

## APPENDIX 1: DIRECTOR-GENERAL'S REQUIREMENTS



### Planning

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Our ref: 09\_0088, qB146084, 10/11396

John Toon  
John Toon Pty Ltd  
17 Bunyana Avenue,  
WAHROONGA NSW 2076

Dear Mr Toon

**Subject: CONCEPT PLAN APPLICATION- MIXED USE SUBDIVISION 09\_0088**

The Department has received your application for a mixed use subdivision at West Culburra, which is situated in the Shoalhaven local government area.

The Director-General's Environmental Assessment Requirements (DGRs) for the environmental assessment of the concept application are attached to this correspondence at **Attachment 1**. These requirements have been prepared in consultation with the relevant government agencies including Shoalhaven City Council. These requirements have been provided on the basis that no development will occur in the Lake Wolumboola catchment and that the Concept Plan will not be used to rezone lands or facilitate prohibited uses.

It was identified prior to the 4 May 2010 Planning Focus Meeting that there are varying views regarding the exact location of the Lake Wollumboola catchment boundary. It is recommended that you provide the Department with documentation (such as a surveyor's report) clarifying what you believe is the catchment boundary. The Department will consider the information provided, in consultation with other agencies, to ensure that your application proceeds on the correct basis.

**Attachment 2** lists the relevant plans and documents which will be required upon submission of your proposal.

It should be noted that the DGRs have been prepared based on the information provided to date. Under section 75F(3) of the Act, the Director-General may alter or supplement these requirements if necessary and in light of any additional information that may be provided prior to the proponent seeking approval for the project. Also note the DGRs have been prepared for a Concept Plan only as there was insufficient detail in the information provided to prepare DGRs for the project application. The project application can be dealt with at a later date.

If the Environmental Assessment (EA) is not exhibited within 2 years of the date of issue of these requirements, you should consult further with the Director-General in relation to the preparation of the EA.

Please contact the Department at least two weeks before you propose to submit the EA for the project to determine:

- the fees applicable to the application. Note that you will need to provide a signed statement from a Quantity Surveyor to verify the capital investment value of the project;
- consultation and public exhibition arrangements that will apply; and

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- number and format (hard-copy or CD-ROM) of the EA that will be required.

A list of some relevant technical and policy guidelines which may assist in the preparation of the EA are attached at **Attachment 3**.

Prior to exhibiting the EA, the Department will review the document to determine if it adequately addresses the DGRs. The Department may consult with other relevant government agencies in making this decision. If the Director-General considers that the EA does not adequately address the DGRs, the Director-General may require the proponent to revise the EA to address the matters notified to the proponent.

Following this review period, the EA will be made publicly available for a minimum period of 30 days.

If your proposal includes any actions that could have a significant impact on matters of National Environmental Significance (NES), it will require an additional approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This approval is in addition to any approvals required under NSW legislation. It is your responsibility to contact the Commonwealth Department of the Environment, Water, Heritage and the Arts in Canberra (6274 1111 or <http://www.environment.gov.au>) to determine if the proposal is likely to have a significant impact on matters of NES and would require an approval under the EPBC Act. The Commonwealth Government has accredited the NSW environmental assessment process for assessing any impacts on matters of NES. As a result, if it is determined that an approval is required under the EPBC Act, please contact the Department immediately as supplementary DGRs will need to be issued.

Please note that under section 75U of the Act, Part 3A applications do not require certain permits/approvals required under other legislation. These matters are considered as part of the Part 3A assessment process. For example, Section 87 permits and Section 90 consents under the *National Parks and Wildlife Act 1974* are not required for Part 3A applications. Section 75U applies from the date of issue of the DGRs.

Notwithstanding, the Department still requires an equivalent level of information within the EA as would ordinarily be required for the issue of any such permit/approval to enable an assessment of the relevant works. Please notify the Department should any sub-surface testing be required during the preparation of your EA.

Copies of responses from government agencies to the Department's request for key issues and assessment requirements are enclosed at **Attachment 4**. Please note that these responses have been provided to you for information only and do not form part of the DGRs for the EA.

If you have any queries regarding these requirements, please contact Emma Barnet on 9228 6441 or email [emma.barnet@planning.nsw.gov.au](mailto:emma.barnet@planning.nsw.gov.au).

Yours sincerely

  
Alan Bright  
Acting Director  
Regional Projects  
as delegate for the Director General

27 MAY 2010

# Attachment 1

## Director-General's Environmental Assessment Requirements

Section 75F of the *Environmental Planning and Assessment Act 1979*

<b>Application number</b>
09_0088
<b>Project</b>
Concept Plan for a staged mixed use subdivision
<b>Location</b>
Lot 61 DP 755971, Lot 5 DP 1065111 and Lot 6 DP 1065111 West Culburra
<b>Proponent</b>
Realty Relizations Pty Ltd
<b>Date issued</b>
<b>General requirements</b>
<p>The Environmental Assessment (EA) for the <b>Concept Application</b> must include:</p> <ol style="list-style-type: none"> <li>1. An executive summary;</li> <li>2. An outline of the scope of the project including: <ul style="list-style-type: none"> <li>• any development options;</li> <li>• justification for the project taking into consideration any environmental impacts of the project, the suitability of the site and whether the project is in the public interest;</li> <li>• outline of the staged implementation of the project if applicable;</li> </ul> </li> <li>3. A thorough site analysis including constraints mapping and description of the existing environment;</li> <li>4. Consideration of any relevant statutory and non-statutory provisions and identification of any non-compliances with such provisions, in particular relevant provisions arising from environmental planning instruments, the <i>South Coast Regional Strategy</i> and Development Control Plans;</li> <li>5. Consideration of the consistency of the project with the objects of the <i>Environmental Planning and Assessment Act 1979</i>;</li> <li>6. Consideration of impacts, if any, on matters of National Environmental Significance under the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>;</li> <li>7. An assessment of the potential impacts of the project and a draft Statement of Commitments, outlining environmental management, mitigation and monitoring measures to be implemented to minimise any potential impacts of the project;</li> <li>8. The plans and documents outlined in <b>Attachment 2</b>;</li> <li>9. A signed statement from the author of the Environmental Assessment certifying that the information contained in the report is neither false nor misleading; and</li> <li>10. An assessment of the key issues specified below and a table outlining where in the EA these key issues have been addressed.</li> <li>11. A Quantity Surveyors Certificate of Cost to verify the capital investment value of the project.</li> </ol>

Key Issues	
The EA must address the following key issues:	
1. Strategic Planning	
1.1	Justify the proposal with reference to relevant local, regional and State planning strategies. Provide justification for any inconsistencies with these planning strategies.
1.2	Demonstrate consistency of the proposed subdivision with the <i>South Coast Regional Strategy</i> (as well as the recommendations resulting from the <i>South Coast Sensitive Urban Lands Review</i> ), <i>NSW Coastal Design Guidelines</i> and <i>NSW Coastal Policy</i> .
2. Subdivision Design, Layout and Desired Future Character	
2.1	Provide a Structure Plan for the site that identifies location of indicative land uses, lot layout, densities, road and open space networks and areas of environmental protection on the site. The Structure Plan is to include: <ul style="list-style-type: none"> <li>(a) Consideration of the site's context, topography, opportunities and constraints.</li> <li>(b) Identification of buffer areas and environmental protection zones, inclusive of riparian areas.</li> <li>(c) Identification of areas capable of accommodating higher densities of housing to facilitate increased housing supply and choices and to promote social and economic development.</li> </ul>
2.2	Discuss the desired urban form of the development covering issues such as: proposed road hierarchy and character, public domain/built form interface, building heights and gross floor areas. Include consideration of the integration and compatibility of the proposed land uses and potential impacts such as access arrangements for each use, traffic, buffers, density controls and suitability of the proposed development with the surrounding area.
2.3	Outline the long-term management, maintenance and rehabilitation of any areas of open space or conservation including ownership and control, management and maintenance funding, public access, revegetation and rehabilitation works and bushfire management.
2.4	Demonstrate the consistency of the proposed subdivision with the <i>NSW Coastal Design Guidelines</i> , <i>NSW Coastal Policy 1997</i> , <i>NSW South Coast Regional Strategy</i> and <i>SEPP 71-Coastal Protection</i> .
2.5	Provide details of proposed design quality controls and the means for implementing them.
2.6	Provide details of any staging that demonstrates the lots will be released in an orderly and coordinated manner.
3. Visual Impact	
3.1	Address the visual impact of the proposal in the context of surrounding development and relevant mitigation measures. In particular address impacts on the amenity of the foreshore, overshadowing of public reserves, loss of views from public places and cumulative impacts. Provide visual aids, including photo montages from key view points.
3.2	Intended view corridors should be identified including any areas of native vegetation or trees required to be removed to facilitate views.
4. Infrastructure Provision	
4.1	Address existing capacity and any required augmentation of sewerage, water, electricity, waste disposal, telecommunications and gas infrastructure, in consultation with relevant agencies. Identify and describe staging, if any, of infrastructure works. Ensure proposed infrastructure (such as stormwater basins, wetlands, cycling/walking tracks) are located on private land and outside of any riparian corridors/ecological buffers.
4.2	Identify any existing easements over the site.
4.3	Address proposed contingency measures to ensure sewage infrastructure does not negatively impact on water quality of the adjacent wetlands and the Crookhaven River.
4.4	Address and provide the likely scope of any planning agreements and/or development contributions with Council/ Government agencies (including relevant community/state infrastructure contributions).



5. Traffic and Access	
5.1	<p>Prepare a Transport and Accessibility Impact Study in accordance with Table 2.1 of the RTA's <i>Guide to Traffic Generating Developments</i>, having regard to the principles of the <i>NSW Planning Guidelines for Walking and Cycling</i> and the <i>NSW State Plan</i> (2010) to include:</p> <ul style="list-style-type: none"> <li>(a) details and analysis of proposed access to the site</li> <li>(b) network modelling using TRACKS</li> <li>(c) appropriate arrangements for the provision of road and public transport infrastructure needed to service the site. Specifically in relation to the Nowra/Culburra bus service, inclusive of the feasibility of the proposed diversion of the existing service, early provision of the service and funding</li> <li>(d) pedestrian and cycle access within and to the site</li> <li>(e) an assessment based on the current speed zonings, with consideration of safe spacing of intersections within 100km/hr speed zones</li> <li>(f) an assessment of the impacts on the surrounding road network.</li> </ul>
5.2	Provide for a road network allows for (potential) future public access to the coastal foreshore.
5.3	Demonstrate consistency of the proposal with the NSW Government's <i>Integrating Land Use &amp; Transport policy package</i> .
6. Hazard Management and Mitigation	
<i>Coastal Processes</i>	
6.1	Address coastal hazards and the provisions of the <i>Coastline Management Manual</i> . In particular consider impacts associated with wave and wind action, coastal erosion, climate change, sea level rise (as set out in <i>NSW Coastal Planning Guideline: Adapting to Sea Level Rise</i> (2009) and <i>NSW Sea Level Rise Policy Statement</i> ) and more frequent and intense storms.
<i>Contamination</i>	
6.2	Identify any contamination on site and appropriate mitigation measures in accordance with the provisions of <i>SEPP 55 – Remediation of Land</i> .
<i>Acid Sulfate Soils</i>	
6.3	Identify the presence and extent of acid sulfate soils on the site and, where relevant, appropriate mitigation measures. Identify the need for an Acid Sulfate Management Plan (prepared in accordance with ASSMAC Guidelines).
<i>Bushfire</i>	
6.4	Address the requirements of <i>Planning for Bush Fire Protection 2006</i> (RFS).
<i>Geotechnical</i>	
6.5	Provide an assessment of any geotechnical limitations that may occur on the site and if necessary, appropriate design considerations that address these limitations.
<i>Flooding</i>	
6.6	Provide an assessment of any flood risk on site (for the full range of floods including events greater than the design flood, up to probable maximum flood; and from coastal inundation, catchment based flooding or a combination of the two) and having consideration of any relevant provisions of the <i>NSW Floodplain Development Manual 2005</i> . The assessment should determine: the flood hazard in the area; address the impact of flooding on the proposed development, address the impact of the development (including filling) on flood behaviour of the site and adjacent lands; and address adequate egress and safety in a flood event.
6.7	Assess the potential impacts of sea level rise and an increase in rainfall intensity on the flood regime of the site and adjacent lands with consideration of <i>Practical Consideration of Climate Change – Floodplain Risk Management Guideline DECC, October 2007</i> , the <i>Sea Level Rise Policy Statement</i> (NSW Government, October 2009) and the <i>NSW Coastal Planning Guideline: Adapting to Sea Level Rise</i> .

7. Water Cycle Management	
7.1	Prepare an Integrated Water Cycle Management Strategy for the overall development which considers water supply, sewage.
7.2	Address stormwater management based on Water Sensitive Urban Design principles which addresses direct and indirect impacts on quality of surface and groundwater and the surrounding environment (including Lake Wollumboola, the Crookhaven River, riparian areas and the SEPP 14 wetlands), drainage and water quality controls for the catchment, and erosion and sedimentation controls at construction and operational stages. Demonstrate an acceptable level of water quality protection for a range of water quality parameters including turbidity, gross pollutants, nitrogen and phosphorus with respect to water quality and river flow recognising the environmental and food production importance of the receiving waters (eg sea grass beds and oyster aquaculture). Demonstrate consistency with any relevant <i>Statement of Joint Intent</i> established by the Healthy Rivers Commission, the <i>NSW Government River Flow Objectives</i> and <i>Water Quality Objectives</i> framework.
7.3	Address potential direct and indirect impacts and relevant mitigation measures on oyster leases and aquaculture in the vicinity of the site.
7.4	Prepare a conceptual design layout plan for the preferred stormwater treatment train showing location, size and key functional elements of each part of the system.
7.5	Undertake a detailed groundwater assessment that includes (but is not limited to), the current quality of the groundwater, any existing groundwater users, the nature and profile of the groundwater regime under the site (natural flow regime, water table local drainage patterns), interactions between the groundwater and surface water, any hydrologic impacts (including cumulative) which would affect its depth or water quality, result in increased groundwater discharge, impact on the stability of potential acid sulfate soils in the vicinity, or affect groundwater dependent native vegetation. Identify measure for preventing groundwater pollution.
7.6	Map the presence and distribution of groundwater dependant ecosystems on and surrounding the site. Identify measures to maintain natural patterns and levels of groundwater flow and other protective measures for any groundwater dependant ecosystems.
7.7	Provide details on any existing surface water and groundwater licences under the <i>Water Act 1912</i> , any proposed water extraction (surface or groundwater) including purpose, as well as the function and location of all existing and proposed storage/ponds.
7.8	Design a long term water quality monitoring program that shall be implemented prior to stage one and last until such time as the dwelling construction phase is complete. The program should include monitoring of the receiving waters of the Crookhaven River and groundwater. The program should be one of adaptive management, used to assess the effectiveness of the water quality controls, by highlighting deficiencies that may exist and enhancements that may be required. The results of the monitoring program should be used to form the basis of the programs for subsequent stages, thereby preventing irreversible impacts to the Crookhaven/Shoalhaven estuary and adjacent wetlands. Provide details of contingency plans in the event of potential adverse impacts and degradation of the Crookhaven/Shoalhaven Estuary and wetlands.
8. Heritage and Archaeology	
8.1	Identify whether the site has significance to Aboriginal cultural heritage and identify appropriate measures to preserve any significance. The assessment must address the information and consultation requirements of the draft <i>Guidelines for Aboriginal Cultural Heritage Assessment and Community Consultation</i> (DEC 2005).
8.2	Identify any items of non-indigenous heritage significance and, where relevant, provide measures for the conservation of such items.
9. Flora and Fauna	
9.1	Assess the potential direct and indirect impacts of the development on flora and fauna (including aquatic) taking into consideration impacts on any threatened species, populations, ecological communities and/or critical habitat and any relevant recovery plan in accordance with DECC's <i>Guidelines for Threatened Species Assessment</i> (2005). Identify whether the proposal meets each of the key thresholds set out in Step 5 of the draft <i>Part 3A Threatened Species Assessment Guidelines</i> and describe the actions that will be taken to firstly avoid or, if necessary, mitigate or compensate unavoidable impacts, where relevant. Provide details of any offset strategy or other suitable mitigation measures to ensure that there is no net loss of native vegetation values.
9.2	The assessment should at a minimum:

9.2	<p>The assessment should at a minimum:</p> <ol style="list-style-type: none"> <li>map the extent of the Endangered Ecological Communities on site (and show adequate buffers)</li> <li>map the distribution of hollows on and adjacent the site</li> <li>include targeted surveys for threatened flora (refer to the list in DECCW response attached)</li> <li>include targeted surveys for identified threatened fauna (refer to the list in DECCW response attached)</li> <li>address (and identify in relation to the 7(a) zoning) riparian zone buffering to adjoining wetlands and waterways demonstrating how the Wetlands, the Crookhaven River and Curleys Bay will be protected.</li> </ol>
9.3	Outline measures for the (in-perpetuity) management of EECs and other conservation areas including riparian area buffers and any proposed offsets.
9.4	Outline measures for the conservation of existing wildlife corridor values (particularly the north/south linkage) and/or connective importance of any vegetation on the subject land.
9.5	Address impacts on migratory species listed under Section 20 and 20A and species listed under Section 18 and 18A of the EPBC Act.
<b>10. Noise</b>	
10.1	Address potential noise impacts, in particular road traffic noise, for future residents and appropriate mitigation measures.
10.2	Demonstrate that the proposal will be designed, constructed and operated so that there are no unacceptable impacts from noise.
<b>11. Odour</b>	
11.1	Undertake an Odour assessment (in accordance with DECCW's <i>Assessment and management of odour from stationary sources in NSW - Technical Framework</i> and DECCW's <i>Odour Policy</i> ) to determine an appropriate buffer to the STP. Justify any departure from setbacks contained within Council's DCP 67.
<b>12. Socio-economic Impacts</b>	
12.1	Provide a social impact assessment for the development. Address the social and economic context of the development (for both the tourist and residential components) in terms of infrastructure requirements, public transport, community services and facilities (including schools and medical services).
12.2	Address the design considerations, where appropriate, within the Heart Foundation's <i>Healthy by Design: a planners' guide to environments for active living</i> .
<b>Consultation</b>	
<p>You should undertake an appropriate and justified level of consultation with the following agencies during the preparation of the environmental assessment:</p> <p>(a) <i>Agencies or other authorities:</i></p> <ul style="list-style-type: none"> <li>Commonwealth Department of the Environment, Water, Heritage and the Arts;</li> <li>Shoalhaven City Council;</li> <li>Shoalhaven Water;</li> <li>Department of Environment and Climate Change and Water;</li> <li>Department of Industry and Investment (Aquatic Habitat Protection);</li> <li>NSW Rural Fire Service;</li> <li>NSW Office of Water;</li> <li>Roads and Traffic Authority;</li> <li>State Emergency Service;</li> <li>Land and Property Management Authority</li> <li>Department of Health</li> <li>Department of Education and Training</li> <li>The Southern Rivers Catchment Management Authority;</li> <li>Jerringa Local Aboriginal Land Council and other Aboriginal community groups; and</li> <li>Integral Energy</li> </ul>	

<ul style="list-style-type: none"> <li>• Shoalhaven Shellfish Quality Assurance Program</li> </ul>
<p>(b) <i>Public:</i>  Document all community consultation undertaken to date or discuss the proposed strategy for undertaking community consultation. This should include any contingencies for addressing any issues arising from the community consultation and an effective communications strategy.</p> <p>The consultation process and the issues raised should be described in the Environmental Assessment.</p>
<p><b>Deemed Refusal Period</b></p>
<p>60 days</p>

## Attachment 2

### Plans and Documents to accompany the Application

<b>Plans and Documents of the development</b>	<p>The following plans, architectural drawings and diagrams of your proposal as well as the relevant documents will be required to be submitted for your application:</p> <ol style="list-style-type: none"> <li>1. The <b>existing site survey plan</b> is to be drawn to 1:500 scale (or other appropriate scale) and show: <ul style="list-style-type: none"> <li>• the location of the land, the measurements of the boundaries of the land, the size of the land and north point;</li> <li>• the existing levels of the land in relation to buildings and roads;</li> <li>• location and height of existing structures on the site; and</li> <li>• location and height of adjacent buildings and private open space.</li> </ul> </li> <li>2. An <b>aerial photograph</b> of the subject site with the site boundary superimposed.</li> <li>3. A <b>Site Analysis Plan</b> must be provided which identifies existing natural elements of the site (including all hazards and constraints), existing vegetation, property dimensions, footpath crossing levels and alignments, existing pedestrian and vehicular access points and other facilities, slope and topography, natural features such as watercourses (including top of bank), wetlands, riparian land (on and adjacent to the site) rock outcrops, utility services, boundaries, orientation, view corridors and all structures on neighbouring properties where relevant to the application (including windows, driveways etc.).</li> <li>4. A <b>locality/context plan</b> drawn to 1:500 scale (or other appropriate scale) should be submitted indicating: <ul style="list-style-type: none"> <li>• significant local features such as parks, community facilities and open space, water courses and heritage items;</li> <li>• the location and uses of existing buildings, shopping and employment areas;</li> <li>• traffic and road patterns, pedestrian routes and public transport nodes; and</li> <li>• The existing site plan and locality plan should be supported by a written explanation of the local and site constraints and opportunities revealed through the above documentation.</li> </ul> </li> <li>5. A <b>zoning plan</b> must be provided which shows the existing zoning overlaid with the proposed development layout. An extract of the land use table or relevant clauses from the subject LEP is required.</li> <li>6. <b>Subdivision plans</b> are to show the following:- <ul style="list-style-type: none"> <li>• The location, boundary dimensions, site area and north point of the land, and names of roads fronting the land;</li> <li>• Title showing the description of the land with lot and DP numbers etc;</li> <li>• Existing and proposed subdivision pattern including all measurements and sites areas of existing and proposed allotments;</li> <li>• Location and details of all proposed roads and footpaths;</li> <li>• Location of all structures proposed and retained on site;</li> <li>• Location and details of access points to the subdivision;</li> <li>• Existing vegetation on the land and vegetation to be retained;</li> <li>• Location of services and infrastructure, and proposed methods of</li> </ul> </li> </ol>
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	<p>draining the land;</p> <ul style="list-style-type: none"> <li>Any easements, covenants or other restrictions either existing or proposed on the site;</li> <li>Type of subdivision proposed (Torrens, strata and/or community title).</li> <li>Location of water pollution control ponds and drainage discharge points.</li> </ul> <p>7. <b>Stormwater Management Plan</b> - illustrating the concept for stormwater management from the site and must include details of any major overland flow paths through the site and any discharge points to the street drainage system. Where an on-site detention system is required, the type and location must be shown and must be integrated with the proposed landscape design. Site discharge calculations should be provided;</p> <p>8. <b>Erosion and Sediment Control Plan</b> – plan or drawing that shows the nature and location of all erosion and sedimentation control measures to be utilised on the site and proposals for auditing of compliance ;;</p> <p>9. <b>Landscape Concept Plan</b> – showing planting design and plant/tree species to be used, listing botanical and common names, mature height and spread, including details of street trees, furniture, signage, lighting and surface treatments (i.e. pavers).</p> <p>10. <b>View analysis</b> – artist's impression, photomontages, etc of the proposed development in the context of the surrounding development.</p>
<b>Specialist advice</b>	<p>Specialist advice, where required to support your Environmental Assessment, must be prepared by suitably qualified and practising consultants in relation to issues including, but not limited to, the following:</p> <ul style="list-style-type: none"> <li>Planning;</li> <li>Flora and Fauna;</li> <li>Bushfire;</li> <li>Landscaping;</li> <li>Geotechnical and/or hydrogeological (groundwater);</li> <li>Stormwater/drainage;</li> <li>Urban Design/Architectural;</li> <li>Contamination in accordance with the requirements of SEPP 55; and</li> <li>Acid Sulfate Soils.</li> </ul>
<b>Documents to be submitted</b>	<ul style="list-style-type: none"> <li>Both hard copy and electronic versions of the Environmental Assessment will be required to be submitted. Please contact the Department prior to submitting your Environmental Assessment to determine how many copies will be required.</li> <li>If the Environmental Assessment is bulky, you will be required to package up each Environmental Assessment ready for distribution by the Department to key agencies.</li> </ul>
<b>Electronic Documents</b>	<p>Electronic documents presented to the Department for publication via the Internet must satisfy the following criteria:-</p> <ul style="list-style-type: none"> <li>All files should be approximately 5 Mb.</li> <li>Large files of more than 5 Mb will need to be broken down and supplied as different files.</li> </ul>

## Attachment 3 State Government technical and policy guidelines

The following list provides relevant technical and Policy Guidelines which may assist in the preparation of the Environmental Assessment. It should be noted, however, that this list is not exhaustive as other documents and policies may need to be reviewed. It is also important to note that not all of these guidelines may be relevant to your proposal.

The majority of these documents can be found on the relevant Departmental Websites, on the NSW Government's on-line bookshop at <http://www.bookshop.nsw.gov.au> or on the Commonwealth Government's publications website at <http://www.publications.gov.au>.

Aspect	Policy/Methodology
<b>Biodiversity</b>	
	Draft Guidelines for Threatened Species Assessment (DEC & DPI, 2005)
	Threatened Biodiversity Survey and Assessment - Guideline for Developments and Activities - DECCW 2009
	Threatened Species Assessment Guidelines: The Assessment of significance - DECC 2007
	Guidelines for Development Adjoining DECC Land (DECC, 2008)
	Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (NSW Fisheries, 2003)
	Policy and Guidelines: Aquatic Habitat Management and Fish Conservation (NSW Fisheries, 1999)
	Threatened Species Management Manual (NPWS, 1998)
<b>Coastal Planning</b>	
	NSW Coastal Policy 1997 - A sustainable Future for the New South Wales Coast, NSW Government, 1997
	Coastal Design Guidelines for NSW, PlanningNSW, February 2003
	NSW Wetlands Management Policy (DLWC, March 1996)
	Coastline Management Manual (NSW Government 1990)
	Practical Consideration of Climate Change – Floodplain Risk Management Guideline (DECC, October 2007)
	Draft Coastal Risk Management Guide: Incorporating sea level rise benchmarks in flood risk assessments (DECCW, 2009)
	Draft Coastal Risk Management Guide: Incorporating the sea level rise benchmarks in coastal hazard assessments (DECCW, 2009)
	Draft NSW Coastal Planning Guideline: Adapting To Sea Level Rise (DoP, 2009)
<b>Community Consultation</b>	
	Guidelines For Major Project Community Consultation, (NSW Department of Planning, 2007)
<b>Bushfire</b>	
	Planning for Bushfire Protection 2006 (NSW Rural Fire Service)
<b>Contamination and Soils</b>	
	Managing Land Contamination: Planning Guidelines SEPP 55 – Remediation of Land (DUAP & EPA, 1998)
	Best Practice in Contaminated Sites (Commonwealth DEH, 1999, ISBN 0 642 546460)



Aspect		Policy/Methodology
		Contaminated Sites: Sampling Design Guidelines (EPA, 1999)
		NSW Acid Sulfate Soil Management Advisory Committee - Acid Sulfate Soil Manual (ASSMAC, 1998).
		National Environment Protection (Assessment of Site Contamination) Measure (NEPC 1999)
<b>Environmental Management Systems</b>		
		NSW Government Interim Water Quality and River Flow Environmental Objectives (DEC)
		Guidelines for the preparation of Environmental Management Plans (DIPNR, 2004)
<b>Heritage</b>		
<b>Aboriginal</b>		Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation (DEC, 2005)
		Interim Community Consultation Requirements for Applicants (DEC, 2004)
<b>Non-Indigenous</b>		Assessing Heritage Significance Update for Heritage Manual, NSW Heritage Office, 2000
		Statements of Heritage Impact, NSW Heritage Office 2002
		NSW Heritage Manual, NSW Heritage Office 1996
<b>Noise</b>		
		Environmental Criteria for Road Traffic Noise (EPA, 1999)
		Acoustics - Road traffic noise intrusion - Building siting and construction (Standards Australia, 1989, AS 3671-1989)
		Interim Construction Noise Guideline (DECC, 2009)
<b>Safety and Hazards</b>		
		Electrical Safety Guidelines (Integral Energy)
		Crime prevention and assessment of development applications 2001
<b>Traffic &amp; Transport</b>		
		Guide to Traffic Engineering and Guide to Geometric Design of Rural Roads (Austroads, 2003, AP-G1/03)
		Guide to Traffic Generating Developments (RTA, 2002)
		Integrating Land Use & Transport policy package, (DUAP 2001)
<b>Urban Design: Cycleway/Pathway Design</b>		
		Guidelines for the Design and Construction of Paths and Cycleways along Watercourses and Riparian Areas (Version 2) (DIPNR/DNR)
<b>Vibration</b>		
		Assessing Vibration: A Technical Guideline (DEC, 2006)
<b>Water</b>		
<b>Water Quality</b>		Water quality guidelines for the protection of aquatic ecosystems for upland rivers. (ANZECC, 2000)
		Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC 2000)
<b>Effluent Reuse</b>		Environmental Guidelines for the Utilisation of Treated Effluent by Irrigation (NSW DEC 2004)
<b>Floodplain</b>		NSW Government Floodplain Development Manual - the Management of Flood Liable Land (DIPNR, 2005)
		Practical Consideration of Climate Change – Floodplain Risk Management

Aspect	Policy /Methodology
	Guideline (DECC, October 2007)
<b>Groundwater</b>	NSW State Groundwater Quality Protection Policy (DLWC, 1998, 0 7313 0379 2)
	NSW State Groundwater Quality Protection Policy (DLWC 1998)
	NSW Groundwater Dependent Ecosystem Policy (DLWC 2000)
	NSW Groundwater Quantity Management Policy (DLWC)
	NSW Groundwater Policy Framework Document –General (DLWC 1997)
<b>Stormwater</b>	Managing Urban Stormwater: Soils & Construction – Volume 1 (NSW Landcom, March 2004) - "The Blue Book"
	Managing Urban Stormwater: Soils & Construction – Volume 2 (DECC, January 2008)
	Managing Urban Stormwater: Harvesting and Reuse (DEC, May 2006)
	Constructed Wetlands Manual (NSW DLWC 1998)
<b>Waterways</b>	Waterways Crossing Design & Construction (Version 4 – DIPNR/DNR Draft Guidelines)
<b>Wetlands</b>	NSW Wetlands Management Policy (DLWC 2000)
<b>EPBC Act</b>	
<b>FOR A CONTROLLED ACTION</b>	Commonwealth Environment Protection and Biodiversity Conservation Act 1999: Guide to implementation in NSW: March 2007

**Attachment 4**  
**Agency Responses to Request for Key Issues**  
**- For Information Only**

## APPENDIX 2: RELEVANT PREVIOUSLY RECORDED SITE RECORDS<sup>8</sup>

OEH #52-5-57 (Curleys Bay)

(S) (M) 9022 51/56-9 WOLLONGONG N.S.W.		51/56-9 (Wollongong)	
Curleys Bay		Locality Area 8 OPEN (MIDDEN)	
Military map/other reference 741878 (Rocky Point)		(Nowra area)	July 1963
Pastoral or other property, park		Wollongong 1:250,000 3443.6878	52-5-57
<p><u>Description of site</u> "Two other outstanding sites are (1) Rocky Point, which has a large shell midden and along the shore three axes of the Windang type were collected, and (2) Roseby Park dock. A large range of uniface implements collected here suggest that this is one of the oldest sites in the district. It has been occupied, perhaps intermittently, up to recent pre-historic times but there is insufficient evidence to connect this site with the Bondian period."</p> <p>Information from Report of Shoalhaven Antiquities Committee. File:</p>			
<u>Length</u>	<u>Width</u>	<u>Depth</u>	
<u>Soil and vegetation on and adjacent to site</u>			
<u>Nearest water supply</u>			
<u>Previous excavation or digging</u>			
<u>Erosion, cultivation or other works</u>			
<u>Assemblages</u>			



0

<sup>8</sup> Courtesy OEH AHIMS. Includes previously recorded sites between investigation area and Crookhaven River.

OEH #52-5-114 (Shelly Point Campsite)

MORTON/Nowra DIST.

(See 52-5-186) 52-5-114. OPEN

SITE RECORDING FORM

SECURITY  
A.2... B. ....

SI 56-...../NIMS .....  
CR: 331-931

SITE NO. CE-3  
TYPE CAMP SITE MODERN  
52-5-114 52-5-186

SITE NAMES: SHELLY POINT

MAP NAME: NOWRA NO: ..... SCALE: 1:250,000 GRID REFERENCE: 331-931

SECOND MAP NAME: WOLLONGONG NO: ..... SCALE: 1:250,000 GRID REFERENCE: 3732-8873

1:25K → 294200, 6133000

25K Note = 2942 1330

RECORDED BY: GRAHAM Connolly DATE OF RECORDING: 20-6-79

ADDRESS: ORIENT Point P.O.

SECURITY:

Is the information on this site:

OPEN : yes/no (information may be passed on for research and protection.)

RESTRICTED : yes/no (NPWS may pass on information for protection.)

SECRET : yes/no (only tribal elders may pass on information.)

Blue = annotation by  
15/30/89



52-5-0114

LAND USE:

Is the land used for:

RECREATION : yes/no

HOUSING : yes/no

INDUSTRY : yes/no

FORESTRY : yes/no

FARMING : yes/no

MINING : yes/no

Is site on:

CROWN LAND : yes/no

FREEHOLD : yes/no

LANDOWNER'S NAME:

ADDRESS:

OTHER LAND USE:

CROWN LAND

SITE LOCATION:

Is site by:

SEA : yes/no

HEADLAND : yes/no

ROCK OUTCROP : yes/no

DUNES : yes/no

SWAMP : yes/no

HILLSIDE : yes/no

CREEK : yes/no

IN CLEARED LAND : yes/no

IN BUSH : yes/no

HILLTOP : yes/no

VALLEY : yes/no

GULLY : yes/no

Is the area covered with:

TREES : yes/no

SHRUBS : yes/no

KIND OF TREES OR SHRUBS?:

oak and white tee tree

Is the site near:

FRESH WATER : yes/no

HOW FAR TO THE WATER?: 1 METRE

HOW HIGH UP ABOVE SEA LEVEL IS THE SITE?:

WHAT IS THE ROCK TYPE IN THE AREA OF THE SITE?:

WHICH WAY DOES SITE FACE? NORTH

(Take a photograph of the site in its general area.)

IS KOORIE PERMISSION NEEDED BEFORE VISITING THIS PLACE?

yes/no

CONTACT'S NAME:

JACK CAMPBELL

IS THIS PLACE SIGNIFICANT TO LIVING KOORIES?

yes/no

ADDRESS:

ORIENT Point P.O.

WHO WILL SPEAK ABOUT THE SIGNIFICANCE OF THIS SITE?

Is the site for:

ALL KOORIES

yes/no

INITIATED MEN ONLY

yes/no

MEN ONLY

yes/no

WOMEN ONLY

yes/no

0

SITE NAME: ..... SITE NUMBER: .....

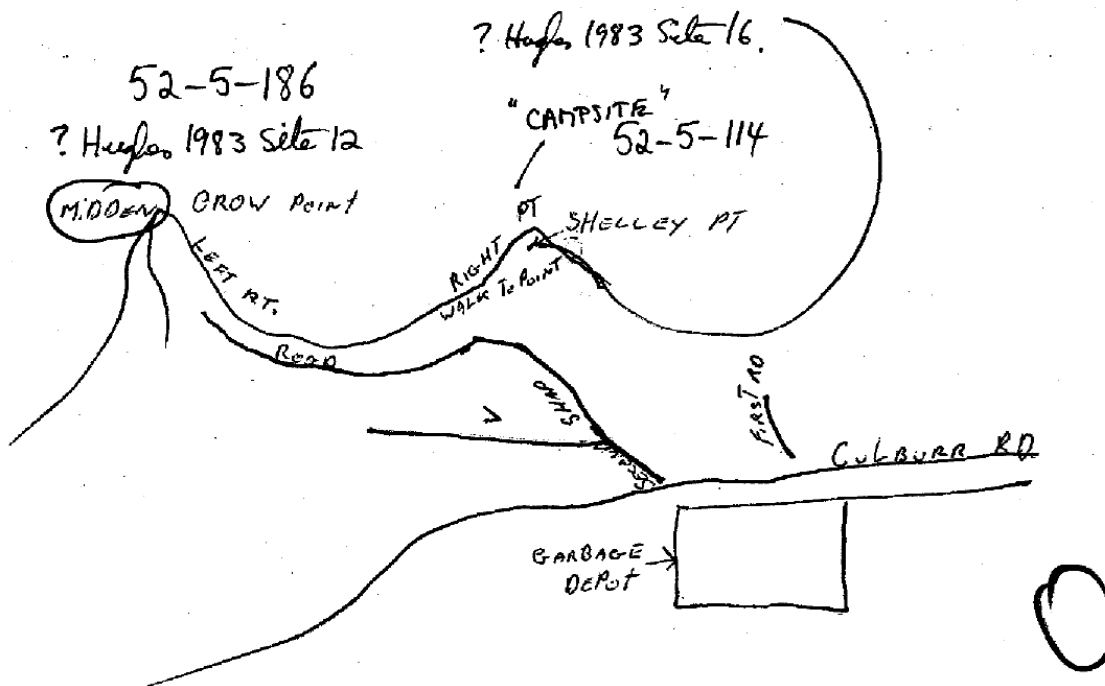
HOW TO GET TO THE SITE:

Travelling along Culburra Road to  
Nowra you will see a garbage  
depot on the left 1KM from  
Culburra. The Track to the site  
is on the Right second Track  
follows the garbage depot turn Right  
at the first V shape track the site  
is about 1KM along from the Track  
you will come to the end of the  
track Walk to the first point  
on the Right Where the Campsite  
is on the left Point from the end  
of Track is the Midden.

SKETCH TO HELP FIND SITE WHEN NECESSARY:

Interpretation by

Blue = 1.5, 30/6/89



SITE NAME: ..... SITE NUMBER: .....



5. CARVED PATTERN ON TREE: : yes/no BARK REMOVED FROM TREE: : yes/no  
 BARK CARVED : yes/no For -  
 BARK REMOVED BEFORE CARVING : yes/no CONTAINER : yes/no  
 SHIELD : yes/no  
 CANOE : yes/no  
 BOOMERANG : yes/no  
 HOW MANY TREES : ..... HOW MANY TREES : .....

THE SCARRED AREA OF THE TREE IS: ..... LONG  
 (or carved area) ..... WIDE  
 ..... ABOVE GROUND.

Take a photo of the scar, using a scale.



6. ART:

PAINTINGS : yes/no  
 ENGRAVINGS IN ROCK : yes/no  
 SITE IN CAVE : yes/no ON ROCK WALL? : yes/no ON FLAT ROCK? : yes/no  
 LENGTH OF CAVE : ..... OTHER? : yes/no WHERE? : .....  
 DEPTH OF CAVE : .....  
 COLOURS USED IN PAINTINGS OR DRAWINGS : .....  
 STENCILS OF HANDS : yes/no  
 HUMAN FIGURES : yes/no  
 LONG SNAKE-LIKE FIGURE : yes/no  
 ANIMALS : yes/no  
 OTHER RECOGNISABLE FIGURES - WHAT? : .....  
 UNRECOGNISABLE FIGURES : yes/no  
 ANY STONE TOOLS SHOWING ON FLOOR : yes/no  
 ANY CHARCOAL : yes/no } (Fill in 11 as well.)  
 ANY SHELL : yes/no }

Take colour photos of the site and of the art when the light is good enough. Use a scale.



7. WATER PLACE:

WATERHOLE : yes/no CREEK: : yes/no  
 SPRING : yes/no UNDERGROUND : yes/no  
 IS WATER PRESENT : yes/no

Take a photo, using a scale.



SITE NAME: ..... SITE NUMBER: .....



## 8. GRINDING GROOVES:

HOW MANY? : .....  
HOW CLOSE TO WATER? : ..... IS WATER PERMANENT? : yes/no  
LENGTH OF GROOVES VARIES FROM ..... TO .....  
WIDTH OF GROOVES VARIES FROM ..... TO .....  
DEPTH OF GROOVES VARIES FROM ..... TO ..... Take a photo with a scale.



## 9. STONE QUARRY:

TYPE OF STONE : .....  
CORES : yes/no  
FLAKES : yes/no  
BOULDERS : yes/no  
BRACH/RIVER PEBBLES : yes/no Photograph the site using a scale.



## 10. OCHRE QUARRY:

COLOUR? : ..... IN CAVE? : yes/no  
Take a photo of the Ochre, using a scale.



## 11. SHELL MIDDEN:

WHAT SHELL SPECIES?  
WHICH SHELL SPECIES ARE MOST COMMON?  
Are some shells -  
BROKEN UP : yes/no WHOLE : yes/no  
Is site -  
IN THE OPEN : yes/no IN A ROCK SHELTER : yes/no  
LENGTH OF SITE : 1.1 METRE WIDTH : .....  
CHARCOAL PRESENT : yes/no STONE TOOLS : yes/no  
BONES : yes/no HUMAN BONES VISIBLE : yes/no  
HOW HIGH ABOVE HIGH TIDE IS THE MIDDEN? 4 METRE  
CAN YOU TELL HOW DEEP THE MIDDEN IS? : yes/no (Don't dig) HOW DEEP? .....  
Take a general photograph of the site, and a close-up of the midden material. Use a scale.



## 12. CAMPSITE: (has little or no shell material)

IN THE OPEN : yes/no IN A SHELTER : yes/no  
SHELL : yes/no CORES : yes/no  
SHORE FLAKES : yes/no CHARCOAL : yes/no  
RAISED SMALL MOUNDS  
COVERED WITH STONES : yes/no

OTHER TYPES OF SITE? DESCRIBE:

IS THERE INFORMATION ON TAPE OR FILM ABOUT THIS SITE? : yes/no TAPE NUMBER: .....  
FILM NUMBER: .....

52-5-114

Page 6:

SITE NAME: ..... SITE NUMBER: .....

SITE CONDITION:

IS SITE IN DANGER : yes/no

IS EROSION TAKE PLACE  
AT THE SITE : yes/no

IS THERE EVIDENCE OF  
VANDALISM AT THE SITE : yes/no

DESCRIBE THE CAUSE OF THE DANGER TO THE SITE:-

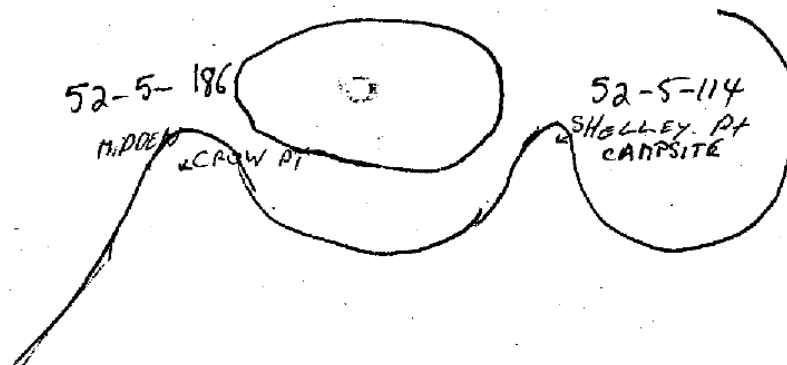
IN EMERGENCY, CONTACT NWS HEAD OFFICE: PHONE: 02 237 6759. DO NOT GET INVOLVED IF THE SITUATION IS UNPLEASANT.

ACTION TO PROTECT THE SITE:

IS ACTION REQUIRED : yes/no

IF YOU HAVE SUGGESTIONS TO MAKE, PLEASE NOTE THEM HERE. THESE CAN RANGE FROM FENCING, TO STOPPING BULL-DOZERS AT WORK, TO PUTTING THE SITE IN A SPECIAL PROTECTED CATEGORY BY LAW.

DRAW A SKETCH OF THE SITE:





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Standard Site Recording Form



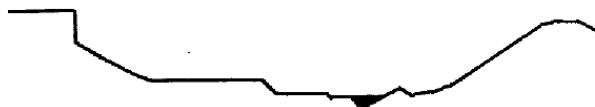
52-5-0171

MAP NAME Wollongong S156-9 Nowra 9028-14-S	EDITION 1st 1st	SCALE 1:250 000 1:25 000	REFERENCE 3730 6857 9240 3285	HEAD OFFICE USE ONLY: NWPS site no: 52-5-171 Site types: open shell midden  File nos: Report filed with site no: Classification: Site status: Filed by: B.D.W Date: 29.2.84
Site name: Culburra 1  Local post office: Greenwell Point Locality/property name: NPWS District: Nowra Region: Southeast				
Reason for investigation (give H.O. instruction no. or full title of accompanying report where applicable): SEE: Hughes, P.J. 'An Archaeological Survey of the Proposed Culburra Town Expansion Area, South Coast, N.S.W.', A report to Colin Graham, Atcock, Giles, Tribe Pty Ltd, May 1983.				
Portion no: 62 Parish: Wollumboola	Other land category: County: St. Vincent		Plan/sketch/section of site attached? Yes/No. How many?	
Air photo refs. (for stereo pair)			Annotated photos attached? Yes/No How many?	
Condition of site: Disturbed		Causes of damage/disturbance/threat to site: (Fill in separate management/protection recommendations sheet if necessary) Rabbits		
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff. Draw diagram on separate sheet if necessary). See report				
Other sites in locality? <input checked="" type="radio"/> Yes <input type="radio"/> No. Are sites in NPWS Register? Yes/No.		Site Types include: Shell middens Unregistered sites-plans for future recording? Yes/No.		
Have artefacts been removed from site? Yes <input checked="" type="radio"/> No <input type="radio"/> don't know. When? By whom? Deposited where?				
Is site important to local Aborigines? Yes/No/don't know. Give contact(s) name(s) + address(es) Contacted for this recording? Yes/No. (Attach additional information separately) If not, why not? Survey was carried out with members of the Aboriginal community at Rosebay Park.				
Verbal/written reference sources:				
Site recorded by: P.J. Hughes Address/institution: ANU Archaeological Consultancies ANUTECH PTY, LTD, G.P.O. BOX 4				Date: May 1983

# SITE POSITION & ENVIRONMENT

OFFICE USE ONLY: NPWS site no: 52-5-171

1. Land form e.g. beach/hill slope/ridge top, etc:
2. Describe briefly & mark on diagram provided or on your own sketch the position of the site:



3a Local rock type: b rock type at site: c site aspect: d slope:

4. Distance from drinking water: Source: Perm/temp.?

5. Vegetation:

6. Edible plants noted:
7. Faunal resources (include shellfish)

## DESCRIPTION OF SITE & CONTENTS.

Site type(es):

Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.  
Attach sketches etc, eg. plan & section of shelter, show relation between site contents, indicate scale.  
Attach annotated photos (stereo where useful) showing scale, particularly for art sites.

CHECKLIST TO HELP:  
length, width, depth,  
height of site, shelter,  
deposit, structure,  
element eg. tree scar,  
grooves in rock...

DEPOSIT: colour,  
texture, estimated  
depth, stratigraphy,  
contents-shell, bone,  
stone, charcoal, density  
& distribution of these,  
stone types, artefact  
types.

ART: area of surface  
decorated, motifs,  
colours, wet, dry  
pigment, technique of  
engraving, no. of  
figures, sizes,  
patination.

BURIALS: number &  
condition of bone,  
position, age, sex,  
associated artefacts.

TREES: number, alive,  
dead, likely age, scar  
shape, position, size,  
patterns, axe marks,  
regrowth.

QUARRIES: rock type,  
debris, recognisable  
artefacts, percentage  
quarried.

OTHER SITES EG.  
structures (fish traps,  
stone arrangements,  
bora rings, mia mias),  
mythological sites, rock  
holes, engraved groove  
channels, contact sites  
(missions massacres  
cemeteries) as  
appropriate

Sparse scatter of shell in loose sand.  
About 10m across.  
Base of cliff.

SITE 1        52-5-171

LOCATION

Base of cliff.

DESCRIPTION

Sparse scatter of shell in loose sand. The site and its surrounds are badly disturbed by rabbits and support a thick cover of lantana. The scatter of shell is about 10m across and the original volume of midden would have been about 5cu m.

CONTENTS

Roughly equal proportions of rock oyster (Crassostrea commercialis), cockle (Anadara trapezia) and mudwink (Pyrazus ebeninus). A trace of the small rock platform gastropod Austrocochlea constricta. One quartz flake.

COMMENT

This site has been virtually totally destroyed by rabbit warrens.



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52-5-0172

MAP NAME Wollongong S156-9 Nowra 9028-11-S	EDITION 1st 1st	SCALE 1:250 000 1:25 000	REFERENCE 3730 6857 9245 3290	HEAD OFFICE USE ONLY: NWPS site no: 52-5-172 Site types: open shell middens  File nos: Report filed with site no: Classification: Site status: Filed by: S.O.W Date: 29.2.84
Site name: Culburra 2  Local post office: Greenwell Point  Locality/property name:  NPWSDistrict: Nowra Region: Southeast				
Reason for investigation (give H.O. instruction no. or full title of accompanying report where applicable): SEE: Hughes P.J., 'An Archaeological Survey of the Proposed Culburra Town Expansion Area, South Coast, N.S.W.', A report to Colin Graham, Atcock, Giles, Tribe Pty Ltd, May 1983.				
Portion no: 61 Parish: Wollumboola	Other land category: County: St. Vincent	Plan/sketch/section of site attached? Yes/No, How many?		
Air photo refs. (for stereo pair)		Annotated photos attached? Yes/No How many?		
Condition of site: Stable, some erosion on Margin		Causes of damage/disturbance/threat to site: (Fill in separate management/protection recommendations sheet if necessary)		
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff. Draw diagram on separate sheet if necessary). See report				
Other sites in locality? <input checked="" type="radio"/> Yes <input type="radio"/> No. Are sites in NPWS Register? Yes/No.		Site Types include: Shell middens Unregistered sites-plans for future recording? Yes/No.		
Have artefacts been removed from site? Yes <input checked="" type="radio"/> No <input type="radio"/> don't know. When? By whom? Deposited where?				
Is site important to local Aborigines? Yes/No/don't know. Give contact(s) name(s) + address(es)		Survey was carried out with members of the Aboriginal community at Roseby Park.		
Contacted for this recording? Yes/No. (Attach additional information separately) If not, why not?				
Verbal/written reference sources:				
Site recorded by: P.J. Hughes Address/institution: ANU Archaeological Consultancies ANUTECH PTY. LTD.		Date: May 1983		

52-5-172

# SITE POSITION & ENVIRONMENT

OFFICE USE ONLY: NPWS site no: 52-75-172

1. Land form e.g. beach/hill slope/ridge top, etc:
2. Describe briefly & mark on diagram provided or on your own sketch the position of the site:



3a Local rock type:

b rock type at site:

c site aspect:

d slope:

4. Distance from drinking water:

Source:

Perm/temp.?

5. Vegetation:

6. Edible plants noted:

7. Faunal resources (include shellfish)

## DESCRIPTION OF SITE & CONTENTS.

Site type(es):

Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.  
Attach sketches etc, eg. plan & section of shelter, show relation between site contents, indicate scale.  
Attach annotated photos (stereo where useful) showing scale, particularly for art sites.

### CHECKLIST TO HELP:

length, width, depth,  
height of site, shelter,  
deposit, structure,  
element eg. tree scar,  
grooves in rock.

DEPOSIT: colour,  
texture, estimated  
depth, stratigraphy,  
contents-shell, bone,  
stone, charcoal, density  
& distribution of these,  
stone types, artefact  
types.

ART: area of surface  
decorated, motifs,  
colours, wet, dry  
pigment, technique of  
engraving, no. of  
figures, sizes,  
patination.

BURIALS: number &  
condition of bone,  
position, age, sex,  
associated artefacts.

TREES: number, alive,  
dead, likely age, scar  
shape, position, size,  
patterns, axe marks,  
regrowth.

QUARRIES: rock type,  
debris, recognisable  
artefacts, percentage  
quarried.

OTHER SITES EG.  
structures (fish traps,  
stone arrangements,  
bora rings, mia mias),  
mythological sites, rock  
holes, engraved groove  
channels, contact sites  
(missions massacres  
cemeteries) as  
appropriate

Compact mounded shell midden complex.  
40x 15m, maximum thickness 100 cm and  
average 30 cm.  
Top of cliff.



The midden complex looking west.



SITE 2      52-5-172

#### LOCATION

Immediately west of the northwest corner of the development area. Located on the cliff top which is steep at this point.

#### DESCRIPTION

Slightly cone shaped midden complex 40m long and 15m wide at its widest point.

The midden has an irregular surface and it consists of numerous mounds which have merged together. The surface is well grassed and stable but along the cliff edge the midden is exposed and has been slightly damaged by rabbits.

The midden spills down the cliff face which is steep at this point. The face is covered with impenetrable lantana.

Along the crest of the complex the average thickness of midden is about 40cm and its maximum thickness is between 70-100cm.

The midden appears to rest on a sandstone bed that caps the cliff top.

#### CONTENTS

The midden everywhere consists of compact shell in a black sandy matrix oysters 85%, wolk 5%, cockle 5%.

1 core on a rounded cobble of acid volcanic rock, 1 snapped flake of the same material.

#### COMMENTS

Except along the cliff edge the site is in excellent condition.



Current photos (August 2011) above.



## National Parks and Wildlife Service

Standard Site Recording Form



52-5-0173

MAP NAME	EDITION	SCALE	REFERENCE	HEAD OFFICE USE ONLY:
Wollongong S156-9	1st	1:250 000	3730 6857	NWPS site no: 52-5-173
Nowra 9028-III-S	1st	1:25 000	9250 3290	Site types: open shell midden
Site name: Culburra 3				File nos:
Local post office: Greenwell Point				Report filed with site no:
Locality/property name:				Classification: Site status:
NPWSDistrict: Nowra		Region: South east		
Reason for investigation (give H.O. instruction no. or full title of accompanying report where applicable): SEE: Hughes P.J., 'An Archaeological Survey of the Proposed Culburra Town Expansion Area, South Coast, N.S.W.', A report to Colin Graham, Atcock, Giles, Tribe Pty Ltd, May 1983.				
Portion no: 61	Other land category:		Plan/sketch/section of site attached? Yes/No.	
Parish: Wollumboola	County: St. Vincent		How many?	
Air photo refs. (for stereo pair)			Annotated photos attached? Yes/No	
			How many?	
Condition of site: Stable, some erosion on shoreward side		Causes of damage/disturbance/threat to site: (Fill in separate management/protection recommendations sheet if necessary) Wave action		
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff. Draw diagram on separate sheet if necessary). See report				
Other sites in locality? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No.		Site Types include: Shell middens		
Are sites in NPWS Register? Yes/No.		Unregistered sites-plans for future recording? Yes/No.		
Have artefacts been removed from site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> don't know. When?				
By whom?		Deposited where?		
Is site important to local Aborigines? Yes/No/don't know.		Survey was carried out with members of the Aboriginal community at Roseby Park.		
Give contact(s) name(s) + address(es)				
Contacted for this recording? Yes/No.				
(Attach additional information separately) If not, why not?				
Verbal/written reference sources:				
Site recorded by: P.J. Hughes		Date: May 1983		
Address/institution: ANU Archaeological Consultancies				
ANUTECH PTY. LTD.				
G.P.O. BOX 4				
CANBERRA A.C.T. 2601				

# SITE POSITION & ENVIRONMENT

OFFICE USE ONLY: NPWS site no: 52-6-173

1. Land form e.g. beach/hill slope/ridge top, etc:
2. Describe briefly & mark on diagram provided or on your own sketch the position of the site:



3a Local rock type: b rock type at site: c site aspect: d slope:

4. Distance from drinking water: Source: Perm/temp.?

5. Vegetation:

6. Edible plants noted:

7. Faunal resources (include shellfish)

## DESCRIPTION OF SITE & CONTENTS.

Site type(es):

Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.

Attach sketches etc, eg. plan & section of shelter, show relation between site contents, indicate scale.

Attach annotated photos (stereo where useful) showing scale, particularly for art sites.

CHECKLIST TO HELP:  
length, width, depth,  
height of site, shelter,  
deposit, structure,  
element eg. tree scar,  
grooves in rock.

DEPOSIT: colour,  
texture, estimated  
depth, stratigraphy,  
contents-shell, bone,  
stone, charcoal, density  
& distribution of these,  
stone types, artefact  
types.

ART: area of surface  
decorated, motifs,  
colours, wet, dry  
pigment, technique of  
engraving, no. of  
figures, sizes,  
patination.

BURIALS: number &  
condition of bone,  
position, age, sex,  
associated artefacts.

TREES: number, alive,  
dead, likely age, scar  
shape, position, size,  
patterns, axe marks,  
regrowth.

QUARRIES: rock type,  
debris, recognisable  
artefacts, percentage  
quarried.

OTHER SITES EG.  
structures (fish traps,  
stone arrangements,  
bora rings, mia mias),  
mythological sites, rock  
holes, engraved groove  
channels, contact sites  
(missions massacres  
cemeteries) as  
appropriate

Compact shell midden complex, not mounded.  
40 x 15m; maximum thickness 50cm &  
average 30cm.  
Base of cliff.



View of the midden looking southeast.



SITE 3

52-5-173

LOCATION

On flat ground at the base of the cliff.

DESCRIPTION

A compact midden in black sand resting on compact clayey sand. It has a stable grassed surface, but is exposed and cliffed along the shoreward margin by wave erosion, the exposed face being c.30cm high. The midden is 40 x 15m, with a maximum thickness of 50cm.

CONTENTS

The midden shell is in excellent condition and appears not to be very old. It consists of mostly cockle and oyster (45% each) with welks and some austrocochlea, and a large rock platform gastropod.

There are red weathered sandstone fragments throughout - possibly hearthstones. One quartz flaked piece.

COMMENT

Except along the shoreward margin this site is in excellent condition.



## National Parks and Wildlife Service

Standard Site Recording Form



52-5-0174

MAP NAME Wollongong S156-9 Nowra 9028-11-5	EDITION 1st 1st	SCALE 1:250 000 1:25 000	REFERENCE 3730 6857 9255 3290	HEAD OFFICE USE ONLY: NWPS site no: <del>52-5-174</del> Site types: open shell midden File nos: Report filed with site no: Classification: Site status: Filed by: B.D.W. Date: 29.2.84
Site name: Culburra 4 Local post office: Greenwell Point Locality/property name: NPWSDistrict: Nowra Region: Southeast				
Reason for investigation (give H.O. instruction no. or full title of accompanying report where applicable): SEE: Hughes P.J. 'An Archaeological Survey of the Proposed Culburra Town Expansion Area, South Coast, N.S.W.', A report to Colin Graham, Alcock, Giles, Tribe Pty Ltd, May 1983.				
Portion no: 61 Parish: Wollumboola	Other land category: County: St. Vincent	Plan/sketch/section of site attached? Yes/No. How many?		
Air photo refs. (for stereo pair)		Annotated photos attached? Yes/No How many?		
Condition of site: Exposed by erosion		Causes of damage/disturbance/threat to site: (Fill in separate management/protection recommendations sheet if necessary) Wave erosion		
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff. Draw diagram on separate sheet if necessary). See report				
Other sites in locality? <input checked="" type="checkbox"/> Yes/No. Are sites in NPWS Register? Yes/No.		Site Types include: Shell middens Unregistered sites-plans for future recording? Yes/No.		
Have artefacts been removed from site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> don't know. When? By whom? Deposited where?				
Is site important to local Aborigines? Yes/No/don't know. Survey was carried out with members of the Aboriginal community at Roseby Park. Give contact(s) name(s) + address(es) Contacted for this recording? Yes/No. (Attach additional information separately) If not, why not?				
Verbal/written reference sources:				
Site recorded by: P.J. Hughes Address/institution: ANU Archaeological Consultancies ANUTECH PTY. LTD. G.P.O. BOX 1				Date: May 1983

# SITE POSITION & ENVIRONMENT

OFFICE USE ONLY: NPWS site no: 52-5-174

1. Land form e.g. beach/hill slope/ridge top, etc:
2. Describe briefly & mark on diagram provided or on your own sketch the position of the site:



3a Local rock type:

b rock type at site:

c site aspect:

d slope:

4. Distance from drinking water:

Source:

Perm/temp.?

5. Vegetation:

6. Edible plants noted:

7. Faunal resources (include shellfish)

## DESCRIPTION OF SITE & CONTENTS.

Site type(s):

Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.

Attach sketches etc, eg. plan & section of shelter, show relation between site contents, indicate scale.

Attach annotated photos (stereo where useful) showing scale, particularly for art sites.

### CHECKLIST TO HELP:

length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock.

DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types.

ART: area of surface decorated, motifs, colours, wet, dry pigment, technique of engraving, no. of figures, sizes, patination.

BURIALS: number & condition of bone, position, age, sex, associated artefacts.

TREES: number, alive, dead, likely age, scar shape, position, size, patterns, axe marks, regrowth.

QUARRIES: rock type, debris, recognisable artefacts, percentage quarried.

OTHER SITES EG. structures (fish traps, stone arrangements, bora rings, mia mias), mythological sites, rock holes, engraved groove channels, contact sites (missions massacres cemeteries) as appropriate

Lense of shell midden exposed in wave eroded face.

4m long x 30cm thick.

Base of cliff.



Midden 4.

SITE 4

52-5-174

LOCATION

At the base of cliff.

DESCRIPTION

A lense of shell, exposed in a wave eroded face, which may extend upslope beneath thick lantana. About 4m long and 30cm thick.

CONTENTS

Consists of oyster 80%, cockle 15%, welk 5%, and one large mud oyster shell.

COMMENT

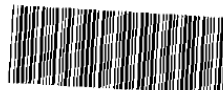
A small site under threat from erosion by wave action.





# National Parks and Wildlife Service

Standard Site Recording Form



52-5-0175

MAP NAME	EDITION	SCALE	REFERENCE	HEAD OFFICE USE ONLY:
Wollongong S156-9	1st	1:250 000	3735 6857	NWPS site no: 52-5-175
Nowra 9028-11-5	1st	1:25 000	9265 3290	Site types: open shell midden
Site name: Culburra 5				File nos:
Local post office: Greenwell Point				Report filed with site no:
Locality/property name:				Classification: Site status:
NPWS District: Nowra		Region: Southeast		Filed by: B.P.W.
				Date: 29.2.84
Reason for investigation (give H.O. instruction no. or full title of accompanying report where applicable):				
SEE: Hughes, P.J. 'An Archaeological Survey of the Proposed Culburra Town Expansion Area, South Coast, N.S.W.' A report to Colin Graham, Alcock, Giles, Tribe Pty Ltd, May 1983.				
Portion no: b1	Other land category:		Plan/sketch/section of site attached? Yes/No.	
Parish: Wollumboola	County: St. Vincent		How many?	
Air photo refs. (for stereo pair)			Annotated photos attached? Yes/No	
			How many?	
Condition of site:		Causes of damage/disturbance/threat to site:		
Exposed by erosion but stable (vegetated)		(Fill in separate management/protection recommendations sheet if necessary) wave erosion		
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff. Draw diagram on separate sheet if necessary).				
See report				
Other sites in locality? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No.		Site Types include: Shell middens		
Are sites in NPWS Register? Yes/No.		Unregistered sites-plans for future recording? Yes/No.		
Have artefacts been removed from site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> don't know. When?				
By whom? Deposited where?				
Is site important to local Aborigines? Yes/No/don't know. Survey was carried out with members of the Aboriginal community at Rosebay Park				
Give contact(s) name(s) + address(es)				
Contacted for this recording? Yes/No. (Attach additional information separately) If not, why not?				
Verbal/written reference sources:				
Site recorded by: P.J. Hughes				Date: May 1983
Address/institution: ANU Archaeological Consultancies				
ANUTECH PTY. LTD.				

# SITE POSITION & ENVIRONMENT

OFFICE USE ONLY: NPWS site no: 52-5-175

1. Land form e.g. beach/hill slope/ridge top, etc:
2. Describe briefly & mark on diagram provided or on your own sketch the position of the site:



3a Local rock type:

b rock type at site:

c site aspect:

d slope:

4. Distance from drinking water:

Source:

Perm/temp.?

5. Vegetation:

6. Edible plants noted:

7. Faunal resources (include shellfish)

## DESCRIPTION OF SITE & CONTENTS.

Site type(s):

Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.

Attach sketches etc, eg. plan & section of shelter, show relation between site contents, indicate scale.

Attach annotated photos (stereo where useful) showing scale, particularly for art sites.

CHECKLIST TO HELP:  
length, width, depth,  
height of site, shelter,  
deposit, structure,  
element eg. tree scar,  
grooves in rock.

DEPOSIT: colour,  
texture, estimated  
depth, stratigraphy,  
contents-shell, bone,  
stone, charcoal, density  
& distribution of these,  
stone types, artefact  
types.

ART: area of surface  
decorated, motifs,  
colours, wet, dry  
pigment, technique of  
engraving, no. of  
figures, sizes,  
patination.

BURIALS: number &  
condition of bone,  
position, age, sex,  
associated artefacts.

TREES: number, alive,  
dead, likely age, scar  
shape, position, size,  
patterns, axe marks,  
regrowth.

QUARRIES: rock type,  
debris, recognisable  
artefacts, percentage  
quarried.

OTHER SITES EG.  
structures (fish traps,  
stone arrangements,  
bora rings, mia mias),  
mythological sites, rock  
holes, engraved groove  
channels, contact sites  
(missions massacres  
cemeteries) as  
appropriate

Solided mound of shell midden exposed in  
wave eroded face.

About 10m across & 30 cm thick.

Base and face of cliff.



Midden 5

SITE 5

52-5-175

LOCATION

Base and face of cliff.

DESCRIPTION

Midden extends to the surface and is about 10m long. Thickest in centre where it is slightly mounded. Surface well vegetated.

CONTENTS

Midden consists of oyster 90%, with a trace of welk, cockle and mussel.

COMMENT

Except along the shoreward margin this site is in excellent condition.



## National Parks and Wildlife Service

Standard Site Recording Form



52-5-0176

MAP NAME Wollongong S156-9 Nowra 9028-11-5	EDITION 1st 1st	SCALE 1:250 000 1:25 000	REFERENCE 3735 6857 9290 3290	HEAD OFFICE USE ONLY: NWPS site no: 52-5-176 Site types: open shell midden  File nos: Report filed with site no: Classification: Site status: Filed by: B.W. Date: 29-2-84
Site name: Culburra b Local post office: Greenwell Point Locality/property name: NPWS District: Nowra Region: Southeast				
Reason for investigation (give H.O. instruction no. or full title of accompanying report where applicable): SEE: Hughes, P.J. 'An Archaeological Survey of the Proposed Culburra Town Expansion Area, South Coast, N.S.W.', A report to Colin Graham, Atcock, Giles, Tribe Pty Ltd, May 1983.				
Portion no: b1 Parish: Wollumboola	Other land category: County: St. Vincent		Plan/sketch/section of site attached? Yes/No. How many?	
Air photo refs. (for stereo pair)			Annotated photos attached? Yes/No How many?	
Condition of site: Stable. Some disturbance on one section		Causes of damage/disturbance/threat to site: (Fill in separate management/protection recommendations sheet if necessary) Rabbits		
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff. Draw diagram on separate sheet if necessary). See report				
Other sites in locality? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No. Are sites in NPWS Register? Yes/No.		Site Types include: Shell middens Unregistered sites-plans for future recording? Yes/No.		
Have artefacts been removed from site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> don't know. When? By whom? Deposited where?				
Is site important to local Aborigines? Yes/No/don't know. Give contact(s) name(s) + address(es)		Survey was carried + with members of the Aboriginal community at Roseby Park.		
Contacted for this recording? Yes/No. (Attach additional information separately) If not, why not?				
Verbal/written reference sources:				
Site recorded by: P.J. Hughes Address/institution: ANU Archaeological Consultancies			Date: May 1983	



# SITE POSITION & ENVIRONMENT

OFFICE USE ONLY: NPWS site no: 52-5-176

1. Land form e.g. beach/hill slope/ridge top, etc:
2. Describe briefly & mark on diagram provided or on your own sketch the position of the site:



3a Local rock type: b rock type at site: c site aspect: d slope:

4. Distance from drinking water: Source: Perm/temp.?
5. Vegetation:

6. Edible plants noted:
7. Faunal resources (include shellfish)

## DESCRIPTION OF SITE & CONTENTS.

Site type(es):

Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.  
Attach sketches etc, eg. plan & section of shelter, show relation between site contents, indicate scale.  
Attach annotated photos (stereo where useful) showing scale, particularly for art sites.

CHECKLIST TO HELP:  
length, width, depth,  
height of site, shelter,  
deposit, structure,  
element eg. tree scar,  
grooves in rock.

DEPOSIT: colour,  
texture, estimated  
depth, stratigraphy,  
contents-shell, bone,  
stone, charcoal, density  
& distribution of these,  
stone types, artefact  
types.

ART: area of surface  
decorated, motifs,  
colours, wet, dry  
pigment, technique of  
engraving, no. of  
figures, sizes,  
patination.

BURIALS: number &  
condition of bone,  
position, age, sex,  
associated artefacts.

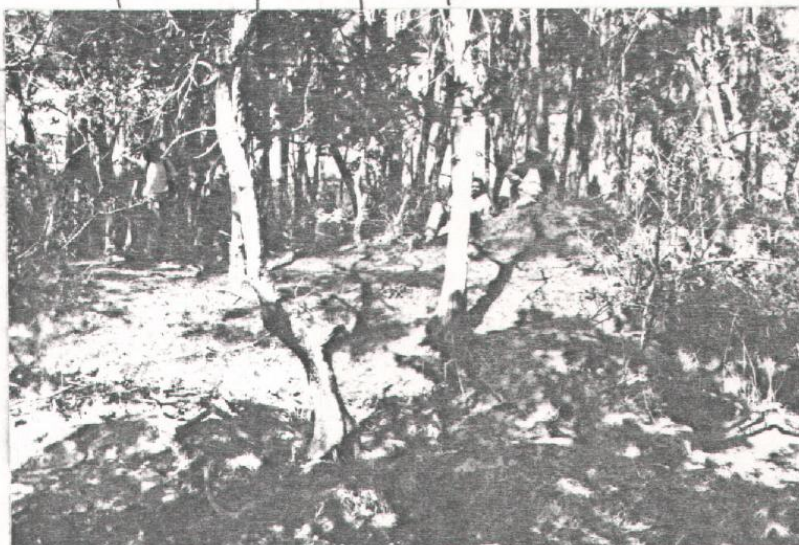
TREES: number, alive,  
dead, likely age, scar  
shape, position, size,  
patterns, axe marks,  
regrowth.

QUARRIES: rock type,  
debris, recognisable  
artefacts, percentage  
quarried.

OTHER SITES EG.  
structures (fish traps,  
stone arrangements,  
bora rings, mia mias),  
mythological sites, rock  
holes, engraved groove  
channels, contact sites  
(missions massacres  
cemeteries) as  
appropriate

Complex of 4 compact, rounded shell middens,  
resting on horizontally stratified middens up  
to 50cm thick.

Each mound roughly 3m across and up to  
50cm thick. Located in an area 45m across  
Base of and face of cliff.



Midden b showing one of the 4 mounds

SITE 6

52-5-176

LOCATION

Base and face of cliff.

DESCRIPTION

Site consists of 4 distinct mounds resting on a layer of shell midden. Whole complex measures 45m x 25m. Underlying midden probably 50cm thick.

Mound 1: Roughly circular, moderately well grassed under casuarina trees. 2-3m across and 50cm above ground surface. Mostly oyster shell in black sandy matrix.

Mound 2: 2.5m across, about 30cm high. Surface grassed and covered with litter.

Mound 3: 3 x 2m across. Cockle and welk as well as oyster.

Mound 4: 3m across. Very sandy and relatively little shell. Covered by lantana. Destroyed by rabbits.

COMMENT

Three of the mounds are stable and in excellent condition.



## National Parks and Wildlife Service

Standard Site Recording Form



52-5-0177

MAP NAME Wollongong S156-9 Nowra 9028-14-S	EDITION 1st 1st	SCALE 1:250 000 1:25 000	REFERENCE 3735 6857 9275 3285	HEAD OFFICE USE ONLY: NWPS site no: 52-5-177 Site types: open shell midden  File nos: Report filed with site no: Classification: Site status: Filed by: B.W. Date: 29.2.84
Site name: Culburra 7  Local post office: Greenwell Point Locality/property name: NPWS District: Nowra Region: South east				
Reason for investigation (give H.O. instruction no. or full title of accompanying report where applicable): SEE: Hughes P.J., 'An Archaeological Survey of the Proposed Culburra Town Expansion Area, South Coast, N.S.W.', A report to Colin Graham, Alcock, Giles, Tribe Pty Ltd, May 1983.				
Portion no: 61 Parish: Wollumboola		Other land category: County: St. Vincent		Plan/sketch/section of site attached? Yes/No. How many?
Air photo refs. (for stereo pair)		Annotated photos attached? Yes/No How many?		
Condition of site: Exposed by erosion		Causes of damage / disturbance / threat to site: (Fill in separate management / protection recommendations sheet if necessary) Rabbits		
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff. Draw diagram on separate sheet if necessary). See report				
Other sites in locality? <input checked="" type="radio"/> Yes <input type="radio"/> No. Are sites in NPWS Register? Yes/No.		Site Types include: Shell middens Unregistered sites-plans for future recording? Yes/No.		
Have artefacts been removed from site? Yes <input checked="" type="radio"/> No <input type="radio"/> don't know. When? By whom? Deposited where?				
Is site important to local Aborigines? Yes/No/don't know. Give contact(s) name(s) + address(es)		Survey was carried out with members of the Aboriginal community at Rosebay Park.		
Contacted for this recording? Yes/No. (Attach additional information separately) If not, why not?				
Verbal/written reference sources:				
Site recorded by: P.J. Hughes Address/institution: ANU Archaeological Consultancies ANUTECH PTY. LTD. GPO BOX 4		Date: May 1983		



OFFICE USE ONLY NPWT 52610: 52-S-177

and form e.g. beech/hill slope/ridge top, etc.

Describe briefly & mark on diagram provided or on your own sketch the position of the



Local rock type:

b - rock type at site

c site aspect:

d slope:

Distance from drinking water:

Perm / temp. ?

Vegetation:

Eddie plants noted

Faunal resources (include shellfish)

## DESCRIPTION OF SITE & CONTENTS

Site type(es):

Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.

Attach sketches etc, eg. plan & section of shelter, show relation between site contents, indicate scale

Attach annotated photos (stereo where useful) showing scale, particularly for art sites.

**CHECKLIST TO HELP:**  
length, width, depth,  
light of site, shelter,  
position, structure,  
element eg. tree scar,  
pockets in rock.

POSIT colour, texture, estimated depth, stratigraphy, plants-shell, bone, pine, charcoal, density distribution of these, one types, artefact boxes.

RT: area of surface decorated, motifs, colours, wet, dry pigment, technique of engraving, no. of figures, sizes, elimination.

TRIALS: number & condition of bone, position, age, sex, associated artefacts

REES: number, alive, dead, likely age, scar shape, position, size, attempts, axe marks, growth.

**QUARRIES:** rock type, debris, recognisable artefacts, percent age quarried.

OTHER SITES: 1. structures (fish traps, stone arrangements, pora rings, mounds, etc.); 2. hydrological sites (rock holes, engraved grooves, channels, contact sites); 3. missions (massacres, cemeteries) as

Complex of far rounded shell middens. Low concentration of shell in sandy matrix. Each mound roughly 3m across & 50cm thick. Located in an area 30m across. Base of cliff.



Map 7 showing the most prominent and stable of the marks.



SITE 7

52-5-177

LOCATION

Base of cliff.

DESCRIPTION

Site consists of 4 mounds, 3 of which overlap. Site covers 20 x 30m.  
Casuarina tree cover.

Mound 1: Grassed compact stable mound 3m across and 50cm high.  
Good condition. Black matrix.

Mounds 2, 3, and 4: Loose sandy matrix with scatter of shell.  
Badly affected by rabbits and covered by lantana. About 50cm high.

CONTENTS

Mostly oyster.

COMMENT

Except for Mound 1, this site is poorly preserved.



# National Parks and Wildlife Service

## Standard Site Recording Form



52-5-0179

MAP NAME	EDITION	SCALE	REFERENCE	HEAD OFFICE USE ONLY:
Wollongong S156-9	1st	1:250 000	3740 6857	NWPS site no: 52-5-179
Nowra 9028-11-S	1st	1:25 000	9325 3265	Site types: <i>Shell Midden</i>
Site name: <i>Culburra 9</i>				File nos:
Local post office: <i>Greenwell Point</i>				Report filed with site no:
Locality/property name:				Classification: Site status:
NPWSDistrict: <i>Nowra</i>		Region: <i>South east</i>		Filed by: <i>BSW</i>
				Date: <i>29.2.84</i>
Reason for investigation (give H.O. instruction no. or full title of accompanying report where applicable):				
SEE: <i>Hughes, P.J., 'An Archaeological Survey of the Proposed Culburra Town Expansion Area, South Coast, N.S.W.', A report to Colin Graham, Atcock, Giles, Tribe Pty Ltd, May 1983.</i>				
Portion no: <i>6</i>	Other land category:		Plan/sketch/section of site attached? Yes/No.	
Parish: <i>Wollumboola</i>	County: <i>St. Vincent</i>		How many?	
Air photo refs. (for stereo pair)			Annotated photos attached? Yes/No	
			How many?	
Condition of site:		Causes of damage / disturbance / threat to site:		
<i>Stable, very good condition</i>		(Fill in separate management/protection recommendations sheet if necessary)		
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff. Draw diagram on separate sheet if necessary).				
<i>See report</i>				
Other sites in locality? <input checked="" type="radio"/> Yes <input type="radio"/> No.		Site Types include: <i>Shell middens</i>		
Are sites in NPWS Register? Yes/No.		Unregistered sites-plans or future recording? Yes/No.		
Have artefacts been removed from site? Yes <input checked="" type="radio"/> No <input type="radio"/> don't know. When?				
By whom? Deposited where?				
Is site important to local Aborigines? Yes/No/don't know.				
Give contact(s) name(s) + address(es)				
<i>Survey was carried out with members of the Aboriginal community at Rosebay Park.</i>				
Contacted for this recording? Yes/No.				
(Attach additional information separately) If not, why not?				
Verbal/written reference sources:				
Site recorded by: <i>P.J. Hughes</i>				Date: <i>May 1983</i>
Address/institution: <i>ANU Archaeological Consultants</i>				
<i>ANUTECH PTY. LTD</i>				

# SITE POSITION & ENVIRONMENT

OFFICE USE ONLY: NPWS site no: 52-5-179

1. Land form e.g. beach/hill slope/ridge top, etc:
2. Describe briefly & mark on diagram provided or on your own sketch the position of the site:



3a Local rock type: b rock type at site: c site aspect: d slope:

4. Distance from drinking water: Source: Perm/temp.?

5. Vegetation:

6. Edible plants noted:

7. Faunal resources (include shellfish)

## DESCRIPTION OF SITE & CONTENTS.

Site type(es):

Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.  
Attach sketches etc, eg. plan & section of shelter, show relation between site contents, indicate scale.  
Attach annotated photos (stereo where useful) showing scale, particularly for art sites.

CHECKLIST TO HELP:  
length, width, depth,  
height of site, shelter,  
deposit, structure,  
element eg. tree scar,  
grooves in rock.

DEPOSIT: colour,  
texture, estimated  
depth, stratigraphy,  
contents-shell, bone,  
stone, charcoal, density  
& distribution of these,  
stone types, artefact  
types.

ART: area of surface  
decorated, motifs,  
colours, wet, dry  
pigment, technique of  
engraving, no. of  
figures, sizes,  
patination.

BURIALS: number &  
condition of bone,  
position, age, sex,  
associated artefacts.

TREES: number, alive,  
dead, likely age, scar  
shape, position, size,  
patterns, axe marks,  
regrowth.

QUARRIES: rock type,  
debris, recognisable  
artefacts, percentage  
quarried.

OTHER SITES EG.  
structures (fish traps,  
stone arrangements,  
bora rings, mia mias),  
mythological sites, rock  
holes, engraved groove  
channels, contact sites  
(missions massacres  
cemeteries) as  
appropriate

Compact shell midden.  
Extends 20m along the face and up to  
30cm thick.  
Face of cliff.



Midden 9.

0

SITE 9

52-6-179

LOCATION

Face of cliff.

DESCRIPTION

Compact shell midden, densely grassed under casuarina trees. Measures 20m x 10m and up to 80cm thick and on average 50cm thick along crest.

CONTENTS

Only a little poorly preserved shell visible at surface - mostly oyster but also cockle and a few welks.

COMMENT

Grassed, stable and in excellent condition.



## National Parks and Wildlife Service

Standard Site Recording Form



52-5-0180

MAP NAME	EDITION	SCALE	REFERENCE	HEAD OFFICE USE ONLY:
Wollongong S156-9	1st	1:50 000	3744 6860	NWPS site no: 52-5-180
Nowra 9028-11-5	1st	1:25 000	9350 3285	Site types: Midden
Site name: Culburra 10				File nos:
Local post office: Greenwell Point				Report filed with site no:
Locality/property name:				Classification: Site status:
NPWS District: Nowra		Region: Southeast		
Filed by: B.W.				
Date: 29.2.84				
Reason for investigation (give H.O. instruction no. or full title of accompanying report where applicable): SEE: Hughes, P.J., 'An Archaeological Survey of the Proposed Culburra Town Expansion Area, South Coast, N.S.W.', A report to Colin Graham, Atcock, Giles, Tribe Pty Ltd, May 1983.				
Portion no: 6	Other land category:		Plan/sketch/section of site attached? Yes/No.	
Parish: Wollumboola	County: St. Vincent		How many?	
Air photo refs. (for stereo pair)			Annotated photos attached? Yes/No	
			How many?	
Condition of site: Disturbed completely		Causes of damage/disturbance/threat to site: (Fill in separate management/protection recommendations sheet if necessary) Bulldozing		
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff. Draw diagram on separate sheet if necessary). See report				
Other sites in locality? <input checked="" type="radio"/> Yes <input type="radio"/> No.		Site Types include: Shell middens		
Are sites in NPWS Register? Yes/No.		Unregistered sites-plans for future recording? Yes/No.		
Have artefacts been removed from site? Yes <input checked="" type="radio"/> No <input type="radio"/> don't know. When?				
By whom? Deposited where?				
Is site important to local Aborigines? Yes/No/don't know. Survey was carried out with members of the Aboriginal community at Roseby Park.				
Give contact(s) name(s) + address(es)				
Contacted for this recording? Yes/No. (Attach additional information separately) If not, why not?				
Verbal/written reference sources:				
Site recorded by: P.J. Hughes Date: May 1983				
Address/institution: ANU Archaeological Consultancies ANUTECH PTY. LTD. G.P.O. BOX 4				



# SITE POSITION & ENVIRONMENT

OFFICE USE ONLY: NPWS site no: 52-5-180

1. Land form e.g. beach/hill slope/ridge top, etc:
2. Describe briefly & mark on diagram provided or on your own sketch the position of the site:



3a Local rock type: b rock type at site: c site aspect: d slope:

4. Distance from drinking water: Source: Perm/temp.?  
5. Vegetation:

6. Edible plants noted:
7. Faunal resources (include shellfish)

## DESCRIPTION OF SITE & CONTENTS.

Site type(s):

Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.  
Attach sketches etc, eg. plan & section of shelter, show relation between site contents, indicate scale.  
Attach annotated photos (stereo where useful) showing scale, particularly for art sites.

CHECKLIST TO HELP:  
length, width, depth,  
height of site, shelter,  
deposit, structure,  
element eg. tree scar,  
grooves in rock.

DEPOSIT: colour,  
texture, estimated  
depth, stratigraphy,  
contents-shell, bone,  
stone, charcoal, density  
& distribution of these,  
stone types, artefact  
types.

ART: area of surface  
decorated, motifs,  
colours, wet, dry  
pigment, technique of  
engraving, no. of  
figures, sizes,  
patination.

BURIALS: number &  
condition of bone,  
position, age, sex,  
associated artefacts.

TREES: number, alive,  
dead, likely age, scar  
shape, position, size,  
patterns, axe marks,  
regrowth.

QUARRIES: rock type,  
debris, recognisable  
artefacts, percentage  
quarried.

OTHER SITES EG.  
structures (fish traps,  
stone arrangements,  
bora rings, mia mias),  
mythological sites, rock  
holes, engraved groove  
channels, contact sites  
(missions massacres  
cemeteries) as  
appropriate

Scatter of shell midden in sand.  
10m across.  
Top of cliff.



Midden 10

SITE 10

51-5-180

LOCATION

Top of cliff.

DESCRIPTION

A scatter of shell midden spread over an area 10m across.

CONTENTS

Oyster 60%, cockle 35%, mud welk 5%.

COMMENT

Disturbed by construction of a track and spread by bulldozer over the north side of the track.



## National Parks and Wildlife Service

Standard Site Recording Form



52-5-0181

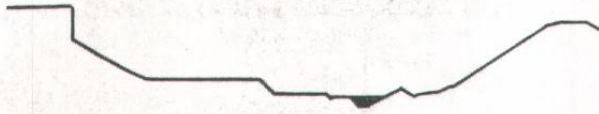
MAP NAME Wollongong S156-9 Nowra 9028-11-S	EDITION 1st 1st	SCALE 1:250 000 1:25 000	REFERENCE 3744 6860 9350 3300	HEAD OFFICE USE ONLY: NWPS site no: 52-5-181 Site types: Midden  File nos: Report filed with site no: Classification: Site status: Filed by: B.W. Date: 29.2.84
Site name: Culburra II  Local post office: Greenwell Point  Locality/property name: NPWSDistrict: Nowra Region: Southeast				
Reason for investigation (give H.O. instruction no. or full title of accompanying report where applicable): SEE: Hughes P.J., 'An Archaeological Survey of the Proposed Culburra Town Expansion Area, South Coast, N.S.W.', A report to Colin Graham, Atcock, Giles, Tribe Pty Ltd, May 1983.				
Portion no: 6 Parish: Wollumboola	Other land category: County: St. Vincent		Plan/sketch/section of site attached? Yes/No. How many?	
Air photo refs. (for stereo pair)			Annotated photos attached? Yes/No How many?	
Condition of site: Grassed & stable		Causes of damage/disturbance/threat to site: (Fill in separate management/protection recommendations sheet if necessary)		
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff. Draw diagram on separate sheet if necessary). See report				
Other sites in locality? <input checked="" type="checkbox"/> No. Are sites in NPWS Register? Yes/No.		Site Types include: Shell middens Unregistered sites-plans for future recording? Yes/No.		
Have artefacts been removed from site? Yes <input checked="" type="checkbox"/> No, don't know. When? By whom? Deposited where?				
Is site important to local Aborigines? Yes/No/don't know. Give contact(s) name(s) + address(es)		Survey was carried out with members of the Aboriginal community at Roseby Park.		
Contacted for this recording? Yes/No. (Attach additional information separately) If not, why not?				
Verbal/written reference sources:				
Site recorded by: P.J. Hughes Address/institution: ANU Archaeological Consultancies		Date: May 1983		



# SITE POSITION & ENVIRONMENT

OFFICE USE ONLY: NPWS site no: 52-5-181

1. Land form e.g. beach/hill slope/ridge top, etc:
2. Describe briefly & mark on diagram provided or on your own sketch the position of the site:



3a Local rock type: b rock type at site: c site aspect: d slope:

4. Distance from drinking water: Source: Perm/temp.?  
5. Vegetation:

6. Edible plants noted:  
7. Faunal resources (include shellfish)

## DESCRIPTION OF SITE & CONTENTS.

Site type(es):

Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.  
Attach sketches etc, eg. plan & section of shelter, show relation between site contents, indicate scale.  
Attach annotated photos (stereo where useful) showing scale, particularly for art sites.

CHECKLIST TO HELP:  
length, width, depth,  
height of site, shelter,  
deposit, structure,  
element eg. tree scar,  
grooves in rock.

DEPOSIT: colour,  
texture, estimated  
depth, stratigraphy,  
contents-shell, bone,  
stone, charcoal, density  
& distribution of these,  
stone types, artefact  
types.

ART: area of surface  
decorated, motifs,  
colours, wet, dry  
pigment, technique of  
engraving, no. of  
figures, sizes,  
patination.

BURIALS: number &  
condition of bone,  
position, age, sex,  
associated artefacts.

TREES: number, alive,  
dead, likely age, scar  
shape, position, size,  
patterns, axe marks,  
regrowth.

QUARRIES: rock type,  
debris, recognisable  
artefacts, percentage  
quarried.

OTHER SITES EG.  
structures (fish traps,  
stone arrangements,  
bora rings, mia mias),  
mythological sites, rock  
holes, engraved groove  
channels, contact sites  
(missions massacres  
cemeteries) as  
appropriate

Subsided mound of shell midden.  
10m across & up to 20cm thick.  
Base of cliff.



Midden II.

SITE 11      52-5-181

LOCATION

Base of cliff.

DESCRIPTION

Very subdued mound of shell midden. 10m across x 20cm high. Dark brown sandy matrix. Well grassed surface merges with grassed surrounds.

CONTENTS

Shell of all 3 species (oyster, cockle, welk).

COMMENT

This very subdued mound was only detected because of its relatively green cover of grass.



## National Parks and Wildlife Service

Standard Site Recording Form



52-5-0182

MAP NAME Wollongong S156-9 Nowra 9028-11-S	EDITION 1st 1st	SCALE 1:250 000 1:25 000	REFERENCE 3746 6860 9390 3280	HEAD OFFICE USE ONLY: NWPS site no: 52-5-182 Site types: Middens  File nos: Report filed with site no: Classification: Site status:  Filed by: B.W. Date: 29.2.84
Site name: Culburra 13  Local post office: Greenwell Point  Locality/property name:  NPWS District: Nowra Region: South east				
Reason for investigation (give H.O. instruction no. or full title of accompanying report where applicable): SEE: Hughes, P.J., 'An Archaeological Survey of the Proposed Culburra Town Expansion Area, South Coast, N.S.W.', A report to Colin Graham, Alcock, Giles, Tribe Pty Ltd, May 1983.				
Portion no: 6 Parish: Wollumboola	Other land category: County: St. Vincent		Plan/sketch/section of site attached? Yes/No. How many?	
Air photo refs. (for stereo pair)			Annotated photos attached? Yes/No How many?	
Condition of site: Stable.		Causes of damage/disturbance/threat to site: (Fill in separate management/protection recommendations sheet if necessary) trailbikes		
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff. Draw diagram on separate sheet if necessary). See report				
Other sites in locality? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Are sites in NPWS Register? Yes/No		Site Types include: Shell middens Unregistered sites-plans for future recording? Yes/No.		
Have artefacts been removed from site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> don't know. When? By whom? Deposited where?				
Is site important to local Aborigines? Yes/No/don't know. Survey was carried out with members of the Aboriginal community at Roseby Park. Give contact(s) name(s) + address(es) Contacted for this recording? Yes/No. (Attach additional information separately) If not, why not?				
Verbal/written reference sources:				
Site recorded by: P.J. Hughes Address/institution: ANU Archaeological Consultancies ANUTECH PTY. LTD. GPO BOX			Date: May 1983	



# SITE POSITION & ENVIRONMENT

OFFICE USE ONLY: NPWS site no: 52-5-182

1. Land form e.g. beach/hill slope/ridge top, etc:
2. Describe briefly & mark on diagram provided or on your own sketch the position of the site:



3a Local rock type: b rock type at site: c site aspect: d slope:

4. Distance from drinking water: Source: Perm/temp.?  
5. Vegetation:

6. Edible plants noted:
7. Faunal resources (include shellfish)

## DESCRIPTION OF SITE & CONTENTS.

Site type(s):

Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.  
Attach sketches etc, eg. plan & section of shelter, show relation between site contents, indicate scale.  
Attach annotated photos (stereo where useful) showing scale, particularly for art sites.

CHECKLIST TO HELP:  
length, width, depth,  
height of site, shelter,  
deposit, structure,  
element eg. tree scar,  
grooves in rock.

DEPOSIT: colour,  
texture, estimated  
depth, stratigraphy,  
contents-shell, bone,  
stone, charcoal, density  
& distribution of these,  
stone types, artefact  
types.

ART: area of surface  
decorated, motifs,  
colours, wet, dry  
pigment, technique of  
engraving, no. of  
figures, sizes,  
patination.

BURIALS: number &  
condition of bone,  
position, age, sex,  
associated artefacts.

TREES: number, alive,  
dead, likely age, scar  
shape, position, size,  
patterns, axe marks,  
regrowth.

QUARRIES: rock type,  
debris, recognisable  
artefacts, percentage  
quarried.

OTHER SITES EG.  
structures (fish traps,  
stone arrangements,  
bora rings, mia mias),  
mythological sites, rock  
holes, engraved groove  
channels, contact sites  
(missions massacres  
cemeteries) as  
appropriate

Two compact midden mounds 20 m apart  
Each 3m across & upto 1m thick  
Face of cliff



13/a The easternmost and most prominent  
of the mounds showing trail bike track  
crossing it.

SITE 13 52-5-182

LOCATION

Face of cliff.

DESCRIPTION

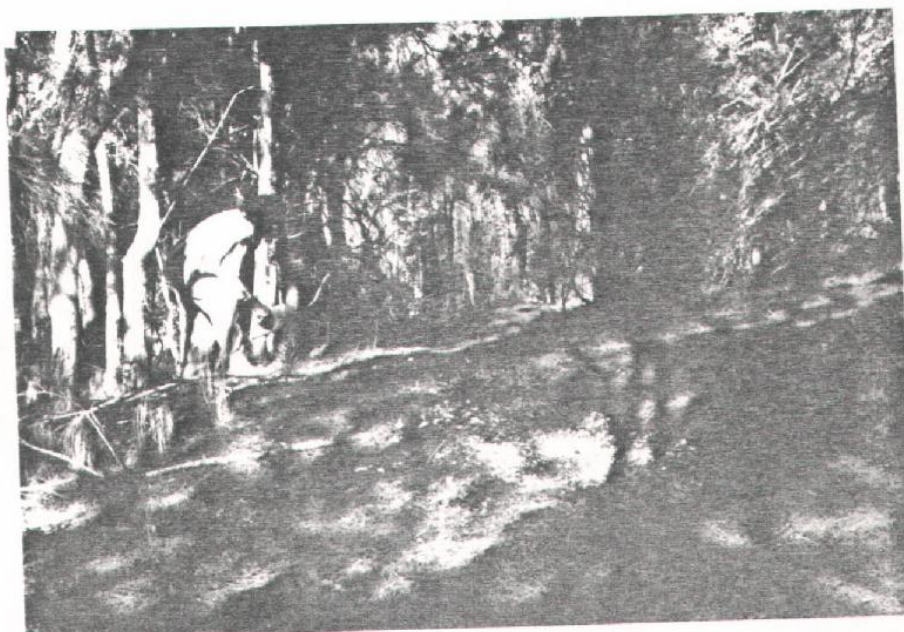
Two compact mounds of midden 20m apart. Each is 3m across and 0.8 to 1m thick. Well grassed under casuarina trees.

CONTENTS

Oyster, cockle, welk.

COMMENT

Excellent condition except for trail bike tracks over both mounds.



13/5. Close up of trail bike damage on the westernmost mound. Note the easternmost mound in the background.



# National Parks and Wildlife Service

Standard Site Recording Form



52-5-0183

MAP NAME	EDITION	SCALE	REFERENCE	HEAD OFFICE USE ONLY:
Wollongong S1569	1st	1:250 000	3746 6860	NWPS site no: 52-5-183
Nowra 9028-11-S	1st	1:25 000	9400 3280	Site types: open shell midden
Site name: Culburra 14				File nos:
Local post office: Greenwell Point				Report filed with site no:
Locality/property name:				Classification: Site status:
NPWS District: Nowra		Region: Southeast		Filed by: B.W.
				Date: 29.2.84
Reason for investigation (give H.O. instruction no. or full title of accompanying report where applicable):				
SEE: Hughes, P.J., 'An Archaeological Survey of the Proposed Culburra Town Expansion Area, South Coast, N.S.W.', A report to Colin Graham, Alcock, Giles, Tribe Pty Ltd, May 1983.				
Portion no: 6	Other land category:		Plan/sketch/section of site attached? Yes/No.	
Parish: Wollumboola	County: St. Vincent		How many?	
Air photo refs. (for stereo pair)			Annotated photos attached? Yes/No	
			How many?	
Condition of site:		Causes of damage/disturbance/threat to site:		
Stable.		(Fill in separate management/protection recommendations sheet if necessary) Pit dug into the midden, and tree growth		
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff. Draw diagram on separate sheet if necessary).				
See report				
Other sites in locality? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No.		Site Types include: Shell middens		
Are sites in NPWS Register? Yes/No.		Unregistered sites-plans for future recording? Yes/No.		
Have artefacts been removed from site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> don't know. When?				
By whom?		Deposited where?		
Is site important to local Aborigines? Yes/No/don't know.		Survey was carried out with members of the Aboriginal community at Rosebay Park.		
Give contact(s) name(s) + address(es)				
Contacted for this recording? Yes/No.				
(Attach additional information separately) If not, why not?				
Verbal/written reference sources:				
Site recorded by: P.J. Hughes		Date: May 1983		
Address/institution: ANU Archaeological Consultancies				
ANUTECH PTY LTD				
GPO BOX 4				



# SITE POSITION & ENVIRONMENT

OFFICE USE ONLY: NPWS site no: 52-5-183

1. Land form e.g. beach/hill slope/ridge top, etc:
2. Describe briefly & mark on diagram provided or on your own sketch the position of the site:



3a Local rock type:

b rock type at site:

c site aspect:

d slope:

4. Distance from drinking water:

Source:

Perm/temp.?

5. Vegetation:

6. Edible plants noted:

7. Faunal resources (include shellfish)

## DESCRIPTION OF SITE & CONTENTS.

Site type(es):

Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.  
Attach sketches etc, eg. plan & section of shelter, show relation between site contents, indicate scale.  
Attach annotated photos (stereo where useful) showing scale, particularly for art sites.

### CHECKLIST TO HELP:

length, width, depth,  
height of site, shelter,  
deposit, structure,  
element eg. tree scar,  
grooves in rock.

DEPOSIT: colour,  
texture, estimated  
depth, stratigraphy,  
contents-shell, bone,  
stone, charcoal, density  
& distribution of these,  
stone types, artefact  
types.

ART: area of surface  
decorated, motifs,  
colours, wet, dry  
pigment, technique of  
engraving, no. of  
figures, sizes,  
patination.

BURIALS: number &  
condition of bone,  
position, age, sex,  
associated artefacts.

TREES: number, alive,  
dead, likely age, scar  
shape, position, size,  
patterns, axe marks,  
regrowth.

QUARRIES: rock type,  
debris, recognisable  
artefacts, percentage  
quarried.

OTHER SITES EG.  
structures (fish traps,  
stone arrangements,  
bora rings, mia mias),  
mythological sites, rock  
holes, engraved groove  
channels, contact sites  
(missions massacres  
cemeteries) as  
appropriate

Single mound of shell midden  
2m across > up to 1m thick.  
Top of cliff



Midden 14: Note the pit at the base  
of the tree.

SITE 14      52-5-183

LOCATION

Base of cliff.

DESCRIPTION

Compact, single, well grassed mound beneath casuarina trees. 1m thick with black sandy matrix.

CONTENTS

Only small amounts of shell visible. Oyster, cockle, welk.

COMMENT

A pit has been dug into the mound. Also damaged by tree roots.





## National Parks and Wildlife Service

Standard Site Recording Form



52-5-0184

MAP NAME Wollongong S156-9 Nowra 9028-11-S	EDITION 1st 1st	SCALE 1:250 000 1:25 000	REFERENCE 3748 6860 9420 3285	HEAD OFFICE USE ONLY: NWPS site no: 52-5-184 Site types: open shell midden File nos: Report filed with site no: Classification: Site status: Filed by: B.W. Date: 29.7.84
Site name: Culburra 15 Local post office: Greenwell Point Locality/property name: NPWSDistrict: Nowra Region: Southeast				
Reason for investigation (give H.O. instruction no. or full title of accompanying report where applicable): SEE: Hughes, P.J., 'An Archaeological Survey of the Proposed Culburra Town Expansion Area, South Coast, NSW', A report to Colin Graham, Alcock, Giles, Tribe Pty Ltd, May 1983.				
Portion no: 6 Parish: Wollumboola	Other land category: County: St. Vincent		Plan/sketch/section of site attached? Yes/No. How many?	
Air photo refs. (for stereo pair)			Annotated photos attached? Yes/No How many?	
Condition of site: Stable		Causes of damage/disturbance/threat to site: (Fill in separate management/protection recommendations sheet if necessary) Tree root growth throughout midden.		
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff. Draw diagram on separate sheet if necessary). See report				
Other sites in locality? <input checked="" type="radio"/> Yes <input type="radio"/> No. Site Types include: Shell middens Are sites in NPWS Register? Yes/No. Unregistered sites-plans for future recording? Yes/No.				
Have artefacts been removed from site? Yes <input checked="" type="radio"/> No <input type="radio"/> don't know. When? By whom? Deposited where?				
Is site important to local Aborigines? Yes/No/don't know. Survey was carried out with members of the Aboriginal community at Roseby Park. Give contact(s) name(s) + address(es) Contacted for this recording? Yes/No. (Attach additional information separately) If not, why not?				
Verbal/written reference sources:				
Site recorded by: P.J. Hughes Date: May 1983 Address/institution: ANU Archaeological Consultancies GPO Box 4 Canberra ACT 2601				

# SITE POSITION & ENVIRONMENT

OFFICE USE ONLY: NPWS site no: 52-5-184

1. Land form e.g. beach/hill slope/ridge top, etc:

2. Describe briefly & mark on diagram provided or on your own sketch the position of the site:



3a Local rock type:

b rock type at site:

c site aspect:

d slope:

4. Distance from drinking water:

Source:

Perm/temp.?

5. Vegetation:

6. Edible plants noted:

7. Faunal resources (include shellfish)

## DESCRIPTION OF SITE & CONTENTS.

Site type(s):

Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.

Attach sketches etc, eg. plan & section of shelter, show relation between site contents, indicate scale.

Attach annotated photos (stereo where useful) showing scale, particularly for art sites.

### CHECKLIST TO HELP:

length, width, depth,  
height of site, shelter,  
deposit, structure,  
element eg. tree scar,  
grooves in rock.

DEPOSIT: colour,  
texture, estimated  
depth, stratigraphy,  
contents-shell, bone,  
stone, charcoal, density  
& distribution of these,  
stone types, artefact  
types.

ART: area of surface  
decorated, motifs,  
colours, wet, dry  
pigment, technique of  
engraving, no. of  
figures, sizes,  
patination.

BURIALS: number &  
condition of bone,  
position, age, sex,  
associated artefacts.

TREES: number, alive,  
dead, likely age, scar  
shape, position, size,  
patterns, axe marks,  
regrowth.

QUARRIES: rock type,  
debris, recognisable  
artefacts, percentage  
quarried.

OTHER SITES EG.  
structures (fish traps,  
stone arrangements,  
bora rings, mia mias),  
mythological sites, rock  
holes, engraved groove  
channels, contact sites  
(missions massacres  
cemeteries) as  
appropriate

Subsided and irregular mound of shell midden.  
8x3m x up to 20cm thick.  
Top of cliff.



Midden 15.

SITE 15      52-5-184

LOCATION

Top of cliff.

DESCRIPTION

Subdued, irregular mound of shell midden, 3m across and 8m along cliff edge. 20cm thick. Disturbed by very thick root network.

CONTENTS

Oyster, cockle, welk.

COMMENT

Totally covered by grass and regrowth scrub.



## National Parks and Wildlife Service

Standard Site Recording Form



52-5-0185

MAP NAME Wollongong S156-9 Nowra 9028-11-S	EDITION 1st 1st	SCALE 1:250 000 1:25 000	REFERENCE 3248 6860 9425 3300	HEAD OFFICE USE ONLY: NWPS site no: 52-5-185 Site types: open shell midden  File nos: Report filed with site no: Classification: Site status:  Filed by: B.W. Date: 29-2-84
Site name: Culburra 16 Local post office: Greenwell Point Locality/property name: NPWS District: Nowra Region: Southeast				
Reason for investigation (give H.O. instruction no. or full title of accompanying report where applicable): SEE: Hughes P.J., 'An Archaeological Survey of the Proposed Culburra Town Expansion Area, South Coast, N.S.W.', A report to Colin Graham, Atcock, Giles, Tribe Pty Ltd, May 1983.				
Portion no: 6 Parish: Wollumboola	Other land category: County: St. Vincent		Plan/sketch/section of site attached? Yes/No. How many?	
Air photo refs. (for stereo pair)			Annotated photos attached? Yes/No How many?	
Condition of site: Grassed and stable but for shoreward margin.		Causes of damage/disturbance/threat to site: (Fill in separate management/protection recommendations sheet if necessary) Wave erosion.		
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff. Draw diagram on separate sheet if necessary). See report				
Other sites in locality? <input checked="" type="checkbox"/> No. Are sites in NPWS Register? Yes/No.		Site Types include: Shell middens Unregistered sites-plans for future recording? Yes/No.		
Have artefacts been removed from site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> don't know. When? By whom? Deposited where?				
Is site important to local Aborigines? Yes/No/don't know. Give contact(s) name(s) + address(es)		Survey was carried out with members of the Aboriginal community at Roseby Park.		
Contacted for this recording? Yes/No. (Attach additional information separately) If not, why not?				
Verbal/written reference sources:				
Site recorded by: P.J. Hughes Address/institution: ANU Archaeological Consultancies GPO Box 4 Culburra NSW 2601		Date: May 1983		



# SITE POSITION & ENVIRONMENT

OFFICE USE ONLY: NPWS site no: 52-5-185

1. Land form e.g. beach/hill slope/ridge top, etc:
2. Describe briefly & mark on diagram provided or on your own sketch the position of the site:



3a Local rock type:

b rock type at site:

c site aspect:

d slope:

4. Distance from drinking water:

Source:

Perm/temp.?

5. Vegetation:

6. Edible plants noted:

7. Faunal resources (include shellfish)

## DESCRIPTION OF SITE & CONTENTS.

Site type(s):

Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.

Attach sketches etc, eg. plan & section of shelter, show relation between site contents, indicate scale.

Attach annotated photos (stereo where useful) showing scale, particularly for art sites.

CHECKLIST TO HELP:  
length, width, depth,  
height of site, shelter,  
deposit, structure,  
element eg. tree scar,  
grooves in rock.

DEPOSIT: colour,  
texture, estimated  
depth, stratigraphy,  
contents-shell, bone,  
stone, charcoal, density  
& distribution of these,  
stone types, artefact  
types.

ART: area of surface  
decorated, motifs,  
colours, wet, dry  
pigment, technique of  
engraving, no. of  
figures, sizes,  
patination.

BURIALS: number &  
condition of bone,  
position, age, sex,  
associated artefacts.

TREES: number, alive,  
dead, likely age, scar  
shape, position, size,  
patterns, axe marks,  
regrowth.

QUARRIES: rock type,  
debris, recognisable  
artefacts, percentage  
quarried.

OTHER SITES EG.  
structures (fish traps,  
stone arrangements,  
bora rings, mia mias),  
mythological sites, rock  
holes, engraved groove  
channels, contact sites  
(missions massacres  
cemeteries) as  
appropriate

Complex of mounded middens

40 x 15 m and up to 50 cm thick

Location: sandstone cliff.



Midden 1b: a/ Photo of site looking  
north across the bay.

SITE 16

LOCATION

Sandstone point.

DESCRIPTION

Complex of mounded middens over an area of 40 x 15m. Up to 30cm thick. Exposed around wave cut margin.

CONTENTS

Contents not visible except along shoreward edge where oyster dominates over cockle and welk.

COMMENT

Well grassed and stable except shoreward edge.



## National Parks and Wildlife Service

Standard Site Recording Form



52-5-0186

MAP NAME	EDITION	SCALE	REFERENCE	HEAD OFFICE USE ONLY:	
Wollongong S156-9	1st	1:250 000	3244 6860	NWPS site no: 52-5- <sup>186</sup> <del>0186</del>	See 52-5-114 (CAPT SITE)
Nowra 9028-11-S	1st	1:25 000	9355 61/3310	Site types: Midden	
	Deliver	250K	2935 1331	File nos:	
Site name: Culburra 12				Report filed with site no:	
Local post office: Greenwell Point				Classification:	Site status:
Locality/property name:				Filed by: B.W.	
NPWS District: Nowra		Region: Southeast		Date: 26.2.84	
Reason for investigation (give H.O. instruction no. or full title of accompanying report where applicable): SEE: Hughes P.J., 'An Archaeological Survey of the Proposed Culburra Town Expansion Area, South Coast, N.S.W.', A report to Colin Graham, Atcock, Giles, Tribe Pty Ltd, May 1983.					
Portion no: 6	Other land category:		Plan/sketch/section of site attached? Yes/No.		
Parish: Wollumboola	County: St. Vincent		How many?		
Air photo refs. (for stereo pair)			Annotated photos attached? Yes/No		
			How many?		
Condition of site:		Causes of damage/disturbance/threat to site:			
Stable. Superficial erosion in parts		(Fill in separate management/protection recommendations sheet if necessary) trailbikes			
How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff. Draw diagram on separate sheet if necessary). See report					
Other sites in locality? <input checked="" type="radio"/> No.		Site Types include: Shell middens			
Are sites in NPWS Register? Yes/No.		Unregistered sites-plans for future recording? Yes/No.			
Have artefacts been removed from site? Yes <input checked="" type="radio"/> No <input type="radio"/> don't know. When?					
By whom?		Deposited where?			
Is site important to local Aborigines? Yes/No/don't know.		Survey was carried out with members of the Aboriginal community at Roseby Park			
Give contact(s) name(s) + address(es)					
Contacted for this recording? Yes/No.					
(Attach additional information separately) If not, why not?					
Verbal/written reference sources:					
Site recorded by: P.J. Hughes		Date: May 1983			
Address/institution: ANU Archaeological Consultancies					
ANUTECH PTY. LTD.					
C/O BOX 4					



# SITE POSITION & ENVIRONMENT

OFFICE USE ONLY: NPWS site no: 52-5-186

1. Land form e.g. beach/hill slope/ridge top, etc:
2. Describe briefly & mark on diagram provided or on your own sketch the position of the site:



3a Local rock type:

b rock type at site:

c site aspect:

d slope:

4. Distance from drinking water:

Source:

Perm/temp.?

5. Vegetation:

6. Edible plants noted:

7. Faunal resources (include shellfish)

## DESCRIPTION OF SITE & CONTENTS.

Site type(es):

Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.

Attach sketches etc, eg. plan & section of shelter, show relation between site contents, indicate scale.

Attach annotated photos (stereo where useful) showing scale, particularly for art sites.

### CHECKLIST TO HELP:

length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock.

DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types.

ART: area of surface decorated, motifs, colours, wet, dry pigment, technique of engraving, no. of figures, sizes, patination.

BURIALS: number & condition of bone, position, age, sex, associated artefacts.

TREES: number, alive, dead, likely age, scar shape, position, size, patterns, axe marks, regrowth.

QUARRIES: rock type, debris, recognisable artefacts, percentage quarried.

OTHER SITES EG. structures (fish traps, stone arrangements, bora rings, mia mias), mythological sites, rock holes, engraved groove channels, contact sites (missions massacres cemeteries) as appropriate

Very large complex of shell midden comprised of numerous mounds resting on stratified midden. About 100 x 50m and in places up to 1.5m thick. Total volume about 1000 m<sup>3</sup>.

Top + face of cliff and on promontory at base of cliff.



a/ Mound 1 looking south

SITE 12

LOCATION

Top and face of cliff and on promontory at base of cliff.

DESCRIPTION

Very large complex of shell midden comprised of numerous mounds resting on stratified midden. About 100m x 50m.

Mound 1: Compact shell on top and edge of cliff. 8m across, 1m thick. Surface badly disturbed by trail bikes. Mostly oyster but also welk and cockle. Oysters crushed but the other shell whole.

Mound 2: Along the western side of the point. Contiguous with mound 1 from base of cliff. 8m wide, 40m long, 50cm thick.

Mound 3: Complex of at least 10 mounds in an area about 20 x 30m long and 0.5 to 1m high. Well vegetated but southern third of site affected by trail bike track. Some rabbit damage but most of site well preserved.

Oyster 80%, welk and cockle 20%.

Mound 4: Eastern side of promontory. 10 x 10m and 40-80cm thick.

COMMENT

Most of the site is well grassed and stable but parts have been affected by trail bikes which have left very unsightly but largely superficial damage.

This site is recorded in the NPWS site register as site 52-5-114.

52-5-114 includes  
2 sites:  
52-5-186 ← { a midden which appears to be  
Culbura 12 (Hughes 1983)  
52-5-114 ← { a 'camp site' which appears to  
be Culbura 16  
15 30/6/89

### APPENDIX 3: ARCHAEOLOGICAL SURVEY COVERAGE DATABASE

Survey Area	Landform Element	Slope	Distance to Water (metres)	Vegetation	Land Surface	Exposure Type (Horizon)	Erosion/Deposition	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)	Extent of Rock Outcrop (%)	Artefact Density/m <sup>2</sup> of Effective Survey Coverage	Comments
WC1	simple slope	gentle	>50	1, 2	4, 5	A	E	4,200	1	1	1	low	42	0	nil	-	slope leading south to broad drainage that enters Lake Wollumboola; skeletal soil; low potential for deposit of research value; minor exposures, drainage culverts but otherwise dense grass; pockets of forest, ironbark, apple, casuarina, several mature trees but mostly younger regrowth
WC2	ridge crest	level - very gentle	>50	1, 2	4, 5	A	E	7,200	0.5	1	0.5	low	36	0	nil	-	broad ridge crest bordering Culburra Road; immediately west of retirement village; dense grass, scattered trees; silty/sandy soil; generally low potential for deposits of research value
WC3	simple slope	gentle	>50	1, 2	4, 5	A	E	9,500	5-80	1	5-70	low-mod	1695	1	nil	<0.001	broad slope leading north from ridge and Culburra Road towards Curleys Bay, immediately west of Canal Street and Culburra shops/residences; Unit A cleared paddock behind Ambulance Station - moderate disturbance, graded areas, black silty soil, wet/boggy, generally dense grass; unit B cleared track down fence beside Canal St - silty/sandy, shallow topsoil over clay, minor quartz gravel; unit C minor sandy track through north-south through centre, minor rock oyster - not Aboriginal - former track to oyster leases in Curleys Bay; unit D vehicle track along fence near Industrial estate and Culburra Wastewater Treatment Plant, wet; dense vegetation elsewhere, paperbark, casuarina, wattle, teatree, stringybark, some mature trees but no surface visibility; survey area covers some land outside study area
WC4	flat	level - very gentle	<50	1, 2	4, 5	A	D	1,500	80	1, 3	70	low	1050	7	nil	0.007	flat bordering Curleys Bay, with minor tidal channel entering; all outside/immediately north of present study area; sandy; vehicle track along water/sewer main
WC5	simple slope	gentle	>50	2	4, 5	A	E	1,810	0.1-30	1, 2	0.1-30	low	274	0	nil	-	continuation of slope that is WC3, but west of industrial estate and south of Treatment Works; unit A - dense forest, bracken; unit B - vehicle track, sandy soil, leaf litter; unit C - vehicle track leading south to ridge; dense vegetation, many trees relatively large but similar size, appear to be old regrowth

Survey Area	Landform Element	Slope	Distance to Water (metres)	Vegetation	Land Surface	Exposure Type (Horizon)	Erosion/Deposition	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)	Extent of Rock Outcrop (%)	Artefact Density/m <sup>2</sup> of Effective Survey Coverage	Comments
WC6	ridge crest	level - very gentle	>50	2	4, 5	A	E	1,800	5-30	1, 2	5-30	low	315	0	nil	-	unit A main vehicle track, leaf litter, grass, very minor sandstone exposed on track; unit B another vehicle track but mostly grass, leaf litter; no visibility off track, dense grass, bracken, teatree and forest; part of forest heavily cleared in southeast near industrial estate
WC7	simple slope	gentle	>50	2	4, 5	A/B	E	1,650	0.1-20	1, 2	0.1-5	low	50	0	nil	-	southerly facing slope at the head of first order drainage leading to Lake Wollumboola; unit A - Telstra cable adjacent to Culburra Road, highly impacted, road cut in; unit B - dense forest, bracken, grass, leaf litter - whole area like this; unit C - overgrown vehicle track leading north from Culburra Road to ridge crest, pine needles, leaf litter; low potential for deposit of research value
WC8	spur crest	level - very gentle	>50	2	4, 5	A/B	E	570	5-70	1, 2	5-30	low	104	0	nil	-	spur crest or bench leading north to Curleys Bay but 300 metres from the inlet; unit A - vehicle track along water/sewer main, B unit dug up, gravel; unit B - overgrown vehicle track
WC9	simple slope	gentle	>50	2	4, 5	A/B	E	7,160	10-70	1, 2	10-40	low	729	0	nil	-	extensive broad slope leading north from ridge to inlet, generally at least 50m inland from inlet margin, mostly at least 100m; unit A vehicle track/sewer/water main, dense vegetation off track but a number of mature trees; unit B - track well dug out in parts by trailbikes, leads north from sewer to inlet, lots of stringybark, bracken, teatree off track; unit C - sewer/water main/track; unit D - track south from sewer to ridge crest, sandy, leaf litter, grass; unit E - cattle trail, vehicle track along fence at clearing; unit F - as per E but lower down, high potential near estuary; unit G - sewer east from gate at clearing
WC10	ridge crest	level - very gentle	>50	2	4	A	E	4,560	0.1-10	1, 2	0.1-10	low	71	0	nil	-	broad ridge crest parallel to Curleys Bay but about 250-300 metres inland; unit A - forest, probably nearly all old regrowth, similar size, several large mature trees, virtually no visibility; unit B - vehicle track along part of ridge crest, leaf litter, grass; unit C - dense forest, grass, bracken; very broad crest; almost gentle slope in places; generally low potential for deposits of research value
WC11	hillock	level - very gentle	>50	2	4	A	E	1,380	0.1	1, 2	0.1	low	2	0	nil	-	peak along ridge crest; dense forest, grass, bracken; virtually no visibility
WC12	ridge crest	gentle	>50	2	4	A	E	1,200	0.1	1, 2	0.1	low	1	0	nil	-	dense forest, casuarina, lomandra, eucalypts, grass

Survey Area	Landform Element	Slope	Distance to Water (metres)	Vegetation	Land Surface	Exposure Type (Horizon)	Erosion/Deposition	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)	Extent of Rock Outcrop (%)	Artefact Density/m <sup>2</sup> of Effective Survey Coverage	Comments
WC13	ridge crest	level - very gentle	>50	1, 2	4	A	E	4,300	0.1-30	1, 2	0.1-30	low	170	0	nil	-	unit A - dense forest; unit B - grassy paddock at west end of forest, several large scattered stringybarks, bracken, minor exposures - cattle tracks, vehicles, dark silty soil; unit C - erosion scours in paddock
WC14	simple slope	gentle	>50	1, 2	4	A	E	5,400	2	1, 2	2	low	108	0	nil	-	dense grass; minor cattle trails, erosion scours, vehicle disturbance; dense pocket of casuarina in northwest corner; low potential for deposit of research value
WC15	spur crest	level - very gentle	>50	1	4	A	E	2,100	0.1	1	0.1	low	2	0	nil	-	dense grass; sewer all grassed over just north of survey area; low broad very gentle crest above inlet; high potential for deposits of research value; midden deposits along inlet 70 metres north of survey area
WC16	spur crest	gentle	>50	2	4	A	E	1,560	0.1-30	1, 2	0.1-30	low	217	0	nil	-	unit A - dense forest; unit B - cattle trails, tracks along fence traversing lower portion of spur; unit C - minor vehicle track to drill site

Vegetation - 1 = cleared/grass/crop; 2 = forest/bush/regrowth;

Land Surface - 1 = sheet erosion; 2 = gully erosion; 3 = stream bank erosion; 4 = vegetated; 5 = modified;

Erosion = E, Depositional = D, Uncertain = U;

Detection Limiting Factors - 1 = vegetation; 2 = leaf litter/gravel; 3 = sediment deposition; 4 = other;