

# SEALARK SUPPLEMENTARY REPORT TO ABORIGINAL CULTURAL HERITAGE ASSESSMENT

14 April 2020

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## 1. PURPOSE

The purpose of this report is to provide an assessment of the potential impacts on Aboriginal cultural heritage from the proposed amended application for Concept Plan approval for the West Culburra Beach Expansion Area (**Revised Concept Plan**). The Revised Concept Plan is drawing 25405-210 Rev 06, included as **Annexure A** to this report.

## 2. BACKGROUND

### 2.1 Original Application

On 29 April 2010, John Toon Pty Ltd (on behalf of Sealark Pty Ltd) lodged a request for Director General Environmental Assessment Requirements for the West Culburra Beach Expansion Area Concept Plan (**Original Concept Plan**).

The Application was then lodged with the Department of Planning (Major Project 09-0088) for determination by the Minister for Planning under Part 3A of the *Environmental Planning & Assessment Act 1979 (EP&A Act)*.

The Application was transitioned in 2015 to State Significant Development (SSD) under Part 4 Division 4.7 of the *EP&A Act*, where it remained a Concept Plan. This Original Concept Plan was a much larger area than the current Revised Proposal.

### 2.2 Aboriginal Cultural Heritage Assessment of the Original Application

The potential impact of the Original Concept Plan on Aboriginal cultural heritage was assessed by the Applicant in the *Proposed Mixed Use Subdivision at West Culburra Shoalhaven City, South Coast of New South Wales, Aboriginal Cultural Heritage Assessment*, May 2012, prepared by South East Archaeology (Aboriginal Cultural Heritage Assessment, or **ACHA**).

### 2.3 Refusal of the Original Application

The Department of Planning & Environment on 16 June 2018 recommended refusal of the Original Concept Plan Application to the NSW Independent Planning Commission. A subsequent review by the NSW Independent Planning Commission refused the Original Concept Plan on 17 October 2018.

The IPC Statement of Reasons provided:

Note: in the text below "AR" is an abbreviation for "Assessment Report".

*The Department's AR concluded that: "the proposal has the potential to have irreversible impacts on Aboriginal heritage sites of regional conservation significance and high cultural significance to Aboriginal people, as noted in the JLALC submission. The Department considers the concept proposal presents an unacceptable risk and should be refused. [179]*

*The Commission accepts the Department's AR and its conclusion set out in paragraph 179, because there is potential for the Project to have irreversible impacts on Aboriginal heritage sites. [183]*

The application for the Original Concept Plan was refused by the IPC.

## **2.4 Appeal and Amendment to the Concept Plan Application**

On 23 May 2019, the Applicant lodged an appeal of the Application refusal by the IPC with the Land & Environment Court.

During this process the Respondent raised concerns regarding the Aboriginal Cultural Heritage Impact of the Proposal in the Respondent's Statement of Facts and Contentions at contention 6.

The key issues raised by the Respondent in its Statement of Facts and Contentions (**SOFAC**) were:

- a) The Applicant has not demonstrated the Proposal would not have an unacceptable impact on Aboriginal Cultural Heritage;
- b) Inaccurate methodology to assess Aboriginal heritage values and cultural significance;
- c) Inadequate assessment of the impact of the Proposal on Aboriginal cultural heritage within the development area and foreshores area; and
- d) Inadequate consultation with Aboriginal people.

A conciliation conference was held between the parties on 14 November 2019. An outcome of the conciliation conference was for the Applicant to provide a Revised Concept Plan.

The Applicant now proposes to proceed with the Revised Concept Plan (Annexure A) which reduces the size of the proposed development and removes most of the proposed development from Lake Wollumboola catchment.

The Applicant also agreed to prepare a supplementary report to the original Aboriginal Cultural Heritage Assessment on the basis of the Revised Concept Plan and to address the issues raised in the IPC's Statement of Facts and Contentions. The Revised Concept Plan is the subject of this review.

## **3. ASSESSMENT OF AMENDED PROPOSAL**

### **3.1 Preparation of ACHA for Concept Plan**

The assessment of the impact of the Original Concept Plan on Aboriginal cultural heritage was carried out by South East Archaeology and recorded in the ACHA.

A review of the South East Archaeology ACHA has been carried out by Dr Johan Kamminga, Principal, National Heritage Consultants (see Annexure D) in this report

having regard to the issues raised by the IPC in its assessment of the Concept Plan. It is concluded that:

- The ACHA consultation process completed by South East Archaeology fulfilled the step by step requirements specified in DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010*;
- The ACHA completed by South East Archaeology is consistent with the requirements in the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW 2011*;
- The assessment of potential impact of the Proposal on Aboriginal cultural heritage completed by South East Archaeology involved consultation with Registered Aboriginal Parties (RAPs) in accordance with these requirements which included identification of Aboriginal heritage items and cultural landscape;
- The Proposal does not involve the disturbance of any known Aboriginal heritage items;
- The Proposal includes the preservation of middens and other areas of Aboriginal heritage items in public reserve land between the Crookhaven River and the residential area;
- The Proposal includes measures for the protection of the identified Aboriginal heritage items in accordance with the ACHA; and
- The Applicant's ACHA that had been prepared for the originally larger area for the Concept Plan is directly applicable to the Revised Concept Plan.

The Revised Concept Plan concerns a land area located within but considerably smaller than the initial proposal land area. In particular, the Revised Concept Plan does not include the western portion of the Original Concept Plan (including the proposed commercial development at Cactus Point) and has also removed the residential development within the Lake Wollumboola catchment along the ridgeline.

The amended proposal is approximately 50% of the area of the original proposal which ensures there is a reduced impact on any known items of Aboriginal heritage significance that are located along the foreshore of the Crookhaven River.

Further, the Revised Concept Plan has increased the foreshore setbacks which has resulted in a larger buffer area to the known items of Aboriginal heritage significance located along the foreshore of the Crookhaven River which will further reduce likely impacts on Aboriginal heritage.

In addition, the middens have now been located by survey, so the location of those items is now fully understood which allows for a more accurate assessment of the impacts to be provided. The surveyed locations of items of Aboriginal significance is shown on the Revised Concept Plan in Appendix A.

### **3.2 Methodology**

The ACHA is consistent with the requirements in the *Guide to Investigating, Assessing and Reporting on Aboriginal cultural Heritage in NSW 2011*, and to the extent applicable to an ACHA, Article 5 (5.1) of the Burra Charter.

The area of the Revised Concept Plan is not a significant Aboriginal cultural landscape and the Proposal will not result in irrecoverable direct and indirect impacts on a significant Aboriginal cultural landscape and waterscape.

The ACHA and consultation process carried out on behalf of the Applicant adequately assesses Aboriginal cultural heritage including archaeological and non-archaeological sites and cultural landscapes.

### **3.3 Assessment of the impact of the Proposal within the development area and foreshore area**

The ACHA adequately assessed the Aboriginal cultural heritage values of the wider area including the foreshore buffer area. Further, the reduction in area with the Revised Concept Plan further reduces the potential for impacts on Aboriginal cultural heritage, particularly with the reduction of proposed development in the western area and along the ridgeline.

The identified items of Aboriginal cultural heritage are being preserved by the Proposal and can be appropriately protected by conditions of consent. The level and degree of potential impact of the Proposal on Aboriginal cultural heritage is not likely to be adverse or material.

### **3.4 Middens**

The IPC Statement of Facts and Contentions 13 (b) stated that:

"The Proposal has the potential to have irreversible adverse impacts on Aboriginal heritage sites, in particular the Crookhaven midden complex."

The middens referred to in the above extract are distributed along a much longer stretch of the Crookhaven River than the foreshore in the Revised Concept Plan. There are only six sites previously identified and recorded as 'middens' located along the foreshore immediately adjacent to the development area within the Revised Concept Plan. In technical terms, these sites are not all midden deposits (see Table 1). The middens occur in a range of forms, from loose sand sediment containing low numbers of shells to thin lenses of shells, and to bedded or mounded layers of shells intermixed with other types of objects/substances, such as flaked stone, pebbles, wood ash and animal bones (for midden identification criteria see Mulvaney and Kamminga 1999:19-23). Along the lower Crookhaven River generally, shell midden deposits tend to be shell scatters on ground surface, and layers or low mound over shallow sediment layers, bedrock and bedrock rubble.

These six sites are all located within the minimum 100-metre wide foreshore buffer proposed in the Revised Concept Plan. The closest 'midden' site outside this area is located about 70 m northwest of the western corner of the proposed foreshore buffer. This site is located within current Crown foreshore reserve. The development proposed in the Revised Concept Plan will not directly impact any midden site located along the Crookhaven River.

Since their original recording in 1983, the middens immediately north of the existing Culburra Sewerage Treatment Works and the proposed development have sustained considerable foreshore erosion, bioturbation and other forms degradation. Natural bioturbation has resulted from tunnelling and burrowing invertebrate, amphibian, reptile and mammals (e.g., ants, frogs, bandicoots and wombats), and from fall, as well as wind and water, especially during storms. The inspection revealed that since the original recording of the midden sites in 1983 many had been further eroded or and in other ways degraded.

It was evident that since the initial registration of these sites on AHIMS in 1983, (as then administered by NSW National Parks and Wildlife Service and subsequently by a succession of government departments), no step has been taken to protect the recorded midden deposits or mitigate ongoing natural erosion and other kinds of sediment disturbance. There has been no site conservation by concealment or barrier protection of eroding margins. Salvage of any Aboriginal objects regarded as significant also has not been undertaken.

The middens and stone artefact scatters are protected by Commonwealth and state legislation. The existing Crown foreshore reserve and the expansive northern buffer land zoned 7(a) (Environment Protection "A" (Ecology) Zone) together will constitute a public reserve (Annexure A) that will provide appropriate protection for the middens along the foreshore shore of the Crookhaven River north of the Project Area. These midden sites and stone artefact scatters are located below the 5 m contour and are within the proposed minimum 100-metre foreshore reserve.

Land zoned 7(a) (Environment Protection "A" (Ecology) Zone) is intended to protect and conserve elements of the natural environment, including wetland, maintain the scenic, habitat, scientific and educational values of the natural environment, protect habitats of threatened species and maintain or improve biodiversity and catchment water quality. This range of objectives is compatible with and complementary to the protection of in-situ Aboriginal cultural heritage sites. However, natural agencies of physical disturbance such as invertebrate, animal and tree-fall bioturbation, and physical and chemical degradation of materials such as shell are normally not reversed or arrested.

The specific location of the middens along the Crookhaven River foreshore in the area near both the Original Concept Plan and smaller Revised Concept Plan area has been ground truthed and surveyed on 2-3 December 2019. Table 1 provides brief descriptive notes based on the recent ground truthing and surveying about the locations and current conditions of shell midden deposits or sites and stone artefact occurrences in the vicinity and westward up to about half a kilometre from the Project Area (see Annexure A). Updated GPS surveying of site boundaries was also carried out (see Annexure B).

This inspection of midden sites along the foreshore of Crookhaven River indicated that the Revised Concept Plan poses no direct impact on these sites. Any potential indirect impacts can be mitigated, as is ordinarily the case, by conditions of an appropriate Aboriginal cultural heritage management plan.

### **3.5 Dreaming Route in the Region ('Dreamtime Track')**

The ACHA consultation process fulfilled the step by step requirements specified in DECCW's Aboriginal cultural heritage consultation requirements for proponents 2010. The consultation process allows for and encourages provision of relevant information about gender aspects of Aboriginal cultural heritage.

Two Aboriginal organisations registered as parties to be consulted for the ACHA (page 58). These respondents were Jerrinja Traditional Owners Corporation and Jerrinja Local Aboriginal Land Council. These organisations represented the interests of relevant Aboriginal people without exclusion – both women and men and young and old. Written correspondence was received from both women and men on behalf of Aboriginal community organisations. In its participation in the consultation process the Jerrinja Local Aboriginal Land Council representative spoke for all members of that organisation including a member who some years later, at an IPC meeting in 2018, referred to a Dreaming trail in an area of Jervis Bay

National Park, south of Culburra. During the lengthy consultation period no issue concerning a Dreaming route in the region was raised by the Registered Aboriginal Parties.

Cultural Heritage is an expression of the ways of living developed by a community and passed on from generation to generation, including customs, practices, places, objects, artistry and values. Cultural Heritage is often expressed as either intangible or tangible cultural heritage. The categories of heritage apply generally in assessing heritage values of culturally diverse Indigenous and the non-Indigenous Australians. Many traditional Aboriginal customs, stories and spiritual beliefs of people on the NSW South Coast have been recorded and studied since the nineteenth century to modern times (e.g., Boot 2002, 2019; Kamminga and Ono 2009). Registered Aboriginal Parties often provide relevant feedback about tangible heritage. Feedback about intangible Aboriginal heritage values relating to traditional religious beliefs and stories generally concern locations at a distance to a project area and do not involve negatively impact to Aboriginal heritage values of a project area under investigation (e.g. Kamminga and Ono 2009 for a residential housing proposal at Sussex Inlet, south of Culburra).

In 2018, several years after the ACHA had been finalised and submitted to the IPC, the Jerrinja LALC provided feedback directly to a panel of IPC commissioners in relation to proposed developments at Culburra Beach, Callala Bay and Currarong and with a proposed dedication of land as an extension of Jervis Bay National Park (see Annexure C; see also RPS 2019:5, 8, 14-18 listed in the references). These proposed developments and the dedication of land for public use represent a much wider series of geographical areas than the single West Culburra Mixed Use Concept Plan (or the Revised Proposed Concept Plan).

The Jerrinja LALC representatives at the IPC meeting in 2018 (including the Jerrinja LALC RAP who previously had provided feedback for the ACHA report for the Original Concept Plan) indicated that the Jerrinja LALC would support opportunities for young Indigenous people to be employed in the development proposed by the West Culburra Mixed Use Concept Plan.

The IPC minutes also record that one of the Jerrinja LALC representative, advised about a "women's dreamtime" route located well south of Culburra Beach. The route the representative described is located a distance south of the Revised Concept Plan area, and is located within Jervis Bay National Park (upper Bid Bid Creek to the mouth of Callala Creek at Lake Wollumboola), up to nine kilometres south and south west of the Revised Concept Plan area (see Annexure C).

Subsequently in 2019, the Jerrinja LALC representative provided feedback about Aboriginal cultural heritage and contemporary cultural knowledge to be included in the ACHA for the proposed development at Culburra Beach, Callala Bay and Currarong NSW (RPS:5, 8, 14-18). On this subsequent occasion no mention whatsoever was made about a Dreaming route in the region.

The relevant minute notation in the IPC record (see Annexure C) does not indicate that Dreaming route is relevant to Aboriginal heritage values for the proposed West Culburra development (or for the area of the Revised Concept Plan).

It appears that the statement about a Dreaming route was intended as background information in reference to the region generally. Whether taken separately or together, the IPC minute notes, and the earlier consultation carried out for the ACHA in 2011-2012, it is evident that this proposed route to the south of Culburra Beach is unrelated to the West Culburra Proposal.

Furthermore, there appears to be no independent historical, ethnohistorical or ethnographic evidence to corroborate this route or to suggest general belief by the Aboriginal community in general about the existence of the proposed Dreaming route. From the 1970s to the present time no Aboriginal heritage consulting report relevant to proposed developments in the region refers to this Dreaming route, nor does any consultancy report or published professional literature refer to a Dreaming route relevant to the Revised Concept Plan.

In summary, both the ACHA in 2012 and the IPC minutes summarising the statements made to Commissioners in 2018 do not indicate that a Women's Dreaming route well south of Culburra Beach is relevant to heritage values within the area of the Revised Concept Plan; nor do these documents indicate that such route could be a commonly held belief in the local Aboriginal community (see IPC 2019 (listed in section 5 of this report) for the latest such report, researched and prepared by women).

In view of the above, even if a Dreaming route did exist to the south there is no reason to infer that there would be any negative impact on such a route whatsoever by the development proposed in the Revised Concept Plan.

### **3.6 Aboriginal Community Consultation**

At all stages of the investigation every opportunity was afforded to the Registered Aboriginal Parties (RAPs) to provide relevant cultural knowledge about any known Aboriginal sites, spiritual places, traditional travel routes and any other matter relating to Aboriginal cultural landscape within or otherwise relevant the assessment of the Proposal Area. The consultation process provided for representation of all relevant Aboriginal people irrespective of gender (see ACHA Section 6 and Appendix 6, and section 3.4 above).

It was noted that there are no Registered Aboriginal Owners for this area (See Part 9 Division 3 of the *Aboriginal Land Rights Act 1983*, refer especially to Section 171).

Notification of proposal under DECCW *Aboriginal Cultural Heritage Consultation Guidelines for Proponents 2010*, Proposed Mixed Use Subdivision at West Culburra was advertised in *The Shoalhaven and Nowra News* on 16 December 2010 (ACHA. Page 184). The text of the notification is substantially standardised in accordance with formal requirements and guidelines. The stated purpose of Aboriginal community consultation was "... to assist the proponent in the potential preparation of any Aboriginal Heritage Impact Permit (AHIP) that may be required under the *National Parks and Wildlife Act 1974* ... and to assist the Director General of the Department of Environment, Climate and Water (DECCW) in their consideration and determination of any such application".

The advertisement further stated:

"In compliance with the DECCW policy entitled *Aboriginal Cultural Heritage Consultation Guidelines for Proponents 2010*, South East Archaeology extends an invitation to Aboriginal people who have an interest in the investigation area and hold knowledge relevant to the determining of cultural significance of any Aboriginal object or place within it to register an interest in the consultation process for this project" (ACHA, page 184).

Compliance with Procedure 4.1.2 and 4.1.3 of the DECCW consultation policy was also achieved via direct correspondence with the relevant organisations and subsequently by direct correspondence to relevant Aboriginal organisations and individuals. The RAPs were accorded further opportunity to provide information

about relevant Aboriginal cultural heritage during their participation in the field survey undertaken in August 2012 prior to finalisation of the draft ACHA document. Prior to finalisation of the ACHA the draft document was submitted to the RAPs for review and feedback. The representatives of the organisations expressed satisfaction with the consultation process as well as an interest in the findings detailed in the ACHA report (see ACHA, page 58).

### **3.7 Ground surface inspection during field survey**

The degree of survey coverage carried out as part of the ACHA is adequate to support the conclusions and recommendations of the ACHA.

In Aboriginal heritage surveys of rural lands such as farmland, woodlands and public reserves, it is extremely common to experience low ground surface visibility and for sample close quarter pedestrian ground surface inspection to be limited, especially so if a survey area is relatively large (e.g., Kamminga and Ono 2009). Whilst this is a constraint, it is normally managed professionally by predictive modelling, including extrapolating results from other similar land units and landscapes. Thousands of field surveys carried out over the past decades have provided substantial comparative evidence that is applied in predicting the general character of Aboriginal cultural heritage in the area. This is the reason why predictive modelling is Requirement 4 of DECCW (2010) *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*.

The total survey coverage (16 sample survey areas closely inspected for heritage evidence) comprised approximately 5.3% of the entire proposed development prior to the Revision Concept Plan which requires a smaller area. The actual coverage for conspicuous site types such as Aboriginal culturally scarred trees and rock shelters) was significantly greater than this. Such a degree of coverage and even less than this total area is not unusual for Aboriginal heritage surveys of large areas of farmland or reserve on the South Coast (for example see Kamminga and Ono 2009).

The ACHA recommended that the proponent applies for an AHIP should the Revised Concept Plan be approved. An AHIP is not required for State significant development, but the AHIP consultation process will apply for the further development applications for the Revised Concept Plan should it be approved. The AHIP consultation process provides opportunity for Aboriginal input in decision-making, collaborative archaeological subsurface testing to corroborate aspects of the predictive modelling, proponent staff and contractor training in Aboriginal cultural heritage, and monitoring of excavation/earth moving work activities where required.

### **3.8 Differential preservation of Aboriginal objects across within the area of the proposed Development area**

Buried archaeological remains are diverse in their chemical composition, and only certain environmental conditions favour the preservation of different types of archaeological evidence. Waterlogged soils will preserve many types of organic remains, whereas bone and shell are better preserved in alkaline soils. The longevity of any archaeological material or substance, other than siliceous stone, is determined by the interplay of variables such as subsurface chemistry, climate, past and present land use and the nature and size of the remains (Forest Research 2019).



In the case of the Revised Concept Plan, the pattern of Aboriginal site and object distribution and frequency is straightforward – midden deposits, often poorly preserved or disturbed, occur along the southern shore of the Crookhaven River.

To determine the potential for shell and bone preservation within the area of proposed development a total of 27 pH tests were carried out in August 2019 by direction of the author of this report for the purpose of determining the pH of the sediment within the Halloran Trust West Culburra property (including the area of the Revised Concept Plan). All the test results from a transect above the five-metre contour inland of the immediate Culburra River foreshore indicated that the soil was acidic. Twenty-four of the 27 readings registered pH readings of less than pH5.5 (the remaining three readings registered pH5.5 and pH6). All the pH readings represent contraindication for preservation of bone and shells. The paddocks west of the Crookhaven River foreshore have been substantially cleared of native woodland vegetation, grazed by cattle for decades, ploughed at least in large part, and their sediments have been generally bioturbated and subjected to microbial degradation of organic substances and materials (cattle grazing in particular contributes to sediment bioturbation and acidity). There is no reasonable likelihood that bone or shell middens from traditional Aboriginal encampment or other subsistence activity will be preserved in this generally disturbed acidic soil. The only Aboriginal objects that are likely to occur in these paddocks therefore are stone artefacts (which is mostly the debris from stone flaking to make tools such as flake scrapers) and fewer stone manuports (e.g., natural stones used in cooking stones). Such occurrences of stone objects are extremely common in sediments throughout Australia. Order of magnitude estimates of greater than 100 billion have been calculated for the quantity of Aboriginal stone tools that exist Australia. The total number of Aboriginal stone artefacts in the soils of Australia may be in the trillions (see Wright 1983; Kamminga 1991:14; 2011).

Occurrences of Aboriginal stone artefacts are normally managed by conditions of an AHIP or State significant development consent where an AHIP is not legally required.

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Within the land area subject to direct impact by proposed development archaeological bone and shell are unlikely to be preserved, and occurrences of stone objects such as stone 'manuports' and artefacts will generally occur across the land area as is the case throughout south-eastern Australia. Such stone items are predominantly the debris from making stone tools and do not represent significant Aboriginal objects.

Three primary processes are identified as the major controlling influences of weathering rates of buried organic objects:

- Soil pH.
- Soil solution saturation.
- Soil water movement.

It is well known that acidic solution will dissolve many substances including soil minerals and archaeological materials. Thus, the soil pH can strongly influence the types of buried materials that will be preserved (Forest Research 2019).

Acidic soil in high rainfall, open-air pastureland, woodland and forest contexts such as at West Culburra are generally unsuitable for the preservation of bone, including human bone.

The pH of soil has the largest influence on bone preservation (Gordon and Buikstra 1981; Surabian 2012). Bone preservation is generally adverse in soils pH 5.3

(strongly to extremely acid) or less (Surabian 2012) which is the case within the sediment of the subject land. The proportion of completely deteriorated bones more than doubles between soils of pH 5.5 and pH 6.0 (Nielsen-Marsh *et al.* 2007).

Soils containing a highly acidic pH will decompose bone rapidly due to the dissolution of the inorganic matrix of hydroxylapatite (Nafte 2000). Seventy percent of bone is made up of hydroxylapatite. This mineral in bone contains calcium and phosphates and is insoluble in water (Morse, *et al.* 1983). In a corrosive soil environment, it is clear that, irrespective of taphonomy, the outcome will be the same: catastrophic mineral dissolution (Nielsen-Marsh *et al.*, 2007). In contrast, if the pH of the soil is neutral or basic (pH 7 or more), a buried skeleton may persist for centuries in good condition (Surabian 2012:4-5). Furthermore, fluctuations in water saturation due to heavy rainfall events, and fluctuating groundwater in the soil, are the most influential factors influencing microbial activity under field conditions (Lund and Goksoyr 1980) and produce a wet-dry cycle consistent with the increased turnover of microbial biomass (Jenkinson and Ladd 1981).

The soil chemistry within the subject land is a contraindication for the preservation human remains or bones of any kind that are unbuffered by highly concentrated accumulations of shell or similar objects composed of calcium carbonate.

### **3.9 Aesthetic value in assessment of Aboriginal site types**

In assessing significance of Aboriginal objects, sites and places, aesthetic value is not normally relevant to inconspicuous/unobtrusive Aboriginal site types, such as scatters of stone artefacts (predominantly stone-flaking debris) on the surface of the ground (usually in areas of topsoil erosion) or as concentrations of shells and shell fragments in within the ground (usually described by the generic term 'midden'). Aesthetic heritage value is relevant to carved trees, natural landscape features that figure in Dreaming stories, and to rock art sites. Such site types do not occur within or in the vicinity of the land area of the Revised Concept Plan.

## **4. CONCLUSIONS –IMPACT ON ABORIGINAL CULTURAL HERITAGE**

The key findings of this report are that:

- The ACHA, along with the site inspection undertaken in December 2019 by the author of this report, and further information provided in this report (including Annexures), demonstrate that the development proposed in the Revised Concept Plan does not pose an unacceptable risk to Aboriginal cultural heritage.
- In relation to the original and the Amended Proposal the ACHA and the Aboriginal community consultation carried out on behalf of the Applicant adequately assesses Aboriginal cultural heritage, including tangible and intangible heritage, and archaeological and non-archaeological sites and cultural landscapes.
- The ACHA also adequately demonstrates that it fulfills the step by step requirements specified in *DECCW's Aboriginal cultural heritage consultation requirements for proponents 2010*.
- The ACHA adequately fulfilled the requirements in the *Guide to Investigating, Assessing and Reporting on Aboriginal cultural Heritage* in NSW 2011, and to the extent applicable to an ACHA, Article 5 (5.1) of the Burra Charter.

- Any potential increase risk of impact to significant Aboriginal sites, such as an increase in visitation of the foreshore of Crookhaven River by local residents, can be adequately mitigated by an appropriate Cultural Heritage Management Plan as proposed in the ACHA completed by South East Archaeology Pty Ltd.
- Stone artefact occurrences registered as sites 52-5-0649, 52-5-0650 and 52-5-0651 are located on an existing sewer line easement which has been significantly disturbed by the construction of the sewer line by council and subsequent vehicular traffic along this cleared easement. The elevated boardwalk/footpath/cycleway proposed in the Revised Concept Plan can be designed in future subdivision applications to mitigate potential impact on Aboriginal items at these locations in consultation with the Aboriginal community representatives. For instance, relocation of proposed bore holes for support posts for elevated sections of pathway, and construction of raised earth/gravel surfaces if required.
- If the Revised Concept Plan is approved, a proposed Aboriginal Cultural Heritage Management Plan will be developed in consultation with Aboriginal community representatives as part of the development application process for the project development consents.
- The conclusions of the original ACHA are suitable for progressing the Revised Concept Plan, and are fully supported by the author of this report (subject to my recommendation that the AHIP consultation process and preparation of associated ACHMP should apply for future development applications if the Revised Concept Plan is approved in circumstances where an AHIP is not legally required). The conclusions of the original ACHA are included herein for completeness:

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

- 1) In consideration of the results of the assessment and subject to implementation of the recommendations below, there are no Aboriginal heritage constraints to approval of the Concept Plan under Part 3A of the EP&A Act;
- 2) Subsequent to detailed design being completed and in association with subsequent applications for development approval under Part 4 of the EP&A Act, further heritage investigation involving test excavations should be undertaken within survey area WC15 and a sample of the portions of WC 3, 9 and 14 within the zone of high potential for sub-surface deposits of artefacts (Figure 10), to identify the nature, extent and significance of any heritage evidence present, and to enable the subsequent formulation of appropriate management strategies in consultation with the registered Aboriginal parties;



Test excavations should only be undertaken within areas subject to potential impact, at a stage of the planning process at which alternative development plans to avoid or minimise impacts can realistically be considered, and where the risks of impacts to the heritage resource from the testing itself can be justified (ie. a firm development proposal is available and lodgement of an application for approval is pending). The excavations may be able to be undertaken in compliance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* using the same consultation process as for the present investigation. The investigations must be undertaken by archaeologists qualified and experienced in Aboriginal heritage, in consultation with the registered Aboriginal parties, prior to any development impacts occurring;

- 3) Should any subsequent development application involve proposed impacts outside of the heritage study area investigated during the current assessment (refer to Figure 9), for example, in the foreshore zone between the investigation area and the Crookhaven River, further Aboriginal cultural heritage investigation should be undertaken. As a minimum this would involve the archaeological survey of any proposed impact areas outside of the present heritage study area, in consultation with the registered Aboriginal parties, with the preparation of a supplementary heritage assessment report. Any such investigation should apply the same methodology, consultation process (*Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*) and standards (*Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*) as for the current study, and address any applicable OEH requirements;

- 4) Subsequent to detailed design and the further heritage investigations required above being completed, and in association with any subsequent application for development approval under Part 4 of the EP&A Act, in order to establish a defence to prosecution under Section 86(2) of the NP&W Act with respect to the probable occurrence of stone artefacts within the impact area, and any subsequent impacts to those objects and identification of those impacts, a Section 90 AHIP should be obtained for the impact area prior to the proposed works being undertaken;
- 5) The Culburra midden sites (OEH #52-5-171 to 52-5-186) adjacent to the investigation area are of significance, potentially at a regional level, and warrant total conservation. Direct impacts to this suite of sites must be avoided and indirect impacts must be managed and minimised. As a condition of any development approval under Part 4 for the immediately adjacent land, a Conservation Management Plan specific to the protection of these midden sites should be formulated by a heritage practitioner with suitable qualifications and experience, in consultation with the registered Aboriginal parties. It should include a location plan, a description of the Aboriginal sites, and a statement of the policies and actions required for the ongoing conservation of this Aboriginal heritage evidence. Any direct impacts to these sites that may arise from works designed outside of the present heritage study area (for example, walkways, essential services or other development within the zone between the investigation areas and the Crookhaven River) must be avoided;
- 6) As a condition of any further heritage investigation associated with an application for development approval under Part 4 for the investigation area, the oral account recorded in the late 1970s by Jerrinja Elder, Mr Jack Campbell, and lodged with AIATSIS, of the middens adjacent to the investigation area and their importance to the Jerrinja community, should be researched;




- 7) Archaeological investigations should only be undertaken by archaeologists qualified and experienced in Aboriginal heritage (in accordance with the requirements of Section 1.6 of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*), in consultation with the registered Aboriginal stakeholders, and occur prior to any development impacts occurring;
- 8) Where impacts will be avoided to the identified heritage evidence, appropriate protective measures should be implemented for those sites in close proximity to the construction works, including informing relevant staff and contractors of the nature and location of the heritage evidence and need to avoid impacts, along with the establishment of temporary protective fencing and signage to protect the identified evidence during the construction period;
- 9) Other land users (for example, Shoalhaven City Council) should be made aware of the nature and location of the Aboriginal sites identified during the present investigation (West Culburra 3/A, 4/A and 4/B) to ensure that inadvertent impacts are avoided;

- 10) As a general principle, all relevant contractors and staff engaged on the Proposal should receive heritage awareness training prior to commencing work on-site, including the presentation of information about the nature of the identified and potential Aboriginal heritage evidence within the locality, heritage management measures and protocols, and legal obligations;

- 11) Should any previously unrecorded Aboriginal sites or objects be detected prior to or during the course of development which are not covered by a Section 90 AHIP, work in the immediate vicinity of those objects would need to promptly cease and the finds be reported to the OEH (in accordance with Section 89A of the NP&W Act) and advice sought as to the appropriate course of action. If skeletal remains are identified, the proponent is required to immediately stop work and notify the appropriate authorities, including the Police and the OEH. If impacts cannot be avoided, a Section 90 AHIP would be required prior to any impacts occurring;
- 12) Under the terms of the NP&W Act it is an offence to harm or desecrate an object that the person knows is an Aboriginal object, or to harm an Aboriginal object ('strict liability offence'). Therefore, no activities or work should be undertaken within the Aboriginal site areas as described in this report and marked on Figure 10 without a valid Section 90 AHIP;
- 13) Single copies of this report should be forwarded to the registered Aboriginal parties and three copies should be forwarded to the OEH (South Landscape and Aboriginal Heritage Protection Section).

### Expert Witness Obligations

The author has read Part 31 of Division 2 of the *Uniform Civil Procedure Rules 2005* and Schedule 7 of the *Uniform Civil Procedures Rules 2005* and understands his obligations to the Court and agrees to abide by these rules. This report has been prepared in accordance with the Expert Witness Guidelines.



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**Table 1.** Aboriginal sites recorded on AHIMS. The sites are listed from east to west along the Crookhaven River. The GPS readings for relocated sites are provided in Annexure B.

<b>AHIMS Site No.</b>	<b>Location of site and notes on site condition</b>
52-5-0649	<p>The site marker on the Plan (Annexure A) denotes the approximate location of the isolated stone artefact, as determined during the site inspection by National Heritage Consultants (NHC) on 2 December 2019. The item was originally recorded during the ACHA field survey in August 2011 by South East Archaeology (SEA) (ACHA, p. 168). The stone artefact was not re-locatable. It was no longer present at or in the vicinity of the original recorded findspot (the middle of the existing access track) nor at or in the vicinity of the revised location, as determined from the site description and photo of the location in the ACHA report. The small difference in identified location may be attributed to imprecision of the original handheld GPS. The NHC redetermination of specific findspot is E294917, N6132493. The original hand-held GPS determination in the ACHA was reported to be 3.5 m east and 2 m north of this location. During the NHC inspection, the ground surface was hardpacked and there was minimal leaf litter, hence high ground surface visibility. The item was not taken off the track at the time of original SEA recording but had been left in place. It may have been laterally and/or vertically displaced by vehicular traffic. Disturbance to the ground surface was evident.</p> <p>The single stone object was described as a brown acidic volcanic "retouched piece". This attribution of artefact type may indicate a retouched stone flake (with apparent chipping along at least one margin), or else, given the context of the find, a piece of stone fractured by non-Aboriginal agencies, such as stock trampling or the passage of off-road vehicles or farm equipment which can cause small flake detachments.</p> <p>The object is very likely to have been of a stone type and an artefact type common in the region. The ACHA reported that the item was assessed as having low heritage value – for instance, low research/scientific and educational values, and negligible historic and aesthetic values.</p>

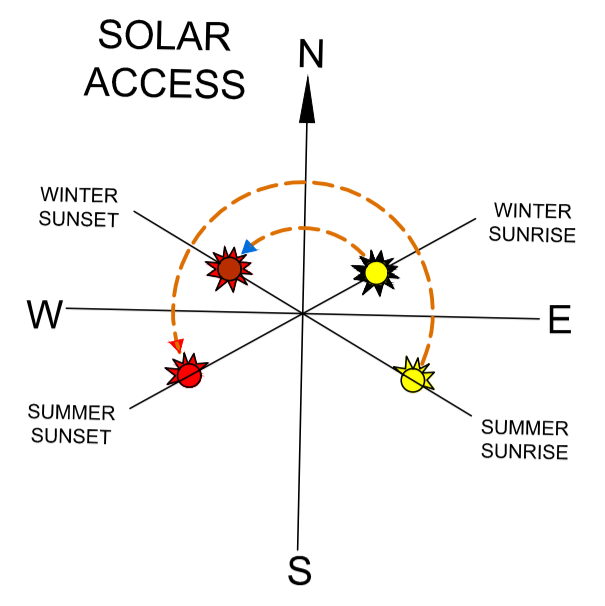
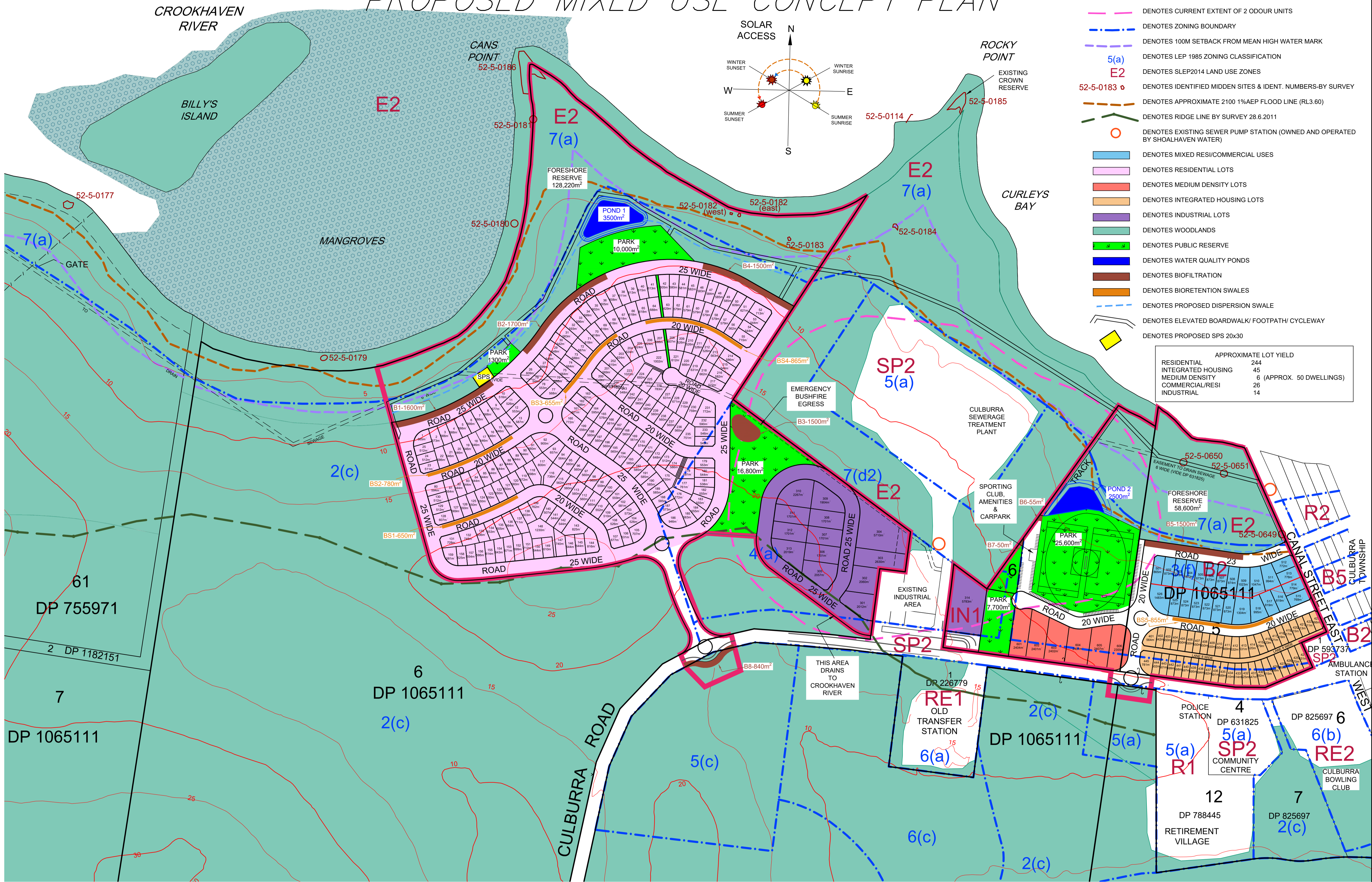


52-5-0651	<p>The site marker on the Plan (Annexure A) denotes the approximate location of the lithic scatter (stone artefact scatter), as determined during the site inspection by NHC on 2 December 2019. The item was originally recorded during the ACHA field survey in August 2011 by SEA.</p> <p>The scatter of only three stone artefacts (a flake of grey acidic volcanic stone, a grey silcrete microblade core, and a small quartz flake) was not re-locatable. There is a difference of 19 m from the location of items on the existing access track, as originally recorded by SEA, and the revised location by NHC as determined from the site description and photo of the location in the ACHA report. The difference in identified location may be attributed to imprecision of the original handheld GPS. The item was not taken off the track at the time of original SEA recording but had been left in place. It may have been laterally and/or vertically displaced by vehicular traffic.</p> <p>During the NHC inspection of the original recorded location the current ground surface visibility was less than 5% due to thick grass cover. However, on the track at the revised location the ground surface visibility was in the order of 70%, sufficient to observe a scatter of modern glass shards on the track.</p> <p>The ACHA assessed the site as having low to potentially moderate significance within a local context.</p>
52-5-0650	<p>The ACHA (p. 117) noted that sediment disturbance from construction of a sewer by Council and that there had been ongoing recreational vehicular travel along the track.</p> <p>The site is represented by only four stone artefacts. These stone artefacts are commonplace on the NSW South Coast and throughout South Eastern Australia.</p> <p>The ACHA assessed the site as having low to potentially moderate significance within only a local context.</p>
52-5-0185	<p>Located at a boulder outcrop derived from underlying bedrock almost at the northern end of Rocky Point peninsula within the existing Crown foreshore reserve. The area is thickly vegetated with lantana and Swamp She-oak (<i>Casuarina glauca</i>) but was substantially unvegetated when originally recorded during the field survey by Hughes (1983; see also Kuskie 2012:158).</p> <p>The ground is littered with She-oak 'needles' and the ground surface visibility is less than 5%. Sample areas of leaf litter were lightly raked to expose ground surface, however no Aboriginal shell debris was evident from this surface inspection. It is assessed that there is evidence of potential subsurface intact midden deposit. There is a scatter of modern oyster shells near this location.</p> <p>Some shell debris is evident.</p>

52-5-0114	<p>Located at Mean High Water Mark (at the water's edge) within Crown foreshore reserve (the furthest possible distance if approximately 150 metres north of the Proposal Area).</p> <p>The objects in this location appear to be shell wave wash, possibly from a degraded former midden layer. Only one length dimension could be determined due to recent accumulation of mangrove mud and sand over some of the shell scatter.</p>
52-5-0184	<p>This map grid reference recorded by Hughes (1983) for this site is not correct; the site is approximately 58 m west of his location. This site is on a slope, somewhat flood prone dry land but in an area that formerly had been mangrove mudflats. The soil of the slope may overly bedrock formation. Casuarina leaf litter obscures much of the ground surface.</p> <p>The site comprises a scatter of highly fragmented bivalve and whelk shell. There is no midden mound and no evidence of a midden layer or lens at ground surface or undisturbed or intact midden below ground surface.</p> <p>The site's location and the high degree of she fragmentation may indicate that the site is older than the other shell scatters and midden deposits along the present-day foreshore.</p>
52-5-0183	<p>The map reference given in Hughes (1983) is incorrect. Precise GPS readings in 2019 has located the site about 14 m west of his stated location, and across a paddock fence.</p> <p>The description of local topography referred to a "cliff". However, the notable feature is a toe slope of low inclination.</p> <p>Hughes (1983) described the site as a single well grassed mound about 2 m in diameter, adding that "only a small amount of shell visible". A pit dug into the mound (Hughes 1983) is no longer re-locatable. The site is a small mound of topsoil and shell fragments surrounded by a sparse scatter of shells. Kamminga inspection revised the diameter of the shell dispersal as up to 4 m.</p>
52-5-0182	<p>The site comprises two discrete midden layers/low rises/mounds, which are now labelled east and west in Annexure A. The location of the site has been updated (see Annexure B).</p>
52-5-0057	<p>Located 50 metres offshore within the waters of within existing Crown foreshore reserve</p> <p>The original 1983 site record on AHIMS indicates that the site was on the foreshore and therefore within the Crown foreshore reserve.</p>



# PROPOSED MIXED USE CONCEPT PLAN



- DENOTES DEVELOPMENT BOUNDARY
- - - DENOTES CURRENT EXTENT OF 2 ODOUR UNITS
- - - DENOTES ZONING BOUNDARY
- - - DENOTES 100M SETBACK FROM MEAN HIGH WATER MARK
- 5(a) DENOTES LEP 1985 ZONING CLASSIFICATION
- E2 DENOTES SLEP2014 LAND USE ZONES
- 52-5-0183 ○ DENOTES IDENTIFIED MIDDEN SITES & IDENT. NUMBERS-BY SURVEY
- - - DENOTES APPROXIMATE 2100 1%AEFP FLOOD LINE (RL3.60)
- - - DENOTES RIDGE LINE BY SURVEY 28.6.2011
- DENOTES EXISTING SEWER PUMP STATION (OWNED AND OPERATED BY SHOALHAVEN WATER)
- DENOTES MIXED RESI/COMMERCIAL USES
- DENOTES RESIDENTIAL LOTS
- DENOTES MEDIUM DENSITY LOTS
- DENOTES INTEGRATED HOUSING LOTS
- DENOTES INDUSTRIAL LOTS
- DENOTES WOODLANDS
- DENOTES PUBLIC RESERVE
- DENOTES WATER QUALITY PONDS
- DENOTES BIOFILTRATION
- DENOTES BIORETENTION SWALES
- - - DENOTES PROPOSED DISPERSION SWALE
- - - DENOTES ELEVATED BOARDWALK/ FOOTPATH/ CYCLEWAY
- DENOTES PROPOSED SPS 20x30

APPROXIMATE LOT YIELD	
RESIDENTIAL	244
INTEGRATED HOUSING	45
MEDIUM DENSITY	6 (APPROX. 50 DWELLINGS)
COMMERCIAL/RESI	26
INDUSTRIAL	14



RATIO:  
**1:3000**  
(AT A1 ORIGINAL)  
(1:8000 AT A3)

DATUM:  
AUSTRALIAN HEIGHT DATUM  
ORIGIN: SSM  
RL  
DATE OF PLAN: 19.11.2019

SURVEY	AERIAL PHOTOGRAPHY	REV	DESCRIPTION	BY	DATE
DESIGN	MP	01	MIDDEN SITES LOCATED BY SURVEY ADDED	DS	09.12.2019
DRAWN	DS	02	FURTHER MODIFICATIONS	DS	20.12.2019
CHECK'D	MP	03	SOUTHERN DEVELOPMENT OMITTED	DS	15.01.2020
		04	FOOTPATH LINKS TO DEVELOPMENT ADDED	DS	29.01.2020
		05	TITLE CHANGED. MINOR LOT AMENDMENTS	DS	18.02.2020
		06	MINOR STORMWATER QUALITY AMENDMENTS	DS	01.04.2020
			MIDDEN SITES CLARIFIED		

**allen price & scarratts pty ltd**  
land and development consultants  
Nowra Branch: 75 Plunkett Street, Nowra NSW 2541  
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consultants@allenprice.com.au www.allenprice.com.au

**PROPOSED MIXED USE CONCEPT PLAN**  
OVER PART OF LOTS 5 & 6 DP1065111  
AT WEST CULBURRA FOR SEALARK PTY LTD

DRAWING STATUS <b>PRELIMINARY</b> NOT TO BE USED FOR CONSTRUCTION PURPOSES		
DRAWING NUMBER <b>25405-210</b>	SHEET <b>1</b>	REVISION <b>06</b>
OF 1		

M:\Projects\201000\25405-210 - MIXED USE CONCEPT PLAN - SUBDIVISION.dwg



## Annexure B

### GPS re-recording of AHIMS Registered Aboriginal Sites.

On 2-3 December 2019, Johan Kamminga (National Heritage Consultants) assisted by Survey Technician Frank Killick, (Allen Price and Scarratts Pty Ltd) inspected a number of the AHIMS-registered Aboriginal sites within and in the vicinity of the area of the Revised Concept Plan.

GPS recording of Aboriginal site boundaries identified by Johan Kamminga. Location and site boundaries were recorded on a Leica GNSS with survey accuracy to real time kinematic (RTK). RTK positioning is a satellite navigation technique used to enhance the precision of position data derived from satellite-based positioning systems such as GPS. It uses measurements of the phase of the signal's carrier wave in addition to the information content of the signal and relies on a single reference station or interpolated virtual station to provide real-time corrections, providing up to centimetre-level accuracy. With reference to GPS in particular, the system is commonly referred to as carrier-phase enhancement, or CPGPS. It has applications in land and hydrographic survey.

The general accuracy of the GPS used can be as accurate as 7 cm or less in the right conditions (e.g., little or no tree cover). The accuracy of the GPS during the inspections was inferred to be about 30 cm. The coordinates (Zone 56) is in MGA. GDA94/MGA zone 56 is a projected CRS last revised in April 2020. GDA94/MGA zone 56 uses the GDA94 geographic 2D CRS as its base CRS and the Map Grid of Australia zone 56 (Transverse Mercator) as its projection.

The purpose of this inspection was to ground truth and record locations with more precision than previously recorded and assess the current condition of these sites.

A photographic record was taken of the sites and their localities, and in particular visible contents of the site such as shell scatter and evidence of any intact midden layers that have stratigraphic integrity.

#### Site 152-5-0649

	<b>Easting</b>	<b>Northing</b>
1	294917.23	6132492.76

#### Site 52-5-0651

	<b>Easting</b>	<b>Northing</b>
1	294818.96	6132593.90

#### Site 52-5-0650

	<b>Easting</b>	<b>Northing</b>
1	294752.95	6132612.38

#### Site 52-5-0185

	<b>Easting</b>	<b>Northing</b>
1	294355.10	6133204.99
2	294363.18	6133213.8

3	294370.11	6133222.53
4	294383.64	6133234.18
5	294385.89	6133233.94
6	294386.61	6133224.93
7	294385.84	6133216.38
8	294381.43	6133207.77
9	294377.83	6133197.45
10	294376.07	6133201.57
11	294377.91	6133206.54
12	294375.72	6133210.22
13	294369.32	6133206.07
14	294361.26	6133206.46

**Site 52-5-0114**

	<b>Easting</b>	<b>Northing</b>
1	294297.47	6133197.14
2	294294.81	6133197.27
3	294286.51	6133183.63

**Site52-5-0184**

	<b>Easting</b>	<b>Northing</b>
1	294269.67	6133013.48
2	294266.89	6133013.59
3	294265.08	6133013.00
4	294263.92	6133008.07
5	294267.53	6133008.36
6	294270.60	6133005.41
7	294272.68	6133009.18
8	294272.20	6133003.02

**Site 52-5-0183**

	<b>Easting</b>	<b>Northing</b>
1	294090.66	6132991.92
2	294087.70	6132990.62
3	294089.03	6132985.81
4	294092.41	6132985.93

**Site 52-5-0182**

	<b>Easting</b>	<b>Northing</b>
1	293995.48	6133031.65
2	293991.13	6133032.72
3	293990.97	6133030.02
4	293994.39	6133029.13

**Site 52-5-0186**

	<b>Easting</b>	<b>Northing</b>
1	293674.2	6133258.98
2	293668.05	6133260.99
3	293663.30	6133264.85

4	293658.08	6133264.91
5	293655.43	6133263.55
6	293654.94	6133252.77
7	293653.10	6133246.43
8	293654.64	6133239.39
9	293652.64	6133231.67
10	293644.24	6133232.56
11	293641.45	6133247.47
12	293638.85	6133276.61
13	293636.03	6133293.74
14	293637.01	6133303.15
15	293645.19	6133303.60
16	293657.66	6133287.79
17	293669.32	6133272.48
18	293681.51	6133256.90

**Site 52-5-0181**

	<b>Easting</b>	<b>Northing</b>
1	293661.05	6133189.02

**Site 52-5-0180**

	<b>Easting</b>	<b>Northing</b>
1	293629.59	6133014.07

**Site 52-5-0179**

	<b>Easting</b>	<b>Northing</b>
1	293314.08	6132790.83

<b>This meeting is part of the determination process.</b>		
<b>Meeting note taken by:</b> Alana Jelfs	<b>Date:</b> 24 July 2018	<b>Time:</b> 09.00am
<b>Project:</b> West Culburra Concept Proposal (SSD 3846) & Long Bow Point Golf Course (SSD 8406)		
<b>Meeting Place:</b> Jerrinja Aboriginal Land Council Medical Centre, Orsova Parade, Orient Point NSW 2540		
<b>Attendees:</b>		
IPC Members: Mary O’Kane (Chair), Ross Carter, Ilona Millar		
IPC Secretariat: Alana Jelfs (Senior Planning Officer)		
Jerrinja Local Aboriginal Land Council / Traditional Custodians: Delia Low (Deputy Chair), Alfred Wellington (CEO), Grace Crossley, Ronald Carberry, Graham Connolly Jnr		
<b>Meeting Purpose:</b> For the Jerrinja Local Aboriginal Land Council (LALC) to meet with the Commission and discuss the West Culburra Concept proposal and the Long Bow Point Golf Course project.		
The meeting commenced with a walk over the Roseby Park Reserve and the meeting was held on the reserve. The following matters were discussed:		
<ul style="list-style-type: none"> <li>Jerrinja land extends around the Crookhaven River foreshore with numerous landholdings around the bay. The reserve has views over the Crookhaven River and across to Mount Coolangatta;</li> <li>the Roseby Park Reserve is the site of the former Roseby Mission. Mrs. Lowe explained that the Jerrinja Tribal Council made the first Aboriginal Land Claim for areas in Orient Point and Culburra Beach;</li> <li>Mr. Wellington explained that the Crookhaven River has always been used by the Jerrinja people and provided the main source of food. However, since the river has been used for commercial fishing, there has been a significant decline in fishery populations within the river;</li> <li>Jerrinja site officers have done some survey work to support cultural heritage assessments undertaken in the area;</li> <li>There are a number of midden sites in the surrounding area that are culturally significant to the Jerrinja people. Mrs. Lowe explained the significance of the midden sites to the Jerrinja people and their effect on food lifecycle. The Jerrinja believe that when shellfish is eaten, and shells are left in the one place, the shellfish would come back to the group. Protection of middens is important to the Jerrinja people and beliefs held around food lifecycle;</li> <li>Lake Wollumboola is a sensitive ecosystem, opening to the sea intermittently and therefore does not get flushed often. The lake is an important breeding ground for birds and fish. Mr Carberry and Mr Connolly Jnr explained that the lake catchment contains an important fish trap site;</li> <li>Lake Wollumboola has always been used for its cultural resources up until today. The lake is geographically situated between the Bundarwa, the Jerrinja birth place and the Cullunghutti, on the eastern ridge of Mount Cullunghutti is the departure site when Jerrinja people pass on and go into the spiritual world;</li> <li>Mrs. Lowe explained there is an important women’s Dreamtime track near Kinghorn Point. The area covers from the upper Bid Bid Creek across to Callala Creek down to where it enters Lake Wollumboola;</li> <li>The Jerrinja strongly believe in educating young Aboriginal and non-Aboriginal people about the importance of midden sites and significance of Lake Wollumboola. Information can be provided at sites through interpretation signage, which has been done in areas throughout the Shoalhaven;</li> <li>In relation to the West Culburra Concept Proposal and the Long Bow Point Golf Course, the Jerrinja said it would support opportunities for young indigenous people to be employed in these developments, however they had not been in discussion with the applicant regarding such opportunities;</li> <li>The Jerrinja community hold a lot more cultural knowledge regarding the whole of the Wollumboola and Crookhaven catchments.</li> </ul>		
<b>Meeting closed at:</b> 10.15pm		

## Annexure D

### Johan Kamminga Resume

Dr Johan Kamminga is recognised as one of Australia's foremost archaeologists and prehistorians. He has almost 50 years' experience in Aboriginal cultural heritage consulting.

In the early 1970s his leadership of Alligator Rivers Archaeology Study was the first consultancy Aboriginal archaeology in Australia (sponsored by the Federal Government and Minerals Council of Australia). Jo was the discoverer of Madjedbebe rockshelter in Kakadu National Park, which is reported to be oldest known Aboriginal site in Australia, dating back at least 65,000 years.

Currently Johan is the longest practicing consultant archaeologist in Australia. Jo's Aboriginal heritage solutions for the concept design for the Shell Cove boatharbour and housing project was highlighted for special mention in a UDIA Award for 'Excellence for Concept Design' in 2012.

In 1972 Johan was awarded his first degree, a BA Honours (1st class, with Anthropology Graduation Prize). In 1980 he graduated with PhD in archaeology, University of Sydney. His undergraduate and PhD theses provided a foundation for the modern study of Aboriginal stone artefacts.

His academic positions include Research Fellow, Division of Prehistory, La Trobe University, Research Associate, Department of Archaeology and Natural History, Australian National University, and Faculty Member (previously Erasmus Mundus Visiting Professor), University of the Philippines. He was a founding member of the Australian Archaeological Association, and since 1972 a member of the Australian Institute of Aboriginal & Torres Strait Islander Studies.

Johan has extensive field experience throughout Australia, including the NSW South Coast since 1967, and overseas in Bhutan, Canada, PNG, Sri Lanka, Philippines and Thailand. At the ANU Johan supervised PhD research on the Aboriginal archaeology and culture history of the NSW South Coast.

In the early 1970s Jo's membership of the Alligator Rivers Region Fact-Finding Study Scientific Committee and his report to the Federal Government on the archaeology of the region contributed to the case for creating Kakadu National Park and to its subsequent World Heritage listing. Johan also carried out archaeological fieldwork in PNG for the Australian Museum – his discoveries and report provided the basis for PhD thesis for ANU and Sydney University and decades of research by Australian Museum staff to the present day.

In the 1980s, Johan directed archaeology research projects as Vice-Chancellor Enrichment Fund Research Fellow at La Trobe University, and at the ANU and Sydney University. He also lectured on Indigenous material culture at the National Centre for Cultural Heritage Science, University of Canberra. In the following years he was principal consultant and director of archaeological consulting firms in Canberra as well as continuing his university-based research. Currently he is principal consultant at National Heritage Consultants and an associate of Everick Heritage Consulting Pty Ltd, and Heritage Consultant Australia Pty Ltd.



During the past 29 years Johan has provided independent expert reviews and other professional advice to law firms and government departments and agencies concerning identification and heritage assessment of Aboriginal sites – his first advice was in relation to matters before NSW LEC (40069/1991). His professional advice contributed to the formal standards and guidelines for Aboriginal cultural heritage consulting in NSW. Over the past decade he has delivered cultural heritage training and workshops for mining company personnel and contractors and the NSW National Parks Service.

Johan's consultancy clients include government departments, environmental consulting firms, universities, museums, and a range of private-sector Aboriginal, property development and mining companies, such as Australand, ANU, Australian Heritage Commission, Australian National University, Barrick Gold, the Australian and ACT governments, Malaysian Ministry of Culture, Getty Oil, Goulburn-Murray Water, Museum Victoria, National Museum of Australia, NSW Aboriginal Land Council, Essential Energy, NSW Office of Environment & Heritage, Santos, Origin Energy, and University of Canberra.

Johan is author or co-author of more than 60 professional publications, including the co-authored books *Prehistory of Australia* (Allen & Unwin, & The Smithsonian), *Mechanics of pre-industrial technology* (Cambridge University Press), and *Procedure for the management of Indigenous cultural heritage sites* (Santos). His research has been published in journals such as *Nature*, *Journal of Human Evolution*, *American Antiquity*, *Journal of Archaeological Science*, and the *Proceedings of the US Academy of Sciences*. A number of his publications have been translated into Chinese, Japanese and Turkish. Johan was an Advisory Editor for the award-winning *Encyclopaedia of Aboriginal Australia* and has written for Microsoft's *Encarta*. He was also an on-screen contributor to the China episode of the BBC's TV documentaries *The Human Journey* and 'The Incredible Human Journey' presented by Alice Roberts.