initials   
 Organisation   
 Address   
 Phone number  Fax

### Aboriginal Heritage Unit or Cultural Heritage Division Contacts

### Geographic Location

Site Name

Easting  Northing  AGD/GDA

Mapsheet

Zone

Location Method

Other Registration

### Primary Recorder

Title  Surname  First Name  Initials   
 Organisation   
 Address   
 Phone number  Fax   
 Date recorded

Office Use Only

Client on system ☐

Client on system ☐

Client on system ☐



# NPWS Aboriginal Site Recording Form - Site Information

page 3

## General Site Information

### Closed Site

#### Shelter/Cave Formation

- ☐ Boulder  
☐ Wind erosion  
☐ Water erosion  
☐ Rock collapse

#### Rock Surface Condition

- ☐ Boulder  
☐ Sandstone platform  
☐ Silica gloss  
☐ Tessellated  
☐ Weathered  
☐ Other platform

### Open Site

#### Site Orientation

- ☐ N-S  
☐ NE-SW  
☐ E-W  
☐ SE-NW  
☒ N/A

#### Condition of Ceiling

- ☐ Boulder  
☐ Sandstone platform  
☐ Silica gloss  
☐ Tessellated  
☐ Weathered  
☐ Other platform

#### Shelter Aspect

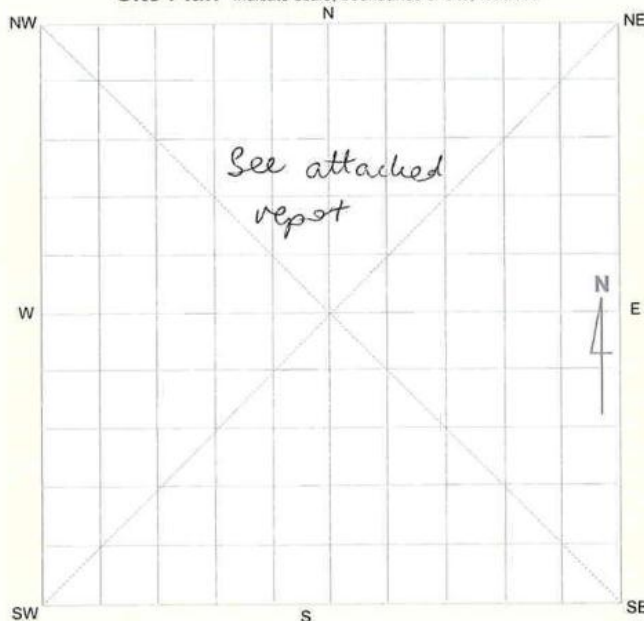
- ☐ North  
☐ North East  
☐ East  
☐ South East  
☐ South  
☐ South West  
☐ West  
☐ North West

## Features

- ☐ 1. Aboriginal Ceremony & Dreaming  
☐ 2. Aboriginal Resource & Gathering  
☐ 3. Art  
☒ 4. Artefact  
☐ 5. Burial  
☐ 6. Ceremonial Ring  
☐ 7. Conflict  
☐ 8. Earth Mound  
☐ 9. Fish Trap  
☐ 10. Grinding Groove  
☐ 11. Habitation Structure  
☐ 12. Hearth  
☐ 13. Non Human Bone & Organic Material  
☐ 14. Ochre quarry  
☒ 15. Potential Archaeological Deposit  
☐ 16. Stone Quarry  
☐ 17. Shell  
☐ 18. Stone Arrangement  
☐ 19. Modified Tree  
☐ 20. Water Hole

## Site Plan

Indicate scale, boundaries of site, features



## Site Dimensions

### Closed Site Dimensions (m)

- Internal length  
 Internal width  
 Shelter height  
 Shelter floor area

### Open Site Dimensions (m)

- 41m Total length of visible site  
 25m Average width of visible site  
 400m<sup>2</sup> Estimated area of visible site  
 41m Length of assessed site area

### 6.2.3 RN3

RN3 is a scatter of nine (9) artefacts (Artefact ID # 9–17) extending across an area of approximately 41 x 25m (Figure 6.5). The site is situated in an area of high ground surface visibility, on an exposed flat crest of land at the western edge of the central fire track overlooking Merimbula Lake, with some original topsoil still intact (Figure 6.14). Identified artefacts include flakes (n=5), flaked pieces (n=3) and one core (eg Figures 6.15, 6.16 and 6.17). The predominant raw material is fine-grained grey, pink and red silcrete (n=4) followed by very fine-grained light grey chert (n=3) and grey quartzite (n=2). Small quantities of fragmented cockle shell are also dispersed throughout this area. The site is approximately 80 metres west of RN4.



Figure 6.14 Looking southeast across part of the exposed fire track at RN3.



Figure 6.15 Artefact # 9—Grey fine-grained quartzite core.



Figure 6.16 Artefact # 11—Grey fine-grained quartzite flake.



Figure 6.17 Artefact # 14—Very light grey/white fine-grained silcrete flake.

## RN3 - Additional Description July 2011

Site Type:	<i>Open artefact scatter and midden</i>	MGA Grid Reference:	<i>as per GML (2008)</i>
Date Recorded:	<i>28/7/11</i>	Topographic Map:	<i>Pambula 8824-2S</i>
Recorder:	<i>Peter Kuskie</i>		
Landform Element:	<i>Spur crest</i>	Vegetation:	<i>Cleared</i>
Slope:	<i>Gentle</i>	Ground Disturbance:	<i>Moderate</i>
Distance to Water:	<i>&lt;50</i>		

Visible Extent of Surface Exposures: Length (m)	Visible Extent of Surface Exposures: Width (m)	Visible Extent of Evidence: Length (m)	Visible Extent of Evidence: Width (m)	Visible Locus Area (m <sup>2</sup> )	Mean Surface Visibility of Locus (%)	Mean Arch. Visibility of Locus (%)	Effective Locus Area (m <sup>2</sup> )	# of Artefacts	# of Artefacts per m <sup>2</sup> of Effective Locus Area	Sub-Surface Deposit
varies	varies	-	-	-	50	40	-	0	-	possible

### Additional Comments:

- ☐ Only two artefacts relocated, therefore refer to GML (2008) recording for site extent;
- ☐ Minor, very sparse scatter of cockle near artefact #1 (of current recording);
- ☐ Vegetation previously at site has been recently removed and mulched;
- ☐ Moderate disturbance from vegetation removal and vehicles;
- ☐ Sandy soil;
- ☐ Moderate potential for sub-surface deposit but unlikely to be of high research value.



Site Location: RN3 (July 2011)



Photograph: RN3 (July 2011) - view west across RN3 to Robyn's Nest existing facilities.







## Aboriginal Site Recording Form

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PO Box 1967, Hurstville NSW 2220



### Office Use Only

Site Number

Date received

Date entered into system

Date catalogued

Entered by (I.D.)

### Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

### For Further Information Contact:

#### ☐ Nominated Trustee

Title  Surname  First Name  Initials   
 Organisation   
 Address   
 Phone number  Fax

#### ☒ Knowledge Holder

Title  Surname  First Name  Initials   
 Organisation   
 Address   
 Phone number  Fax

### Aboriginal Heritage Unit or Cultural Heritage Division Contacts

### Geographic Location

Site Name

Easting

Northing

AGD/GDA

Mapsheet

Zone

Location Method

Other Registration

### Primary Recorder

Title  Surname  First Name  Initials   
 Organisation   
 Address   
 Phone number  Fax   
 Date recorded

Office Use Only

Client on system ☐

Client on system ☐

Client on system ☐

# NPWS Aboriginal Site Recording Form - Site Information

page 3

## General Site Information

### Closed Site

#### Shelter/Cave Formation

- ☐ Boulder  
☐ Wind erosion  
☐ Water erosion  
☐ Rock collapse

#### Rock Surface Condition

- ☐ Boulder  
☐ Sandstone platform  
☐ Silica gloss  
☐ Tessellated  
☐ Weathered  
☐ Other platform

### Open Site

#### Site Orientation

- ☐ N-S  
☐ NE-SW  
☐ E-W  
☐ SE-NW  
☒ N/A

#### Condition of Ceiling

- ☐ Boulder  
☐ Sandstone platform  
☐ Silica gloss  
☐ Tessellated  
☐ Weathered  
☐ Other platform

#### Shelter Aspect

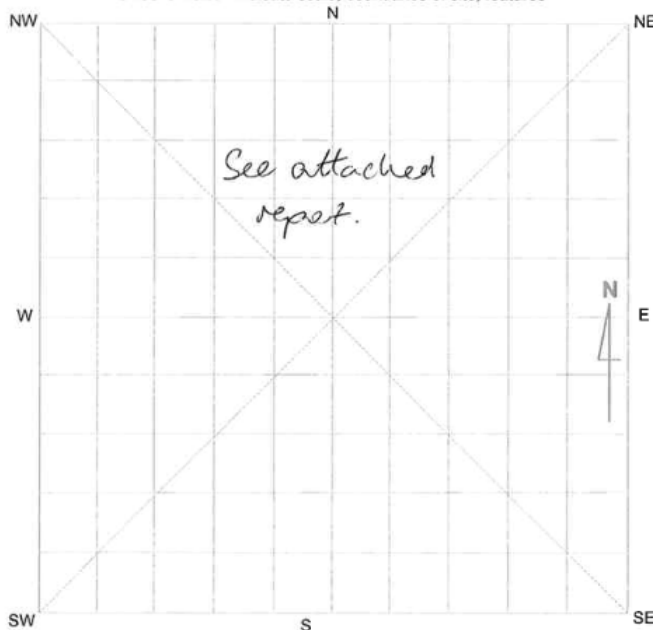
- ☐ North  
☐ North East  
☐ East  
☐ South East  
☐ South  
☐ South West  
☐ West  
☐ North West

## Features

- ☐ 1. Aboriginal Ceremony & Dreaming  
☐ 2. Aboriginal Resource & Gathering  
☐ 3. Art  
☒ 4. Artefact  
☐ 5. Burial  
☐ 6. Ceremonial Ring  
☐ 7. Conflict  
☐ 8. Earth Mound  
☐ 9. Fish Trap  
☐ 10. Grinding Groove  
☐ 11. Habitation Structure  
☐ 12. Hearth  
☐ 13. Non Human Bone & Organic Material  
☐ 14. Ochre quarry  
☒ 15. Potential Archaeological Deposit  
☐ 16. Stone Quarry  
☐ 17. Shell  
☐ 18. Stone Arrangement  
☐ 19. Modified Tree  
☐ 20. Water Hole

## Site Plan

Indicate scale, boundaries of site, features



## Site Dimensions

### Closed Site Dimensions (m)

- Internal length  
 Internal width  
 Shelter height  
 Shelter floor area

### Open Site Dimensions (m)

- 40m Total length of visible site  
 10m Average width of visible site  
 400m Estimated area of visible site  
 40m Length of assessed site area

#### 6.2.4 RN4

RN4 comprises two isolated artefacts (Artefact ID # 18 & 19) located on the hilltop crest in the centre of the site, overlooking Merimbula Lake to the south (Figure 6.18). There appears to be more topsoil intact in this portion of the study area, indicating higher potential for artefacts in this area. The two identified artefacts are approximately 40m apart, and so are essentially two isolated artefacts, but have been grouped together as one site because of their relative proximity. The artefacts are both white silcrete flakes, although the northernmost artefact is of a very fine-grained material (Figures 6.19 and 6.20). The southernmost artefact (Artefact #19) was identified in an area of very high ground surface visibility due to recent land clearing by machinery in this area (Figure 6.21). The artefacts are approximately 80 metres east of RN3.



Figure 6.18 Looking south across the hilltop crest in the area of RN4.



Figure 6.19 Artefact # 18— White very fine-grained silcrete flake.



Figure 6.20 Artefact # 19—White fine-grained silcrete flake.



Figure 6.21 Cleared land with high ground surface visibility, in the location where artefact #19 was located.

## RN4 - Additional Description July 2011

Site Type:	<i>Open artefact scatter</i>	MGA Grid Reference:	<i>as per GML (2008)</i>
Date Recorded:	<i>28/7/11</i>	Topographic Map:	<i>Pambula 8824-2S</i>
Recorder:	<i>Peter Kuskie</i>		
Landform Element:	<i>Spur crest</i>	Vegetation:	<i>Cleared</i>
Slope:	<i>Level-very gentle</i>	Ground Disturbance:	<i>Low to moderate</i>
Distance to Water:	<i>&gt;50</i>		

Visible Extent of Surface Exposures: Length (m)	Visible Extent of Surface Exposures: Width (m)	Visible Extent of Evidence: Length (m)	Visible Extent of Evidence: Width (m)	Visible Locus Area (m <sup>2</sup> )	Mean Surface Visibility of Locus (%)	Mean Arch. Visibility of Locus (%)	Effective Locus Area (m <sup>2</sup> )	# of Artefacts	# of Artefacts per m <sup>2</sup> of Effective Locus Area	Sub-Surface Deposit
10	10	1	1	1	30	30	0.3	1	3.333	possible

### Additional Comments:

- ☐ One exposure, dense grass elsewhere;
- ☐ Located one artefact in exposure, could not relocate other GML (2008) artefacts;
- ☐ Very minor, sparse cockle shell;
- ☐ Disturbance from vegetation removal;
- ☐ Moderate potential for sub-surface deposit but may not be of high research value.



Site Location: RN4 (July 2011)



Photograph: RN4 (July 2011) - view south to Merimbula Lake.







# Aboriginal Site Recording Form

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PO Box 1967, Hurstville NSW 2220



## Office Use Only

Site Number

Date received  Date entered into system  Date catalogued

Entered by (I.D.)

## Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

## For Further Information Contact:

### ☐ Nominated Trustee

Title  Surname  First Name  Initials   
 Organisation   
 Address   
 Phone number  Fax

### ☒ Knowledge Holder

Title  Surname  First Name  Initials   
 Organisation   
 Address   
 Phone number  Fax

## Aboriginal Heritage Unit or Cultural Heritage Division Contacts

## Geographic Location

Site Name   
 Easting  Northing  AGD/GDA   
 Mapsheet   
 Zone  Location Method

Other Registration

## Primary Recorder

Title  Surname  First Name  Initials   
 Organisation   
 Address   
 Phone number  Fax   
 Date recorded

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Client on system ☐

Client on system ☐

# NPWS Aboriginal Site Recording Form - Site Information

page 3

## General Site Information

### Closed Site

#### Shelter/Cave Formation

- ☐ Boulder  
☐ Wind erosion  
☐ Water erosion  
☐ Rock collapse

#### Rock Surface Condition

- ☐ Boulder  
☐ Sandstone platform  
☐ Silica gloss  
☐ Tessellated  
☐ Weathered  
☐ Other platform

#### Condition of Ceiling

- ☐ Boulder  
☐ Sandstone platform  
☐ Silica gloss  
☐ Tessellated  
☐ Weathered  
☐ Other platform

#### Shelter Aspect

- ☐ North  
☐ North East  
☐ East  
☐ South East  
☐ South  
☐ South West  
☐ West  
☐ North West

### Open Site

#### Site Orientation

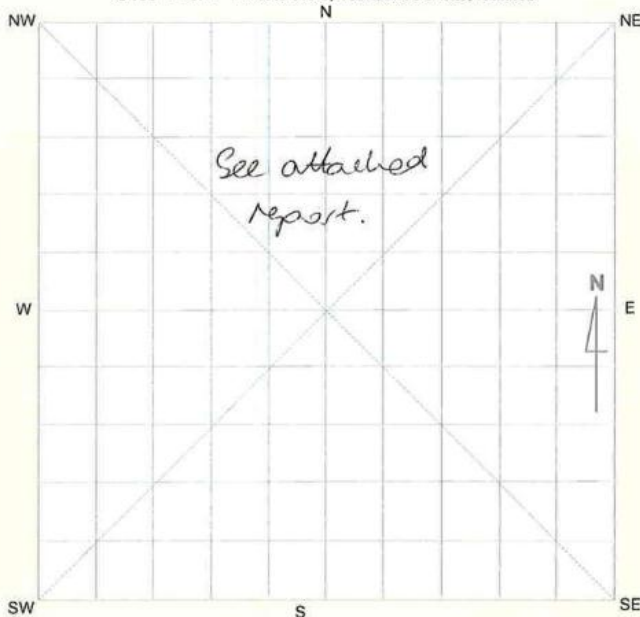
- ☐ N-S  
☐ NE-SW  
☐ E-W  
☐ SE-NW  
☒ N/A

## Features

- ☐ 1. Aboriginal Ceremony & Dreaming  
☐ 2. Aboriginal Resource & Gathering  
☐ 3. Art  
☐ 4. Artefact  
☐ 5. Burial  
☐ 6. Ceremonial Ring  
☐ 7. Conflict  
☐ 8. Earth Mound  
☐ 9. Fish Trap  
☐ 10. Grinding Groove  
☐ 11. Habitation Structure  
☐ 12. Hearth  
☐ 13. Non Human Bone & Organic Material  
☐ 14. Ochre quarry  
☐ 15. Potential Archaeological Deposit  
☐ 16. Stone Quarry  
☒ 17. Shell  
☐ 18. Stone Arrangement  
☐ 19. Modified Tree  
☐ 20. Water Hole

## Site Plan

Indicate scale, boundaries of site, features



## Site Dimensions

### Closed Site Dimensions (m)

- Internal length  
 Internal width  
 Shelter height  
 Shelter floor area

### Open Site Dimensions (m)

- Total length of visible site  
 Average width of visible site  
 Estimated area of visible site  
 Length of assessed site area

### 6.2.5 RN5

RN5 is made up of two very distinct and isolated small shell middens located on the verge of a short section of fire track which projects north at 90° from the main southern fire trail along the lake edge (Figure 6.5). The area is located in a small depression east of the forested gully. The two middens are approximately 11 metres apart and are distinctive in their content. The southern midden measures approximately 1 x 4m in extent and is comprised entirely of oyster shell (Figure 6.22). The northern midden measures 3 x 2m and is comprised entirely of cockle shell (Figure 6.23). According to GPS data collected during the field survey, the southern midden is located just beyond the southern extent of the study area.



Figure 6.22 The scatter of oyster shell within RN5.



Figure 6.23 The scatter of cockle shell within RN5.

## RN5 (MC10/A) - Additional Description July 2011

Site Type:	<i>Open artefact scatter and midden</i>	MGA Grid Reference:	<i>as per GML (2008)</i>
Date Recorded:	<i>28/7/11</i>	Topographic Map:	<i>Pambula 8824-2S</i>
Recorder:	<i>Peter Kuskie</i>		
Landform Element:	<i>Simple slope</i>	Vegetation:	<i>Cleared, regrowth</i>
Slope:	<i>Moderate</i>	Ground Disturbance:	<i>Moderate to high</i>
Distance to Water:	<i>&lt;50</i>		

Visible Extent of Surface Exposures: Length (m)	Visible Extent of Surface Exposures: Width (m)	Visible Extent of Evidence: Length (m)	Visible Extent of Evidence: Width (m)	Visible Locus Area (m <sup>2</sup> )	Mean Surface Visibility of Locus (%)	Mean Arch. Visibility of Locus (%)	Effective Locus Area (m <sup>2</sup> )	# of Artefacts	# of Artefacts per m <sup>2</sup> of Effective Locus Area	Sub-Surface Deposit
varies	varies	2	2	4	50	50	2	2	1.000	possible

### Additional Comments:

- ☐ Equates to site MC10/A (Kuskie and Gutierrez 2000);
- ☐ Southern midden relocated at 757397:5913407, along with two artefacts at the junction of the two vehicle tracks;
- ☐ Southern midden in 1.9 x 1.5 metre area, 50% visibility, all mud oyster (70% whole, 30% fragments);
- ☐ Moderate to high disturbance from vehicle tracks and erosion;
- ☐ Within 50 metres of Merimbula Lake margin;
- ☐ High potential for sub-surface deposit off vehicle track in areas of lower disturbance.



Site Location: RN5 (July 2011)



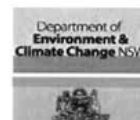
Photograph: RN5 (July 2011) - southern part of midden.





## Aboriginal Site Recording Form

AHIMS Registrar  
PO Box 1967, Hurstville NSW 2220



<b>Office Use Only</b>		<b>Site Number</b> <span style="border-bottom: 1px solid black; display: inline-block; width: 150px;"></span>	
Date received <span style="border-bottom: 1px solid black; display: inline-block; width: 80px;"></span>	Date entered into system <span style="border-bottom: 1px solid black; display: inline-block; width: 80px;"></span>	Date catalogued <span style="border-bottom: 1px solid black; display: inline-block; width: 80px;"></span>	
Entered by (I.D.) <span style="border-bottom: 1px solid black; display: inline-block; width: 400px;"></span>			
<b>Information Access</b>			
<input type="checkbox"/> Gender/male	<input type="checkbox"/> Gender/female	<input type="checkbox"/> Location restriction	<input type="checkbox"/> General restriction <input type="checkbox"/> No access
<b>For Further Information Contact:</b>			
<input type="checkbox"/> Nominated Trustee			
Title	Surname	First Name	Initials
<span style="border-bottom: 1px solid black; display: inline-block; width: 60px;"></span>	<span style="border-bottom: 1px solid black; display: inline-block; width: 180px;"></span>	<span style="border-bottom: 1px solid black; display: inline-block; width: 180px;"></span>	<span style="border-bottom: 1px solid black; display: inline-block; width: 60px;"></span>
Organisation	<span style="border-bottom: 1px solid black; display: inline-block; width: 300px;"></span>		
Address	<span style="border-bottom: 1px solid black; display: inline-block; width: 300px;"></span>		
Phone number	<span style="border-bottom: 1px solid black; display: inline-block; width: 120px;"></span>	Fax	<span style="border-bottom: 1px solid black; display: inline-block; width: 120px;"></span>
<input checked="" type="checkbox"/> Knowledge Holder			
Title	Surname	First Name	Initials
<span style="border-bottom: 1px solid black; display: inline-block; width: 60px;">MR</span>	<span style="border-bottom: 1px solid black; display: inline-block; width: 180px;">DIXON</span>	<span style="border-bottom: 1px solid black; display: inline-block; width: 180px;">JOHN</span>	<span style="border-bottom: 1px solid black; display: inline-block; width: 60px;"></span>
Organisation	<span style="border-bottom: 1px solid black; display: inline-block; width: 300px;">NGARIGO CONSULTANCY PTY LTD</span>		
Address	<span style="border-bottom: 1px solid black; display: inline-block; width: 300px;">PO BOX 413 BEGA NSW 2550</span>		
Phone number	<span style="border-bottom: 1px solid black; display: inline-block; width: 120px;">0488749193</span>	Fax	<span style="border-bottom: 1px solid black; display: inline-block; width: 120px;"></span>
<b>Aboriginal Heritage Unit or Cultural Heritage Division Contacts</b>			
<span style="border-bottom: 1px solid black; display: inline-block; width: 300px;">SOUTHERN ABORIGINAL HERITAGE UNIT</span>			
<b>Geographic Location</b>			
Site Name	<span style="border-bottom: 1px solid black; display: inline-block; width: 300px;">ROBYNS NEST 6 (RNG)</span>		
Easting	<span style="border-bottom: 1px solid black; display: inline-block; width: 80px;">757459</span>	Northing	<span style="border-bottom: 1px solid black; display: inline-block; width: 80px;">5913425</span>
AGD/GDA	<span style="border-bottom: 1px solid black; display: inline-block; width: 80px;">GOA</span>		
Mapsheet	<span style="border-bottom: 1px solid black; display: inline-block; width: 180px;">PAMBULA</span>		
Zone	<span style="border-bottom: 1px solid black; display: inline-block; width: 60px;">55</span>	Location Method	<span style="border-bottom: 1px solid black; display: inline-block; width: 180px;">NON-DIFFERENTIAL GPS.</span>
		Other Registration	<span style="border-bottom: 1px solid black; display: inline-block; width: 180px;"></span>
<b>Primary Recorder</b>			
Title	Surname	First Name	Initials
<span style="border-bottom: 1px solid black; display: inline-block; width: 60px;">MS</span>	<span style="border-bottom: 1px solid black; display: inline-block; width: 180px;">FARQUHARSON</span>	<span style="border-bottom: 1px solid black; display: inline-block; width: 180px;">LAURA</span>	<span style="border-bottom: 1px solid black; display: inline-block; width: 60px;">A</span>
Organisation	<span style="border-bottom: 1px solid black; display: inline-block; width: 300px;">GODDEN MACKAY LOGAN PTY LTD</span>		
Address	<span style="border-bottom: 1px solid black; display: inline-block; width: 300px;">78 GEORGE ST REDFERN NSW 2016</span>		
Phone number	<span style="border-bottom: 1px solid black; display: inline-block; width: 120px;">02 93194811</span>	Fax	<span style="border-bottom: 1px solid black; display: inline-block; width: 120px;">02 93194883</span>
Date recorded	<span style="border-bottom: 1px solid black; display: inline-block; width: 180px;">2/10/2003</span>		

Office Use Only

Client on system ☐

Client on system ☐

Client on system ☐



# NPWS Aboriginal Site Recording Form - Site Information

page 3

## General Site Information

### Closed Site

#### Shelter/Cave Formation

- ☐ Boulder
- ☐ Wind erosion
- ☐ Water erosion
- ☐ Rock collapse

#### Rock Surface Condition

- ☐ Boulder
- ☐ Sandstone platform
- ☐ Silica gloss
- ☐ Tessellated
- ☐ Weathered
- ☐ Other platform

#### Condition of Ceiling

- ☐ Boulder
- ☐ Sandstone platform
- ☐ Silica gloss
- ☐ Tessellated
- ☐ Weathered
- ☐ Other platform

#### Shelter Aspect

- ☐ North
- ☐ North East
- ☐ East
- ☐ South East
- ☐ South
- ☐ South West
- ☐ West
- ☐ North West

### Open Site

#### Site Orientation

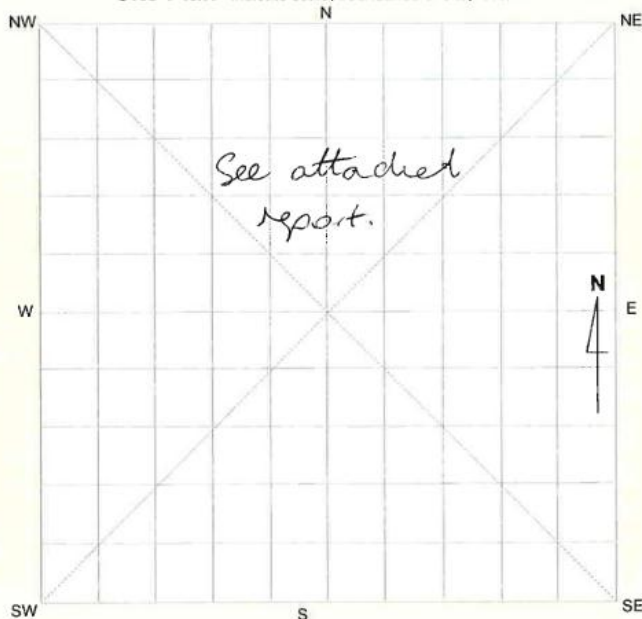
- ☐ N-S
- ☐ NE-SW
- ☐ E-W
- ☐ SE-NW
- ☒ N/A

## Features

- ☐ 1. Aboriginal Ceremony & Dreaming
- ☐ 2. Aboriginal Resource & Gathering
- ☐ 3. Art
- ☐ 4. Artefact
- ☐ 5. Burial
- ☐ 6. Ceremonial Ring
- ☐ 7. Conflict
- ☐ 8. Earth Mound
- ☐ 9. Fish Trap
- ☐ 10. Grinding Groove
- ☐ 11. Habitation Structure
- ☐ 12. Hearth
- ☐ 13. Non Human Bone & Organic Material
- ☐ 14. Ochre quarry
- ☐ 15. Potential Archaeological Deposit
- ☐ 16. Stone Quarry
- ☒ 17. Shell
- ☐ 18. Stone Arrangement
- ☐ 19. Modified Tree
- ☐ 20. Water Hole

## Site Plan

Indicate scale, boundaries of site, features



## Site Dimensions

### Closed Site Dimensions (m)

- Internal length
- Internal width
- Shelter height
- Shelter floor area

### Open Site Dimensions (m)

- Total length of visible site
- Average width of visible site
- Estimated area of visible site
- Length of assessed site area



### 6.2.6 RN6

RN6 is a small isolated shell midden located approximately 60 metres to the east of RN5, in the southeast corner of the study area. The site is located on the south end of the fire track running down the eastern edge of the study area, and is visible within a grassed exposure (Figure 6.24). The site is a small concentration of Sydney mud oyster measuring 0.7 x 1.5m, including some whole pieces and large fragments (Figure 6.25).



Figure 6.24 RN6 as exposed within the grassed fire track in the southeast corner of the study area.



Figure 6.25 Detail of mud oyster at RN6.

## RN6 - Additional Description July 2011

Site Type:	Midden	MGA Grid Reference:	as per GML (2008)
Date Recorded:	28/7/11	Topographic Map:	Pambula 8824-2S
Recorder:	Peter Kuskie		
Landform Element:	Spur crest	Vegetation:	Cleared
Slope:	Gentle	Ground Disturbance:	Moderate
Distance to Water:	>50		

Visible Extent of Surface Exposures: Length (m)	Visible Extent of Surface Exposures: Width (m)	Visible Extent of Evidence: Length (m)	Visible Extent of Evidence: Width (m)	Visible Locus Area (m <sup>2</sup> )	Mean Surface Visibility of Locus (%)	Mean Arch. Visibility of Locus (%)	Effective Locus Area (m <sup>2</sup> )	# of Artefacts	# of Artefacts per m <sup>2</sup> of Effective Locus Area	Sub-Surface Deposit
50+	3	2	1	2	10	10	0.2	0	-	possible

### Additional Comments:

- ☐ Less shell currently visible than at time of GML (2008) recording due to regrowth of grass;
- ☐ Midden approximately 90% cockle (all fragments) and 10% mud oyster (all fragments);
- ☐ Disturbance from vegetation removal and vehicle track;
- ☐ Minor scatter, probably an extension of the adjacent site MC11/A;
- ☐ Low potential for sub-surface midden deposit of high research value.



Site Location: RN6 (July 2011)



Photograph: RN6 (July 2011) - view south to Merimbula Lake, midden inset.



## APPENDIX 2: ARCHAEOLOGICAL SURVEY COVERAGE DATABASE

Survey Area	Landform Element	Slope	Distance to Water (metres)	Type of Water	Exposure Type (Horizon)	Total Sample Area (m <sup>2</sup> )	Surface Visibility (%)	Detection Limiting Factors	Archaeological Visibility %	Ground Disturbance	Effective Survey Coverage (m <sup>2</sup> )	# of Artefacts (open sites)	Presence of Shell Midden	Artefact Density/m <sup>2</sup> of Effective Survey Coverage	Comments
MC6	simple slope	steep	>50	1st order	A	1830	80-90	1, 3	60-70	mod	1566	0	no	0.000	dust cover lowers visibility along tracks graded by surveyors; regrowth of melaleuca, oaks, blackbutt, wattle, pine; ground cover mostly bracken, pine/leaf litter and grass; sandstone boulders present; fine silty loam soil with quartz and sedimentary gravel; one exposure off track made by dozer push to side of main transect; coverage data relates to 2000 survey and all of original survey area; boundaries adjusted with updated contour data and 2011 inspection
MC10	simple slope	moderate	<50	lake	A/B	243	80-90	1	70-90	mod	213	8	yes	0.038	lower slope; vehicle track cut in; quartz gravel present on track; north of road is development area, but no visibility or tracks, mostly dense vegetation, regrowth of paperbarks, casuarinas, ironbark, stringybark, with grass and bracken undercover; steep drop off to rocky shoreline of lake edge south of road, Crown land not part of study area; coverage data relates to 2000 survey and all of original survey area; boundaries adjusted with updated contour data and 2011 inspection
MC11	spur crest	gentle	<50	lake	A/B	45	90	1	70	mod	41	10	yes	0.244	vehicle track; north of road is development area, but no visibility or tracks, mostly dense vegetation, regrowth of paperbarks, casuarinas, ironbark, stringybark, with grass and bracken undercover; steep drop off to rocky shoreline of lake edge south of road, Crown land not part of study area; coverage data relates to 2000 survey and all of original survey area; boundaries adjusted with updated contour data and 2011 inspection
MC12	simple slope	moderate	<50	lake	A/B	301	90	1	70-90	mod	271	1	no	0.004	vehicle track; north of road is development area, but no visibility or tracks, mostly dense vegetation, regrowth of paperbarks, casuarinas, ironbark, stringybark, with grass and bracken undercover; steep drop off to rocky shoreline of lake edge south of road; shed related to sediment dam on water pipeline is located next to dam; coverage data relates to 2000 survey and all of original survey area; boundaries adjusted with updated contour data and 2011 inspection
MC13	drainage depression	gentle	<50	2nd order, lake	A/B	75	90	1, 2	70	mod	68	0	no	0.000	vehicle track; dense vegetation off track; coverage data relates to 2000 survey and all of original survey area; boundaries adjusted with updated contour data and 2011 inspection



Survey Area	Landform Element	Slope	Distance to Water (metres)	Type of Water	Exposure Type (Horizon)	Total Sample Area (m <sup>2</sup> )	Surface Visibility (%)	Detection Limiting Factors	Archaeological Visibility %	Ground Disturbance	Effective Survey Coverage (m <sup>2</sup> )	# of Artefacts (open sites)	Presence of Shell Midden	Artefact Density/m <sup>2</sup> of Effective Survey Coverage	Comments
MCRN 15	drainage depression	moderate	<50	1st order	A/B	500	0.1-90	1	0.1-90	low - mod	126	0	no	0.000	vehicle tracks cross at northern and southern margins; generally low potential apart from at lake margin; surveyed by GML (2008) and reinspected by SEA in 2011
MCRN 16	spur crest	gentle	<50	1st order	A/B	300	5	1	5	low - mod	15	0	no	0.000	high potential across spur crest; adjoins MC11; surveyed by GML (2008) and reinspected by SEA in 2011
MCRN 17	simple slope	moderate	<50	1st order, lake	A/B	270	60	1	50	low - mod	135	3	yes	0.022	extension of MC10; high potential, close to lake margin; surveyed by GML (2008) and reinspected by SEA in 2011
MCRN 18	spur crest	gentle	<50	1st order, lake	A/B	1950	0.1-90	1	0.1-90	low - high	375	16	yes	0.427	broad gently sloping spur crest, all within Robyn's Nest property; surveyed by GML (2008) and reinspected by SEA in 2011
MCRN 19	simple slope	moderate	<50	1st order	A/B	200	0.1-50	1	0.1-50	low - mod	100	0	no	0.000	small portion of moderate slope in Robyn's Nest property adjoining MC6; surveyed by GML (2008) and reinspected by SEA in 2011
MCRN 20	spur crest	level - very gentle	<50	1st order	A/B	1200	0.1-30	1	0.1-30	low - mod	30	2	no	0.066	crest over 150 metres from lake margin; potential uncertain; surveyed by GML (2008) and reinspected by SEA in 2011
MCRN 21	simple slope	moderate	<50	2nd order	A/B	1200	2	1	2	low - mod	24	0	no	0.000	relatively low potential; surveyed by GML (2008) and reinspected by SEA in 2011

Detection Limiting Factors - 1 = vegetation; 2 = leaf litter/gravel; 3 = sediment deposition.

**APPENDIX 3: ABORIGINAL HERITAGE SITE RECORDS AND UPDATED DESCRIPTIONS FOR SITES MC6/C, MC10/B, MC10/C, MC11/A AND MC12/A<sup>9</sup>**

Site Name	OEH #	Site Type / Features	MGA Easting	MGA Northing	Survey Area	Landform
RN1	62-6-0690	open artefact scatter and midden	757208	5913518	MCRN18	spur crest
RN2	62-6-0691	midden	757264	5913471	MCRN18	spur crest
RN3	62-6-0692	open artefact scatter and midden	757353	5913594	MCRN18	spur crest
RN4	62-6-0693	open artefact scatter	757449	5913590	MCRN20	spur crest
RN5 = MC10/A	62-6-0694	open artefact scatter and midden	757396	5913411	MCRN17	simple slope
RN6	62-6-0695	midden	757459	5913425	MC11	spur crest
MC6/C	62-6-0632	open artefact scatter	757500	5913618	MC6	simple slope
MC10/B	62-6-0470	open artefact scatter and midden	757407	5913390	MCRN17	simple slope
MC10/C	62-6-0470	open artefact scatter and midden	757470	5913390	MC10	simple slope
MC11/A	62-6-0469	open artefact scatter and midden	757490	5913420	MC11	spur crest
MC12/A	62-6-0471	open artefact scatter	757533	5913434	MC12	simple slope


<sup>9</sup> Sites identified and recording by South East Archaeology are described below. Sites originally recorded by GML (2008) are presented in Appendix 1.



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Standard Site Recording Form Revised 5/88

1:250,000 map sheet: _____ NPWS Code _____		<b>HEAD OFFICE USE ONLY:</b> NPWS Site no: _____ Site types: _____ Accessed by: _____ Date: _____ Data entered by: _____ Date: _____ Owner/Manager: C/-Caddey Searl & Jarman Address: PO Box 488 Merimbula NSW 2548														
<b>AMG Grid reference</b> Full reference - please include leading digits <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">             250K  <table border="1" style="border-collapse: collapse;"> <tr><td>7</td><td>5</td><td>7</td><td>4</td><td>0</td><td>0</td></tr> </table>             mE           </div> <div style="text-align: center;">             250K  <table border="1" style="border-collapse: collapse;"> <tr><td>5</td><td>9</td><td>1</td><td>3</td><td>4</td><td>3</td><td>0</td></tr> </table>             mN           </div> </div>		7	5	7	4	0	0	5	9	1	3	4	3	0	Scale of map used for grid reference <input checked="" type="checkbox"/> 25K, 50K (preferred) <input type="checkbox"/> 100K <input type="checkbox"/> 250K Please use largest scale available 1:25K, 50K, 100K map name: Pambula 8824-2-S	
7	5	7	4	0	0											
5	9	1	3	4	3	0										
Site name: Merimbula Cove 6/C Locality/property name: Merimbula Cove		NPWS District: Eden District Region: Southern														
<b>Reason for investigation</b> Archaeological assessment of proposed development of Stages 3, 4 & 5 of the Merimbula Cove residential estate.																
Portion no: 82 Parish: Pambula		Photos taken? Yes How many attached? Nil														
<b>How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff (Draw diagram on separate sheet))</b> About one kilometre west of Merimbula along the Old Princes Highway, turn south into Lakewood Drive and travel down toward lake shore.																
Other sites in locality? Yes Are sites in NPWS Register? Yes		Site Types include: Middens, artefact scatters & burials														
Have artefacts been removed from site? Yes By whom? South East Archaeology		When? October 2004 Deposited where? Bega Traditional Aboriginal Elders Council														
Is site important to local Aborigines? Yes Give contact(s) name(s) + address(es) Bega LALC PO Box 11 Bega Traditional Aboriginal Elders Council 3 Ballima Court Contacted for this recording? Yes Bega NSW 2550 Bega NSW 2550 (Attach additional information separately) If not, why not?																
<b>Verbal/written reference sources (including full title of accompanying report)</b> Kuskie, P. 2005 Sub-Surface Archaeological Investigation of Stages 3 and 5 of the Proposed Bellbird Ridge Residential Development at Merimbula Cove, Merimbula, Far South Coast of New South Wales. Unpublished report to Ridge Consolidated		NPWS Report Catalogue #														
<b>Checklist</b> surface visibility, damage/disturbance/ threat to site	<b>Condition of site</b> High disturbance through vegetation removal, earthworks															
<b>Recommendations for management &amp; protection (attach separate sheet if necessary)</b> Section 90 Consent in consultation with Aboriginal community																
Site recorded by: E. Clarke Address/institution: South East Archaeology Pty Ltd 24 Bamford St Hughes ACT 2605		Date: 18/10/2004														

SITE POSITION & ENVIRONMENT		OFFICE USE ONLY: NPWS site no:
<b>1. Land form</b> a. beach/hill slope/ridge top, etc: simple slope		<b>b. site aspect:</b> west
<b>c. slope:</b> moderate		<b>d. mark on diagram provided or on your own sketch the position of the site:</b>
		<b>e. Describe briefly:</b>
<b>f. Local rock type:</b>		<b>g. Land use/effect:</b> Cleared regrowth forest, subdivision development
<b>2. Distance from drinking water:</b> >50 metres		<b>Source:</b> 2nd order drainage
<b>3. Resource Zone associated with site (estuarine, riverine, forest etc):</b> Estuarine, forest		
<b>4. Vegetation:</b> Cleared		
<b>5. Edible plants noted:</b> Nil		
<b>6. Faunal resources (include shellfish):</b> Typical estuarine and forest species		
<b>7. Other exploitable resources (river pebbles, ochre, etc):</b> Quartz gravel in vicinity		
<b>Site type:</b> Artefact Scatter	<b>DESCRIPTION OF SITE &amp; CONTENTS.</b> <b>Note state of preservation of site &amp; contents. Do NOT dig, disturb, damage site or contents.</b>	
<b>CHECKLIST TO HELP:</b> length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock. <b>DEPOSIT:</b> colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types. <b>ART:</b> area of surface decorated, motifs, colours, wet, dry pigment, technique of engraving, no. of figures, sizes, patination. <b>BURIALS:</b> number & condition of bone, position, age, sex, associated artefacts. <b>TREES:</b> number, alive, dead, likely age, scar shape, position, size, patterns, axe marks, regrowth <b>QUARRIES:</b> rock type, debris, recognisable artefacts, percentage quarried. <b>OTHER SITES EG.</b> structures (fish traps, stone arrangements, bora rings, mia mias), mythological sites, rock holes, engraved groove channels, contact sites (missions massacres cemeteries) as appropriate	MC6/C comprises a single grey rhyolite flake situated on a vehicle track on the western boundary of Stage 5 adjacent to Transect D test units, along with a single white quartz flake from test unit D25 approximately 8 metres south of the rhyolite flake.  Considering the results of the test excavations, there is a low potential for further heritage evidence to occur across the moderate simple slope in Stage 5.	
	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.	



## MC6/C - Additional Description July 2011

Site Type:	<i>Open artefact scatter</i>	MGA Grid Reference:	<i>Revised July 2011 to 757500:5913618</i>
Date Recorded:	<i>28/7/11</i>	Topographic Map:	<i>Pambula 8824-2S</i>
Recorder:	<i>Peter Kuskie</i>		
Landform Element:	<i>Simple slope</i>	Vegetation:	<i>Cleared, revegetated</i>
Slope:	<i>Moderate</i>	Ground Disturbance:	<i>Moderate to high</i>
Distance to Water:	<i>&gt;50</i>		

## Additional Comments:

- ❑ Original surface artefact not relocated in July 2011 - grass has overgrown the vehicle track since the original recording;
- ❑ Site grid reference adjusted slightly based on more accurate base mapping/aerial underlay and GPS recording.

Site Location: MC6/C (July 2011) (note - uncorrected reference for AHIMS site number {red star}, test excavation transects in red)





Photograph: MC6/C (July 2011) - view south to Merimbula Lake.



Photograph: MC6/C (Kuskie 2005) - view south to Merimbula Lake with surface artefact marked by yellow flags.





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Standard Site Recording Form

Revised 5/88

1:250,000 map sheet: _____ NPWS Code _____		<b>HEAD OFFICE USE ONLY:</b> NPWS Site no: _____ Site types: _____ Accessed by: _____ Date: _____ Data entered by: _____ Date: _____ Owner/Manager: C/-Caddey Searl & Jarman Address: PO Box 488 Merimbula NSW 2548																																		
AMG Grid reference <table border="1" style="display: inline-table; text-align: center; width: 150px;"> <tr> <td colspan="5">250K</td> <td colspan="5">250K</td> </tr> <tr> <td>7</td><td>5</td><td>7</td><td>3</td><td>3</td><td>0</td> <td>5</td><td>9</td><td>1</td><td>3</td><td>2</td><td>3</td><td>0</td> </tr> <tr> <td colspan="5">25K</td> <td colspan="5">25K</td> </tr> </table> mE 5/6 mN		250K					250K					7	5	7	3	3	0	5	9	1	3	2	3	0	25K					25K					Full reference - please include leading digits Scale of map used for grid reference <input checked="" type="checkbox"/> 25K, 50K (preferred) <input type="checkbox"/> 100K <input type="checkbox"/> 250K Please use largest scale available 1:25K, 50K, 100K map name: Pambula 8824-2-S	
250K					250K																															
7	5	7	3	3	0	5	9	1	3	2	3	0																								
25K					25K																															
Site name: Merimbula Cove 10		Locality/property name: Merimbula Cove																																		
NPWS District: Eden District		Region: Southern																																		
Reason for investigation Archaeological assessment of proposed development of Stages 3 & 4 of the Merimbula Cove residential estate.																																				
Portion no: 82 Parish: Pambula		Photos taken? Yes How many attached? Nil																																		
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff (Draw diagram on separate sheet). About one kilometre west of Merimbula along the Old Princes Highway, turn south into Lakewood Drive and travel down toward lake shore.																																				
Other sites in locality? Yes Are sites in NPWS Register? Yes		Site Types include: Middens, artefact scatters & burials																																		
Have artefacts been removed from site? No By whom?		When? Deposited where?																																		
Is site important to local Aborigines? Yes Give contact(s) name(s) + address(es) Bega LALC PO Box 11 Bega NSW 2550 Bega Traditional Aboriginal Elders Council 227 Newtown Rd Bega NSW 2550 Contacted for this recording? Yes (Attach additional information separately) If not, why not?																																				
Verbal/written reference sources (including full title of accompanying report) Kuskie, P. & Gutierrez, V. 2000 An Archaeological Assessment of the Proposed Merimbula Cove Residential Development, Far South Coast of New South Wales.																																				
Checklist surface visibility, damage/disturbance/ threat to site		Condition of site: Moderate disturbance																																		
Recommendations for management & protection (attach separate sheet if necessary) Consent to Destroy if necessary																																				
Site recorded by: P. Kuskie & V. Gutierrez Address/institution: South East Archaeology Pty Ltd 24 Bamford St Hughes ACT 2605		Date: 13/10/2000																																		



SITE POSITION & ENVIRONMENT		OFFICE USE ONLY: NPWS site no:
1. Land form a. beach/hill slope/ridge top, etc: simple slope      b. site aspect: south      c. slope: moderate d. mark on diagram provided or on your own sketch the position of the site:      e. Describe briefly:		
		
f. Local rock type:      g. Land use/effect: Clearance/regrowth forest		
2. Distance from drinking water: <50 metres      Source: Merimbula Lake		
3. Resource Zone associated with site (estuarine, riverine, forest etc): Estuarine, regrowth forest		
4. Vegetation: Dense regrowth forest of casuarinas, paperbark, ironbark, stringybark, grass and bracken undercover		
5. Edible plants noted: Nil		
6. Faunal resources (include shellfish): Typical estuarine species		
7. Other exploitable resources (river pebbles, ochre, etc): Quartz, siltstone and sandstone gravel in vicinity		
Site type:  Midden	<b>DESCRIPTION OF SITE &amp; CONTENTS.</b> Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.	
<b>CHECKLIST TO HELP:</b> length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock. <b>DEPOSIT:</b> colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types. <b>ART</b> area of surface decorated, motifs, colours, wet, dry pigment, technique of engraving, no. of figures, sizes, patination. <b>BURIALS:</b> number & condition of bone, position, age, sex, associated artefacts. <b>TREES:</b> number, alive, dead, likely age, scar shape, position, size, patterns, axe marks, regrowth <b>QUARRIES:</b> rock type, debris, recognisable artefacts, percentage quarried. <b>OTHER SITES EG.</b> structures (fish traps, stone arrangements, bora rings, mia mias), mythological sites, rock holes, engraved groove channels, contact sites (missions massacres cemeteries) as appropriate	<p>The site is comprised of three concentrations of shell material along a vehicle track: loci A, B &amp; C. Locus A is an in situ mud oyster midden exposed in a 25cm deep road cutting along the side of the vehicle track. The visible extent of the evidence measures 1.5 x 0.3m within a 20 x 3m exposure. Whole and fragmented cockle shell material make up the other exposures of evidence at loci B &amp; C. Within the 80 x 3m exposure of the vehicle track, the evidence visible at Locus B measures 2 x 1m, while at Locus C, dense cockle shell and 7 lithic artefacts were recorded within a 20 x 3m area. The lithic artefacts at this site (all found within Locus C) include a white quartz nondescript core fragment, a banded rhyolite flake, banded rhyolite nondescript core fragment, a banded rhyolite flake, a banded rhyolite microblade core, banded rhyolite flake and an acid volcanic flake. A banded rhyolite lithic fragment was also present. Refer to attached plan.</p> <p>Attach sketches etc, eg. plan &amp; section of shelter, show relation between site contents, indicate north, show scale.            Attach annotated photos (stereo where useful) showing scale, particularly for art sites.</p>	

## MC10/B - Additional Description July 2011

Site Type:	<i>Open artefact scatter and midden</i>	MGA Grid Reference:	<i>Revised July 2011 to 757407:5913390</i>
Date Recorded:	<i>28/7/11</i>	Topographic Map:	<i>Pambula 8824-2S</i>
Recorder:	<i>Peter Kuskie</i>		
Landform Element:	<i>Simple slope</i>	Vegetation:	<i>Cleared</i>
Slope:	<i>Moderate</i>	Ground Disturbance:	<i>Moderate</i>
Distance to Water:	<i>&lt;50</i>		

Visible Extent of Surface Exposures: Length (m)	Visible Extent of Surface Exposures: Width (m)	Visible Extent of Evidence: Length (m)	Visible Extent of Evidence: Width (m)	Visible Locus Area (m <sup>2</sup> )	Mean Surface Visibility of Locus (%)	Mean Arch. Visibility of Locus (%)	Effective Locus Area (m <sup>2</sup> )	# of Artefacts	# of Artefacts per m <sup>2</sup> of Effective Locus Area	Sub-Surface Deposit
50+	3	1	1	1	70	70	0.7	1	1.428	possible

### Additional Comments:

- ☐ Could not relocate originally recorded shell (Kuskie and Gutierrez 2000) but located one artefact in the approximate location, on a vehicle track;
- ☐ Originally recorded as part of broad site MC10 area;
- ☐ Moderate disturbance from construction, maintenance and use of the track;
- ☐ High potential for sub-surface deposit off track, particularly for further midden evidence.

Site Location: MC10/B (July 2011)



Photograph: MC10/B (July 2011) - view west.





## MC10/C - Additional Description July 2011

Site Type:	<i>Open artefact scatter and midden</i>	MGA Grid Reference:	<i>Revised July 2011 to 757470:5913390</i>
Date Recorded:	<i>28/7/11</i>	Topographic Map:	<i>Pambula 8824-2S</i>
Recorder:	<i>Peter Kuskie</i>		
Landform Element:	<i>Simple slope</i>	Vegetation:	<i>Cleared, Forest</i>
Slope:	<i>Moderate</i>	Ground Disturbance:	<i>Low to moderate</i>
Distance to Water:	<i>&lt;50</i>		

Visible Extent of Surface Exposures: Length (m)	Visible Extent of Surface Exposures: Width (m)	Visible Extent of Evidence: Length (m)	Visible Extent of Evidence: Width (m)	Visible Locus Area (m <sup>2</sup> )	Mean Surface Visibility of Locus (%)	Mean Arch. Visibility of Locus (%)	Effective Locus Area (m <sup>2</sup> )	# of Artefacts	# of Artefacts per m <sup>2</sup> of Effective Locus Area	Sub-Surface Deposit
50+	3	35	3	105	60	60	63	11	0.175	probable

### Additional Comments:

- ☐ Relocated original site locus;
- ☐ Originally recorded as part of broad site MC10 area;
- ☐ Adjacent to edge of steep drop down to Merimbula Lake;
- ☐ Quartz gravels;
- ☐ Moderate disturbance along vehicle track but low in adjacent bush;
- ☐ High potential for sub-surface deposit off track.

Site Location: MC10/C (July 2011)



Photograph: MC10/C (July 2011) - view south-west.





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1:250,000 map sheet: _____ NPWS Code _____		<b>HEAD OFFICE USE ONLY:</b> NPWS Site no: _____ Site types: _____ Accessed by: _____ Date: _____ Data entered by: _____ Date: _____ Owner/Manager: C/-Caddey Searl & Jarman Address: PO Box 488 Merimbula NSW 2548	
<b>AMG Grid reference</b> Full reference - please include leading digits <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">             250K  <div style="border: 1px solid black; padding: 2px;">7 5 7 3 9 0</div>             25K           </div> <div style="text-align: center;">             250K  <div style="border: 1px solid black; padding: 2px;">5 9 1 3 2 5 0</div>             25K           </div> </div>		Scale of map used for grid reference [ x ] 25K, 50K (preferred) [ ] 100K [ ] 250K Please use largest scale available 1:25K, 50K, 100K map name: Pambula 8824-2-S	
Site name: Merimbula Cove 11		Locality/property name: Merimbula Cove	
NPWS District: Eden District		Region: Southern	
Reason for investigation Archaeological assessment of proposed development of Stages 3 & 4 of the Merimbula Cove residential estate.			
Portion no: 82 Parish: Pambula		Photos taken? Yes How many attached? Nil	
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff (Draw diagram on separate sheet)) About one kilometre west of Merimbula along the Old Princes Highway, turn south into Lakewood Drive and travel down toward lake shore.			
Other sites in locality? Yes Are sites in NPWS Register? Yes		Site Types include: Middens, artefact scatters & burials	
Have artefacts been removed from site? No By whom?		When? Deposited where?	
Is site important to local Aborigines? Yes Give contact(s) name(s) + address(es) <div style="display: flex; justify-content: space-between;"> <div>             Bega LALC              PO Box 11              Bega NSW 2550           </div> <div>             Bega Traditional Aboriginal Elders Council              227 Newtown Rd              Bega NSW 2550           </div> </div> Contacted for this recording? Yes (Attach additional information separately) If not, why not?			
Verbal/written reference sources (including full title of accompanying report) Kuskie, P. & Gutierrez, V. 2000. An Archaeological Assessment of the Proposed Merimbula Cove Residential Development, Far South Coast of New South Wales.			
Checklist surface visibility: damage/disturbance/ threat to site		Condition of site: Moderate disturbance	
Recommendations for management & protection (attach separate sheet if necessary) Conserve within proposed Foreshore Public Reserve			
Site recorded by: P. Kuskie & V. Gutierrez Address/institution: South East Archaeology Pty Ltd 24 Bamford St Hughes ACT 2605		Date: 13/10/2000	



SITE POSITION & ENVIRONMENT		OFFICE USE ONLY: NPWS site no:
<div style="display: flex; justify-content: space-between;"> <div> <p>1. Land form a. beach/hill slope/ridge top, etc: spur crest</p> <p>d. mark on diagram provided or on your own sketch the position of the site:</p> </div> <div> <p>b. site aspect: south</p> <p>e. Describe briefly:</p> </div> <div> <p>c. slope: gentle</p> </div> </div>		
		
<div style="display: flex; justify-content: space-between;"> <p>f. Local rock type:</p> <p>g. Land use/effect: Regrowth forest, vehicle track</p> </div>		
<div style="display: flex; justify-content: space-between;"> <p>2. Distance from drinking water: &lt;50 metres</p> <p>Source: Merimbula Lake</p> </div>		
<p>3. Resource Zone associated with site (estuarine, riverine, forest etc): Estuarine, regrowth forest</p>		
<p>4. Vegetation: Dense regrowth forest of casuarinas, paperbark, ironbark, stringybark, grass and bracken undercover</p>		
<p>5. Edible plants noted: Nil</p>		
<p>6. Faunal resources (include shellfish): Typical estuarine species</p>		
<p>7. Other exploitable resources (river pebbles, ochre, etc): Quartz, siltstone and sandstone gravel in vicinity</p>		
<p>Site type:</p> <p>Midden/ Artefact scatter</p>	<p><b>DESCRIPTION OF SITE &amp; CONTENTS.</b></p> <p>Note state of preservation of site &amp; contents. Do NOT dig, disturb, damage site or contents.</p>	
<p><b>CHECKLIST TO HELP:</b></p> <p>length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock.</p> <p><b>DEPOSIT:</b> colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density &amp; distribution of these, stone types, artefact types.</p> <p><b>ART</b> area of surface decorated, motifs, colours, wet, dry pigment, technique of engraving, no. of figures, sizes, patination.</p> <p><b>BURIALS:</b> number &amp; condition of bone, position, age, sex, associated artefacts.</p> <p><b>TREES:</b> number, alive, dead, likely age, scar shape, position, size, patterns, axe marks, regrowth</p> <p><b>QUARRIES:</b> rock type, debris, recognisable artefacts, percentage quarried.</p> <p><b>OTHER SITES EG.</b> structures (fish traps, stone arrangements, bora rings, mia mias), mythological sites, rock holes, engraved groove channels, contact sites (missions massacres cemeteries) as appropriate</p>	<p>The site is comprised of dense concentrations of cockle shell and sparse scatters along a vehicle track. The shell is generally fragmented. The visible extent of evidence measures 15 x 3m within a similar size exposure. Ten lithic artefacts are present, including three rhyolite flakes, a rhyolite microblade and microblade core, a chalcedony flake, two rhyolite microblade proximal portions and two rhyolite microblade distal portions. Refer to attached plan.</p>	
<p>Attach sketches etc. eg. plan &amp; section of shelter, show relation between site contents, indicate north, show scale.</p> <p>Attach annotated photos (stereo where useful) showing scale, particularly for art sites.</p>		

## MC11/A - Additional Description July 2011

Site Type: *Open artefact scatter and midden*      MGA Grid Reference: *Revised July 2011 to 757490:5913420*  
 Date Recorded: *28/7/11*      Topographic Map: *Pambula 8824-2S*  
 Recorder: *Peter Kuskie*  
  
 Landform Element: *Spur crest*      Vegetation: *Cleared, Forest*  
 Slope: *Gentle*      Ground Disturbance: *Low*  
 Distance to Water: *<50*

Visible Extent of Surface Exposures: Length (m)	Visible Extent of Surface Exposures: Width (m)	Visible Extent of Evidence: Length (m)	Visible Extent of Evidence: Width (m)	Visible Locus Area (m <sup>2</sup> )	Mean Surface Visibility of Locus (%)	Mean Arch. Visibility of Locus (%)	Effective Locus Area (m <sup>2</sup> )	# of Artefacts	# of Artefacts per m <sup>2</sup> of Effective Locus Area	Sub-Surface Deposit
varies	varies	35	25	875	30	30	262	9	0.034	probable

### Additional Comments:

- ☐ Originally recorded evidence along 12 x 3 metre section of vehicle track relocated and nine artefacts recorded;
- ☐ Midden along track comprising 95% cockle (10% whole, 90% fragments) and 5% mud oyster (all fragments), low density scatter;
- ☐ Track unformed, relatively low disturbance;
- ☐ Adjacent to edge of steep drop down to Merimbula Lake;
- ☐ Additional midden deposits identified in clearing immediately to north of vehicle track. Extends over 20 x 20 metre area, 30% visibility, variable density but some very dense patches. Estimated 90% cockle (50% whole, 50% fragments) and 10% mud oyster (50% whole, 50% fragments);
- ☐ High potential for sub-surface deposit of research value.

Site Location: MC11/A (July 2011)



Photograph: MC11/A (July 2011) - view south-west of vehicle track.





Photograph: MC11/A (July 2011) - view south of extension of site north of vehicle track.



Photograph: MC11/A (July 2011) - close-up of midden deposits north of vehicle track.





[ x ] New recording

[ ] Additional info




# National Parks and Wildlife Service

Box 1967, Hurstville NSW 2220. Tel: (02) 9585 6444

Standard Site Recording Form

Revised 5/88

1:250,000 map sheet: _____ NPWS Code _____	
AMG Grid reference Full reference - please include leading digits Scale of map used for grid reference [x] 25K, 50K (preferred) [ ] 100K [ ] 250K Please use largest scale available 1:25K, 50K, 100K map name: _____	<div style="text-align: center;"> <div style="display: inline-block; border: 1px solid black; padding: 2px;">250K</div> <div style="display: inline-block; border: 1px solid black; padding: 2px;">250K</div> </div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 2px;">7</div> <div style="border: 1px solid black; padding: 2px;">5</div> <div style="border: 1px solid black; padding: 2px;">7</div> <div style="border: 1px solid black; padding: 2px;">4</div> <div style="border: 1px solid black; padding: 2px;">2</div> <div style="border: 1px solid black; padding: 2px;">0</div> </div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 2px;">5</div> <div style="border: 1px solid black; padding: 2px;">9</div> <div style="border: 1px solid black; padding: 2px;">1</div> <div style="border: 1px solid black; padding: 2px;">3</div> <div style="border: 1px solid black; padding: 2px;">2</div> <div style="border: 1px solid black; padding: 2px;">5</div> <div style="border: 1px solid black; padding: 2px;">0</div> </div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div>mE</div> <div>5/6</div> <div>mN</div> </div>
<b>HEAD OFFICE USE ONLY:</b> NPWS Site no: _____ Site types: _____ Accessioned by: _____ Date: _____ Data entered by: _____ Date: _____ Owner/Manager: C/-Caddey Searl & Jarman Address: PO Box 488 Merimbula NSW 2548	
Site name: Merimbula Cove 12	Locality/property name: Merimbula Cove
NPWS District: Eden District	Region: Southern
Reason for investigation Archaeological assessment of proposed development of Stages 3 & 4 of the Merimbula Cove residential estate.	
Portion no: 82 Parish: Pambula	Photos taken? Yes How many attached? Nil
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff (Draw diagram on separate sheet.) About one kilometre west of Merimbula along the Old Princes Highway, turn south into Lakewood Drive and travel down toward lake shore.	
Other sites in locality? Yes Are sites in NPWS Register? Yes	Site Types include: Middens, artefact scatters & burials
Have artefacts been removed from site? No By whom?	When? Deposited where?
Is site important to local Aborigines? Yes Give contact(s) name(s) + address(es) Bega LALC PO Box 11 Bega NSW 2550 Bega Traditional Aboriginal Elders Council 227 Newtown Rd Bega NSW 2550 Contacted for this recording? Yes (Attach additional information separately) If not, why not?	
Verbal/written reference sources (including full title of accompanying report) Kuskie, P. & Gutierrez, V. 2000 An Archaeological Assessment of the Proposed Merimbula Cove Residential Development, Far South Coast of New South Wales.	
Checklist surface visibility, damage/disturbance/ threat to site	Condition of site Moderate disturbance
Recommendations for management & protection (attach separate sheet if necessary) Conserve within proposed Foreshore Public Reserve	
Site recorded by: P. Kuskie & V. Gutierrez Address/institution: South East Archaeology Pty Ltd 24 Bamford St Hughes ACT 2605	
Date: 13/10/2000	

SITE POSITION & ENVIRONMENT		OFFICE USE ONLY: NPWS site no:
1. Land form a. beach/hill slope/ridge top, etc: simple slope      b. site aspect: south      c. slope: moderate d. mark on diagram provided or on your own sketch the position of the site:      e. Describe briefly:		
		
f. Local rock type:      g. Land use/effect: Regrowth forest, vehicle track		
2. Distance from drinking water: <50 metres      Source: Merimbula Lake		
3. Resource Zone associated with site (estuarine, riverine, forest etc): Estuarine, regrowth forest		
4. Vegetation: Dense regrowth forest of casuarinas, paperbark, ironbark, stringybark, grass and bracken undercover		
5. Edible plants noted: Nil		
6. Faunal resources (include shellfish): Typical estuarine species		
7. Other exploitable resources (river pebbles, ochre, etc): Quartz, siltstone and sandstone gravel in vicinity		
<b>Site type:</b>  Isolated Artefact	<b>DESCRIPTION OF SITE &amp; CONTENTS.</b> Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.	
<b>CHECKLIST TO HELP:</b> length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock. <b>DEPOSIT:</b> colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types. <b>ART:</b> area of surface decorated, motifs, colours, wet, dry pigment, technique of engraving, no. of figures, sizes, patination. <b>BURIALS:</b> number & condition of bone, position, age, sex, associated artefacts. <b>TREES:</b> number, alive, dead, likely age, scar shape, position, size, patterns, axe marks, regrowth <b>QUARRIES:</b> rock type, debris, recognisable artefacts, percentage quarried. <b>OTHER SITES EG.</b> structures (fish traps, stone arrangements, bora rings, mia mias), mythological sites, rock holes, engraved groove channels, contact sites (missions massacres cemeteries) as appropriate	The site comprises a single rhyolite flake located along a vehicle track, within an exposure of 100 x 3 metres. However, there is very high potential for in situ midden deposits in the adjacent ground. Refer to attached plan.	
	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.	

## MC12/A - Additional Description July 2011

Site Type: *Open artefact scatter* MGA Grid Reference: *as per original recording; 757533:5913434*

Date Recorded: *28/7/11* Topographic Map: *Pambula 8824-2S*

Recorder: *Peter Kuskie*

Landform Element: *Simple slope* Vegetation: *Cleared, Forest*

Slope: *Moderate* Ground Disturbance: *Low to moderate*

Distance to Water: *<50*

Visible Extent of Surface Exposures: Length (m)	Visible Extent of Surface Exposures: Width (m)	Visible Extent of Evidence: Length (m)	Visible Extent of Evidence: Width (m)	Visible Locus Area (m <sup>2</sup> )	Mean Surface Visibility of Locus (%)	Mean Arch. Visibility of Locus (%)	Effective Locus Area (m <sup>2</sup> )	# of Artefacts	# of Artefacts per m <sup>2</sup> of Effective Locus Area	Sub-Surface Deposit
50+	3	1	1	1	20	20	0.2	1	5.000	probable

### Additional Comments:

- ☐ Relocated original site location, but not artefact - new artefact recorded at MGA 757514:5913423, approximately 20 metres south-west of original;
- ☐ Adjacent to edge of steep drop down to Merimbula Lake;
- ☐ Quartz gravels;
- ☐ Low to moderate disturbance along vehicle track but low in adjacent bush;
- ☐ Moderate to high potential for sub-surface deposit off track, particularly middens close to lake.



Site Location: MC12/A (July 2011)



Photograph: MC12/A (July 2011) - view south-west towards MC11/A on crest.





## APPENDIX 4: PLATES



Plate 1: View south-east across survey area MC6 (Stage 5 Bellbird Ridge).



Plate 2: View south across survey areas MC11 and MCRN16 to Merimbula Lake.





Plate 3: View north-east across survey area MCRN20.

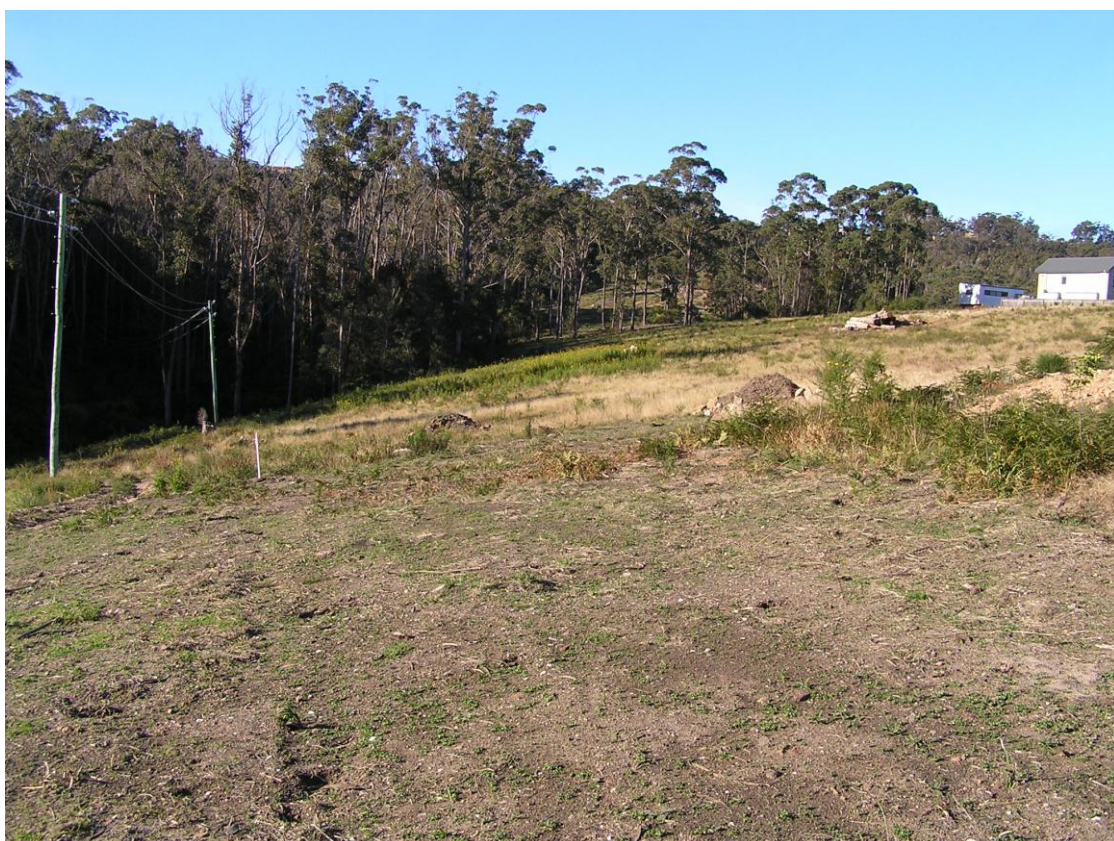


Plate 4: View north-east across survey area MCRN21.

## APPENDIX 5: ABORIGINAL COMMUNITY CONSULTATION

### *Consultation Database:*

Date	Person Contacted	Organisation	How Contacted	Contacted By	Organisation	Description
8/3/11	South - Landscape and Aboriginal Heritage Protection Section	DECCW	Letter	P. Kuskie	SEA	Official request to notify of Aboriginal stakeholders/register interest as per DECCW 2010 policy by 25 March 2011.
8/3/11	Manager	Office of the Registrar, Aboriginal Land Rights Act	Letter	P. Kuskie	SEA	Official request to notify of Aboriginal stakeholders/register interest as per DECCW 2010 policy by 25 March 2011.
8/3/11	Manager	Native Title Services Corporation Ltd	Letter	P. Kuskie	SEA	Official request to notify of Aboriginal stakeholders/register interest as per DECCW 2010 policy by 25 March 2011.
8/3/11	General Manager	Bega Valley Shire Council	Letter	P. Kuskie	SEA	Official request to notify of Aboriginal stakeholders/register interest as per DECCW 2010 policy by 25 March 2011.
8/3/11	Manager	Southern Rivers Catchment Management Authority	Letter	P. Kuskie	SEA	Official request to notify of Aboriginal stakeholders/register interest as per DECCW 2010 policy by 25 March 2011.
8/3/11	CEO	Bega LALC	Letter	P. Kuskie	SEA	Official request to notify of Aboriginal stakeholders/register interest as per DECCW 2010 policy by 25 March 2011.
9/3/11	General Public	-	Advertisement	P. Kuskie	SEA	Advertisement placed in Public Notices section of the Merimbula News Weekly calling for interested Aboriginal persons/groups to register an interest in the project as per DECCW 2010 policy by 28 March 2011.
10/3/11	Peter Kuskie	SEA	Email	John Dixon	Yukembuk Merung Ngarigo Consultancy	Registered an interest in the project.
15/3/11	Peter Kuskie	SEA	Letter	Tabatha Dantoine	Office of the Registrar, Aboriginal Land Rights Act	Responded to SEA request of 8/3/11 by advising that there are no Registered Aboriginal Owners for this area but that the Bega LALC can assist further.
6/4/11	Phil Boot	DECCW	Telephone	P. Kuskie	SEA	Inquired why no response from DECCW to correspondence of 8/3/11. Phil advised that Dimitri Young should be contacted.
6/4/11	Dimitri Young	DECCW	Email	P. Kuskie	SEA	Inquired why no response from DECCW to correspondence of 8/3/11.
8/4/11	Peter Kuskie	SEA	Letter	Dimitri Young	DECCW	Responded to SEA request of 8/3/11 by advising that the Bega LALC, Eden LALC, Merrimans LALC, South East Coast Gadu Elders Aboriginal Corporation, Mr Lionel Mongta, Bega Traditional Aboriginal Elders Council, Yukembuk Merung Ngarigo Consultancy Pty Ltd, Colleen Dixon, Twofold Aboriginal Corporation, Yukkumbruk and Walbunja Aboriginal Corporation should be contacted.
11/4/11	CEO	Bega LALC	Letter	Peter Kuskie	SEA	Official request to notify of Aboriginal stakeholders/register interest as per DECCW policy, following from DECCW response of 8/4/11.

Date	Person Contacted	Organisation	How Contacted	Contacted By	Organisation	Description
11/4/11	CEO	Eden LALC	Letter	Peter Kuskie	SEA	Official request to notify of Aboriginal stakeholders/register interest as per DECCW policy, following from DECCW response of 8/4/11.
11/4/11	CEO	Merrimans LALC	Letter	Peter Kuskie	SEA	Official request to notify of Aboriginal stakeholders/register interest as per DECCW policy, following from DECCW response of 8/4/11.
11/4/11	Manager	South East Coast Gadu Elders Aboriginal Corporation	Letter	Peter Kuskie	SEA	Official request to notify of Aboriginal stakeholders/register interest as per DECCW policy, following from DECCW response of 8/4/11.
11/4/11	Mr Lionel Mongta	-	Letter	Peter Kuskie	SEA	Official request to notify of Aboriginal stakeholders/register interest as per DECCW policy, following from DECCW response of 8/4/11.
11/4/11	Mr John Dixon	Bega Traditional Aboriginal Elders Council	Letter	Peter Kuskie	SEA	Official request to notify of Aboriginal stakeholders/register interest as per DECCW policy, following from DECCW response of 8/4/11.
11/4/11	Mrs Colleen Dixon	-	Letter	Peter Kuskie	SEA	Official request to notify of Aboriginal stakeholders/register interest as per DECCW policy, following from DECCW response of 8/4/11.
11/4/11	Manager	Twofold Aboriginal Corporation	Letter	Peter Kuskie	SEA	Official request to notify of Aboriginal stakeholders/register interest as per DECCW policy, following from DECCW response of 8/4/11.
11/4/11	Manager	Yukkumbruk	Letter	Peter Kuskie	SEA	Official request to notify of Aboriginal stakeholders/register interest as per DECCW policy, following from DECCW response of 8/4/11.
11/4/11	Chairperson	Walbunja Aboriginal Corporation	Letter	Peter Kuskie	SEA	Official request to notify of Aboriginal stakeholders/register interest as per DECCW policy, following from DECCW response of 8/4/11.
16/4/11	Peter Kuskie	SEA	Email	Jan Dowling	Bega LALC	Registered an interest in the project.
26/4/11	Peter Kuskie	SEA	Email	William Davis	On behalf of Lionel Mongta	William Davis registered an interest in the project for Lionel Mongta.
2/5/11	John Dixon	Yukembuk Merung Ngarigo Consultancy	Letter	P. Kuskie	SEA	Official notification of and request for comment on proposed investigation methodology as per DECCW policy and provision of clients Selection Criteria for completion with supporting documentation (eg. insurance) for those registrants wishing to be considered for participation in paid field inspections.
2/5/11	Jan Dowling	Bega LALC	Letter	P. Kuskie	SEA	Official notification of and request for comment on proposed investigation methodology as per DECCW policy and provision of clients Selection Criteria for completion with supporting documentation (eg. insurance) for those registrants wishing to be considered for participation in paid field inspections.



Date	Person Contacted	Organisation	How Contacted	Contacted By	Organisation	Description
2/5/11	Lionel Mongta	-	Letter	P. Kuskie	SEA	Official notification of and request for comment on proposed investigation methodology as per DECCW policy and provision of clients Selection Criteria for completion with supporting documentation (eg. insurance) for those registrants wishing to be considered for participation in paid field inspections.
2/5/11	Dimitri Young	OEH (South Branch)	Letter	P. Kuskie	SEA	Notification of registrations and correspondence as per Section 4.1.6 of the DECCW policy.
2/5/11	Jan Dowling	Bega LALC	Letter	P. Kuskie	SEA	Notification of registrations and correspondence as per Section 4.1.6 of the DECCW policy.
31/5/11	Peter Kuskie	SEA	Fax	John Dixon	Yukembuk Merung Ngarigo Consultancy	Sent response to selection criteria. Agreed with proposed methodology for project.
31/5/11	Peter Kuskie	SEA	Fax	Jan Dowling	Bega LALC	Sent response to selection criteria. Agreed with proposed methodology for project.
6/7/11	Jan Dowling	Bega LALC	Telephone	P. Kuskie	SEA	Made arrangements for field inspection, after client agreed to one representative on a paid basis.
6/7/11	John Dixon	Yukembuk Merung Ngarigo Consultancy	Telephone	P. Kuskie	SEA	Made arrangements for field inspection, with client only agreeing to representatives on an unpaid basis.
6/7/11	Jan Dowling	Bega LALC	Email	P. Kuskie	SEA	Made arrangements for field inspection, after client agreed to one representative on a paid basis.
6/7/11	John Dixon	Yukembuk Merung Ngarigo Consultancy	Email	P. Kuskie	SEA	Made arrangements for field inspection, with client only agreeing to representatives on an unpaid basis.
6/7/11	Lionel Mongta	-	Email	P. Kuskie	SEA	Made arrangements for field inspection, with client only agreeing to representatives on an unpaid basis.
28/7/11	John Dixon; Ross Thomas	Yukembuk Merung Ngarigo Consultancy; Bega LALC	Fieldwork	P. Kuskie, B. Stephenson; Greg Britten	SEA Sea Eagle Estate	Field inspection of investigation area, discussion of site significance and management.
7/11/11	John Dixon	Yukembuk Merung Ngarigo Consultancy	Email	Peter Kuskie	SEA	Sent copy of draft heritage report with request for comment.
7/11/11	Jan Dowling	Bega LALC	Email	Peter Kuskie	SEA	Sent copy of draft heritage report with request for comment.
7/11/11	Lionel Mongta	-	Email	Peter Kuskie	SEA	Sent copy of draft heritage report with request for comment.
28/11/11	Peter Kuskie	SEA	Email	John Dixon	Yukembuk Merung Ngarigo Consultancy	John advised that the LALC is closed due to internal problems.
1/12/11	Peter Kuskie	SEA	Email	John Dixon	Yukembuk Merung Ngarigo Consultancy	Responded to draft report and agreed with the recommendations.

**Notification of Proposal Under DECCW  
Aboriginal Cultural Heritage Consultation  
Requirements for Proponents 2010  
- Proposed Development at Robyn's Nest  
and Stage 5 Bellbird Ridge Estate  
(Lot 881 DP 1148672 and  
Lot 1882 DP 1014185,  
Merimbula Drive, Merimbula).**

South East Archaeology has been engaged by Sea Eagle Estate to undertake an Aboriginal Heritage Impact Assessment for the proposed development at Robyn's Nest and Stage 5 Bellbird Ridge Estate. The investigation area is located off Merimbula Drive and Lakewood Drive at Merimbula in the Bega Valley Shire. It comprises the whole of Lot 881 DP 1148672 and part of Lot 1882 DP 1014185, Merimbula Drive, Merimbula. Sea Eagle Estate, PO Box 204, Merimbula, NSW is proposing to undertake a range of works within the investigation area as part of a residential subdivision and tourist facility development. Development Approvals for part of the proposed works have been granted by Bega Valley Shire Council, with approval for the remainder of the work pending.

The purpose of community consultation with Aboriginal people is to assist the proponent in the potential preparation of any Aboriginal Heritage Impact Permit (AHIP) that may be required under the National Parks and Wildlife Act 1974 and to assist the Director General of the Department of Environment, Climate Change and Water (DECCW) in their consideration and determination of any such application.

In compliance with the DECCW policy entitled Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010, South East Archaeology extends an invitation to Aboriginal people who have an interest in the investigation area and hold knowledge relevant to determining the cultural significance of any Aboriginal objects or places within it to register an interest in the consultation process for this project.

Registrations must be forwarded in writing to:

**South East Archaeology  
(fax 02-6260 4439 or post to  
24 Bamford St, Hughes ACT 2605)  
by 28 March 2011.**

All registered stakeholders will then be contacted to discuss the project further in accordance with the DECCW policy. Any parties that register an interest are advised that their details will be forwarded to DECCW and the relevant LALC within 28 days of the closing date for registrations of interest, in accordance with the DECCW policy, unless they request in writing that their details are withheld.

***Relevant Correspondence:***

**From:** Account Service® [ngarigo@y7mail.com]

**Sent:** Thursday, 10 March 2011 12:30 PM

**To:** peter@southeastarchaeology.com.au

**Subject:** Bellbird Ridge/Seaeagle Estate

Hi Peter,

Formerly registering my interest in the proposed surveys at Bell Bird Ridge and Se Eagles Estate in Merimbula. Now trading as Yukembuk Merung Ngarigo Consultancy PTY LTD, PO Box 413 Bega NSW 2550. Ph 0488749193.

John Dixon





11-13 Mansfield Street  
Glebe NSW 2037  
PO Box 112, Glebe NSW 2037  
P. 02 9562 6327 F. 02 9562 6350

Mr Peter Kuskie  
Director  
South East Archaeology  
24 Bamford Street  
Hughes ACT 2605

10 March 2011

Dear Peter,

**Re: Request - Search for Registered Aboriginal Owners**

I refer to your letter dated 8th March 2011 regarding Aboriginal stakeholders within the Bega valley Shire area 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 (NSW)*.

I suggest you contact the Bega Local Aboriginal Land Council. They may also be able to assist you in identifying other Aboriginal stakeholders for this project.

Yours sincerely

Tabatha Dantoine  
**Administrative Officer**  
Office of the Registrar, *Aboriginal Land Rights Act (1983)*



**Environment,  
Climate Change  
& Water**

Your reference:  
Our reference: FIL11/3 DOC11/12637  
Contact: Dimitri Young 6229 7116

South East Archaeology  
24 Bamford Street  
Hughes ACT 2605

Attention: Mr Peter Kuskie

Dear Mr Kuskie

**WRITTEN NOTIFICATION OF PROPOSAL AS REQUIRED UNDER DECCW ABORIGINAL  
CULTURAL HERITAGE CONSULTATION REQUIREMENT FOR PROPONENTS 2010**

**RE: Proposed Subdivision Bellbird Ridge Estate Merimbula, Bega Valley LGA**

I refer to your correspondence received by the Office of Environment and Heritage (OEH), formerly the Department of Environment, Climate Change and Water, on 9 March 2011 regarding the above matter. I apologise for the delay in responding.

Attached is a list of known Aboriginal parties for the Bega Valley local government area that OEH feels is likely to have an interest in the development. Please note this list is not necessarily an exhaustive list of all interested Aboriginal parties and receipt of this list does not remove the requirement of a proponent/ consultant to advertise in local print media and contact other bodies seeking interested Aboriginal parties, in accordance with the Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (April 2010).

If you wish to discuss any of the above matters further please contact me on (02) 6229 7116.

Yours sincerely

*Dimitri Young* 6 April 2011

**DIMITRI YOUNG**  
**A/Manager Landscape and Aboriginal Heritage Protection South**  
**Environment Protection and Regulation**  
**Office of Environment and Heritage**  
**Department of Premier and Cabinet**

Enclosure: Attachment 1

PO Box 733 Queanbeyan NSW 2620  
11 Farrer Place Queanbeyan NSW  
Tel: (02) 6229 7188 Fax: (02) 6229 7001  
ABN 30 841 387 271  
[www.environment.nsw.gov.au](http://www.environment.nsw.gov.au)

**ATTACHMENT 1**

<b>Organisation/Individual Name</b>	<b>Address</b>	<b>Contact Details</b>
Bega Local Aboriginal Land Council	Auckland Plaza, 17 Bunyara Dr, PO Box 11, Bega NSW 2550	Ph: (02) 6492 3950
Eden Local Aboriginal Land Council	PO Box 199, Eden NSW 2551	Ph: (02) 6495 7177 0427 961 922 Fax: (02) 6495 7433
Merrimans Local Aboriginal Land Council	13 Umbarra Rd, Wallaga Lake NSW 2546	Ph: (02) 44737288 Mobile: 0408 118798 Fax: (02) 44737478 merrimanslalc.ozinet.net.au
South East Coast Gadu Elders Aboriginal Corporation	193 Vulcan Street, PO Box 219, Moruya NSW 2537	Ph: (02) 4474 4188 Fax:(02) 4474 4181 Mob: 0412 089 958
Mr Lionel P Mongta, Yuin Traditional Owner	137 Princes Highway, PO Box 143, Bodalla NSW 2545	Mob: 0405 216 690
Bega Traditional Aboriginal Elders Council Inc (BTAEC). John Dixon	PO Box 193, Bega NSW 2550	Mob: 0405 228456
Yukembruk Merung Ngarigo Consultancy Pty Ltd	PO Box 413 BEGA NSW 2550	Mob: 0488749193 ngarigo@y7mail.com
Colleen Dixon	Unit 2 49 East Street BEGA NSW 2550	02 6492 4740
Twofold Aboriginal Corporation	PO Box 184, Eden NSW 2551	Ph: (02) 6945 6343 Fax:(02) 6945 7441
Yukkumbruk	14 Chipperfield Circuit Gordon ACT 2906	Mob: 0401 247 589 canberra.knockout@yahoo.com.au
Chairperson. Walbunja Aboriginal Corporation	41 Queen Street (PO Box 616), Moruya NSW 2537	Ph. 02 4474 5606 or 02 4474 5074 Email. walbunja@gmail.com

**From:** bega local aboriginal land council [begalalc@bigpond.com.au]  
**Sent:** Saturday, 16 April 2011 6:42 AM  
**To:** peter@southeastarchaeology.com.au  
**Subject:** Re Robyns nest and bellbird Ridge Estate

Hi Peter

The Bega Local Aboriginal Land Council are formerly registering an interest in the consultation process for this project at Robyn's nest and stage 5 Bellbird Ridge Estate (Lot 881 DP 1148672 and Lot 1882 DP 1014185) Merimbula Drive Merimbula.

Kind regards

Jan Dowling  
A/CEO  
Bega LALC

PH. 02 64923950

---

Bega Local Aboriginal Land Council,  
17 Bunyarra Drive,  
PO Box 11,  
Bega NSW 2550  
ABN: 60 937 578 961  
Phone: (02) 6492 3950  
Fax: (02) 6492 4087  
Email: [begalalc@bigpond.com.au](mailto:begalalc@bigpond.com.au)

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**From:** bernice hutchison [beh@austarnet.com.au]

**Sent:** Tuesday, 26 April 2011 8:40 AM

**To:** peter@southeastarchaeology.com.au

**Subject:** Merimbula Development

Hi Peter

This is William Davis responding to your letter dated 11 April 2011 on behalf of Lionel Mongta of Bodalla. The Letter of Investigation of Proposed Development at Robyn's Nest and Bellbird Ridge Estate off Merimbula Drive and Lakewood Drive Merimbula (The Whole of Lot 881 DP 1148672 and Lot 1882 DP 1014185).

Lionel Mongta has told me to let the SouthEast archaeology Section know that he has strong ties to the area and that he wants to be involved with the consultations of the Proposed Areas of Merimbula under the Aboriginal Cultural Heritage.

Lionel Mongta  
P.O Box 143  
Bodalla NSW 2545  
Ph 0405216690 - 0451957745

Regards  
William Davis  
22 Bernadette Blvd  
Batehaven NSW 2536  
0244725789  
0429461745



Yukembruk Merung

## Ngarigo Consultancy Pty Ltd

A.C.N: 131 745 723

A.B.N: 62 131 745 723

PO Box 413 Bega NSW 2550

Mob: 0488749193

E-mail: [ngarigo@y7mail.com](mailto:ngarigo@y7mail.com)

Tuesday, 31 May 2011

Mr Peter Kuskie

Southeast Archaeology PTY LTD

24 Bamford Street, Hughes

ACT 2605

Re: Methodology Response To Proposed DA For Robyn's Nest & Stage 5 Bellbird Ridge Estate Merimbula NSW.

Dear Peter,

Thank you for the Methodology and Nature of Proposal letter dated 2<sup>nd</sup> May 2011.

I have reviewed the letter and the methodology for this proposal and I do not have any issues relating to what you have proposed in the Nature of the Proposal and the Methodology.

I have listed three persons who may be involved onsite for this company should I be selected to take part in the field assessment that may lead to other processes including AHIPS and AHMP's. Please note that other people may be posted onsite should I be involved in the field side of things other than the listed people depending on availability and the need for traditional descendants to be involved.

All my people have green cards that cover the OH&S issue and we do provide the necessary work gear under PPS and work-cover. We do have insurance both Public Liability and Workers Compensation. These documents will be provided should we be selected as a field participant.

Should you require anything further please contact me on 0488749193.

Sincerely Yours,



John Dixon

Director

**PROPOSED DEVELOPMENT AT ROBYN'S NEST AND STAGE 5 BELLBIRD  
RIDGE ESTATE (LOT 881 DP 1148672 AND LOT 1882 DP 1014185, MERIMBULA  
DRIVE, MERIMBULA) - ABORIGINAL HERITAGE ASSESSMENT:  
SELECTION CRITERIA**

Sea Eagle Estate will engage a suitable number of Aboriginal representatives (based on the scale and nature of the project), to assist with the field investigations required for this project. If you wish to be considered for paid participation in any field investigation, please address the following selection criteria and provide sufficient supporting documentation for the proponent to consider the merits of your submission.

**1. TRADITIONAL CULTURAL CONNECTION WITH INVESTIGATION AREA**

eg: Are you a Registered Native Title Claimant or Traditional Owner of the locality of the investigation area? (provide sufficient supporting details).

YES - I AM REGISTERED AS AN OWNER  
ON THE BIANMULA NP HANDBACK LET. THE  
SURVEY AREA IS WITHIN THE CULTURAL AREA  
OF THE BIANMULA OWNERS AREA. I AM ALSO  
A RECOGNISED Djirringanj/Namika/Yuin  
DESCENDANT AND CONNECTED TO THE TWOFOOLD  
BAY INDIGENOUS LAND USE AGREEMENT BETWEEN  
THE TWOFOOLD BAY NATIVE TITLE GROUP + THE  
DEPARTMENT OF DEFENCE.

**2. CULTURAL KNOWLEDGE OF INVESTIGATION AREA**

eg: Do you have specific ties with or knowledge of the investigation area? (provide details).

Do you have cultural knowledge of any Aboriginal places or objects within the investigation area (provide details).

YES - I HAVE BEEN INVOLVED IN PREVIOUS  
INVESTIGATIONS AND I HAVE IDENTIFIED  
SITES WITHIN THE STUDY AREA. THESE SITES  
WERE RECORDED AND SOME TESTING HAS  
BEEN CARRIED OUT, PARTICULARLY WITHIN THE  
BELLBIRD RIDGE SECTION. THE LACE AREA  
AT MERIMBULA IS VERY SACRED AND HAS A  
WEALTH OF UNDISCOVERED SITES INCLUDING  
BURIALS.

### 3. REPRESENTATION OF OTHERS WITHIN THE ABORIGINAL COMMUNITY

eg: If you are registered as an organisation, who do you represent? (provide details, such as number of members and criteria for membership). What procedures do you have in place to communicate with other members of your organisation about this heritage assessment? (provide details).

I REPRESENT MYSELF AND LOCAL TRADITIONAL ELDERS AND OWNERS. I DO DELIVER INFORMATION AT LOCAL LAND COUNCIL MEETINGS FOR THE WHOLE COMMUNITY AND I MEET WITH THE ELDERS.

### 4. EXPERIENCE IN PROVIDING CULTURAL HERITAGE ADVICE – Nominate key individuals who may participate in any field investigation and their relevant experience (provide sufficient supporting details).

Name	JOHN DIXON
Experience	MORE THAN 25 YRS EXPERIENCE IN ASSISTING GOVERNMENT + DEVELOPERS IN DAS AND ARCHIVE + BALANCE IN THE PRESERVATION + PROTECTION OF HERITAGE AND ALLOWING PROGRESS WITH INFRASTRUCTURE.
Name	ROSS THOMAS
Experience	EXPERIENCED SITES OFFICER WHO HAS WORKED IN THE SOUTH EAST AREA FOR 25 YRS ON MOST.

Name	.....DANIEL DOWLING/DIXON
Experience	.....EXPERIENCED SITES OFFICER .....WORKING IN THE SOUTH COAST .....AREA FOR 140+ OF THAN 5 YRS
5. PRICE (per person)	Full Day .....incl GST Hourly Rate \$110 .....incl GST Full Day .....incl GST Hourly Rate \$110 .....incl GST Disbursements (specify type, eg. vehicle/travel)..... .....incl GST .....incl GST
6. INSURANCE AND OH&S	Provide copies of current insurance policies (Public Liability and Worker Compensation). Will provide with a closer to SAME DATE IF SELECTED Provide copies of 'General Induction for Construction Work in NSW' ('white card' or 'green card'). SAME AS ABOVE.
7. CONTACT DETAILS	Organisation: YUKENBARK MERIMBULA NATURAL CONSULTANCY PTY LTD ABN Number: ..... Contact Name: JOHN DIXON (DIRECTOR) Address: 107 UPPER ST BELLA NSW 2550 Phone: 0488-749193 Fax: ..... Email: nganigo@yahoo.com

Please observe the following:

- If all information is not supplied then the proposal may not be accepted.
- Please attach additional information and details as required.

## Bega Local Aboriginal Land Council

17-19 Bunyarra Drive, Bega  
PO box 11  
Bega NSW 2550

ABN: 60 937 578 961  
Email: [begalalc@bigpond.com.au](mailto:begalalc@bigpond.com.au)  
Ph: 02 64923950  
Fax: 02 64924087

Tuesday, 31 May 2011

Mr Peter Kuskie  
Manager  
South East Archaeology Pty Ltd  
24 Bamford St  
Hughes ACT  
2605

**Response to methodology for proposed DA for Robins Nest and stage 5 Bellbird Ridge Estate Merimbula.**

Dear Peter,


Thank you for your letter dated 2nd May 2011 in relation to the methodology for proposed DA for Robins Nest and stage 5 Bellbird Ridge Estate Merimbula.

We have reviewed the nature of the proposal and the methodology and we agree with the proposal. The LALC is covered with public liability insurance and workers compensation insurance. Copies of these will be provided ASAP.

All workers are required to hold OH&S certificates and all have steel capped boots and long sleeved shirts/long pants, workers will be supplied with safety vests.

Please contact this office for further information if necessary.

Kind regards



Jan Dowling  
A/CEO  
Bega LALC



**PROPOSED DEVELOPMENT AT ROBYN'S NEST AND STAGE 5 BELLBIRD  
RIDGE ESTATE (LOT 881 DP 1148672 AND LOT 1882 DP 1014185, MERIMBULA  
DRIVE, MERIMBULA) - ABORIGINAL HERITAGE ASSESSMENT:  
SELECTION CRITERIA**

Sea Eagle Estate will engage a suitable number of Aboriginal representatives (based on the scale and nature of the project), to assist with the field investigations required for this project. If you wish to be considered for paid participation in any field investigation, please address the following selection criteria and provide sufficient supporting documentation for the proponent to consider the merits of your submission.

**1. TRADITIONAL CULTURAL CONNECTION WITH INVESTIGATION AREA**

eg: Are you a Registered Native Title Claimant or Traditional Owner of the locality of the investigation area? (provide sufficient supporting details).

The Bega LALC has many members who have traditional cultural connection with the area and a number of the members are registered native title claimants and owners eg Indigenous Land use agreement (Eden) NT. Claims, Eden Djirringanj, Walbanja

**2. CULTURAL KNOWLEDGE OF INVESTIGATION AREA**

eg: Do you have specific ties with or knowledge of the investigation area? (provide details).

Do you have cultural knowledge of any Aboriginal places or objects within the investigation area (provide details).

The Bega LALC has had participants involved in previous field assessments within the study area and those people including other LALC members have cultural knowledge of the investigation area.

### 3. REPRESENTATION OF OTHERS WITHIN THE ABORIGINAL COMMUNITY

eg: If you are registered as an organisation, who do you represent? (provide details, such as number of members and criteria for membership). What procedures do you have in place to communicate with other members of your organisation about this heritage assessment? (provide details).

The Bega LALC represents its members totalling approx 110 people.

Results of investigations and reports will be tabled at future LALC Board and general meetings.

### 4. EXPERIENCE IN PROVIDING CULTURAL HERITAGE ADVICE – Nominate key individuals who may participate in any field investigation and their relevant experience (provide sufficient supporting details).

Name	Ross Thomas
Experience	Experienced person who has years of experience working in this area as a <del>site</del> sites officer.
Name	Ron Thomas
Experience	A sites officer with local knowledge and experience.

Name	Justin Green   Kevin Dixon
Experience	Both experienced site officers with local knowledge + experience.
5. PRICE (per person)	Full Day ..... incl GST Hourly Rate \$110 ..... incl GST Full Day ..... incl GST Hourly Rate \$110 ..... incl GST Disbursements (specify type, eg. vehicle/travel) ..... included in hourly rates ..... incl GST (excl. accommodation) ..... incl GST
6. INSURANCE AND OH&S	Provide copies of current insurance policies (Public Liability and Worker Compensation).  Provide copies of 'General Induction for Construction Work in NSW' ('white card' or 'green card').
7. CONTACT DETAILS	Organisation: Bega Local Aboriginal Land Council ABN Number: 60 937 578 961 Contact Name: Jan Dowling Address: 17-19 Bungarra Drive Bega Phone: 02 64923950 Fax: 02 64924087 Email: begalalc@bigpond.com.au

Please observe the following:

- If all information is not supplied then the proposal may not be accepted.
- Please attach additional information and details as required.

**From:** Account Service® <ngarigo@y7mail.com>  
**Sent:** Thursday, 1 December 2011 11:57 AM  
**To:** Peter Kuskie  
**Subject:** Re: Merimbula Cove Britten Aboriginal Heritage Report

Hi Peter,

After reveiw of the report there are no issues for me, report accepted as recieved.

John Dixon  
Yukembruk Merung Ngarigo Consultancy PTY LTD