



**STATE SIGNIFICANT DEVELOPMENT ASSESSMENT:  
West Culburra Concept Proposal  
SSD 3846**



Environmental Assessment Report  
Section 4.40 of the  
*Environmental Planning and Assessment Act 1979*

June 2018



*Aerial image of Culburra Beach  
(Lightstorm Photography, accessed via Google Images, 27 February 2018)*

Cover photo: Artist's impression of Culburra Road medium density development, John Toon, Environmental Assessment 2013

© Crown copyright 2018  
Published June 2018  
NSW Department of Planning and Environment  
[www.planning.nsw.gov.au](http://www.planning.nsw.gov.au)

**Disclaimer:**  
While every reasonable effort has been made to ensure that this document is correct at the time of publication, the State of New South Wales, its agents and employees, disclaim any and all liability to any person in respect of anything or the consequences of anything done or omitted to be done in reliance upon the whole or any part of this document

## ABBREVIATIONS & DEFINITIONS

---

Applicant	John Toon Pty Limited
BAR	Biodiversity assessment report
BOS	Biodiversity offset strategy
BMT	BMT WBM, independent water quality consultant appointed by the Department
CEEC	Critically endangered ecological community listed on the <i>Environment Protection and Biodiversity Conservation Act 1999</i>
Commission	Independent Planning Commission
Council	Shoalhaven City Council
Department	Department of Planning and Environment
Development	A concept proposal for residential, industrial, tourist and recreational development delivered in five stages
DPI	Department of Primary Industries, incorporating Fisheries, NSW Office of Water and Crown Lands
EA	Environmental Assessment titled <i>West Culburra Mixed Use Concept Plan Major Project 09_0088 Environmental Assessment</i> , prepared by John Toon Pty Limited dated March 2013
EEC	Endangered ecological community listed on the <i>Threatened Species Conservation Act 1995</i>
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EPI	Environmental Planning Instrument
ESD	Ecologically sustainable development as defined in the <i>Protection of the Environment Administration Act 1991</i>
ISRP	Illawarra Shoalhaven Regional Plan 2015
ISUDP	Illawarra Shoalhaven Urban Development Program, Update 2016
JLALC	Jerrinja Local Aboriginal Land Council
LWPA	Lake Wollumboola Protection Association
Middens	Aboriginal place where debris from eating shellfish and other food has accumulated over time
Minister	Minister for Planning (or delegate)
NorBE	Neutral or Beneficial Effect (on water quality)
NOW	NSW Office of Water within the Department of Primary Industries
OEH	Office of Environment and Heritage
RFS	Rural Fire Service
RMS	Roads and Maritime Services
RTS	Response to Submissions <i>West Culburra Mixed Use Concept Plan Major Project 09_0088 Environmental Assessment Response to Submissions</i> , prepared by John Toon Pty Limited dated October 2013
SCSULR	South Coast Sensitive Urban Lands Review 2006
Secretary	Secretary of the Department, or nominee
SEPP	State Environmental Planning Policy
Sensitive receiver	Residence, education institution, health care facility, religious facility and child care facility
SLEP 1985	<i>Shoalhaven Local Environmental Plan 1985</i>
SLEP 2014	<i>Shoalhaven Local Environmental Plan 2014</i>
SRD SEPP	<i>State Environmental Planning Policy (State and Regional Development) 2011</i>
SRTS	Supplementary Response to Submissions titled <i>West Culburra Mixed Use Concept Plan SSD 3846</i> , prepared by John Toon Pty Limited, dated July 2017
SSD	State Significant Development

# TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY</b> .....	i
<b>1. BACKGROUND</b> .....	1
1.1. The Department's Assessment .....	1
1.2. Profile of Culburra Beach .....	2
1.3. Background to the Concept Proposal .....	2
1.4. Related Proposals .....	3
<b>2. CONCEPT PROPOSAL</b> .....	4
2.1. Summary of Key Elements .....	4
2.2. Applicant's Justification for the Concept Proposal .....	5
2.3. Site Description .....	5
2.4. Surrounding Land Uses .....	5
2.5. Detailed Description of the Concept Proposal .....	6
2.6. Clarifications on the Concept Proposal .....	7
<b>3. STRATEGIC CONTEXT</b> .....	12
3.1. Premier's Priorities .....	12
3.2. Illawarra Shoalhaven Regional Plan 2015 .....	12
3.3. South Coast Sensitive Urban Lands Review 2006 .....	13
3.4. Illawarra Shoalhaven Urban Development Program, Update 2016 .....	13
3.5. Other Strategic Studies .....	14
3.6. Strategic Summary .....	15
<b>4. STATUTORY CONTEXT</b> .....	15
4.1. State Significant Development .....	15
4.2. Consent Authority .....	15
4.3. Permissibility .....	15
4.4. Other Approvals .....	16
4.5. Development on Crown Land .....	17
4.6. Considerations under Section 4.15 of the EP&A Act .....	17
4.7. Environmental Planning Instruments .....	19
4.8. Public Exhibition and Notification .....	19
4.9. Objects of the EP&A Act .....	19
4.10. Ecologically Sustainable Development .....	21
4.11. Environmental Planning and Assessment Regulation 2000 .....	22
4.12. Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) .....	22
<b>5. CONSULTATION &amp; SUBMISSIONS</b> .....	22
5.1. Exhibition of the EA .....	22
5.2. Submissions on the EA .....	22
5.3. Applicant's Response to Submissions .....	23
5.4. Issues Raised in Submissions .....	24
5.4.1. Government Agencies .....	24
5.4.2. General Public .....	27
5.4.3. Special Interest Groups .....	30
5.5. Department's Consultation .....	31
5.6. Department's Consideration of Submissions .....	31
<b>6. ASSESSMENT</b> .....	33
6.1. Suitability of the Site for the Proposed Development .....	34
6.2. Water Quality .....	35
6.2.1. Introduction .....	35
6.2.2. Existing Water Resources around the Site .....	35
6.2.3. Applicant's Assessment of Surface Water Impacts .....	38
6.2.4. Issues Raised in Submissions .....	40
6.2.5. Department's Independent Water Quality Expert Advice .....	41
6.2.6. Evaluation and Conclusion .....	42
6.3. Biodiversity .....	44
6.3.1. Introduction .....	44
6.3.2. Existing Flora and Fauna .....	44
6.3.3. Potential Impacts of the Concept Proposal .....	45
6.3.4. Issues Raised in Submissions .....	45



6.3.5.	Proposed Biodiversity Offsets .....	46
6.3.6.	Evaluation and Conclusion.....	46
6.4.	Aboriginal Heritage .....	48
6.4.1.	Introduction.....	48
6.4.2.	Existing Aboriginal Heritage Values .....	48
6.4.3.	Potential Impacts of the Concept Proposal.....	48
6.4.4.	Issues Raised in Submissions .....	49
6.4.5.	Evaluation and Conclusion.....	49
6.5.	Traffic and Access .....	50
6.5.1.	Traffic .....	50
6.5.2.	Access.....	52
6.5.3.	Evaluation and Conclusion.....	53
<b>7.</b>	<b>CONCLUSION.....</b>	<b>54</b>
<b>APPENDIX A: Draft Instrument of Refusal.....</b>		<b>56</b>
<b>APPENDIX B: Consideration of Environmental Planning Instruments .....</b>		<b>57</b>
<b>APPENDIX C: Environmental Assessment.....</b>		<b>59</b>
<b>APPENDIX D: Response to Submissions .....</b>		<b>60</b>
<b>APPENDIX E: Supplementary Response to Submissions .....</b>		<b>61</b>
<b>APPENDIX F: Submissions on EA, RTS and SRTS.....</b>		<b>62</b>
<b>APPENDIX G: Gateway Determination For Planning Proposal.....</b>		<b>63</b>

# EXECUTIVE SUMMARY

---

## **Background**

In 2010, the Department of Planning and Environment (the Department) received a concept plan application for a large urban expansion to the west of the existing township of Culburra Beach on the south coast of NSW. The concept plan application (referred to throughout this report as the West Culburra Concept Proposal) was submitted under the now repealed Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and was transitioned to State Significant Development (SSD) in 2015. John Toon Pty Limited (the Applicant) lodged the concept plan application on behalf of the Halloran Trust, which owns the 100 hectare (ha) site and other large parcels of land to the west of Culburra Beach. The Halloran Trust owns around 1,680 ha of land across the Shoalhaven local government area (LGA).

Land to the west of Culburra Beach was earmarked for urban expansion in the 1980's. In 1992, the Shoalhaven Local Environmental Plan 1985 (SLEP 1985) was amended to rezone large parcels of land west of Culburra Beach for residential use. In 1993, the Halloran Trust lodged an application for residential development at Long Bow Point, immediately south of the proposed site. The residential development at Long Bow Point was subject to a Commission of Inquiry (COI) which recommended refusal due to likely adverse impacts on threatened flora and fauna and the water quality of the adjacent Lake Wollumboola. The then Minister for Planning subsequently refused the application in June 2000.

Since then, a number of strategic studies have been undertaken by the State Government to identify areas of land suitable for residential expansion and areas requiring environmental protection, within and around Culburra Beach.

At the time of lodgement of the concept plan application in 2010, Council had drafted the Shoalhaven Local Environmental Plan 2014 (SLEP 2014) which sought to amend the zoning of the West Culburra site to reflect the outcomes of the strategic studies. Following discussions with the Applicant, Council resolved to defer the zoning of the site, and other Halloran owned land, until the Part 3A concept plan application was determined. The SLEP 2014 shows the site as a 'deferred matter' to which the residential zoning in SLEP 1985 still applies. The former Minister for Planning agreed to the deferral, subject to a Planning Proposal for the land that protects the Lake Wollumboola catchment and provides for the sustainable growth of Culburra Beach.

In 2015, the Halloran Trust lodged a Planning Proposal with Council to rezone 1,681.5 ha of land which was deferred in SLEP 2014. This includes the West Culburra site, Long Bow Point and land at Callala Bay and Kinghorn Point, all within the Shoalhaven LGA.

## **West Culburra Concept Proposal**

The concept proposal includes a mixed use subdivision immediately west of Culburra Beach on the southern bank of the Crookhaven River. The concept proposal covers approximately 75 ha of the 100 ha site and comprises:

- 650 residential dwellings of low and medium density
- 3.5 ha of industrial development
- tourist accommodation, cafes, restaurants and viewing areas
- sports field
- 3 kilometre (km) foreshore reserve including cycleways, walkways, picnic areas and playgrounds
- parks and view corridors
- supporting infrastructure including an internal road network and stormwater management system.

The concept proposal has an estimated capital investment value of \$40 million and would be delivered in five stages over an approximate 20 year period, dependent on the demand for housing. The first stage involves 46 small residential lots of medium density, closest to the existing town centre. This stage is located within the surface water catchment of Lake Wollumboola, on the southern side of Culburra Road. An artist's impression of the medium density development is shown on the cover of this report. All stages of the concept proposal would be subject to separate planning applications.

The Applicant revised aspects of the concept proposal to address issues raised by relevant Government agencies, including the Department, throughout the assessment process. Changes were made to reduce the scale of development within the Lake Wollumboola catchment and to remove development from the Crookhaven River foreshore, which is zoned 'environmental protection'. The overall scale of the concept proposal was not altered, with the application consistently proposing around 650 residential dwellings.

### ***Environmental Setting***

Culburra Beach is a small coastal town located 15 kilometres (km) south-east of Nowra. The town is reached by a rural road connection that carries low volumes of traffic. Culburra Beach and the adjacent Orient Point have a resident population of 3,552. The town has a supermarket, a few small shops, a medical centre, retirement village and a primary school. The area is popular as a holiday destination and receives an influx of people during the summer holiday period. The Australian Bureau of Statistics 2016 Census data indicate people in the 55-74 year age bracket make up the largest component of the resident population and the unemployment rate is higher than the NSW average at 7.5%.

Culburra Beach is surrounded by high quality natural features including beaches, the Crookhaven River estuary, Lake Wollumboola and Jervis Bay National Park (see aerial image on the inside cover of this report). The Crookhaven River estuary contains a number of priority oyster leases which are an important economic resource in the region and for NSW. The estuary also supports a protected wetland and marine vegetation including saltmarsh, seagrass and mangroves. Lake Wollumboola, located south of the site, is a sensitive coastal lake that has been the subject of recent strategic studies. The lake is considered a unique lagoon system, reliant on high quality surface and groundwater inflows to maintain its biological diversity. The lake supports internationally listed migratory bird species, forms part of the Jervis Bay National Park and is listed as a Wetland of National Importance.

The concept proposal has a 3 km frontage to the Crookhaven River estuary and includes several components within the surface water catchment of Lake Wollumboola, including the Stage 1 residential development, entrance roundabout, parts of the access road, part of the industrial development and the sports oval. The concept proposal would require clearing of 91.65 ha of native vegetation and also seeks to trim marine vegetation to create vistas from the proposed residential areas to the Crookhaven River.

### ***Strategic Planning***

There are a number of strategic planning studies relevant to consideration of the concept proposal. The Department has considered these studies and concluded the concept proposal is inconsistent with several of these studies.

A number of studies cover urban development planning across the Shoalhaven LGA including the Illawarra Shoalhaven Regional Plan 2015 and the Illawarra Shoalhaven Urban Development Program Update 2016. These plans identify the need to provide additional housing in the Shoalhaven LGA that is close to established and growing population and employment centres, with access to services and infrastructure. These plans do not identify the West Culburra site as a priority area for housing delivery, but identify a smaller investigation area within Culburra Beach, which includes the eastern part of the site, closest to the existing town centre (see **Figure 8** in this report).

Other strategic studies covering the sensitive coastal environments of Culburra Beach include the South Coast Sensitive Urban Lands Review 2006, the Healthy Rivers Commission Independent Public Inquiry into Coastal Lakes 2002 and the Scanes Peer Review 2013. These studies identified the need to protect Lake Wollumboola from further urban development and recommended any development on the Halloran owned lands be subject to environmental assessment and demand. Components of the concept proposal, including Stage 1, is inconsistent with these studies, as it proposes urban development within the surface water catchment of Lake Wollumboola.

### ***Halloran Trust Planning Proposal***

In 2015, the Halloran Trust lodged a Planning Proposal with Council to rezone 1,681.5 ha of land to provide a mix of development and conservation outcomes. The Planning Proposal seeks to rezone the Halloran owned land, including the West Culburra site, for residential, commercial, industrial, recreation and environmental conservation. In November 2015, the Deputy Secretary, Planning Services, as delegate of the Minister for Planning, issued a Gateway Determination recommending that land in the

Lake Wollumboola catchment is zoned for environmental protection, dependent on the outcomes of a biodiversity offset strategy and water quality studies prepared to support the Planning Proposal. This includes detailed investigations to define the extent of the groundwater catchment of Lake Wollumboola. The studies are currently underway in conjunction with a masterplan that will determine a suitable development footprint west of Culburra Beach, outside of the Lake Wollumboola catchment. Discussions with Council indicate the Planning Proposal will take 3 to 4 years to finalise.

### ***Assessment Process and Consultation***

In 2010, the West Culburra concept proposal was declared a 'major project' under Clause 1(1)(b) of Schedule 2 of State Environmental Planning Policy (Major Development) 2005, as it involves subdivision for residential purposes into more than 100 lots. Following the repeal of Part 3A of the EP&A Act, in 2015 the Minister for Planning transitioned the concept proposal to SSD. The assessment process has continued under Part 4 of the EP&A Act as an SSD.

After a number of revisions to the Environmental Assessment (EA), the Department accepted the EA in 2013 and publicly exhibited the document from 26 April 2013 until 7 June 2013. A total of 44 submissions were received including seven from Government agencies, three from special interest groups and 34 from the public. Of the special interest groups and public submissions, 26 objected and 11 supported the proposal. This included two petitions containing a total of 780 signatures objecting to the proposal. Separate to the public exhibition, the then Minister for Planning received a 1,400 signature petition supporting the proposal.

Submissions from Government agencies have consistently expressed significant concerns about the proposal. The concerns include the potential impacts on water quality in the Crookhaven River, adverse impacts on oyster production, water quality impacts on Lake Wollumboola and flow-on impacts on protected migratory bird species. This included submissions from the Department of Primary Industries (Fisheries), Office of Environment and Heritage, NSW Office of Water, Crown Lands and NSW Food Authority. Council generally supported the application and its intention, however it raised a number of issues and requested substantial revisions to the concept proposal.

Submissions from the community included both support for the proposal and objections. Those supporting the proposal cited social and economic benefits for the local community and businesses through the provision of housing, jobs and services. Submissions objecting to the proposal raised concerns about the impacts on water quality in the Crookhaven River and Lake Wollumboola, biodiversity, Aboriginal heritage and the adverse impacts on the coastal village character of Culburra Beach. Many submissions cited the proposal's inconsistency with strategic plans that identify the need to protect Lake Wollumboola from further urban development.

Submissions from special interest groups included the Lake Wollumboola Protection Association, Jerrinja Local Aboriginal Land Council and Australia's Oyster Coast. Across these submissions the key issues included impacts on water quality and oyster production, biodiversity and Aboriginal heritage.

Since exhibition of the EA in 2013, the Applicant has attempted to address the significant issues raised in the submissions. A number of Response to Submissions (RTS) documents were submitted, however they did not adequately address the issues. In 2014, the Department engaged an independent water quality expert, BMT WBM, to assist in evaluating the Applicant's water quality modelling and assessment. The Department and BMT WBM liaised extensively with the Applicant and its water quality consultant for over three years, in an attempt to clarify the proposal's water quality impacts with a degree of scientific certainty. Despite multiple revisions of the water quality modelling, the Department remained unsatisfied with the Applicant's assessment. After four years, the Department accepted a final Supplementary RTS (SRTS) from the Applicant in July 2017, to bring the assessment process to a conclusion. The SRTS was provided to the key Government agencies with final responses and recommendations received from the agencies in September 2017. The Applicant submitted further information in November 2017, which has also been considered as part of the Department's assessment.

In April 2018, the Deputy Secretary, Planning Services and the Executive Director, Key Sites and Industry Assessments visited the site and met with the Applicant and the Lake Wollumboola Protection Association (LWPA). The LWPA reiterated the concerns raised in their submission including the potential water quality and biodiversity impacts on Lake Wollumboola. In May 2018, the Executive



Director, Key Sites and Industry Assessments met with representatives of the Culburra Beach and Districts Progress Association and the Culburra Chamber of Commerce. These groups noted their support for the proposal, stating Culburra Beach needs further residential development to prevent population decline and the closure of local businesses.

### **Key Issues**

The Department identified the following key issues for assessment:

- suitability of the site for large scale urban expansion
- potential impacts on water quality in the Crookhaven River and Lake Wollumboola
- potential contamination of oyster aquaculture in the Crookhaven River estuary and damage to this important economy
- impacts on protected wetlands, marine vegetation and fish habitat
- impacts on significant Aboriginal midden sites
- synergistic impacts of native vegetation clearing on water quality
- unresolved aspects relating to traffic and access to the development.

The Department evaluated the suitability of the site for the development by considering:

- the scale of the proposal (650 dwellings) in the context of strategic planning for urban development
- the sensitive environmental attributes of the site and the need to protect oyster aquaculture, wetlands, marine vegetation and Lake Wollumboola from urban development
- on-going strategic planning for the Halloran lands through the Planning Proposal, that will identify a mix of development and conservation outcomes based on detailed environmental studies.

The Department's assessment concludes the site is not suitable for the scale of urban development proposed and is not consistent with strategic planning for the delivery of housing close to employment centres, services and infrastructure. Strategic plans identify West Lake Illawarra and Nowra-Bomaderry as the major focus for housing delivery in the Shoalhaven. The strategic plans do identify a small investigation area in Culburra Beach near the existing town centre, for future urban development, acknowledging the importance of the water catchment issues. The concept proposal has a small overlap with this investigation area but does not propose any residential component in that area, as it is currently zoned for commercial use. The Department acknowledges some further urban development in Culburra Beach may be warranted, however this needs to be balanced with demand and environmental factors. The Department's assessment has also concluded the proposed 650 dwellings exceeds Council's growth forecasts for Culburra Beach, which estimates an additional 280 dwellings may be required over the next 20 years (to 2036).

The potential water quality impacts of the concept proposal were identified early as a key assessment issue. The Department's independent water quality expert, BMT WBM, undertook considerable consultation with the Applicant's water quality consultant, Martens, to revise components of the water quality modelling and the design of the stormwater treatment system. As a result of this process, the Applicant revised the concept proposal, altering the stormwater design, removing the commercial town centre and boat ramp and reducing the scale of industrial development. No changes were made to the Stage 1 residential component within the surface water catchment of Lake Wollumboola.

Following a review of the SRTS and final water quality assessment, a number of agencies confirmed they were still not satisfied the proposal's impacts could be adequately managed and mitigated. The Department of Primary Industries (Fisheries), Office of Environment and Heritage, NSW Office of Water, Crown Lands and NSW Food Authority maintained the concerns they had highlighted as early as 2013, that the water quality impacts of the proposal present an unacceptable risk to the Crookhaven River estuary, oyster aquaculture, and the catchment of Lake Wollumboola and are unlikely to be adequately mitigated.

### **Summary**

The Department's assessment considered the objects of the EP&A Act and the matters to be considered by a consent authority listed in Section 4.15 of the EP&A Act. The Department visited the site, reviewed all assessment information, liaised with key agencies, considered submissions, met with key community members and reviewed relevant strategic plans. The Department undertook considerable consultation with the Applicant over many years. Despite multiple revisions to the assessment documents, the Department and several key Government agencies remain dissatisfied with the level of assessment provided and the validity of the conclusions.

The Department's assessment has concluded:

- the site is unsuitable for the scale of urban development proposed and is not consistent with areas identified for urban expansion in current strategic plans
- the proposed 650 dwellings exceeds Council's growth projections for Culburra Beach for the next 20 years (estimated at 280 dwellings)
- the proposed development does not utilise the area identified in strategic plans for future urban development in Culburra Beach (the Culburra investigation area)
- the potential water quality impacts of the concept proposal on the Crookhaven River estuary present an unacceptable risk to oyster aquaculture, protected wetlands, marine vegetation and fish habitat
- there is scientific uncertainty that the water quality impacts can be adequately mitigated by the proposed stormwater management system, and the Applicant has been unable to adequately demonstrate there would not be serious or irreversible impacts
- the potential water quality impacts on Lake Wollumboola are inconsistent with strategic planning objectives to protect the lake from urban development
- the proposal is likely to have serious and irreversible impacts on Aboriginal heritage sites of regional conservation significance and high cultural significance to Aboriginal people
- there are unresolved aspects relating to traffic and access to the concept proposal that the Applicant has been unable to address to a satisfactory level.

The Department concludes the concept proposal is not consistent with the objectives of ecologically sustainable development, is not in the public interest and should be refused. The Department considers the Planning Proposal is the most appropriate mechanism for determining suitable locations for residential development and environmental conservation on the Halloran landholdings at Culburra Beach.

# 1. BACKGROUND

## 1.1. The Department's Assessment

This report details the Department of Planning and Environment's (the Department) assessment of the State significant development (SSD 3846) application for the West Culburra Concept Proposal (the development). John Toon Pty Limited (the Applicant) submitted a concept proposal for a mixed use subdivision including 650 residential dwellings of low and medium density, industrial lots, tourist facilities, sports field, a foreshore reserve and supporting infrastructure at West Culburra (see **Figure 1**). The land is owned by the Halloran Trust.



**Figure 1: Regional Location**

Shoalhaven City Council (Council) and the Department are also considering a Planning Proposal, which covers the site and other land in the Shoalhaven area owned by the Halloran Trust. The Planning Proposal seeks to amend the Shoalhaven Local Environmental Plan 2014 (SLEP 2014) to zone 1,681.5 hectares (ha) of land owned by the Halloran Trust for a range of uses including residential, commercial, industrial, recreation and environmental conservation. As the concept proposal was lodged prior to SLEP 2014, the residential zoning under the previous Shoalhaven Local Environmental Plan 1985 (SLEP 1985) applies to the site. Under SLEP 1985 the concept proposal is permissible with consent, therefore the application can be determined, prior to finalising the Planning Proposal (which may take another 3 to 4 years).

The Department's assessment considered the Environmental Assessment (EA), Response to Submissions (RTS), Supplementary Response to Submissions (SRTS), submissions from government agencies, stakeholders and the public and relevant strategic and statutory planning instruments. This report evaluates the key issues associated with the concept proposal and provides a recommendation for determining the application.

## 1.2. Profile of Culburra Beach

Culburra Beach is a small coastal town which includes mainly single storey dwellings close to the beach and waterways. Culburra Beach is characterised by its high quality natural environments which surround the urban areas including beaches, the Crookhaven River estuary, Lake Wollumboola and the adjoining Jervis Bay National Park.

Settlement of the area dates back to the mid 1800's with the most significant development occurring post second world war. The 2016 Australian Bureau of Statistics (ABS) Census showed a total of 5,044 residents in the area of Culburra Beach, Orient Point, Greenwell Point, Pyree and Brundee. Council estimates the population of Culburra Beach and Orient Point alone is 3,552. Whilst the ABS Census data shows a declining population trend in Culburra Beach, Council estimates there will be some future population growth. Council estimates the population in Culburra Beach will grow from 3,552 to 4,136 over the next 20 years, requiring an additional 280 dwellings (to 2036). Council's forecast is based on the demographic profile of the area and current and planned urban developments, including some development at West Culburra.

The largest age categories in Culburra Beach are the 55-64 years and 65-74 years (16.2% and 16.5%, respectively), suggesting an older population. Culburra Beach has a higher rate of unemployment at 7.5% than the NSW State average of 5.6%. The ABS reported the largest local employer as health care and social assistance, with many workers traveling to Nowra and Bomaderry for work. Other employment sectors include construction, retail, public administration and education.

## 1.3. Background to the Concept Proposal

Land west of the township of Culburra Beach was earmarked for potential urban expansion in the early 1980's. Council zoned large parcels of land for residential use and others a mixture of commercial, industrial and environmental protection in a 1992 amendment to the Shoalhaven Local Environmental Plan 1985 (SLEP 1985), see **Figure 2**.

In 1993, the Halloran Trust lodged an application for residential subdivision at Long Bow Point, immediately north of Lake Wollumboola and south of the current concept proposal site, see **Figure 2**. The development application was under assessment by Council when the then Minister for Planning directed a Commission of Inquiry (COI) be held. The COI considered the suitability of the Long Bow Point site for residential development and recommended refusal of the residential subdivision due to likely adverse impacts on threatened flora and fauna and the water quality of Lake Wollumboola. The then Minister for Planning subsequently refused the application for residential subdivision in June 2000.

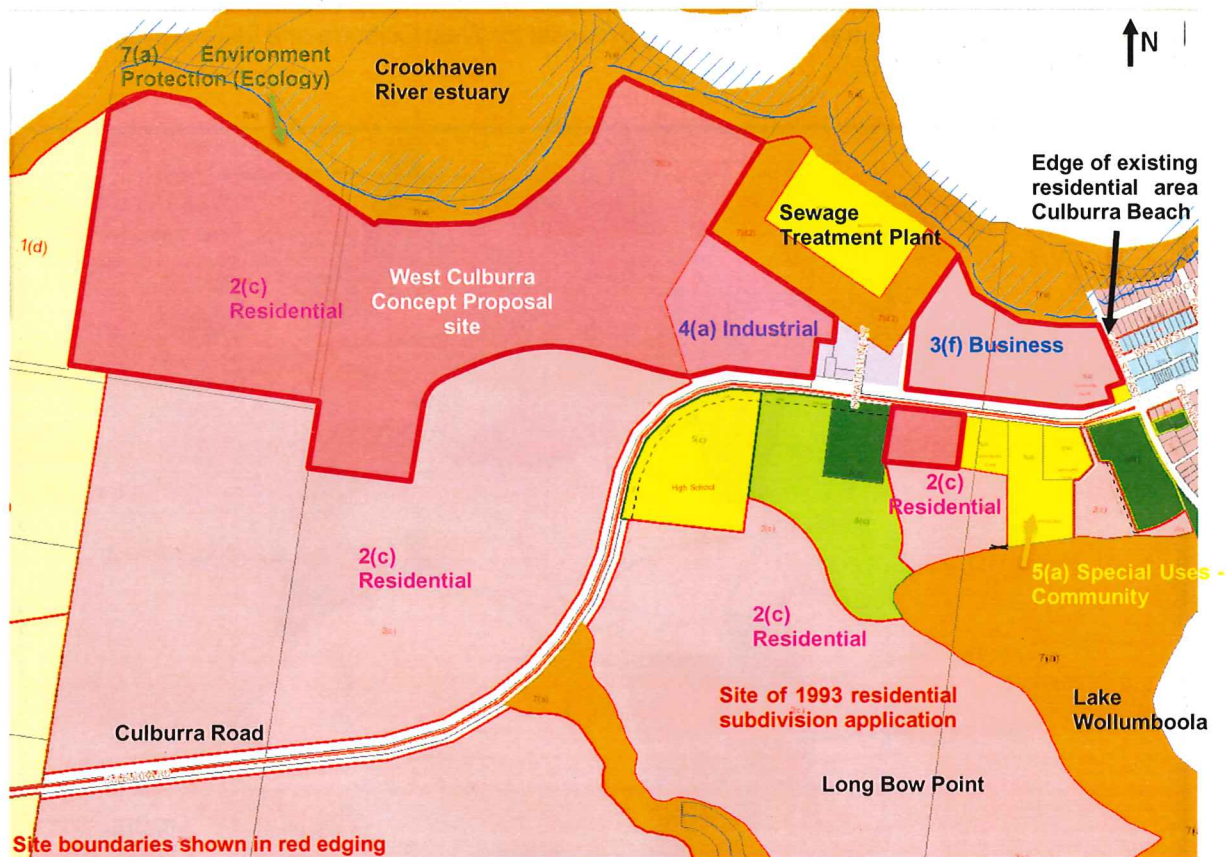
A number of strategic studies followed this decision, with the aim of identifying areas of land suitable for residential development and the sensitive environments requiring protection. In 2002 the Healthy Rivers Commission conducted an Independent Inquiry into Coastal Lakes and in 2006 the government prepared the South Coast Sensitive Urban Lands Review. These studies identified Lake Wollumboola as a sensitive ecosystem requiring protection from urban development. Further detail is provided in **Section 3**. The latest update to the Illawarra Shoalhaven Urban Development Program in 2016 identified an investigation area in Culburra Beach focusing on land within and immediately adjacent to the established residential and commercial areas, as suitable for further urban development, subject to detailed environmental studies.

In 2010 the Applicant lodged an application under Part 3A of the EP&A Act with the Department for residential development at West Culburra, to the north of Culburra Road. The majority of the concept proposal is located outside the surface water catchment of Lake Wollumboola, which was identified in the strategic studies for environmental conservation. At the same time, Council had drafted a new Local Environmental Plan (SLEP 2014) which sought to amend the zoning of the Long Bow Point and West Culburra sites, consistent with the outcomes of the strategic studies. Following discussions with the Applicant, Council resolved to defer the zoning of the site until the Part 3A application was determined. The Shoalhaven Local Environmental Plan 2014 (SLEP 2014) shows the land as a 'deferred matter' to which SLEP 1985 still applies. The former Minister for Planning agreed to the deferral subject to a Planning Proposal being prepared for the land, that protects the Lake Wollumboola catchment and provides for the sustainable growth of Culburra Beach.

In 2015, the Part 3A concept proposal was transitioned to State Significant Development (SSD). In the same year, the Halloran Trust lodged a Planning Proposal with Council to rezone 1,681.5 ha of land



which was deferred in SLEP 2014. This includes land at West Culburra, Long Bow Point, Callala Bay and Kinghorn Point, see **Figure 3**.



**Figure 2: SLEP 1985 Site Zoning**

#### 1.4. Related Proposals

##### Planning Proposal

The West Culburra site is part of 1,681.5 ha of land in the Shoalhaven LGA owned by the Halloran Trust. Other sites include Long Bow Point, West Callala Bay and Kinghorn Point. In 2014, Council deferred zoning the land owned by the Halloran Trust, until broader strategic studies were undertaken. This decision recognised the substantial land holding, the various development proposals under consideration at the time and the environmental values of the land.

The Applicant prepared a Planning Proposal for these broader lands, seeking to provide balanced development and conservation outcomes. The Planning Proposal seeks to rezone the land for residential, commercial, industrial, recreation and environmental conservation. **Figure 3** shows the areas covered by the Planning Proposal.

In November 2015, the Deputy Secretary, Planning Services, as delegate of the Minister for Planning issued a Gateway Determination recommending that land in the Lake Wollumboola catchment is zoned for environmental protection, dependent on the outcomes of a biodiversity offset strategy and water quality studies.

The biodiversity offset and water quality management strategies are currently being prepared along with a masterplan that will be used to determine a suitable development footprint west of Culburra Beach, outside of the Lake Wollumboola catchment.

The Gateway Determination also requires preparation of other studies including, Aboriginal cultural heritage, community impacts and economic studies, amongst others. In late 2017, Council lodged a request with the Department to split the Planning Proposal into two components, based on geographic area. West Culburra and Lake Wollumboola would be dealt with in one Planning Proposal and Callala Bay and Kinghorn Point would be dealt with in another Planning Proposal. The objectives of the

Planning Proposals remain the same, however the groundwater investigations for Lake Wollumboola are expected to take a minimum of two years. Given these issues are specific to West Culburra and Lake Wollumboola, Council considered it unnecessary to delay consideration of Callala Bay and Kinghorn Point. Council estimates the Planning Proposal for West Culburra and Lake Wollumboola will take 3 to 4 years to complete.

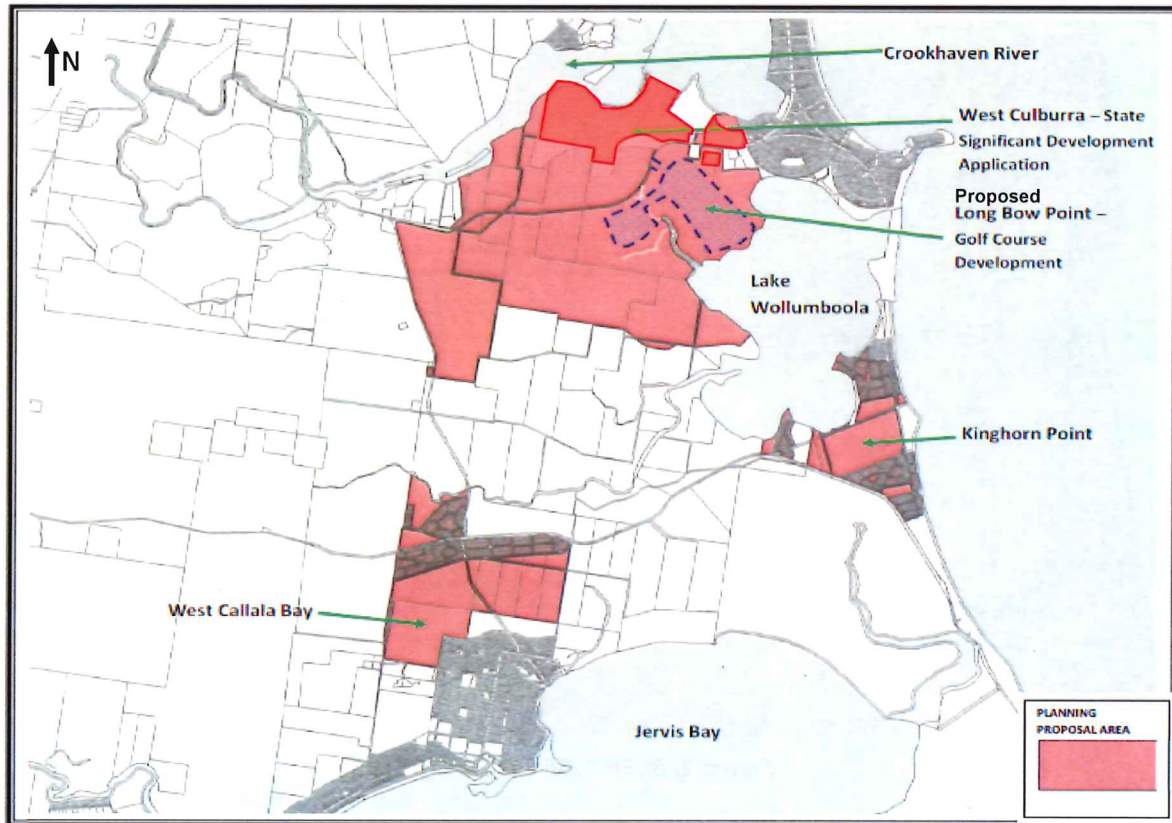


Figure 3: Planning Proposal Area & Current SSDs

#### State Significant Development – Long Bow Point Golf Course

In June 2011, the Halloran Trust lodged a development application (DA) with Council for a golf course on Long Bow Point. The DA (DA11/1728) proposes an 18-hole championship golf course to the south of Culburra Road, on the site of the previously refused residential subdivision, see **Figure 3**. The proposed golf course has an approximate length of 6.4 kilometres (km) and includes facilities such as a golf practice area, maintenance buildings, access road, car parking and water management facilities.

On 7 March 2017, the Minister for Planning declared the proposed development at Long Bow Point to be SSD. This declaration acknowledged the complex history of the site, the sensitivity of the adjacent Lake Wollumboola and the Planning Proposal overlaying the site. The Minister's declaration followed consideration of advice received from the Independent Planning Commission (the Commission). The Department is currently assessing the application.

## 2. CONCEPT PROPOSAL

### 2.1. Summary of Key Elements

The Applicant proposes to deliver a new residential subdivision to the west of Culburra Beach to provide 650 new dwellings and associated facilities. The concept proposal covers approximately 75 ha and would be delivered over five stages. The key elements include:



- 650 residential dwellings of low and medium density
- 3.5 ha of industrial development
- tourist accommodation, cafes, restaurants and viewing areas
- sports field
- foreshore reserve including cycleways, walkways, picnic areas and playgrounds
- parks and view corridors
- supporting infrastructure and services including an internal road network and stormwater management system.

The concept proposal has evolved since it was first lodged in 2010. Some aspects described in the Environmental Assessment (EA) publicly exhibited in 2013 have been changed to address the issues raised in submissions. The Supplementary Response to Submissions (SRTS) lodged in July 2017 describes the final concept proposal that has been evaluated in this assessment report and by other Government agencies in their final submissions. Some aspects of the concept proposal were not clearly described, as there have been multiple and sometimes conflicting versions submitted by the Applicant. **Section 2.4** provides a description of the Department's understanding of the key elements. **Section 2.6** clarifies some key aspects that have changed over the course of assessing the application.

## 2.2. Applicant's Justification for the Concept Proposal

The Applicant has lodged several development proposals on its landholdings at Culburra Beach over the past 20 years. The Applicant's overall vision for development is to expand the township of Culburra Beach, increase employment opportunities locally, provide recreational facilities for local residents and attract further tourism to the area.

The Applicant maintains there is a demand for new housing in Culburra Beach, estimating demand for new dwellings at 90 lots per year, with a three way split between retirees, young households and holiday homes. The Applicant considers the proposal would meet the demand for new housing, promote new business opportunities in tourism and recreation and provide local employment. The Applicant considers the concept proposal would generate a demand for new health and community services which would benefit the entire Culburra Beach community.

The Applicant considers the proposal is well located adjacent to the existing edge of Culburra Beach and near existing services such as sewer and water supply. The Applicant stated that there is a 'pent up' demand for new dwellings as there has been no new development in Culburra Beach for 40 years. The Applicant also states the concept proposal is consistent with the residential zoning of the site.

## 2.3. Site Description

The West Culburra site is located on the northern side of Culburra Road, immediately west of the township of Culburra Beach and around 15 km south-east of Nowra, see **Figure 1**. The site covers over 100 ha of land with an approximate 3 km frontage to the Crookhaven River estuary. The site boundaries are shown on **Figure 6**. The site is predominantly undeveloped natural bushland with an area of cleared land at the western boundary. From the cleared area, the site has extensive views of the Cambewarra range to the west, Mount Coolangatta to the north and the Crookhaven River estuary and Pacific Ocean to the east. The site is mostly covered in native bushland with a few dirt access tracks. The vegetation comprises mostly of Red Bloodwood – Blackbutt – Spotted Gum shrubby open forest. The site supports 9.57 ha of plant communities listed as endangered ecological communities on the *Threatened Species Conservation Act 1995* (now covered by the *Biodiversity Conservation Act 2016*) including 1.11 ha of a critically endangered ecological community listed on the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*.

The Culburra sewage treatment plant and existing industrial area sit between the eastern part of the site adjoining Culburra Beach township, and the larger land parcel to the west, see **Figure 4**. The eastern part of the site abuts the Culburra Beach town centre and is zoned for Business use. The site also includes a small parcel of residential zoned land south of Culburra Road near the existing town centre, see **Figure 6**. This parcel of land is located within the surface water catchment of Lake Wollumboola.

## 2.4. Surrounding Land Uses

The eastern boundary of the site adjoins the existing commercial centre of Culburra Beach, which includes a supermarket, medical centre, local shops and restaurants. Culburra Beach extends further

to the east and comprises mostly single storey dwellings located between the Crookhaven River estuary, Culburra Beach and Lake Wollumboola.

The Crookhaven River estuary is located immediately to the north of the site with a 30 m wide strip of crown land covering the riparian area adjoining the northern site boundary. The estuary supports a wetland listed on State Environmental Planning Policy No. 14 – Coastal Wetlands and several Priority Oyster Aquaculture Areas listed on State Environmental Planning Policy No. 62 – Sustainable Aquaculture. The estuary in this location contains marine vegetation including seagrasses and saltmarsh communities.

To the south and west of the site are extensive areas of native bushland. Long Bow Point (also owned by the Halloran Trust) is located south of the site and Culburra Road. Long Bow Point extends down to Lake Wollumboola, which forms part of Jervis Bay National Park.



Figure 4: Local Context

## 2.5. Detailed Description of the Concept Proposal

Table 1 summaries the key components of the concept proposal. Aspects that remain unclear, despite requests for clarification from the Applicant, include:

- the size of the development footprint
- the total number of residential dwellings
- scope and extent of mixed uses (i.e. housing above shops) and medium density development
- proposed development within the 100 m foreshore buffer zone, such as cycleways, walkways and viewing platforms.

The concept proposal is shown in Figures 5 to 7.



**Table 1: Key Components of the Concept Proposal**

Aspect	Description
Summary	<b>A concept proposal to deliver a new residential area to the west of Culburra Beach providing 650 dwellings and associated facilities.</b>
Development footprint	Approximately 75 ha of the 100 ha site
Development stages and timeframe	<ul style="list-style-type: none"> <li>• five stages of development over a 20 year period</li> <li>• Stages 1 to 4 – residential and tourist development</li> <li>• Stage 5 – industrial development.</li> </ul>
Capital investment value	\$40 million
Residential	<ul style="list-style-type: none"> <li>• 650 dwellings delivered over Stages 1 to 4</li> <li>• a range of lot sizes from 300 square metres (m<sup>2</sup>) to 800 m<sup>2</sup>, with an average of 550 m<sup>2</sup></li> <li>• combination of development types including medium density, small lots and mixed use (units above shops)</li> <li>• medium density area near the development entrance roundabout, which may include seniors living</li> <li>• Stage 1 residential includes 46 lots south of Culburra Road closest to the town centre and adjacent to the existing retirement village, see <b>Figure 7</b>. Stage 1 includes a mix of low and medium density with up to four-storey apartments along the Culburra Road frontage.</li> </ul>
Tourist Development	<ul style="list-style-type: none"> <li>• children’s play area and adjoining café near the foreshore (delivered in Stage 2)</li> <li>• tourist accommodation, cafes, restaurants, park and viewing areas at Cactus Point (delivered in Stage 4).</li> </ul>
Industrial	<ul style="list-style-type: none"> <li>• 3.5 ha of industrial development adjacent to existing industrial area and Sewage Treatment Plant (delivered in Stage 5).</li> </ul>
Sports field	<ul style="list-style-type: none"> <li>• Sports field located south of the residential areas and main access road (delivered in Stage 3).</li> </ul>
Parks and open space	<ul style="list-style-type: none"> <li>• 3 km of managed waterfront including boardwalks, viewing platforms, playgrounds and picnic areas</li> <li>• two view corridors through the residential areas to create views of Curleys Bay and Mount Coolangatta</li> <li>• Vista Park, a linear park from the Stage 1 residential area through to the Crookhaven River.</li> </ul>
Roads and access	<ul style="list-style-type: none"> <li>• new 1.8 km collector road off Culburra Road running east-west through the development</li> <li>• roundabout on Culburra Road as the main entrance to the residential area</li> <li>• speed reduction on Culburra Road from 100 km/hr to 50 km/hr to facilitate the roundabout</li> <li>• foreshore drive including cycle/walkway along the full length of the foreshore, approximately 3 km</li> <li>• cycle/walkway adjacent to the new collector road, extending along Culburra Road to the existing town centre</li> <li>• layout of local roads to follow a circular pattern, similar to existing layout in Culburra Beach. Detail to be included in separate development applications.</li> </ul>
Supporting infrastructure	<ul style="list-style-type: none"> <li>• internal roads, drainage, water and electricity</li> <li>• new electrical substation near the industrial area</li> <li>• stormwater ponds at the sports oval, entrance roundabout, industrial area and medium density development.</li> </ul>

## 2.6. Clarifications on the Concept Proposal

This section provides clarification on aspects of the concept proposal that are important to understand for the purpose of assessing the application.

### Development within the Catchment of Lake Wollumboola

The Secretary’s Environmental Assessment Requirements (SEARs) for the concept proposal (issued in 2010) recommended the proposal avoid land within the catchment of Lake Wollumboola. This issue was also identified in the Government’s South Coast Sensitive Urban Lands Review, 2006 and was

raised in submissions from the Department, Office of Environment and Heritage (OEH) and Council. The components located within the catchment include:

- Stage 1 residential development of 46 lots, south of Culburra Road (referred to as Site B on **Figure 6**), located next to the existing retirement village
- a 200 metre section of the collector road and associated cycle/walkway
- proposed entrance roundabout on Culburra Road and drainage swale
- sports field
- part of the medium density area adjacent to the new collector road
- 1.1 ha of the industrial development.

In November 2017, the Applicant provided clarification regarding proposed development within the lake catchment. The Applicant confirmed its intention to retain the Stage 1 residential development and the collector road, but accepted that it could defer the sports field and relocate or remove the industrial development.

#### Stage 1 Residential Development

Throughout the assessment process, several documents were submitted by the Applicant, describing the concept proposal. In relation to the Stage 1 residential component, some of the descriptions were unclear, or conflicting. In its September 2017 submission, Council questioned what, if any, works are proposed as part of the concept proposal, and specifically whether the application was requesting approval for any physical works in Stage 1. In November 2017, the Applicant confirmed the application was for a concept proposal only and all physical works would be subject to separate development applications.

#### Future Development Zones

**Figure 5** shows two areas as future development zones, including:

- an area zoned 3(f) Business, located between the existing Culburra commercial centre and the proposed Vista Park
- an area located immediately next to the entrance roundabout between the proposed industrial area and the collector road.

The EA and SRTS do not clearly state what uses are proposed in these zones, or when they would be developed. For the purpose of assessment, the Department has assumed no development in these zones.

#### Elements Removed from the Concept Proposal

The Applicant proposed to remove the following components from the concept proposal to address issues raised in submissions:

- a proposed commercial town-centre was removed due to the potential for it to conflict with the established town centre in Culburra Beach
- proposed boat ramp and jetty at Cactus Point was removed due to the shallow and constrained waterway which is not deep enough for motor boats to navigate
- changes to the size of wetlands and stormwater ponds to improve the management of stormwater
- reducing the industrial area by 50% to address water quality concerns.

#### Biodiversity Offset Strategy

The Applicant's final biodiversity offset strategy (BOS) proposes to offset the clearing of 91.65 ha of native vegetation. The BOS identified four biobank sites on land owned by the Halloran Trust. The Applicant proposes to use a combination of these sites to provide 5,472 ecosystem credits. The majority of credits would be sourced from the Lake Wollumboola biobank site located 1.5 km south of the site. Some credits would be sourced from Tullarwalla and One Tree Bay biobank sites located approximately 25 km south-west of the site. The Applicant proposes to stage the retirement of ecosystem credits, consistent with the development stages. **Section 6.3.5** provides further details.

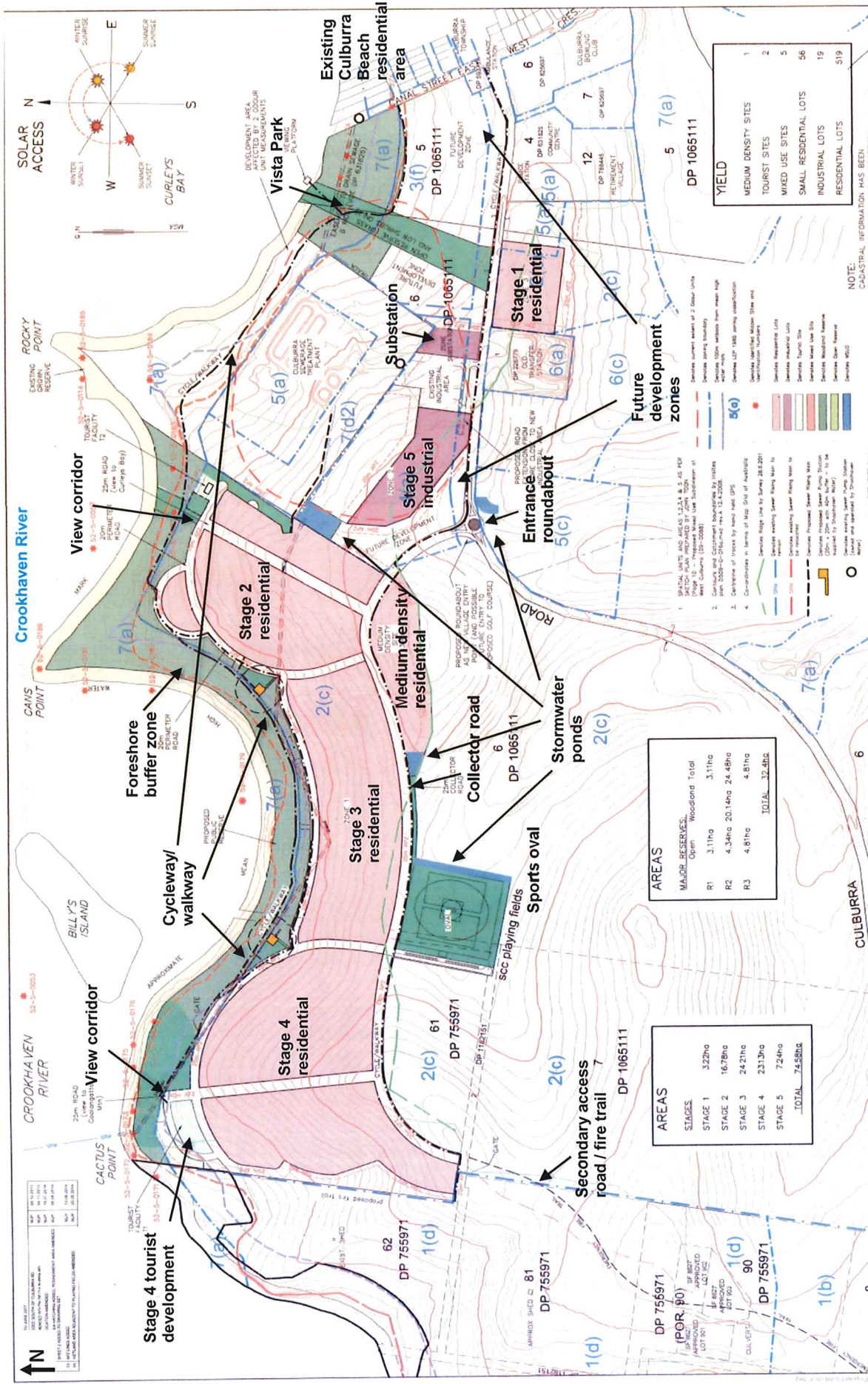


Figure 5: Concept Proposal



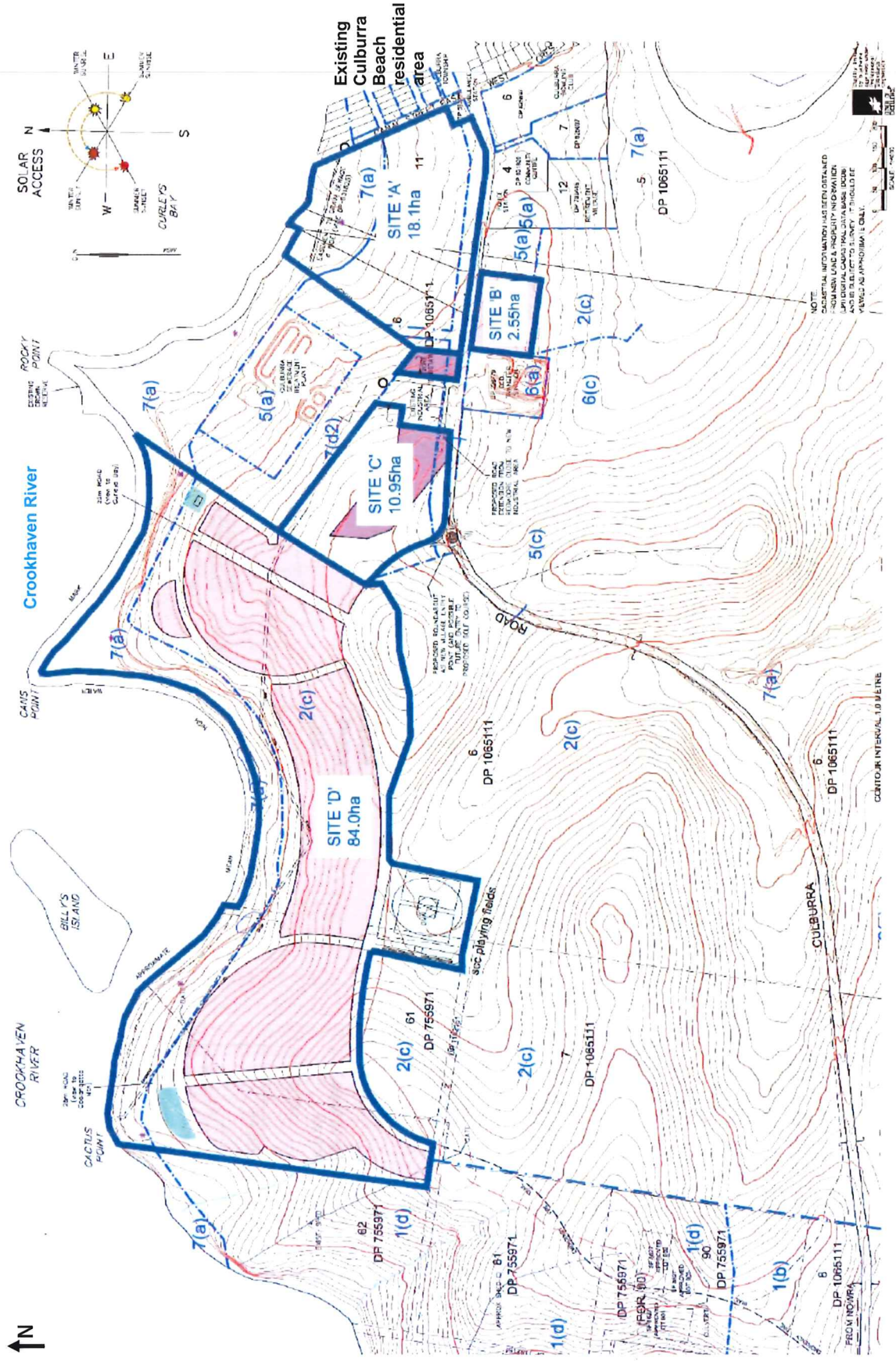


Figure 6: Concept Proposal Boundaries





Figure 7: Stage 1 Residential Development south of Culburra Road (referred to as Site B in Figure 6)

### 3. STRATEGIC CONTEXT

---

Planning for urban development in the Shoalhaven LGA is covered by strategic documents at the State and regional level. There have been changes to strategic planning since the concept proposal was first lodged in 2010, and work is on-going with respect to the preferred locations and scale of urban development within the LGA.

The strategic planning documents relevant to urban expansion in the Shoalhaven area are considered below. As noted in **Section 1.3**, Culburra Beach was earmarked for urban expansion in the early 1980's, with the local zoning reflecting the potential for more residential development. Since that time, the strategic direction for urban development has shifted to focus on delivering housing close to established population and employment centres, with access to services and infrastructure. Strategic plans have also recognised a need to protect the sensitive environmental attributes around Culburra Beach, including the catchment of Lake Wollumboola. This section considers the concept proposal in the context of relevant strategic plans.

#### 3.1. Premier's Priorities

The NSW Government's Premier's Priorities cover 12 key areas including economic growth, provision of infrastructure, protection of vulnerable communities, improving education and environmental protection.

Aspects of the Premier's priorities relevant to the concept proposal include creating jobs and increasing housing supply. The concept proposal would create jobs during construction and has the potential to create on-going jobs at the proposed tourist facility and industrial development. The number of jobs generated by the concept proposal was not stated in the application documents.

The concept proposal would increase housing supply in Culburra Beach through the provision of 650 dwellings over a 20 year period. The need for housing in the locality is discussed further in the sections below.

#### 3.2. Illawarra Shoalhaven Regional Plan 2015

The Illawarra Shoalhaven Regional Plan (ISRP) 2015 sets a vision and goals for the region covering housing, communities, resources and the natural environment. The objectives for housing delivery is to provide sufficient housing close to existing services, jobs and infrastructure, avoid environmental impacts and conserve biodiversity values when planning new communities. The ISRP also aims to match housing supply with demand.

The ISRP identifies West Lake Illawarra and Nowra-Bomaderry as the major regional release areas for greenfield housing in the region. The ISRP states these two areas have a combined capacity to delivery 37,600 lots representing a 30 to 40 year supply of greenfield housing to meet projected housing needs across the Wollongong, Shellharbour and Shoalhaven LGAs. Nowra-Bomaderry would provide an estimated 6,400 lots, with areas rezoned for this purpose in 2014.

The ISRP identifies other smaller release areas, including West Culburra as adding to the diversity of supply. The ISRP notes the Government's South Coast Sensitive Urban Lands Review (see **Section 3.3**) will guide future land use planning decisions for the West Culburra site. The ISRP identifies Lake Wollumboola as having very high conservation value which is to be protected from inappropriate development that affects water quality or ecological function. Under the ISRP, land in the Lake Wollumboola catchment is considered unsuitable for urban development.

The concept proposal includes the following development within the Lake Wollumboola catchment:

- Stage 1 – 46 lot residential development, south of Culburra Road
- entrance roundabout, drainage swale and part of the new collector road
- part of the medium density development adjacent the new collector road
- sports field
- Stage 5 – 1.1 ha of industrial development.

These elements of the concept proposal are inconsistent with the strategic direction of the ISRP, as they include urban development within the catchment of Lake Wollumboola, with the potential to cause adverse impacts on the lake.

### South Coast Regional Strategy 2006

The South Coast Regional Strategy (SCRS) was released as a draft in 2006 for public comment. During preparation of the strategy, a number of areas zoned for urban expansion were identified as environmentally sensitive and warranted a review to determine the suitability and scale of urban development in these areas. The Minister for Planning appointed an independent panel to prepare the South Coast Sensitive Urban Lands Review to inform the finalisation of the SCRS. The outcomes of the review are discussed below and are reflected in the ISRP, which supersedes the draft SCRS.

### **3.3. South Coast Sensitive Urban Lands Review 2006**

The Minister for Planning appointed an independent Panel comprising Dr Andrew Refshauge (Chair), Dr David Robertson and Mr Vince Berkhout to investigate and report on sensitive sites on the south coast, to inform the finalisation of the SCRS.

The South Coast Sensitive Urban Lands Review (SCSULR) identified ecological values that form significant constraints to urban development and concluded that land within the Lake Wollumboola catchment is entirely unsuitable for urban development.

The SCSULR noted the remaining land within the catchment of the Crookhaven River, immediately west of the Culburra Beach town centre is suitable for limited urban development. The SCSULR recommended any new release area achieve higher densities to reduce the land-take and provide for 10 to 15 years of estimated housing need. Site planning should achieve bushfire setback requirements, protect endangered ecological communities and exceed standard requirements for riparian setbacks. The SCSULR suggested development be reviewed to determine whether dwellings are permanently occupied and recommended Council instigate planning reform to achieve high densities within the established areas of Culburra Beach and Orient Point. The SCSULR also identified land further west of the town centre for investigation for additional urban development subject to environmental assessment and demand. The outcomes and recommendations of the review are embodied within the ISRP.

The West Culburra concept proposal proposes high densities close to the existing town centre, however this component of the development (Stage 1), is located within the catchment of Lake Wollumboola. This is inconsistent with the recommendations of the SCSULR. The concept proposal does not achieve bushfire setback requirements (refer to **Section 5.4.1**), requires removal of endangered ecological communities (**Section 6.3**) and would compromise riparian setbacks through the proposed trimming of marine vegetation to create water views (**Section 5.4.1**). These elements of the concept proposal are inconsistent with the SCSULR.

### **3.4. Illawarra Shoalhaven Urban Development Program, Update 2016**

The Illawarra Shoalhaven Urban Development Program (ISUDP) gathers historical information and forecast data to estimate housing supply needs across the Wollongong, Shellharbour and Shoalhaven LGAs. The ISUDP considers population and dwelling projections to inform greenfield land supply for housing. This data informed the ISRP and was recently updated in 2016 to include the Shoalhaven LGA.

In relation to the concept proposal, the ISUDP refers to the 'Culburra investigation area', noting that Culburra Beach is identified as sensitive urban land due to the potential impacts of urban growth on Lake Wollumboola. The ISUDP notes potential yields from the Culburra investigation area are yet to be determined and will depend on an evaluation of scale, water catchment issues and other environmental considerations. The ISUDP refers to the Planning Proposal currently underway which will resolve appropriate land use yields at Culburra Beach. The Culburra investigation area is shown on **Figure 8**. The area includes only a small proportion of the land covered by the concept proposal, focusing on land within and immediately adjacent to the established residential and commercial areas of Culburra Beach. The area of the concept proposal that overlaps with the Culburra investigation area is currently zoned 3(f) Business. The Applicant does not propose any development on this land, other than the proposed Vista park, which would provide linear views from the Stage 1 development through to the Crookhaven River.

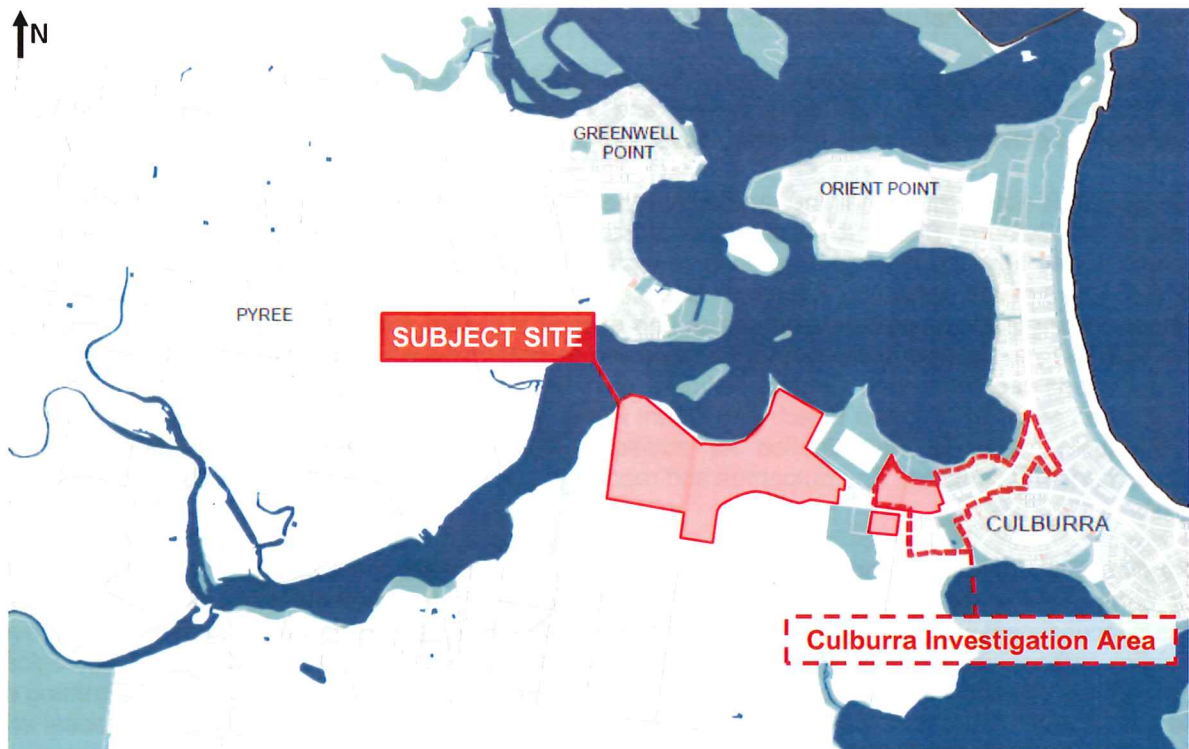
The concept proposal is not consistent with the ISUDP as it does not optimise development within the Culburra investigation area.

### 3.5. Other Strategic Studies

#### Healthy Rivers Commission (HRC), Independent Public Inquiry into Coastal Lakes 2002

The HRC inquiry considered all coastal lakes in NSW including Lake Wollumboola. The HRC concluded Lake Wollumboola has extreme natural sensitivity and gave it the highest classification of 'Comprehensive Protection'. The HRC recommended limiting new urban development near Lake Wollumboola to within existing developed boundaries.

As noted in **Section 3.2**, the concept proposal includes a number of components within the catchment of Lake Wollumboola, including the Stage 1 residential development, parts of the access road, sports field and part of the industrial development. Development in the catchment of the lake is inconsistent with the recommendations of the HRC.



**Figure 8:** Culburra Investigation Area, Illawarra Shoalhaven Urban Development Program 2016

#### Scanes Peer Review 2013

The Office of Environment and Heritage (OEH) conducted a review titled Environmental Sensitivity of Lake Wollumboola: Input to Considerations of Development Applications for Long Bow Point, Culburra (referred to as the Scanes Peer Review). The Scanes Peer Review emphasised the extreme sensitivity of the lake and its high susceptibility to impacts. The review recommended a precautionary approach and supported limiting development from the catchment.

The SCSULR, HRC Inquiry and Scanes Peer Review concluded that development in the lake catchment is not suitable because of adverse impacts on the lake hydrology and ecosystem. The Applicant's view is that the concept proposal would not adversely impact on the water quality of Lake Wollumboola, see **Section 6.2.3**. The Department's water quality expert BMT and OEH dispute this view, noting proposed development within the lake catchment is inconsistent with strategic planning and may lead to irreversible impacts on the lake. OEH and the Department consider the detailed studies being undertaken for the Planning Proposal would better inform development boundaries with respect to the catchment of Lake Wollumboola.



### 3.6. Strategic Summary

The strategic planning studies covering urban development across the Shoalhaven LGA and the specific studies of Lake Wollumboola have identified that Culburra Beach is constrained by significant natural features and is not the main focus for housing delivery to match population demand. The West Lake Illawarra and Nowra-Bomaderry areas are the major focus areas to provide housing close to established and growing population and employment centres. Development at Culburra Beach needs to achieve a balance between housing need and protection of the unique environmental qualities of the locality. The Department considers the concept proposal is inconsistent with the strategic direction for housing provision in the Shoalhaven LGA. Aspects of the concept proposal are also inconsistent with the findings of key studies recommending the protection of Lake Wollumboola from further urban development. The Planning Proposal currently under assessment will be supported by detailed environmental, social and economic studies that will identify suitable areas, densities and yields for further urban development in Culburra Beach. This process will take a further 3 to 4 years to finalise.

## 4. STATUTORY CONTEXT

### 4.1. State Significant Development

The concept proposal was declared a 'major project' under Clause 1(1)(b) of Schedule 2 of *State Environmental Planning Policy (Major Development) 2005*, as it involves subdivision for residential purposes of land that is not in the metropolitan coastal zone (unless it is wholly or partly in a sensitive coastal location) into more than 100 lots.

Following the repeal of Part 3A of the EP&A Act, the Minister for Planning transitioned the concept proposal to State significant development (SSD) under Clause 6 of Schedule 6A of the EP&A Act.

### 4.2. Consent Authority

The Independent Planning Commission (the Commission) is declared the consent authority for SSD applications where:

- the relevant local council has made an objection
- there are more than 25 public submissions in the nature of objections, or
- a reportable political donation been made.

As there were more than 25 public submissions objecting to the concept proposal, the Commission is declared the consent authority for this application in accordance with clause 8A of the SRD SEPP and section 4.5(a) of the EP&A Act.

### 4.3. Permissibility

The local environmental planning instrument applying to the site is the Shoalhaven Local Environmental Plan 1985 (SLEP 1985). **Table 2** lists the land use zones in the LEP which apply to the site, and whether the individual project components are a permissible land use in each zone. **Figure 9** shows the land use zonings on the site. The concept proposal is permissible with consent under SLEP 1985. Therefore, the Commission may determine the carrying out of the development.

**Table 2: Permissibility of the Concept Proposal**

LEP Land Use Zone	Development Component	Permissible
2(c) Residential (Living Area)	• Residential dwellings	Yes – with consent
	• Tourist development (accommodation, cafes, restaurant)	Yes – with consent
	• Roads	Yes – with consent
	• Sports oval	Yes – with consent
3(f) Business (Village)	• Vista park, cycleway and walkway	Yes – with consent
4(a) Industrial (General)	• Industrial	Yes – with consent



LEP Land Use Zone	Development Component	Permissible
7(a) Environmental Protection (Ecology)	• Walkway and cycleway, viewing platforms, picnic areas and playgrounds	Yes – with consent
	• Tourist development	Yes – with consent

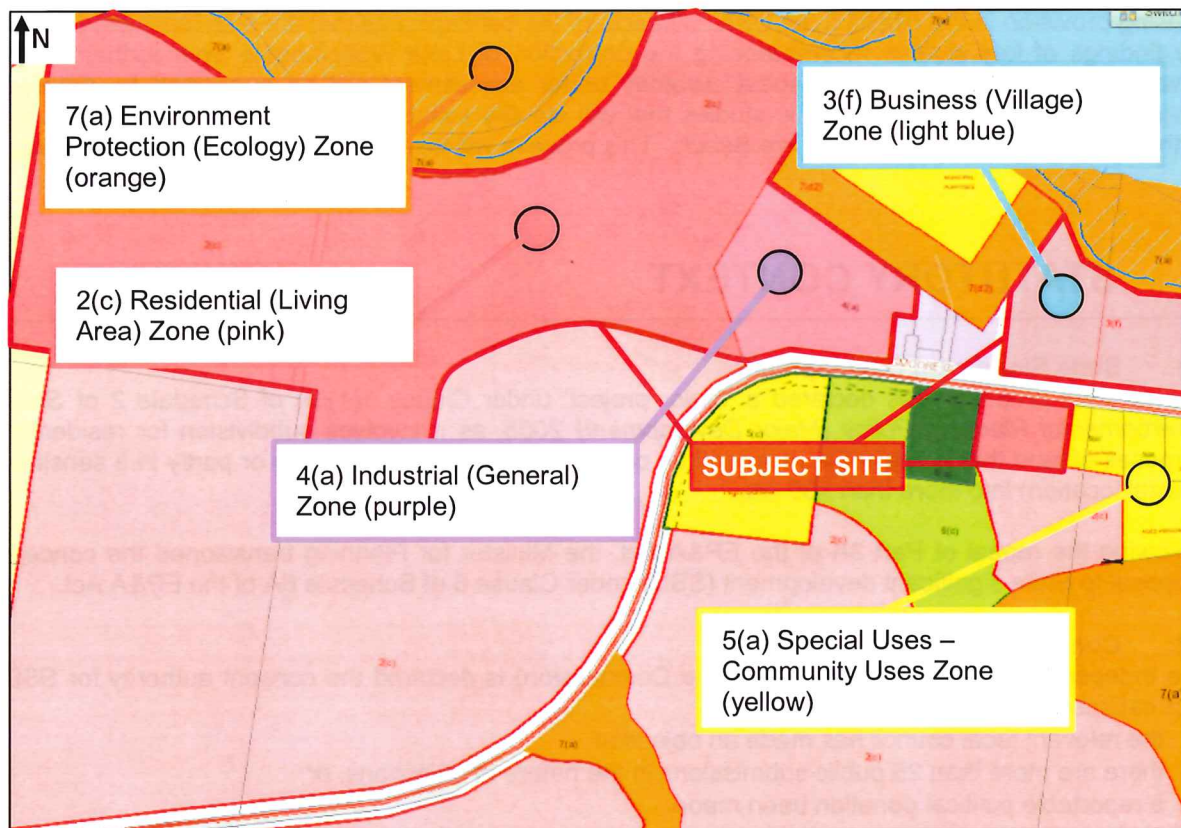


Figure 9: Site Zoning under SLEP 1985

#### 4.4. Other Approvals

For SSD applications, Sections 4.41 and 4.42 of the EP&A Act are relevant:

- Section 4.41 – Approvals / legislation that does not apply
- Section 4.42 – Approvals / legislation that must be applied consistently.

##### Section 4.41

The types of approvals relevant to this application but not required to be obtained separate to the SSD, include:

- *Coastal Protection Act 1979* (for use of the coastal zone)
- *Fisheries Management Act 1994* (for clearing marine vegetation)
- *National Parks and Wildlife Act 1974* (for impacts to Aboriginal objects or places)
- *Water Management Act 2000* (for water management works or controlled activities)
- *Rural Fires Act 1997* (for a bushfire safety authority).

Whilst Section 4.41 provides an exemption from the requirement to obtain approvals under the above legislation, the relevant agencies provided the following comments in the final submissions:

- DPI Fisheries stated in its submission that approval will generally not be given under the *Fisheries Management Act 1994* for removal or trimming of marine vegetation for aesthetic purposes for private developments
- OEH does not support impacts to the Crookhaven River midden complex, for which an Aboriginal Heritage Impact Permit would usually be required under the *National Parks and Wildlife Act 1974*
- Rural Fire Service recommended revisions to the concept proposal to satisfy the requirements of Planning for Bushfire Protection 2006.

#### Section 4.42

Relevant legislation that must be applied consistently, if the SSD is approved, include:

- *Protection of the Environment Operations Act 1997* (where an Environment Protection Licence is required)
- *Roads Act 1993* (for works within a road reserve).

The concept proposal does not constitute a scheduled activity under the *Protection of the Environment Operations Act 1997* (POEO Act), therefore an Environment Protection Licence (EPL) is not required. However, if any future tenancies include scheduled activities, such as industrial premises, an EPL would be required prior to undertaking the activity.

In its submission, Council generally supported the proposed collector road network, subject to a development application for the works. The works would require an approval under Section 138 of the *Roads Act 1993*. RMS' final submission stated insufficient information was provided in relation to the proposed entrance roundabout and impacts on the intersection of the Princes Highway and Kalandar Street in Nowra. However RMS noted Council is the relevant authority for the proposed collector road and connection to Culburra Road, and RMS is in the planning stage for an upgrade of the Princes Highway including the Kalandar Street intersection.

#### 4.5. Development on Crown Land

There has been a lack of clarity regarding the concept proposal boundaries and whether there is any encroachment onto Crown Land. Early versions of the concept proposal envisaged walkways, cycleways, view corridors and other recreational facilities within the foreshore buffer zone. Crown Lands advised it owns a 30 m wide strip of foreshore land adjacent the site and any development on this land and below the mean high water mark would be located on Crown Land.

Crown Lands advised it does not support the proposed development over Crown land including proposed clearing of marine vegetation, walkways, viewing platforms, boat ramp, any other structures or supporting infrastructure. Crown Lands also advised that its land cannot be used as a biodiversity offset.

In the Supplementary Response to Submissions (SRTS), the Applicant advised it was removing the proposed boat ramp and waterfront works on crown land at Cactus Point. The Department understands the proposed cycle/walkway along the foreshore would not be located on crown land and would be set back 100 m from the foreshore. In the SRTS, the Applicant maintains the need for trimming of marine vegetation along the foreshore to provide views to Curleys Bay and Mt Coolangatta.

#### 4.6. Considerations under Section 4.15 of the EP&A Act

Section 4.15 of the EP&A Act sets out matters to be considered by a consent authority when determining a development application. The Department's assessment has considered the concept proposal against the matters listed in Section 4.15 of the EP&A Act as follows:

- 4.15 (a) – planning instruments and regulations, **Sections 3, 4 and 6 and Appendix B**
- 4.15 (b) – the likely environmental, social and economic impacts, **Section 6**
- 4.15 (c) – suitability of the site for the development, **Section 6**
- 4.15 (d) – submissions, **Section 5**
- 4.15 (e) – the public interest, throughout **Section 6**

**Table 3** presents a summary of the Department's consideration of the concept proposal.

**Table 3: Consideration under Section 4.15**

Section 4.15	Department's Consideration	Reference
(a) the provisions of: (i) any environmental planning instrument, and (ii) any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent	The concept proposal is consistent with the zoning under the SLEP 1985.  The proposal is inconsistent with the objectives of State Environmental Planning Policy (SEPP) 14 (protection of wetlands) as it would adversely impact on a listed wetland and the Applicant proposes to trim mangroves to create views of Curleys Bay. The proposal is inconsistent with SEPP 62 (oyster aquaculture) as it would impact on water quality which would	Section 3, 4.7 and Appendix B

Section 4.15	Department's Consideration	Reference
<p>authority (unless the Director-General has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and (iii) any development control plan, and</p>	<p>adversely affect oyster production. The proposal is inconsistent with SEPP 71 (coastal protection) as it would remove 91.65 ha of high quality native vegetation and is likely to result in irreversible, flow-on impacts on Lake Wollumboola.</p>	
<p>(iiia) any planning agreement that has been entered into under section 93F, or any draft planning agreement that a developer has offered to enter into under section 93F, and</p>	<p>There are no planning agreements for the concept proposal.</p>	
<p>(iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph), and</p>	<p>The Department has assessed the concept proposal in accordance with all relevant matters prescribed by the regulations.</p>	<p>Sections 4.11, 5 and 6.</p>
<p>(v) any coastal zone management plan (within the meaning of the <i>Coastal Protection Act 1979</i>) that apply to the land to which the development application relates</p>	<p>The draft Coastal Zone Management Plan for the Shoalhaven coastline has not been certified by the Minister for the Environment, therefore it does not apply to the concept proposal.</p>	<p>Appendix B</p>
<p>(b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality</p>	<p>The Department considers the concept proposal is likely to have serious adverse impacts on the natural environment and the Applicant has not clearly demonstrated these impacts can be effectively avoided or mitigated. The Department considers the likely impacts on the natural environment are not outweighed by the potential social and economic benefits of the concept proposal.</p>	<p>Sections 4.9, 4.10 and 6</p>
<p>(c) the suitability of the site for the development</p>	<p>The Department considers the site is unsuitable for the proposed 650 residential lot subdivision and associated industrial and tourist developments, due to the potential ecological impacts on the sensitive Crookhaven River estuary and Lake Wollumboola. The concept proposal is likely to adversely impact on water quality, priority oyster leases, SEPP 14 wetlands and marine vegetation. The concept proposal would require clearing of a large area of native vegetation including endangered ecological communities and would adversely impact on regionally significant Aboriginal midden sites.</p> <p>The Department acknowledges Culburra Beach requires some further urban development to provide an appropriate mix of housing types and to service and stimulate future growth. However the scale of the development in this concept proposal is not consistent with strategic plans that identify the need to balance urban development in Culburra Beach with environmental protection.</p>	<p>Section 4 and 6.1</p>
<p>(d) any submissions made in accordance with this Act or the regulations</p>	<p>Submissions from the general public and special interest groups both supported (30%) and objected (70%) to the concept proposal with many submissions raising water quality and Aboriginal heritage as key concerns. Submissions in support considered the proposal would provide substantial economic benefits to Culburra Beach and assist in promoting growth and local jobs. However, key Government agency submissions stated their concerns about the proposal's impacts on water quality, riparian areas, oyster aquaculture and Aboriginal</p>	<p>Section 5 and 6</p>

Section 4.15	Department's Consideration	Reference
	heritage. DPI Fisheries, NSW Food Authority and NSW Office of Water remain unconvinced the proposal's impacts can be adequately ameliorated.	
(e) the public interest.	<p>The concept proposal is also inconsistent with the ISRP, SCSULR and the ISUDP as it proposes development within the catchment of Lake Wollumboola. The concept proposal has the potential to cause serious water quality impacts on Lake Wollumboola, the Crookhaven River estuary, priority oyster leases, SEPP 14 wetlands, marine vegetation and fish habitat.</p> <p>The Applicant has been unable to provide sufficient evidence to demonstrate there would not be serious or irreversible impacts, or that such impacts could be effectively avoided or mitigated. The Applicant has not demonstrated that the economic and social benefits of the proposal would sufficiently outweigh the potential serious environmental impacts. On this basis, the Department concludes the concept proposal in its current form is not in the public interest.</p>	Sections 4 and 6

#### 4.7. Environmental Planning Instruments

The Department has considered the concept proposal against the relevant provisions of the following environmental planning instruments (EPIs) and draft EPI's, as required by Section 4.15.

- State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP)
- State Environmental Planning Policy (Infrastructure) 2007 (ISEPP)
- State Environmental Planning Policy No. 14 – Coastal Wetlands (SEPP 14)
- State Environmental Planning Policy No. 62 – Sustainable Aquaculture (SEPP 62)
- State Environmental Planning Policy No. 71 – Coastal Protection (SEPP 71)
- Illawarra Shoalhaven Regional Plan 2015
- Shoalhaven Local Environmental Plan 1985 (SLEP 1985).

**Appendix B** provides the Department's detailed consideration of the concept proposal against the objectives of these EPI's. The Department considers the concept proposal is inconsistent with some of the key EPIs including SEPP 14, SEPP 62 and SEPP 71.

Development Control Plans (DCPs) do not apply to SSD under Clause 11 of the SRD SEPP. The *Shoalhaven Development Control Plan 2014* is the current DCP for the Shoalhaven local government area. Further, as the DCP came into effect in 2014, after the application was lodged, it does not apply to the concept proposal.

#### 4.8. Public Exhibition and Notification

When the concept plan application was transitioned from Part 3A to SSD, the assessment processes undertaken, including public exhibition of the application, were accredited under the SSD process. The application was on public exhibition from 26 April 2013 to 7 June 2013. Details of the exhibition process and notifications are provided in **Section 5.1**.

#### 4.9. Objects of the EP&A Act

In determining the application, the consent authority should consider whether the proposal is consistent with the relevant objects of the EP&A Act.

The Department has fully considered the objects in section 1.3 of the EP&A Act throughout its assessment of the application, including the encouragement of ecologically sustainable development (ESD). The Department's assessment concludes the concept proposal is not consistent with the objects of the EP&A Act, see **Table 4**.

**Table 4:** Objects of the EP&A Act and Consistency of the Concept Proposal

Object of the EP&A Act	Consideration
(a) to promote the social and economic welfare of the community and a better	The Department's assessment has concluded the proposal, in its current form, would have unacceptable impacts on the natural resources of the Crookhaven River estuary including water quality, mangroves, seagrasses,



Object of the EP&A Act	Consideration
environment by the proper management, development and conservation of the State's natural and other resources	<p>wetlands and fish habitat. The proposal also has the potential to adversely impact the economic viability of the adjacent oyster leases, which are an important economic resource in the local area and for NSW. The proposal may also cause serious and irreversible impacts on an Aboriginal midden complex of regional heritage significance.</p> <p>The Department notes the concept proposal would provide more housing in Culburra Beach, however the Applicant did not provide a socio-economic study to clearly demonstrate the proposal would improve social services, infrastructure or generate a significant number of on-going jobs.</p> <p>The Department acknowledges that some further urban development in Culburra Beach may promote the social and economic welfare of the existing community, however the scale of this concept proposal does not provide an appropriate balance of development and conservation of environmental resources.</p>
(b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment	<p>The concept proposal is not consistent with the principles of ESD, in particular, the precautionary principle and the conservation of biodiversity and ecological integrity. Further discussion is provided in <b>Section 4.10</b>.</p>
(c) to promote the orderly and economic use and development of land	<p>The location of new urban development within the Shoalhaven LGA is guided by the Illawarra Shoalhaven Urban Development Program (ISUDP). The ISUDP considers population and dwelling projections to inform locations for new housing close to employment centres and infrastructure. The ISUDP notes that development yields from the Culburra investigation area are yet to be determined and will need to consider appropriate scale, sensitive areas, water catchment issues and other environmental considerations. This work is being undertaken as part of the Planning Proposal which will determine appropriate locations and yields for future urban development at Culburra Beach.</p> <p>The Department considers the proposal is not orderly development of the land as it is contrary to the ISUDP. The concept proposal would provide a very large number of houses, that exceeds Council's growth projections for the area, and is not in an area identified in strategic plans for future urban development.</p>
(d) to promote the delivery and maintenance of affordable housing	<p>The concept proposal does not propose any affordable housing.</p>
(e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats	<p>The concept proposal would result in clearing 91.65 ha of very good quality native vegetation including trimming of mangroves and has the potential to adversely impact on seagrasses and fish habitat. The proposal would have an adverse impact on the water quality of Lake Wollumboola and the Crookhaven River estuary. The concept proposal would require removal of over 9 ha of EEC's and CEEC's and is likely to impact threatened bat and bird species.</p> <p>The Department considers the cumulative impacts of native vegetation clearing and water quality impacts on the Crookhaven River estuary and Lake Wollumboola present an unacceptable risk to these natural resources.</p>
(f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage)	<p>The concept proposal has the potential to adversely impact on Aboriginal middens of regional conservation significance. OEH advised it did not support any direct or indirect impacts to the midden complex which may arise from the proposed Cactus Point tourist development located close to the midden complex. The Department considers the proposal is likely to have irreversible impacts on Aboriginal heritage.</p>
(g) to promote good design and amenity of the built environment	<p>The concept proposal does not cover any built structures, as these would be subject to separate development applications, which would need to consider the design and amenity of the structures. The concept design reflects the existing circular street pattern of Culburra Beach and would primarily include low density residential dwellings. The proposed Stage 1 development includes up to four storey units at the entrance to Culburra Beach and many public submissions raised concerns that this is not in keeping with the</p>

Object of the EP&A Act	Consideration
	existing low density character of the area. These aspects would require consideration in subsequent development applications.
(h) to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants	The concept proposal does not cover any built structures. The proposed residential, commercial and industrial buildings would be subject to separate development applications, that would need to consider this object of the EP&A Act.
(i) to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State	The Department's assessment has been informed by submissions from both local and State Government (refer to <b>Section 5.4</b> ). The Department has also considered a range of strategic studies prepared by both State and local government including urban development planning and sensitive land use studies. The Department's assessment has promoted the sharing of the responsibility for environmental planning across different levels of government.
(j) to provide increased opportunity for community participation in environmental planning and assessment	The Department publicly exhibited the application in 2013 and has considered submissions from the public and special interest groups during its assessment of the application. The Department consulted with Government agencies at three key stages, receiving submissions on the EA, RTS and SRTS. There has been considerable opportunity for public involvement throughout the assessment of the application.

#### 4.10. Ecologically Sustainable Development

The EP&A Act adopts the definition of ESD found in the *Protection of the Environment Administration Act 1991* (POEA Act). Section 6(2) of that Act states that ESD requires the effective integration of social, economic and environmental considerations in decision-making processes and that ESD can be achieved through the implementation of:

- (a) the precautionary principle
- (b) inter-generational equity
- (c) conservation of biological diversity and ecological integrity
- (d) improved valuation, pricing and incentive mechanisms.

The Department has considered the principles of ESD throughout its assessment of the concept proposal. The aspects of most relevance to the concept proposal include (a) the precautionary principle and (c) conservation of biological diversity and ecological integrity. A summary of the Department's consideration is provided below.

##### The Precautionary Principle

The POEA Act states, if there are threats of serious or irreversible environmental damage, the lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

The Department's assessment has identified the potential for serious or irreversible water quality impacts on the Crookhaven River estuary and Lake Wollumboola. These issues were highlighted as early as 2010, in the SEARs which specifically recommended no development within the catchment of Lake Wollumboola. Despite this, the Applicant continues to propose 46 residential lots within the catchment of Lake Wollumboola, as well as other aspects such as the collector road, entrance roundabout and sports oval. The SEAR's also identified the need to address potential water quality impacts on the Crookhaven River estuary and the oyster leases it supports.

The Applicant has attempted to address these concerns through multiple revisions of the water quality modelling and design of the stormwater management system. However, the application documents have failed to convince the key Government agencies including Department of Primary Industries (Fisheries), OEH and NSW Office of Water (NOW) that the water quality impacts can be adequately managed to achieve a neutral or beneficial effect on water quality. The Applicant has been unable to demonstrate with certainty there is no threat of serious or irreversible damage, or that these impacts can be effectively avoided or mitigated. The Department has considered the merits of the concept proposal under Section 4.15 and drawn its own conclusions regarding its impacts.

##### Conservation of Biological Diversity and Ecological Integrity

The Department's assessment has concluded the impacts of clearing 91.65 ha of good quality native vegetation and the flow on water quality impacts presents an unacceptable risk to biodiversity and

ecological integrity. The Applicant's insistence on the need to trim marine vegetation to provide view corridors provides further reason for the Department to conclude the risks are unacceptable. The Department's view is supported by Fisheries, NOW and Crown Lands.

The Department's assessment concludes the concept proposal poses an unacceptable risk to threatened species and habitat and the water quality and ecology of the Crookhaven River estuary and Lake Wollumboola. Therefore, it does not satisfy the objectives of conserving biodiversity and ecological integrity.

The Department concludes the proposal would adversely impact on the environment and is not consistent with the objects of the EP&A Act and the principles of ESD.

#### **4.11. Environmental Planning and Assessment Regulation 2000**

Subject to any other references to compliance with the EP&A Regulation cited in this report, the requirements for notification (Part 6, Division 6) and fees (Part 15, Division 1AA) have been complied with.

#### **4.12. Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)**

Under the EPBC Act, the Commonwealth Government is required to assess and approve a development if it is likely to impact on a matter of national environmental significance (MNES), as it is considered a 'controlled action'. The EA for the concept proposal included an assessment of the MNES and concluded the concept proposal would not impact on any of these matters, and is therefore not a 'controlled action'. As such, the Applicant determined that a referral to the Commonwealth Government was not required.

The Department notes the concept proposal involves clearing of 1.11 ha of Illawarra Lowlands Grassy Woodland, which is listed as a critically endangered ecological community on the EPBC Act. The Department considers referral to the Commonwealth Government should have been made to determine if the proposed clearing is a controlled action requiring assessment under the EPBC Act. The Department's consideration of the biodiversity impacts of the concept proposal is provided in **Section 6.3**.

## **5. CONSULTATION & SUBMISSIONS**

---

The Department and the Applicant have undertaken a range of consultation activities throughout the application process. The Department consulted the public through a formal exhibition process and sought advice from government agencies at various stages of the assessment. The Department visited the site on several occasions throughout the assessment process. This section summarises the consultation activities and the issues raised.

### **5.1. Exhibition of the EA**

After accepting the EA for the application, the Department:

- made it publicly available from 26 April 2013 until 7 June 2013:
  - on the Department's website
  - at the Department's Information Centre in Sydney
  - at the Department's Southern Region Office in Wollongong
  - at Shoalhaven City Council in Nowra
- notified landowners in the vicinity of the site about the exhibition period by letter
- notified relevant State government agencies and Shoalhaven City Council by letter
- advertised the exhibition in the Nowra Shoalhaven News and the South Coast Register.

### **5.2. Submissions on the EA**

The Department received 44 submissions on the concept proposal, including:

- 7 from government agencies
- 3 from special interest groups
- 34 public submissions (including 2 petitions containing a total of 780 signatures).

Of the 37 submissions from the public and special interest groups, 26 objected, including the petitions containing 780 signatures, and 11 supported the proposal. **Sections 5.4.2** and **5.4.3** provides a summary of the issues raised. **Appendix F** includes a weblink to the submissions.

During the exhibition period, members of the public met with the then Minister for Planning and presented a 1,400 signature petition in support of the application. The petition was presented by several local residents of Culburra Beach that also made individual submissions during the exhibition period. The petition was not submitted to the Department as a formal submission.

The seven submissions from Government agencies included:

1. Department of Primary Industries (DPI) comprising:
  - Fisheries NSW (Fisheries)
  - Marine Parks Authority (MPA)
  - NSW Office of Water (NOW)
  - Crown Lands
  - NSW Agriculture
2. Office of Environment and Heritage (OEH)
3. Roads and Maritime Services (RMS)
4. Rural Fire Service (RFS)
5. Shoalhaven City Council (Council)
6. Shoalhaven Water
7. Endeavour Energy.

Submissions from Government agencies raised numerous issues with the concept proposal and the EA. The Department requested clarifications and further information from the Applicant to address the issues. **Section 5.4.1** summarises the key issues raised by Government agencies throughout the assessment process, and provides the final position of each agency with respect to the concept proposal.

### **5.3. Applicant's Response to Submissions**

#### Response to Submissions (RTS), 2013

In October 2013, the Applicant provided a response to submissions (RTS) to address the issues raised. The RTS included updates to the Water Cycle Management Report, Water Quality Monitoring Plan and Estuarine Management Study. The Department made the RTS publicly available on its website and requested comments from the Government agencies that made submissions on the EA. Significant deficiencies were identified with the RTS and further information was requested from the Applicant to address the key issues.

#### Preferred Project Report (PPR), 2014

In September 2014, the Applicant provided a Preferred Project Report (PPR). The PPR did not include further assessment or analysis to address the key issues and it was not provided to Government agencies for comment. The Department requested the Applicant provide a final RTS to address the outstanding issues.

#### Supplementary Response to Submissions (SRTS), 2017

In July 2017, the Applicant provided a SRTS. The SRTS included the following revisions to the concept proposal:

- removing the proposed commercial development
- reducing the Stage 5 industrial development from 7.25 ha to 3.5 ha
- increasing the total number of residential dwellings from 637 to 650
- removing the boat ramp at the proposed Cactus Point tourist development
- removing the proposed wetland adjacent to the 7(a) environmental protection zone along the foreshore and retention of native vegetation
- increasing the size of the stormwater pond adjacent to the sports field.

The SRTS was made publicly available on the Department's website and provided to Government agencies with a request for final comments. **Section 5.3.1** summarises the final position of each Government agency. One special interest group (Lake Wollumboola Protection Association) provided a final submission on the SRTS, see **Section 5.3.3**.



#### 5.4. Issues Raised in Submissions

Across all submissions, the key issues related to:

- impacts on water quality, biodiversity and Aboriginal heritage
- impacts on the catchments of Lake Wollumboola and the Crookhaven River estuary
- social and economic benefits for the Culburra Beach community including housing, jobs, services and local businesses
- changes to the coastal village character and lifestyle of Culburra Beach.

Further discussion of the specific issues is provided below. **Table 7** summarises the Department's consideration of the issues raised.

##### 5.4.1. Government Agencies

**Fisheries** did not support the concept proposal described in the EA or RTS due to the potential unacceptable water quality impacts on the Crookhaven River, the Priority Oyster Aquaculture Areas and the proposed clearing of marine vegetation. Following a review of the SRTS, Fisheries stated final position is as follows:

*"DPI remains unconvinced that the development as proposed can be carried out without substantial risk of significant adverse impact upon the fisheries values of the Crookhaven River estuary".*

The specific issues raised by Fisheries include:

- potential unacceptable water quality impacts on the Crookhaven River and adverse impacts on POAAs
- failure to fully assess the impacts on POAAs, including impacts on productivity and suitability of oysters for human consumption
- proposed water quality treatments not properly designed for large storm events, when the most significant water quality impacts would occur
- proposed water quality monitoring inadequate and unlikely to detect water quality decline due to the lack of proposed stormwater sampling
- water quality modelling inadequate as it:
  - does not consider the "during development" scenario when most significant erosion and sediment impacts would occur. The period may extend over 20 years given the scale and staging of the development
  - rainfall data used not representative of worst case scenario, data over 40 years old, over an inadequate time period and use of a drought year is inappropriate
  - stated dual water quality objectives of Neutral or Beneficial Effect (NorBE) and Shoalhaven DCP are incompatible
- potential loss of key fish habitats
- foreshore clearing of mangroves to provide 'vistas' and at the tourist facility is not supported. Clearing would compromise the effectiveness of the riparian buffer to filter sediments and nutrients and stabilise the foreshore from wind and wave erosion. Clearing of riparian vegetation and mangroves is proposed without offset compensation and is not consistent with the *Fisheries Management Act 1994* in relation to protection of aquatic habitats and marine vegetation
- proposed developments within the 100 m riparian buffer (such as earth diversion bunds) would compromise its ecological integrity and effectiveness in reducing pollutant discharge to the Crookhaven River estuary
- inappropriate tourist development on the foreshore, the area is inaccessible to boats due to shallow depths and tides and the proposal is located over an existing POAA.

**NSW Food Authority** advised the proposal may have localised impacts on the estuary and three shellfish harvest areas in close proximity. One area is a Direct Harvest, which involves the sale of oysters for human consumption direct from the water, which is vital to the shellfish farmers business model. The Direct Harvest classification is based on the current water quality of the Crookhaven River and may be affected by the proposed urban development.

**NOW** provided submissions on the EA and RTS and raised the following concerns:

- clearing riparian foreshore areas to create 'vistas' is inappropriate and would compromise the ecological value of the foreshore buffer zone
- proposed foreshore clearing is not consistent with NOW's Guidelines for Controlled activities on Waterfront Land 2012
- the proposed tourism facility at Cactus Point may create expectations for boating access leading to requests for dredging which would have adverse impacts on the Crookhaven estuary

- potential impacts of the lengthy construction phase on water quality.

**Crown Lands** provided submissions on the EA, RTS and SRTS and raised the following concerns:

- Crown Lands does not support the proposed development over Crown land including proposed clearing of marine vegetation, walkways, viewing platforms, boat ramp or any other structures
- infrastructure to support the concept proposal must not be located on Crown land
- potential impacts of recreational facilities adjacent to the foreshore include illegal clearing of mangroves and marine vegetation to create views
- the proposed boat ramp is inappropriate given the shallow water depth
- use of Crown land as an offset is not supported, although it is not clear in the concept proposal how much of the proposed foreshore park is located over Crown land
- there is already considerable public access to the foreshore within Curleys Bay and the Crookhaven River estuary.

The **Marine Parks Authority** and **NSW Agriculture** raised no issues with the concept proposal as it is not located within the Jervis Bay Marine Park and there are no issues relating to agriculture.

**Council** provided submissions on the EA, RTS and SRTS. Council's final submission states that it generally supports the application and its intention, however it raised a number of issues and requested multiple revisions to the concept proposal. The issues raised included:

- unclear what works are proposed as part of Stage 1. Council has assumed the concept proposal does not include any physical works as part of Stage 1
- inconsistent references to a mixed-use site, unclear whether it is included or excluded
- unclear the number of lots and dwellings to be provided and the gross floor area for tourism and industrial components
- no development standards provided for subsequent DAs, nor comparison with Shoalhaven DCP requirements
- impacts on the existing commercial centre of Culburra Beach is not considered, but may be provided for in a Voluntary Planning Agreement
- measures are required to address the potential impacts of the tourism facility on the POAAs
- proposal is inconsistent with Planning for Bushfire Protection 2006 as follows:
  - inadequate perimeter roads around residential areas
  - no secondary access road, for safe evacuation
  - tourism development adjacent to sewage treatment plant (STP) requires excessive clearing to comply.

Council requested the following aspects be removed or amended within the concept proposal:

- remove the vegetation clearing for view corridors
- remove proposed Stage 1 development south of Culburra Road within the Lake Wollumboola catchment
- include an area for passive open space and avoid small pocket parks
- limit development within the foreshore area to an elevated walk/cycleway only
- include an area for aged care facilities
- exclude development in the industrial area that falls within the catchment of Lake Wollumboola
- include a recreational access point to the Crookhaven River for the proposed tourist facility in the western part of the site
- remove the proposed tourist facility adjacent to the STP as it is incompatible with the adjacent use
- include stormwater detention and discharge locations
- include north-south pedestrian and cycle linkages through the development.

The **Office of Environment and Heritage** (OEH) did not object but raised a number of issues and requested further detailed assessment. OEH acknowledged the South Coast Sensitive Urban Lands Review 2006 identified the site as suitable for some level of urban development but noted the need for careful design and planning to ensure protection of water quality, EECs and riparian zones. OEH noted its strong support for exclusion of development from the Lake Wollumboola catchment, noting a precautionary approach is needed given the very high conservation values of the lake and the potential for irreversible impacts. OEH also recommended substantial changes to the original concept proposal to exclude development from the foreshore buffer.

After requesting further targeted surveys and a biobanking assessment in accordance with relevant guidelines, OEH confirmed it was satisfied the concept proposal is unlikely to have a significant impact on threatened species, subject to exclusion of development from the foreshore buffer and provided suitable offsets are secured. OEH confirmed its preference for offsets to be sourced from the Lake Wollumboola catchment, with the land considered for addition to the Jervis Bay National Park.

OEH recommended further investigation for Aboriginal cultural heritage in the foreshore zone, the area of high archaeological potential, and around the proposed Cactus Point tourist facility. OEH noted the potential regional significance of the Crookhaven River midden complex and recommended total conservation. OEH does not support any impact to the midden complex associated with proposed recreational use of the foreshore.

OEH noted water quality as the greatest challenge and recommended considerable improvement in the proposed stormwater management system. OEH highlighted that stormwater management systems regularly fail to meet objectives and require a range of contingency measures to manage potential adverse impacts. Following review of the EA and RTS, OEH recommended an independent review of the water quality modelling and groundwater assessment, as it noted numerous inadequacies. In its final submission on the SRTS, OEH reiterated its concerns regarding irreversible impacts on the Lake Wollumboola catchment, and deferred to NSW Fisheries in relation to impacts on the Crookhaven estuary.

**Roads and Maritime Services (RMS)** provided a submission on the EA, RTS and SRTS. In the first submission RMS raised concerns about the potential impacts of the concept proposal on the intersection of the Princes Highway and Kalandar Street in Nowra. RMS conducted its own intersection analysis and concluded the concept proposal would have a very significant impact on the capacity of this intersection. RMS also noted the Applicant had not assessed the impacts of the full development in accordance with RMS guidelines. RMS also objected to the proposed main access roundabout on Culburra Road and the Applicant's request to reduce the speed limit on Culburra Road to facilitate the roundabout. Following a review of the RTS, RMS reconsidered its position stating it would agree to a roundabout for the main site access and a speed reduction on Culburra Road, subject to certain design aspects being demonstrated prior to determination of the concept application. RMS requested a design for the roundabout demonstrating that appropriate sight distances can be achieved and a suite of measures along Culburra Road to alert drivers to the change from a rural speed environment to an urban environment.

In its final submission, RMS stated the SRTS did not provide the additional design information requested in 2014 for the roundabout. RMS also raised concerns about a secondary access road referred to in the SRTS without additional details, noting its earlier advice that the site access points should be consolidated to ensure safety. RMS also noted the potential impacts on the Princes Highway and Kalandar Street intersection, advising RMS is in the planning stage to upgrade this intersection, and would require contributions for the upgrade works.

The **Rural Fire Service (RFS)** provided a submission on the EA, RTS and SRTS. Following review of the Bushfire Risk Report included in the EA, RFS requested amendments to the proposed asset protection zones (APZs) and the access road arrangements for emergency and evacuation purposes. In its final submission RFS stated the Applicant's RTS and SRTS had not adequately addressed the matters raised. RFS provided recommended conditions for the concept proposal in accordance with Planning for Bushfire Protection 2006. RFS also raised the following issues with the concept proposal:

- all APZs are not proposed within the development boundary
- RFS does not support clearing of ecologically significant vegetation to create APZs
- the APZ for the proposed café/retail component is unlikely to be achieved
- additional APZs and a secondary egress is required for the proposed industrial component
- the proposed fire trail in the western part of the site is required to provide secondary access for emergency and evacuation purposes
- there are inconsistencies between the APZs mapped in the Bushfire Risk Report and the concept proposal drawings provided in the EA.

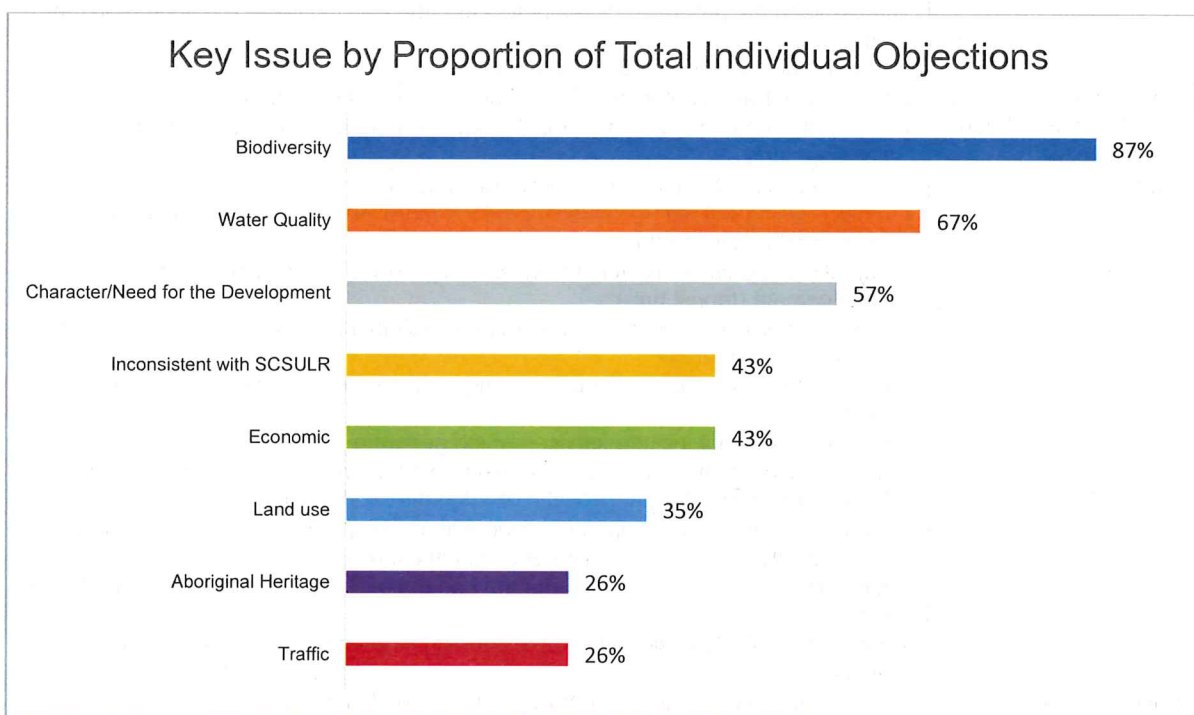
**Shoalhaven Water (SW)** provided detailed requirements for subsequent development applications to include when applying for connections to water and sewer services. SW advised the concept proposal would need to maintain a 400 m buffer around the existing sewage treatment plant, with no residential development allowed in this zone.

**Endeavour Energy (EE)** advised the existing electrical supply network is limited and a new supply line and substation would be required to service the concept proposal. EE requested the concept proposal include space for a new substation, close to the existing industrial area.

#### 5.4.2. General Public

Of the 34 submissions from the general public, 23 objected to the proposal including two petitions containing 780 signatures in total. Eleven submissions supported the concept proposal. A separate petition (not provided as a formal submission) was received by the Minister for Planning, including 1,400 signatures supporting the proposal. **Table 5** summarises the issues raised in objections and **Table 6** summarises the reasons cited for supporting the proposal. The issues are presented in the order of frequency that they were raised (most to least). **Figure 10** shows the percentage of objections that raised key issues, for example 87% of objections raised biodiversity as a key issue. **Figure 11** shows the percentage of supporting submissions that raised key issues.

Of the 23 objections received by the Department, 14 were from residents of Culburra Beach and Orient Point, whilst two were from residents located in the broader Shoalhaven local government area. Seven objections were from individuals residing in Sydney, of which five identified they were regular visitors to Culburra Beach and the surrounding area. **Figure 12** shows an indicative location of all public submitters.



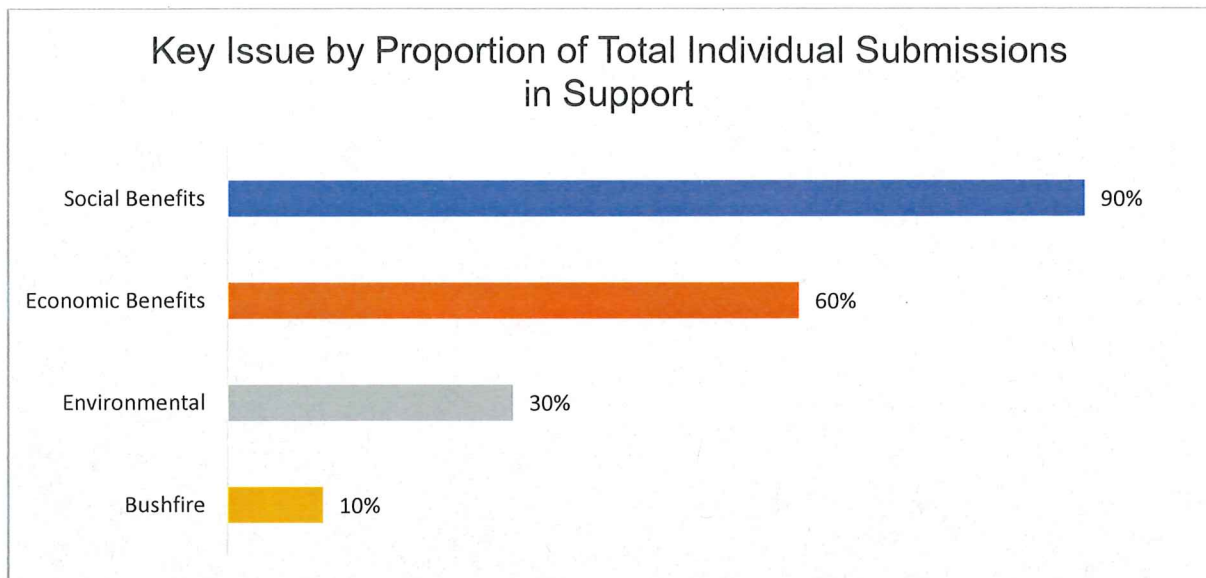
**Figure 10:** Public objections by issue and percentage of submissions that raised each issue

**Table 5:** Issues Raised in Objections

Issue	Detail
Biodiversity	<ul style="list-style-type: none"> <li>• large scale clearing of native vegetation including endangered ecological communities</li> <li>• impacts on habitat of threatened species and migratory birds</li> <li>• area represents a significant wildlife corridor connecting Jervis Bay National Park, Comerong Island Nature Reserve, Seven Mile Beach National Park and Morton National Park</li> <li>• impacts on SEPP 14 wetlands, mangroves and seagrass beds</li> <li>• ecological value of foreshore land will be degraded by the demands of recreational use from the residential development</li> <li>• linear riparian buffer would be highly susceptible to edge effects that would erode its ecological value</li> </ul>



Issue	Detail
	<ul style="list-style-type: none"> <li>• impacts on native orchid species not adequately assessed and likely to be significant</li> <li>• impact of lighting from the development on waterbird roosting sites not considered</li> <li>• proposed planting of Norfolk Island pines is inappropriate for the bushland setting of Culburra Beach.</li> </ul>
Water quality	<ul style="list-style-type: none"> <li>• pollution and runoff into the sensitive ecosystem of Lake Wollumboola</li> <li>• impacts on water quality of the Crookhaven River estuary including effects on oyster leases, SEPP 14 wetlands, mangroves and fish habitat</li> <li>• inadequate water quality management system, potential negative impacts on oyster health, production and local jobs in the oyster industry</li> <li>• erosion and sedimentation risks from urban development and from increased recreational activity at the tourist hub</li> <li>• sedimentation, river dredging and damage to banks and seagrass beds from proposed boat ramp and jetty at tourist hub.</li> </ul>
Character of Culburra Beach and Need for Development	<ul style="list-style-type: none"> <li>• proposal is over-development and not justified for the locality</li> <li>• proposed four-storey buildings along Culburra Road are too high and would substantially change the character of the entrance to Culburra Beach, which is a low density, quiet, coastal town characterised by native bushland</li> <li>• loss of tourism from the area due to changed nature of Culburra Beach from a quiet coastal village and removal of native bushland and impacts on water quality</li> <li>• lack of connection to the existing town centre of Culburra Beach, with vacant areas in between the proposed development and the existing town, requiring more car trips</li> <li>• development of this scale is not needed.</li> </ul>
Inconsistent with South Coast Sensitive Urban Lands Review	<ul style="list-style-type: none"> <li>• land within Lake Wollumboola catchment to be protected from urban development</li> <li>• land within catchment of the Crookhaven River suitable for limited urban development.</li> </ul>
Economic	<ul style="list-style-type: none"> <li>• economic benefits not adequately demonstrated</li> <li>• more housing will not necessarily produce more jobs and services as Nowra is the main employment centre</li> <li>• potential impacts on existing businesses that would be duplicated in the development (tourist hub)</li> <li>• existing areas of Culburra Beach are more suitable for urban expansion, including existing cleared areas</li> <li>• need to boost businesses in the existing town centre, rather than compete with them</li> <li>• proposal does not include services which generate jobs</li> <li>• over-development would detract tourists from the area who visit for the natural beauty and tranquillity, negatively affecting the local economy.</li> </ul>
Land Use	<ul style="list-style-type: none"> <li>• land use conflict from proposed residential and recreational areas adjacent to the existing sewage treatment plant and industrial area</li> <li>• medium density housing inappropriate and out of character with existing Culburra Beach</li> <li>• lack of walkability designed into the concept proposal and lack of public open space.</li> </ul>
Aboriginal heritage	<ul style="list-style-type: none"> <li>• risk of impacts on significant Aboriginal heritage items and land of cultural significance</li> <li>• accidental impacts and vandalism of Aboriginal heritage items through increased use and activity at the tourist hub, which is in close proximity to items of significance.</li> </ul>
Traffic	<ul style="list-style-type: none"> <li>• increased congestion and changed character of the quiet coastal village</li> <li>• only one road in and out of Culburra Beach and extra traffic will be detrimental</li> <li>• intersection of Princes Highway and Kalandar Street already exceeds capacity and extra traffic from the development would cause further congestion.</li> </ul>



**Figure 11:** Public support by issue and percentage of submissions that raised each issue

**Table 6:** Issues Raised in Support

Issue	Detail
Social benefits	<ul style="list-style-type: none"> <li>• address demand for housing in Culburra Beach</li> <li>• lack of housing has constrained growth of Culburra Beach</li> <li>• enable young people to own their own home in Culburra Beach by providing affordable housing</li> <li>• create local jobs and retain existing jobs that are threatened by population decline</li> <li>• increase services including health, aged-care and public transport</li> <li>• provide additional recreational facilities for new and existing residents</li> <li>• address declining population</li> <li>• boost local businesses.</li> </ul>
Economic benefits	<ul style="list-style-type: none"> <li>• encourage more permanent residents</li> <li>• generate employment</li> <li>• increase revenue for local businesses and maintain business viability</li> <li>• provide for demand in 55+ housing.</li> </ul>
Environmental	<ul style="list-style-type: none"> <li>• development within catchment of Lake Wollumboola is ok because of modern water treatment technologies.</li> </ul>
Bushfire	<ul style="list-style-type: none"> <li>• reduce bushfire risk to existing residential area and town centre.</li> </ul>



Figure 12: Indicative location of public submitters

#### 5.4.3. Special Interest Groups

Three submissions were received from special interest groups, including:

- Jerrinja Local Aboriginal Land Council
- Lake Wollumboola Protection Association
- Australia's Oyster Coast.

All three special interest group submissions objected to the concept proposal.

The **Jerrinja Local Aboriginal Land Council (JLALC)** raised serious concerns about the proposal and the protection of cultural and environmental heritage on the site. The JLALC stated that much of the land is adjacent to Jerrinja land titles and include significant areas that fall within traditional land boundaries of the Jerrinja people. The JLALC highlighted that lands in the vicinity are scheduled to be handed back to the traditional owners through National Parks and Wildlife legislation.

The **Lake Wollumboola Protection Association (LWPA)** provided a submission on the EA and following review of the SRTS. The LWPA objected to the proposal on the basis of:

- potential water quality impacts on the Crookhaven estuary, including impacts on mangroves, seagrasses, saltmarsh and oyster leases
- potential water quality impacts on Lake Wollumboola
- removal of native vegetation and impacts on threatened species, including proposed removal of mangrove vegetation for vistas
- inconsistency of the proposal with strategic planning objectives including the South Coast Sensitive Urban Lands Review and the Illawarra Shoalhaven Regional Plan
- impacts of proposed development within the foreshore buffer including the cycle/walkway, viewing platforms, picnic and play areas
- potential impacts on Aboriginal cultural heritage and inappropriate location and scale of tourist development at Cactus Point
- no consideration of potential impacts on migratory bird species protected under the EPBC Act and known to use the Crookhaven estuary and Lake Wollumboola
- inadequate consideration of suitable alternative locations for urban development



- proposed biodiversity offset strategy excludes land at Long Bow Point which has been identified as a priority area for environmental protection. Proposed offset is not consistent with objectives of the South Coast Sensitive Urban Lands Review and South Coast Regional Strategy
- scale of development is extensive and not justified by socio-economic impacts
- water quality assessment does not take adequate account of impacts from major storm events or construction phase impacts.

**Australia's Oyster Coast (AOC)** objected to the concept proposal in its current form on the basis of the proximity to existing oyster leases, the effectiveness of the environmental controls and the lack of direct engagement with the oyster industry in planning the development. The AOC noted it does not object to carefully planned development that includes stakeholder consultation and best practice environmental mitigation measures.

### 5.5. Department's Consultation

In April 2018, the Deputy Secretary, Planning Services and the Executive Director, Key Sites and Industry Assessments visited the site and met with the Applicant and the Lake Wollumboola Protection Association (LWPA). The LWPA reiterated the concerns raised in their submission including the potential water quality and biodiversity impacts on Lake Wollumboola. In May 2018, the Executive Director, Key Sites and Industry Assessments met with representatives of the Culburra Beach and Districts Progress Association and the Culburra Chamber of Commerce. These groups noted their support for the proposal, stating Culburra Beach needs further residential development to prevent population decline and the closure of local businesses.

### 5.6. Department's Consideration of Submissions

**Table 7** summarises the Department's consideration of the key issues raised by the public and special interest groups, with reference to the relevant sections of this report where the issue is evaluated in detail.

**Table 7: Department's Consideration of Issues Raised – Public and Special Interest Groups**

Issues Raised	Department's Consideration	Reference
Biodiversity	<ul style="list-style-type: none"> <li>• The Department assessed the biodiversity impacts in consultation with OEH and considering all submissions.</li> <li>• The Department's assessment concluded the biodiversity impacts could be adequately offset via the proposed biobank sites, however the Department considers the Planning Proposal is the most appropriate mechanism to evaluate biodiversity conservation outcomes for the Halloran landholdings, including the West Culburra site.</li> <li>• When considering the cumulative impacts of native vegetation clearing and water quality impacts on the Crookhaven River estuary and Lake Wollumboola, the Department concluded the potential impacts present an unacceptable level of risk that is not outweighed by the potential benefits of the concept proposal.</li> </ul>	Section 6.3
Water quality	<ul style="list-style-type: none"> <li>• The Department appointed an independent water quality expert (BMT) to assist in its consideration of the water quality impacts.</li> <li>• The Department has evaluated the Applicant's water quality modelling and assessment, the advice from BMT, submissions from key agencies including Fisheries, OEH, NSW Food Authority and NOW and submissions from AOC, LWPA and the public.</li> <li>• The Department's assessment concludes the concept proposal has the potential to cause significant impacts on water quality in the Crookhaven River estuary and Lake Wollumboola and serious and irreversible impacts on the oyster industry and SEPP 14 wetlands.</li> <li>• The Department considers a precautionary approach should be applied and concludes the potential for serious and irreversible impacts on these sensitive environments presents an unacceptable risk, which warrant refusal of the concept proposal.</li> </ul>	Section 6.2
Aboriginal heritage	<ul style="list-style-type: none"> <li>• The Department considered the Aboriginal Cultural Heritage Assessment (ACHA) provided by the Applicant and submissions from OEH, JLALC, LWPA and the public.</li> <li>• The Department notes the ACHA did not cover key aspects of the concept proposal (tourist development at Cactus Point and</li> </ul>	Section 6.4



Issues Raised	Department's Consideration	Reference
	<p>developments in the foreshore buffer zone), where there is high potential for archaeological deposits.</p> <ul style="list-style-type: none"> <li>• The ACHA noted the presence of the Crookhaven River midden complex near the proposed Cactus Point tourist facility and noted its regional value.</li> <li>• OEH confirmed the middens are of regional significance and warrant total conservation. OEH does not support any impact to the midden complex from recreational use of the foreshore.</li> <li>• The Department's assessment concludes the proposed tourist development is inappropriately located given the potential for impacts on items of regional heritage significance and high cultural significance.</li> </ul>	
<p>Inconsistent with South Coast Sensitive Urban Lands Review (SCSULR)</p>	<ul style="list-style-type: none"> <li>• The SCSULR identified ecological values that form significant constraints to urban development and concluded that land within the Lake Wollumboola catchment is entirely unsuitable for urban development.</li> <li>• The SCSULR noted the remaining land within the catchment of the Crookhaven River, immediately west of Culburra Beach is suitable for limited urban development.</li> <li>• The SCSULR recommended any new release area achieve higher densities to reduce the land-take and provide for 10 to 15 years of estimated housing need. Site planning should achieve bushfire setback requirements, protect endangered ecological communities and exceed standards for riparian setbacks.</li> <li>• The Department considers components of the concept proposal, including all development within the catchment of Lake Wollumboola are inconsistent with the SCSULR.</li> </ul>	<p>Section 3.3</p>
<p>Character of Culburra Beach, Site Suitability and Land Use Conflict</p>	<ul style="list-style-type: none"> <li>• The Department has evaluated the concept proposal in the context of the environmental attributes of the site and surrounding area, urban development planning for the Shoalhaven and the potential impacts of the concept proposal.</li> <li>• The Department considers the site is unsuitable for the scale of urban development proposed due to the potential ecological impacts on the sensitive Crookhaven River estuary and Lake Wollumboola. The concept proposal is likely to adversely impact on water quality, priority oyster leases, SEPP 14 wetlands and marine vegetation. The concept proposal would require clearing of a large area of native vegetation including endangered ecological communities and would adversely impact on regionally significant Aboriginal midden sites.</li> <li>• The proposed scale of the residential development is not consistent with strategic plans that identify the need to balance urban development in Culburra Beach with environmental protection.</li> </ul>	<p>Section 1.2, 2.2, 3 and 6.1</p>
<p>Economic</p>	<ul style="list-style-type: none"> <li>• The EA did not include an economic assessment. The Applicant maintains there is a demand for new housing in Culburra Beach and considers the provision of new housing would stimulate the local economy by promoting new business opportunities in tourism and providing local employment. No detailed information was provided to support these assumptions.</li> <li>• The Culburra Beach and Districts Progress Association and Culburra Chamber of Commerce stated the development would provide the existing community with alternative housing choices (older population wanting to move into smaller dwellings) and would provide young people with an opportunity to stay in Culburra Beach and purchase their own home.</li> <li>• The Department notes there has been a declining population trend in Culburra Beach over the past 10 years. This is likely due to a lack of employment opportunities, a lack of suitable housing and the high levels of holiday home ownership.</li> <li>• Despite this trend, Council estimates Culburra Beach will grow by 582 people over the next 20 years, which would require an estimated 280 new dwellings. This is substantially less than the 650 dwellings in the concept proposal.</li> <li>• The Department acknowledges Culburra Beach requires some further urban development to provide an appropriate mix of</li> </ul>	<p>Section 1.5 and 2.2</p>

Issues Raised	Department's Consideration	Reference
	<p>housing types and to service and stimulate future growth. In 2014, the former Minister for Planning recommended Council lodge a Planning Proposal for the Halloran Trust landholdings to protect the Lake Wollumboola catchment and provide for the sustainable growth of Culburra Beach. This is also recognised in the ISUDP 2016 through identification of the Culburra investigation area.</p> <ul style="list-style-type: none"> <li>• The Department considers the Planning Proposal is the appropriate mechanism for evaluating a suitable development footprint that responds to the needs and demands for housing in Culburra Beach and protects the sensitive environmental attributes of the locality. This process is currently underway and will be supported by detailed environmental, social and economic studies.</li> </ul>	
Traffic	<ul style="list-style-type: none"> <li>• The Department assessed the traffic and access impacts of the concept proposal in consultation with RMS and Council.</li> <li>• The Department considers the potential traffic impacts could be managed through design treatments and financial contributions to intersection upgrades; however, there are unresolved aspects that were identified as early as 2014. These include the design of the main access and reference to a secondary access road without adequate details.</li> <li>• Despite repeated requests for further information, the Applicant has been unable to address the outstanding matters to a satisfactory level.</li> <li>• The Department is unable to definitively conclude the development would be acceptable from a traffic and access perspective.</li> </ul>	Section 6.5

## 6. ASSESSMENT

The Department's assessment of the concept proposal has been undertaken in accordance with the EP&A Act. The relevant matters for consideration in determining the application are:

- the provisions of relevant EPI's
- the likely impacts of the concept proposal, including environmental impacts on the natural environment, and social and economic impacts in the locality
- the suitability of the site for the development
- submissions made in accordance with the EP&A Act or the EP&A Regulation
- whether the concept proposal is in the public interest.

In preparing this assessment, the Department visited the site on several occasions and considered the Applicant's EA, RTS, SRTS and independent advice from water quality expert BMT WBM. The Department has considered the submissions made by government agencies, special interest groups and the public during exhibition of the EA and following review of the RTS and SRTS. The Department and other Government agencies repeatedly requested additional assessment information from the Applicant throughout the assessment period, to fully address the key issues. Despite multiple revisions to the concept proposal and key environmental studies, the Department and other Government agencies consider the issues remain unresolved. These issues are discussed throughout **Section 6** of this report.

The Department considers the key issues relevant to the concept proposal are:

- suitability of the site for the proposed development
- water quality
- biodiversity
- Aboriginal heritage
- traffic.

### 6.1. Suitability of the Site for the Proposed Development

Section 4.15(c) of the EP&A Act requires the consent authority to consider the suitability of the site for the proposed development. In assessing whether the concept proposal is suitably located, the Department has considered the:

- environmental attributes of the site and its immediate surrounds
- outcomes of the strategic studies (refer to **Section 3**)
- strategic planning work currently underway for the Halloran landholdings.

#### Environmental Attributes of the Site

Culburra Beach is surrounded by significant natural assets. It has beaches to the east, Lake Wollumboola and Jervis Bay National Park to the south, the Crookhaven River estuary to the north and native forests and agricultural areas to the west. Most of site is covered in mature native vegetation, with some cleared pasture areas to the west. The site has a 3 km frontage to the Crookhaven River estuary. Immediately adjacent to the site are protected wetlands, Priority Oyster Aquaculture Areas and Aboriginal middens of regional significance (some of which are within the development boundary). Part of the site is located within the catchment of Lake Wollumboola. **Sections 6.2 to 6.4** of this report provide more detail of the environmental attributes of the site.

#### Strategic Studies and Planning Proposal

As detailed in **Section 3**, a number of strategic studies have identified Lake Wollumboola as requiring environmental protection and noted the land in the Crookhaven River catchment could yield some limited urban development, subject to detailed consideration of environmental impacts. In 2015, the Halloran Trust lodged a Planning Proposal to guide urban development and environmental conservation across all of the Halloran landholdings, including the West Culburra site. The Planning Proposal will be supported by a range of strategic studies covering water quality, groundwater, biodiversity, Aboriginal heritage and socio-economic.

The Department considers the proposed 650 dwellings considerably exceeds Council's growth projection for a further 280 dwellings in Culburra Beach up to 2036. The Applicant maintains there is an existing housing shortage in Culburra Beach and that development would encourage further growth, however detailed studies were not provided to support this view. The Applicant also notes up to 30% of the 650 dwellings may be holiday homes, reflecting the high level of holiday home ownership in Culburra Beach (ABS 2016 noted 44% of existing dwellings were unoccupied on Census night, compared with the NSW state average of 10%).

Council is currently assessing the Planning Proposal, which will determine the most appropriate locations for urban development and environmental conservation. The Department considers the scale of the development has not been adequately justified by the Applicant and is not supported by Council's growth projections, or the objectives of the strategic plans. The SCSULR recommended future urban development in Culburra Beach focus on increased densities to reduce the land take and subsequent environmental impacts. The Department acknowledges further urban development in Culburra Beach may be warranted, however this needs to be balanced with demand and environmental factors.

The Department concludes the scale of the concept proposal is incompatible with the environmental attributes of the site and immediate surrounds. The proposal includes 46 residential lots of low and medium density within the catchment of Lake Wollumboola. This is despite the Secretary's Environmental Assessment Requirements expressly stating the application should not include land within the Lake Wollumboola catchment and numerous strategic studies highlighting the need to protect the lake catchment from development. The Department also considers the scale of development would have an adverse and irreversible impact on the water quality of the adjacent Crookhaven River estuary, which supports priority oyster aquaculture, wetlands of state importance and key fish habitat. The proposed tourist facility at Cactus Point is also likely to have adverse impacts on regionally significant Aboriginal middens.

The Department's assessment concludes the concept proposal is incompatibly located with regard to strategic planning for balancing housing delivery with environmental protection. The Department concludes the concept proposal would not adequately protect the sensitive ecological resources of Lake Wollumboola and the Crookhaven River estuary. On this basis, the Department considers the concept proposal is not in the public interest and should be refused.

## 6.2. Water Quality

### 6.2.1. Introduction

The concept proposal would substantially change the site from a densely vegetated native landscape to an urban landscape with houses, tourist facilities, industrial activities, roads and drainage. The concept proposal has the potential to increase runoff and pollutants to the adjacent Crookhaven River estuary and Lake Wollumboola, increasing sediments and nutrients including phosphorus, nitrogen, salinity and faecal coliforms. Changes in water quality can adversely impact on marine vegetation, fish, waterbirds and oyster leases, which are particularly susceptible to changes in water quality. The long construction period (over a 20 year period) has the potential to substantially increase sediments in runoff from the site.

The site has a 3 km frontage to the Crookhaven River estuary, see **Figure 13**. The Crookhaven estuary is identified as an environmentally sensitive estuary that supports important aquatic habitat, fish species, migratory birds and a number of priority oyster leases. Two wetland areas listed under SEPP 14 are located immediately adjacent to the site. Part of the proposal is also within the catchment of Lake Wollumboola located to the south of the site, which is identified as having high ecological significance and is located within the Jervis Bay National Park.

The Applicant prepared a number of water quality studies to identify the potential impacts and provide a conceptual design for capture, treatment and discharge of stormwater. The studies included:

- Water Cycle Management Report, Martens 2012 (revised in 2013, 2016 and Addendum 2017), collectively referred to in this report as the WCMR
- Water Quality Monitoring Plan incorporating Sediment and Erosion Control Plan, Martens 2013 (revised 2016)
- Estuarine Management Study, Martens 2013 (revised 2016)
- Estuarine Processes Modelling Report, Martens 2016
- Aquatic Ecology Impact Assessment, Ecological Australia 2017.

The Department received submissions from government agencies, including Fisheries, OEH, NOW and Council raising water quality as a concern, as well as submissions from special interest groups such as Australia's Oyster Coast and Lake Wollumboola Protection Association. Many submissions from the general public also raised water quality impacts as a key concern.

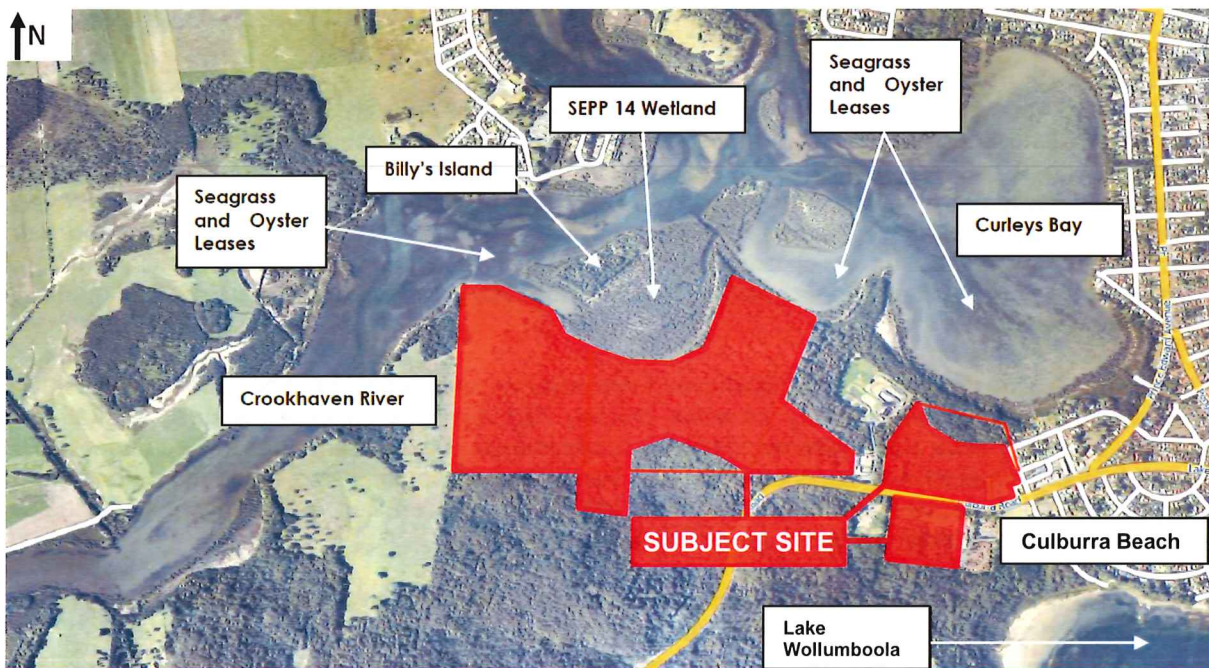
Due to the scale of the proposal and the proximity to sensitive water resources, the Department commissioned an independent water quality expert, BMT WBM (BMT), to provide advice on the likely water quality impacts of the concept proposal. BMT reviewed the water quality studies prepared by the Applicant and liaised directly with the Applicant's water quality consultant Martens, on aspects of the water quality modelling. BMT raised numerous questions about the modelling and over a period of three years, BMT reviewed multiple revisions of the water quality studies and modelling.

### 6.2.2. Existing Water Resources around the Site

#### Crookhaven Estuary and Curleys Bay

The Crookhaven estuary supports extensive areas of marine vegetation including seagrasses, mangroves and saltmarsh. DPI noted the estuary provides important fish habitat and supports Priority Oyster Aquaculture Areas (POAAs) and commercial and recreational fishing. Curleys Bay is located on the north-eastern boundary of the site and Cactus Point is located at the north-western boundary. The catchment upstream of the site contains large areas of vegetated native forest, land used for agriculture and some areas of urban development. The Crookhaven estuary is identified in the Illawarra-Shoalhaven Regional Plan as an important source of agricultural output from oyster farming.





**Figure 13: Water Resources around the Site**

Priority Oyster Aquaculture Areas (POAAs)

There are numerous POAAs in the Crookhaven estuary, see **Figure 14**. The POAAs cover 108 ha and are located in Curleys Bay, around Goodnight Island and immediately adjacent the site at Cactus Point, Cans Point and around Billys Island. The POAAs are an important economic activity in the region with the NSW oyster industry the largest producer of edible oysters in Australia, valued at \$39 million annually.

The NSW Oyster Industry Sustainable Aquaculture Strategy (OISAS) 2016 identifies water quality objectives for the estuaries that support the NSW oyster industry. The broad aims are to protect water quality for safe human consumption and viable production of edible oysters and to maintain or rehabilitate estuarine processes and habitats. The OISAS identifies human activities as the key threat to water quality decline affecting the oyster industry, including sewerage system overflows and leaks, stormwater run-off, contaminated sediments and discharges from industrial premises and agriculture. Oysters filter large volumes of water making them particularly sensitive to changes in water chemistry. Environmental pollutants impact on oyster growth and production and can impact the suitability of oysters for human consumption through bioaccumulation of pollutants. NSW Food Authority advised there is one direct harvest area close to the site which is approved for the sale of oysters for human consumption, direct from the water. The direct harvest classification is based on the current water quality of the Crookhaven River and any changes to the water quality could impact the classification and business operation.

As discussed in **Appendix B**, SEPP 62 Sustainable Aquaculture provides for the protection of POAAs from the adverse impacts of developments.

SEPP 14 Wetlands

One SEPP 14 wetland is located along the entire foreshore of the site in the Crookhaven estuary. The EA provided maps of the wetland based on field survey, shown in the yellow boundary on **Figure 15**. SEPP 14 identifies coastal wetlands in NSW and aims to preserve and protect the wetlands.



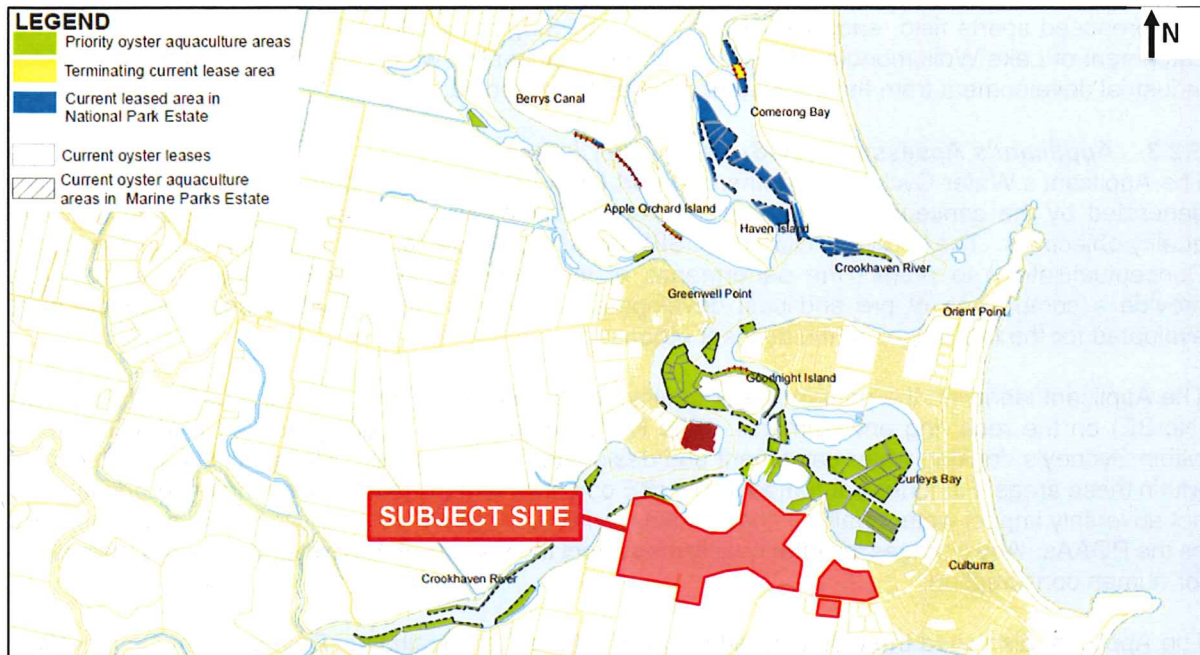


Figure 14: Priority Oyster Aquaculture Areas (green)

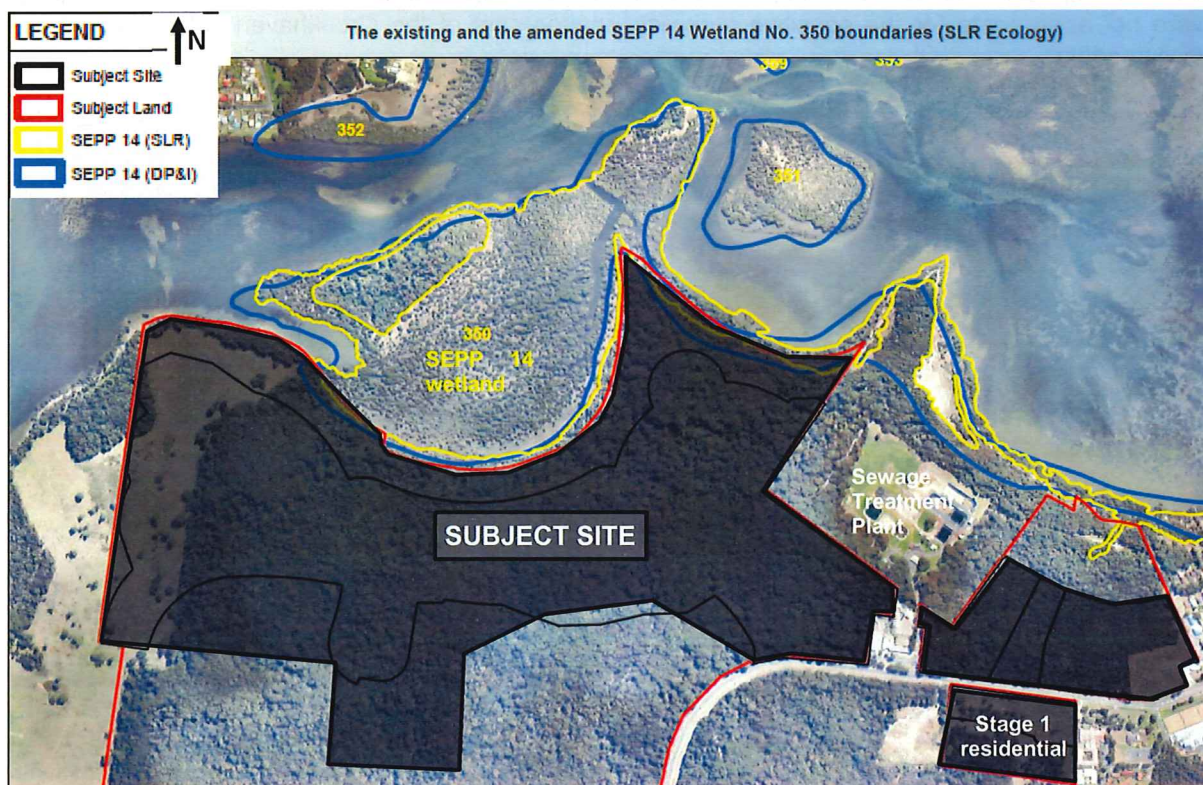


Figure 15: SEPP 14 Wetland (yellow boundary)

Lake Wollumboola

Lake Wollumboola is located 500 m south of the Stage 1 residential area and approximately 2 km south of the main development area. The surface water catchment of the lake is shown in **Figure 16**. The catchment of Lake Wollumboola has been identified in various strategic planning documents for environmental protection and has been identified as unsuitable for urban development (refer to **Section 3**). The Department advised the Applicant in the SEAR's for the EA, that the proposal should exclude development from the catchment of Lake Wollumboola.



The proposed sports field, entrance roundabout, and Stage 1 residential area are located within the catchment of Lake Wollumboola. The size of the industrial area was reduced in the SRTS to exclude industrial development from the catchment of Lake Wollumboola.

### 6.2.3. Applicant's Assessment of Surface Water Impacts

The Applicant's Water Cycle Management Report (WCMR) predicted stormwater quality and quantity generated by the concept proposal and the treatment measures needed to achieve specific water quality objectives. The WCMR included MUSIC modelling (Model for Urban Stormwater Improvement Conceptualisation) to predict the performance of the proposed stormwater treatment system and provide a comparison of pre and post development scenarios. Construction phase impacts were evaluated for the five stages of the concept proposal.

The Applicant identified the primary water quality objective is to achieve a Neutral or Beneficial Effect (NorBE) on the receiving environments. The NorBE objective is routinely applied to developments within Sydney's drinking water catchment and designated marine parks. Whilst the site is not located within these areas, Fisheries confirmed the NorBE objective is important for ensuring the proposal does not adversely impact water quality in the Crookhaven estuary given the sensitive uses it supports, such as the POAAs. Any changes in water quality may affect the viability of the oyster leases and their safety for human consumption.

The Applicant also cited the pollution reduction criteria in the Shoalhaven Development Control Plan, 2014 (DCP) as relevant criteria for the proposed stormwater treatment system. However, Fisheries and OEH noted these criteria are less stringent than the NorBE objective and are not appropriate for the concept proposal. The Department's water quality expert BMT reiterated that the DCP requirements were not appropriate for the sensitive receiving environment of the Crookhaven estuary and Lake Wollumboola.

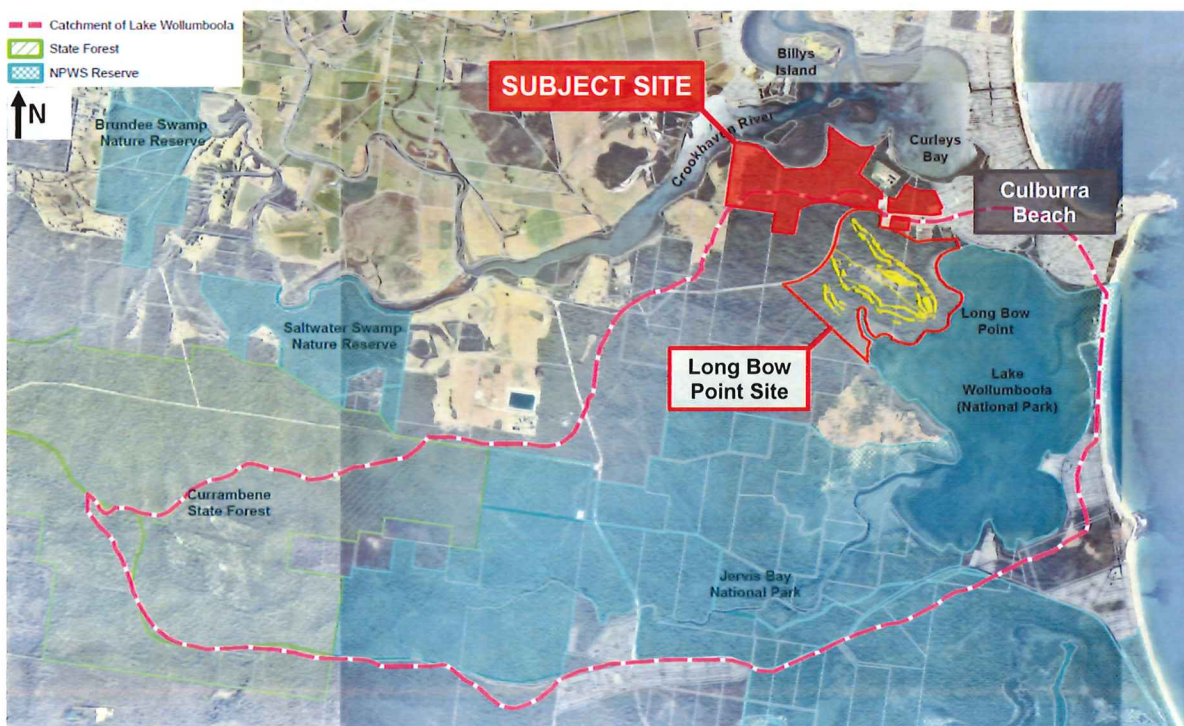


Figure 16: Surface Water Catchment of Lake Wollumboola

The Applicant's WCMR included a conceptual stormwater treatment system that would be refined during detailed design of each development stage. Key elements of the system are shown on **Figure 17** and include:

- rainwater reuse – rainwater tanks for each dwelling and the tourist and industrial developments
- source controls – bioretention swales adjacent to roads to filter nutrients and sediments and aid infiltration. Bioretention swales would include stormfilter / enviropod treatment to remove gross pollutants and suspended solids

- end of line controls – bioretention basins to capture and treat runoff before discharge to the Crookhaven estuary. Located at the site entrance roundabout, in the industrial area and adjacent to the medium density development area
- a constructed wetland adjacent to the sports field to capture stormwater for irrigation of the oval
- an infiltration system along the foreshore adjacent to Stages 2 and 3 of the residential areas and the SEPP 14 wetland to remove nutrients prior to discharge to the Crookhaven estuary
- discharge along the length of the infiltration system to minimise erosion and scouring
- protection of a 100 m riparian buffer along the foreshore to assist infiltration and nutrient uptake before discharge.

The WCMR stated this stormwater treatment system would achieve a NorBE on water quality in the Crookhaven estuary and the catchment of Lake Wollumboola.

BMT reviewed the WCMR and questioned the claim that a NorBE on water quality would be achieved given the validity of some of the assumptions used in the model. This included assumptions about infiltration rates and the effectiveness of the proposed treatment system. The Applicant subsequently modified components of the concept proposal in an attempt to address these concerns. The modifications included:

- reducing the industrial area by 50%
- removing the assumption that the 100 m riparian buffer would absorb nutrients from site runoff
- removing proposed wetland and infiltration systems along the foreshore and retaining it as woodland
- reducing impervious areas of roads and rooftops
- increasing the wetland adjacent to the sports field in the Lake Wollumboola catchment.

The WCMR stated the proposed stormwater treatment system would reduce pollutant loads compared to the pre-development scenario as follows:

- total suspended solids (TSS) – 24% to 63% reduction to receiving waters
- total phosphorus (TP) – 5% to 22% reduction
- total nitrogen (TN) – 2% to 11% reduction
- gross pollutants (GP) – 0 to 13% reduction.

The WCMR also states the stormwater treatment system would achieve pollutant removal efficiency between 83% and 100%, however it is not clear how these values were calculated. The WCMR concludes the water discharged from the development would be of better quality than under the current, pre-development scenario, thereby achieving the NorBE objective. The Applicant's assessment concludes there would be negligible impact on the SEPP 14 wetland, seagrasses, POAAs and Lake Wollumboola as a result of the improved water quality generated by the concept proposal.

The WCMR included a brief discussion of the stormwater flows generated by the concept proposal. The assessment compared pre and post-development flows and concluded the developed area discharging to the SEPP 14 wetland must be limited to 34.9 ha to mimic pre-development flows. The assessment recommends flows outside this area be diverted and discharged to the Crookhaven River (presumably away from the SEPP 14 wetland, although this was not stated). The assessment concludes that on-site detention is not required. The WCMR did not include a plan showing the 34.9 ha area in the context of the full development.

#### Construction phase

The WCMR included modelling for each construction stage for comparison with pre and post-development scenarios. The modelling assumed standard erosion and sediment controls including sediment basins, energy dissipaters, earth diversion bunds and sediment fences. The WCMR provided model outputs without discussion or analysis of the results. The assessment did not reference a construction timeframe, however the Department notes other components of the EA suggest the staged construction may take up to 20 years depending on housing demand.

#### Aquatic Ecology

In the SRTS, the Applicant provided an Aquatic Ecology Impact Assessment (AEIA) to assess the potential impacts of changes in water quality on key fish habitat in the Crookhaven estuary including seagrasses, mangroves and saltmarsh.



The AEIA utilised data from the MUSIC and Tuflow models prepared in the WCMR and EPMR to evaluate the potential impacts of changes in salinity, nutrients and suspended solids on aquatic habitats. The AEIA concluded the concept proposal would be unlikely to have a significant impact on key fish habitat given there would be no changes in salinity, suspended solids and nutrients within the estuary as a result of the concept proposal.

#### Estuarine Processes Modelling Report (EPMR)

To address issues raised by BMT, the Applicant undertook an assessment of the potential water quality impacts of the concept proposal on the Crookhaven estuary including Curleys Bay. The aim of the EPMR was to identify the movement of pollutants within the estuary to determine potential impacts on oyster leases and aquatic flora and fauna. The assessment included background water quality sampling and modelling using the Tuflow AD model. The assessment predicted salinity, nutrient and sediment movement from stormwater runoff through the estuary, for a range of weather conditions (average, dry, wet, extreme wet). The model considered scenarios including nutrient uptake from the 100 m riparian buffer, and no nutrient uptake.

The EPMR concluded:

- the existing estuary is a disturbed ecosystem with compromised health
- oyster harvests are regularly closed for several months due to adverse water quality
- pollutant concentrations from the existing Culburra Beach urban area are more intense and larger than from the concept proposal
- the existing Culburra Beach urban area has not negatively impacted estuary health
- changes to salinity, TN, TP and TSS would be negligible post-development due to the effectiveness of the proposed stormwater treatment system and reduced stormwater flows from the developed site
- estuary health would be improved under many of the post-development scenarios modelled
- the development would increase salinity by up to 10% and reduce TN, TP and TSS by between 4% and 7%
- the NorBE objective would be achieved for the scenario including nutrient uptake from the foreshore buffer, but would not be achieved for the scenario of no nutrient uptake.

Martens stated the estuarine processes model did not require a re-run as the predicted change in water quality within the Crookhaven estuary would be negligible.

#### Water Quality Monitoring Plan

The Applicant provided a Water Quality Monitoring Plan (WQMP) to address concerns raised by Fisheries and OEH. The WQMP included a Sediment and Erosion Control Plan (SECP) for the construction phase.

Key aspects of the Applicant's WQMP are:

- groundwater monitoring at four locations close to the foreshore
- estuary water quality monitoring at four sites for TN, TP, TSS, salinity and faecal coliforms
- shellfish monitoring at one location to supplement existing monitoring by the NSW Food Authority
- regular inspection and maintenance of stormwater quality improvement devices
- secondary indicator monitoring such as weed growth, scouring, sediment plumes and dead native vegetation, including quarterly photographic monitoring at 14 locations on the site.

The WQMP stated there would be no sampling and analysis of stormwater runoff from the site. The Applicant proposes to commence monitoring 12 months prior to construction and continue monitoring throughout construction and for a period of three years after 70% completion of the development, unless water quality impacts require further monitoring.

The SECP proposed for the construction phase includes four sediment basins, earth diversion bunds, sediment fences, energy dissipaters and a stabilised construction road access.

#### **6.2.4. Issues Raised in Submissions**

As detailed in **Section 5.4**, several Government agencies raised water quality as a key concern. Fisheries, NOW and OEH questioned specific aspects of the water quality modelling, stormwater treatment system and the water quality monitoring plan. After reviewing the SRTS, including the final WCMR, Fisheries stated its final position as follows:

*"DPI remains unconvinced that the development as proposed can be carried out without substantial risk of significant adverse impact upon the fisheries values of the Crookhaven River estuary".*

Fisheries considered it implausible that water quality would be improved post development, given the site is currently covered in mature native vegetation with minimal pollutant sources. Fisheries identified specific inadequacies in the modelling and stated the exclusion of stormwater sampling from the monitoring plan meant that water quality decline would unlikely be detected. Fisheries remained concerned about the concept proposal's potential water quality impacts on the POAAs, seagrasses, mangroves and fish habitats.

In its final submission, OEH commented on the potential water quality impacts on the catchment of Lake Wollumboola and advised:

*"...a precautionary approach is needed in determining the extent of any proposed development within (and close to) the Lake Wollumboola catchment".*

OEH further advised:

*"...development in the Lake's catchment would be irreversible and any decision would be better informed by the final catchment boundary (and understanding of water quality processes) which are being studied as part of the broader planning proposal".*

NOW raised concerns about the potential water quality impacts of the lengthy construction phase and the NSW Food Authority advised the proposal may have localised impacts on the oyster harvest areas in close proximity to the proposal. Council recommended specific measures be included to protect the POAAs from the proposed tourism facility.

The Lake Wollumboola Protection Association raised water quality impacts on Lake Wollumboola as a key concern and Australia's Oyster Coast objected to the concept proposal on the basis of the proximity to existing oyster leases in the Crookhaven estuary. The majority of public submissions objecting to the concept proposal raised water quality as a key concern.

#### **6.2.5. Department's Independent Water Quality Expert Advice**

The Department appointed BMT to review the Applicant's water quality assessments and provide independent advice on the reliability of the predictions of water quality impacts. BMT was appointed in 2014 to review the original WCMR. Over a period of three years, BMT liaised directly with the Applicant's water quality consultant Martens to refine the water quality modelling work and the proposed stormwater treatment system. This work resulted in the provision of the EPMR and subsequent revisions and addendums to the WCMR and WQMP.

Throughout its various reviews, BMT raised concerns about the appropriateness of the model, the assumptions used and the effectiveness of the proposed treatment system. BMT raised the following specific questions and concerns:

- the suitability of using the MUSIC model for the Crookhaven estuary, given its hydrologic characteristics
- accuracy of the assumptions used in the modelling in relation to infiltration, seepage losses, uptake of nutrients from the 100 m foreshore buffer and use of inappropriate rainfall scenarios
- limited assessment of construction impacts, when the risks to water quality would be greatest
- inadequate groundwater assessment including consideration of recharge rates, groundwater and surface water interactions and potential increase in nutrient discharge
- proposed stormwater treatment devices inappropriate for the location and the types of pollutants generated by urban development
- risks to oyster leases not adequately addressed, in particular pathogen contamination
- inadequate water quality monitoring and lack of specific water quality objectives by which to measure the performance of the concept proposal
- potential to double the nitrogen and phosphorus loads to the Lake Wollumboola catchment, which is inconsistent with strategic planning objectives for protection of the lake
- reliance on the stormwater treatment system to achieve the NorBE objective without sufficient design detail or evidence to support the claimed pollutant reductions
- treatment performance of proposed stormfilters/envirpods may have been 'double-counted' in the modelling
- sensitivity analysis does not demonstrate with sufficient certainty that the stormwater treatment system would protect the estuary.

BMT's latest advice in July 2017 concluded there is considerable uncertainty in the water quality impact predictions provided by the Applicant. BMT do not agree the proposed modifications to the concept proposal (reduction in industrial area and modified impervious surface assumptions) would lead to the scale of water quality improvements stated by Martens. BMT continue to question the assumptions made about the ability of the stormwater treatment system to improve water quality discharged from the developed site. BMT do not support the Applicant's conclusion that a NorBE objective would be achieved.

#### **6.2.6. Evaluation and Conclusion**

The potential water quality impacts of the concept proposal were identified early in the assessment process as a key issue. The Department provided considerable opportunity for the Applicant to address the concerns raised by BMT, reviewing multiple revisions of the water quality assessment, modelling and monitoring plan. The Applicant has attempted to demonstrate a NorBE on the water quality of the Crookhaven estuary and Lake Wollumboola. The Applicant's predictions of a NorBE on water quality are predicated on the robustness of the proposed stormwater treatment system.

The Department acknowledges the efforts of the Applicant and its water quality consultant Martens to address the concerns raised. However, substantial concerns remain regarding the reliability of the model and its predictions, the suitability of the proposed stormwater treatment system and the lack of detail to inform a robust assessment of impacts. The Department has repeatedly requested the Applicant demonstrate the proposal can achieve a NorBE on water quality, however the Applicant has been unable to demonstrate this with scientific certainty.

Given the sensitive receiving environments of the Crookhaven estuary and Lake Wollumboola, it is important the Department has confidence that the impacts can be managed to an acceptable level. The advice of BMT and key Government agencies indicate there is no confidence that the impacts can be adequately managed.

The Department has considerable concerns about the proposal's potential impacts on the Crookhaven estuary and Lake Wollumboola. Fisheries remains concerned about the proposal's potential impacts on the POAAs, SEPP 14 wetlands, mangroves, seagrasses and commercial and recreational fishing. The Department's water quality expert BMT did not support the Applicant's conclusion that a NorBE would be achieved.

The Department's assessment concludes the proposal has the potential to cause serious impacts on the oyster industry and the SEPP 14 wetlands through increased pollutant loads and changes to surface and groundwater discharges. The Department considers the ecological and economic significance of these receiving environments and the potential for serious and irreversible impacts to occur represents an unacceptable risk. The Department advises a precautionary approach and concludes the potential benefits of the concept proposal do not outweigh the potential adverse ecological and economic impacts.

Further, the Department considers the Planning Proposal is the appropriate process for determining the most suitable locations and scale of urban development in the locality. The Planning Proposal will be informed by strategic studies and technical assessments including groundwater, surface water, biodiversity, heritage and socio-economic to ensure a balanced outcome for urban development and ecological conservation.



Figure 17: Proposed Stormwater Treatment System



## 6.3. Biodiversity

### 6.3.1. Introduction

The proposal has the potential to impact on biodiversity values through the clearing of 91.65 hectares of native vegetation for urban development. Clearing native vegetation has the potential to impact on threatened fauna species through the loss and fragmentation of suitable habitat and food sources.

The EA included an assessment of the flora and fauna impacts of the concept proposal. Supplementary information was provided to address comments from OEH and Council, including additional targeted field surveys and a biodiversity assessment and offset strategy in accordance with OEH's Frameworks for Biodiversity Assessment 2014 (FBA) and the Biobanking Assessment Methodology 2014 (BBAM). Note the *Biodiversity Conservation Act 2016* does not apply to the application as it was lodged prior to this legislation taking effect. The flora and fauna assessments include:

- Ecological and Riparian Issues & Assessment Report (ERIAR), SLR Consulting, 2013
- Additional targeted surveys for Glossy Black Cockatoo and Threatened Orchids
- Preliminary Biobanking Assessment Report (PBAR), Cumberland Ecology, 2014
- Summary of Biodiversity Offset Strategy for West Culburra (BOS), Ecological Australia, 2017.

### 6.3.2. Existing Flora and Fauna

The ERIAR identified 15 vegetation community types on the site including three endangered ecological communities (EECs) listed on the *Threatened Species Conservation Act 1995* (TSC Act). In the SRTS, Ecological Australia provided amended classifications to reflect the biometric vegetation types consistent with the FBA. In summary, the site contains seven biometric vegetation types including four EECs, one of which is also a critically endangered ecological community (CEEC) listed on the Commonwealth EPBC Act.

The vegetation types on site are shown on **Figure 18** and include:

- Bangalay Sand Forest EEC
- Swamp Sclerophyll Forest EEC
- Swamp Oak Floodplain Forest EEC
- Illawarra Lowlands Grassy Woodland, EEC and CEEC
- Red Bloodwood – Blackbutt - Spotted Gum shrubby open forest (majority of the site)
- Blackbutt – Turpentine - Bangalay moist open forest
- Mangrove Forests in estuaries.

The ERIAR noted the vegetation communities on site are in very good condition. A small section in the western most part of the site is cleared with some young regrowth vegetation.

The ERIAR stated there are no threatened plant species on the site and the swamp sclerophyll and swamp oak forests do not constitute EECs, contrary to the advice of OEH. The ERIAR stated the vegetation communities on site are well represented at other sites along the Crookhaven River and in the broader locality. The Department notes there are large areas of national parks and reserves near the site, however the assertion the vegetation communities on site are well represented elsewhere was not verified in the ERIAR with vegetation mapping or reference to other studies.

The ERIAR included field surveys which identified a total of 240 native fauna species on the site, including 177 birds, 40 mammals, 11 amphibians and 12 reptiles. A further 11 introduced species were also identified.

The ERIAR has some conflicting details about the threatened and vulnerable fauna species that have been identified, or have the potential to occur on the site due to the availability of suitable habitat. However, the ERIAR included a summary of the species likely to be impacted. These species are listed as vulnerable on the TSC Act and include:

- Powerful Owl
- Glossy Black Cockatoo
- Square-tailed Kite
- Eastern Freetail Bat
- Eastern Bent-wing Bat
- Eastern False Pipistrelle

- Greater Broad-nosed Bat
- Yellow-bellied Sheath-tail Bat
- Grey-headed Flying Fox.

### 6.3.3. Potential Impacts of the Concept Proposal

#### Flora

The ERIAR noted approximately 73 ha of native vegetation would be cleared, with a further 2 ha of riparian vegetation removed and trimmed to create vistas. The BOS submitted in 2017, clarified the total area of clearing at 91.65 ha with 25 ha of vegetation retained and rehabilitated along the foreshore as a buffer to the Crookhaven River. The Department notes the Applicant proposes a cycle/walkway within the buffer but provides no detail about the clearing required to build it. The site also contains a cleared area with pasture grasses at the western boundary, however it is not clear from the ERIAR or BOS, how large this area is, or how much would be utilised for the proposal.

The Department has used the numbers presented in the BOS for its assessment of the biodiversity impacts of the concept proposal. **Table 8** reproduces the proposed clearing stated in the BOS.

**Table 8:** Clearing for the Concept Proposal

Biometric Vegetation Type	Listing	Ha Cleared
Swamp Oak Floodplain Forest	EEC	2.01
Swamp Sclerophyll Forest	EEC	1.25
Bangalay Sand Forest	EEC	5.2
Illawarra Lowlands Grassy Woodland	EEC and CEEC	1.11
Red Bloodwood – Blackbutt - Spotted Gum shrubby open forest	N/A	76.66
Blackbutt – Turpentine - Bangalay moist open forest	N/A	5.28
Mangrove Forests in estuaries	N/A	0.14
<b>Total</b>		<b>91.65</b>

The Applicant's assessments conclude the proposed clearing is not significant as it represents a small proportion of similar habitat that is protected elsewhere in the locality.

#### Fauna

The ERIAR concluded the site has moderate relevance for the Square-tailed Kite, Glossy Black Cockatoo and Powerful Owl due to minimal evidence of their use of the site, the substantial area of suitable habitat elsewhere in the locality and the high mobility and wide range of these species. The ERIAR concluded the site has low significance for the Eastern Free-tail Bat, Eastern Bent-wing Bat, Greater Broad-nosed Bat, Yellow-bellied Sheath-tail Bat, Eastern False Pipistrelle and the Grey-headed Flying Fox, due to the site containing only a small area of potential habitat compared with available habitat in the wider locality.

Fifteen other threatened fauna species were either identified on the site during field survey, or are known to occur close to the site, however the ERIAR considered they were unlikely to be affected due to a lack of suitable habitat.

### 6.3.4. Issues Raised in Submissions

Early submissions from Council and OEH questioned the adequacy of the flora and fauna assessments. Following the provision of further detailed surveys and biodiversity assessments, OEH confirmed it was satisfied the concept proposal is unlikely to have a significant impact on threatened species, subject to exclusion of development from the foreshore buffer and provided suitable offsets are secured. OEH confirmed its preference for offsets to be sourced from the Lake Wollumboola catchment, with the land considered for addition to the Jervis Bay National Park.

Fisheries, NOW and Council did not support the proposed foreshore clearing of mangroves to provide vistas. Fisheries and NOW did not support the proposed foreshore clearing for the tourist facility at Cactus Point.

Several submissions from special interest groups and the general public raised biodiversity impacts as a key concern. The Lake Wollumboola Protection Association raised concerns about the proposed removal of native vegetation, impacts on threatened species and the proposed removal of mangroves to create vistas.

### **6.3.5. Proposed Biodiversity Offsets**

The Applicant's RTS proposed a biodiversity offset comprising 300 ha of land at One Tree Bay, adjacent to Conjola National Park, approximately 25 km south-west of the site. OEH did not support this offset and noted the Applicant had not used an accredited method for calculating the offset area. In 2014, the Applicant commissioned Cumberland Ecology to prepare the PBAR, which calculated the required offset credits in accordance with OEH's BBAM and credit calculator. Following further evaluation of offset areas considered under the broader Planning Proposal, the Applicant provided a final BOS for the concept proposal.

The final BOS proposes to offset 91.65 ha of native vegetation clearing comprising:

- 8.46 ha of EECs
- 1.11 ha of CEEC, listed on the EPBC Act
- 82.08 ha of native vegetation (the majority being Red Bloodwood – Blackbutt - Spotted Gum shrubby open forest).

A total of 5,472 ecosystem credits are required to offset the 91.65 ha of clearing. The BOS identified four biobank sites on land owned by the Halloran Trust. The Applicant proposes to use a combination of these sites to provide the 5,472 ecosystem credits required. The majority of the credits would be sourced from the Lake Wollumboola biobank site, which is located around 1.5 km south of the site. Some credits would also be sourced from the Tullarwalla and One Tree Bay biobank sites, located 25 km south-west of the site.

### **6.3.6. Evaluation and Conclusion**

The Department notes the concept proposal would require clearing of 91.65 ha of native vegetation including 9.57 ha of EEC and CEEC. Some of the site is already cleared at the western boundary, however it is not clear from the Applicant's biodiversity studies, how large this area is, or how much would be utilised for the proposal.

The 91.65 ha of vegetation to be cleared supports a number of fauna species listed as vulnerable on the TSC Act, including owls, cockatoos, bats and flying foxes. The extent of impact on these species was considered minimal by the Applicant, however the Department contends the assessment of the impacts on these species was cursory and not backed by detailed scientific evidence. Despite this, the Department acknowledges that the locality surrounding the site contains significant stands of native vegetation, much of which is protected within the Jervis Bay National Park. It is likely, although not verified, that there are considerable areas of suitable habitat for many of these species on nearby lands.

OEH was satisfied the concept proposal is unlikely to have a significant impact on threatened species, subject to exclusion of development from the foreshore buffer and provided suitable offsets are secured. OEH was also satisfied with the final BOS. The Department understands OEH is encouraging the establishment of offset areas in the Lake Wollumboola catchment to enable extension of the Jervis Bay National Park and protect the sensitive ecosystem of Lake Wollumboola from development pressure. The Department considers this broader strategic objective is best dealt with via the Planning Proposal, which is evaluating the Halloran Trust landholdings as a whole to identify areas suitable for urban development and biodiversity conservation.

The concept proposal would result in the loss of 91.65 ha of very good quality native vegetation adjacent to the Crookhaven River estuary. The proposal would transform the undisturbed site into a fully developed urban environment. The Applicant's SRTS still strongly supports selective trimming of mangrove vegetation to provide vistas to the Crookhaven River and cycle/walkway development within the foreshore buffer. The Applicant noted it has made adjustments to the proposal to avoid impacts on the foreshore buffer zone, however the size of the overall development remains unchanged and the area of clearing is still stated as 91.65 ha.

The Department notes the biodiversity impacts of the proposal could be adequately offset by the proposed biobank sites. However, the Department understands the Planning Proposal is evaluating the Halloran landholdings holistically, including detailed biodiversity studies and proposed biobank sites to align with the Jervis Bay National Park. The Department considers the Planning Proposal is the most appropriate mechanism for establishing conservation outcomes for the Halloran landholdings, including the West Culburra site.

- West Culburra Part 3A Subdivision
- Potential EEC
- Biometric Vegetation Types
- Dry Sclerophyll Forests (Shrubby SF)
  - SR512\*BSF\* (South Coast Sands DSF 50%) Zone 0
- Forested Wetlands
  - SR648\*SSF\* (Coastal Swamp Forests 50%) Zone 2, 14, 23 & 24
  - SR649\*SOFF\* (Coastal Swamp Forest 95%) Zone 5 & 6
  - SR650\*SOFF\* (Coastal Floodplain Wetlands 95%) Zone 4
- Grassy Woodlands
  - SR690 \*ILGW\* (Coastal Valley Grassy Woodlands 95%) Zone 3
- Saline Wetlands
  - SR575\*CS\* (Mangrove Swamps 50%) Zone 22
- Wet Sclerophyll Forests (Grassy SF)
  - SR582 (Southern Lowland W6F 45%) Zone 1, 11, 27 & 29
  - SR582 Young Regrowth (Southern Lowland W6F 45%) Zone 9
- Wet Sclerophyll Forests (Shrubby SF)
  - SR516 (North Coast W6F 50%) Zone 13
- Other
  - Clearrod
  - BSF = Bangalay Sand Forest
  - SOFF = Swamp Oak Floodplain Forest
  - SSF = Swamp Sclerophyll Forest
  - ILGW = Illawarra Lowlands Grassy Woodland
  - CS = Coastal Saltmarsh
  - CFL = Coastal Freshwater Lagoons

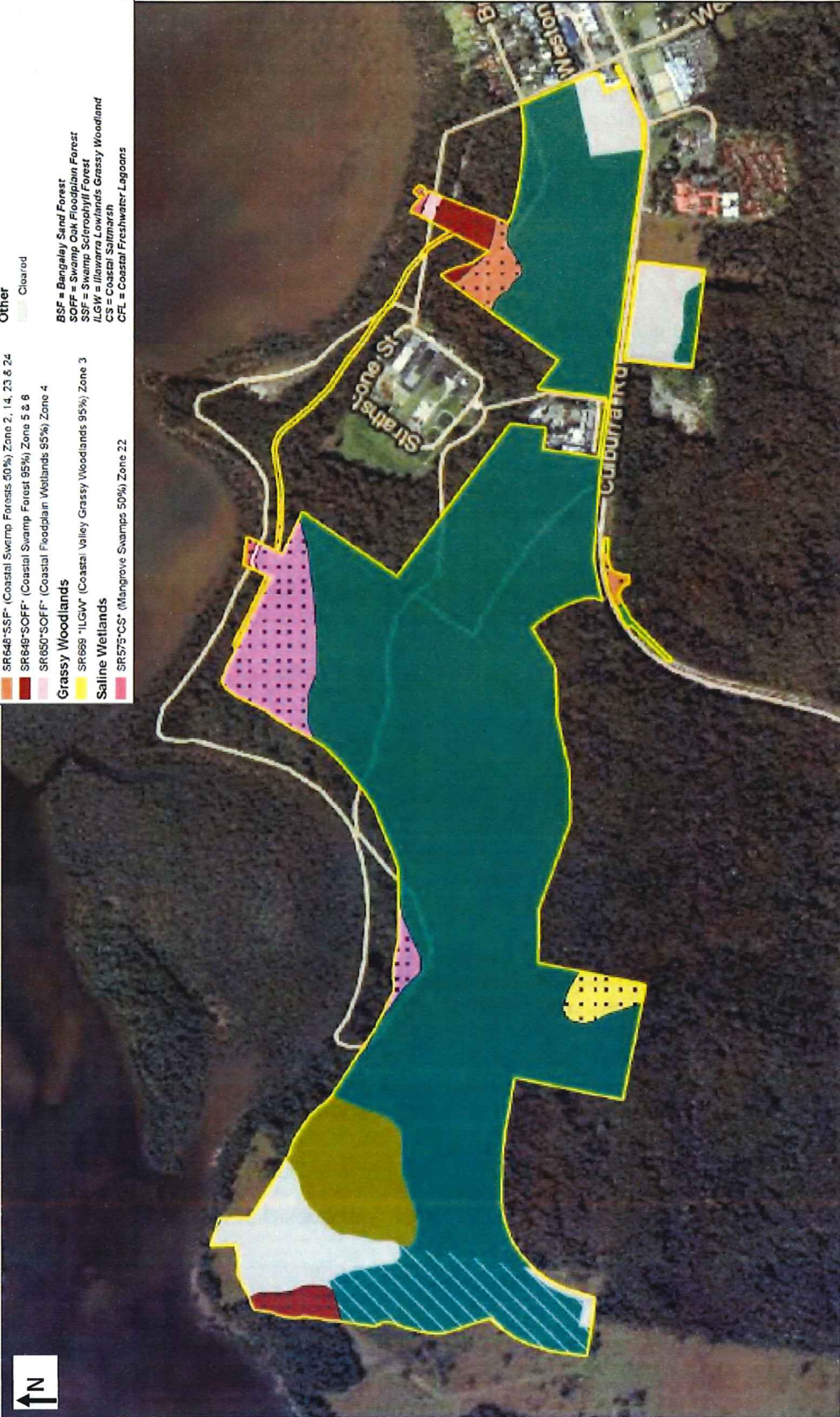


Figure 18: Vegetation Communities on Site (EEC and CEEC shown with black dots)



The Department remains concerned about the scale of urban development proposed at West Culburra and retention of the Stage 1 residential component within the Lake Wollumboola catchment. When considering the biodiversity impacts in isolation, they are not insurmountable. However, when considering the interactions between native vegetation clearing and water quality impacts on the Crookhaven estuary, the cumulative impacts present an unacceptable level of risk. The Applicant's insistence on retaining aspects of the proposal that involve clearing of mangrove vegetation within the foreshore buffer, despite repeated requests for these components to be removed, provides the Department with further reason to consider the risks unacceptable.

On balance, the Department concludes the potential biodiversity impacts and associated flow-on effects to water quality warrant refusal of the scale of development proposed.

## 6.4. Aboriginal Heritage

### 6.4.1. Introduction

The proposal has the potential to impact on Aboriginal heritage as it requires clearing of 91.65 ha of land adjacent to the Crookhaven estuary, an area of known use by Aboriginal people historically.

South East Archaeology (SEA) prepared an Aboriginal Cultural Heritage Assessment (ACHA) to identify Aboriginal heritage evidence or cultural values on the site and determine the potential impacts of the concept proposal on Aboriginal heritage. The ACHA was undertaken in accordance with relevant OEH guidelines and in consultation with two Aboriginal groups, the Jerrinja Local Aboriginal Land Council (JLALC) and the Jerrinja Traditional Owners Corporation (JTOC).

### 6.4.2. Existing Aboriginal Heritage Values

The ACHA included a review of historical studies of the area, field survey and preparation of a predictive model to determine the presence of Aboriginal heritage sites and the potential for subsurface deposits. The area covered by the ACHA included the proposed residential and industrial developments in Stages 1 to 5. The ACHA did not cover the foreshore buffer zone or the area proposed for tourist development at Cactus Point.

The ACHA did not identify any Aboriginal heritage sites or cultural sites within the survey area itself, see **Figure 19**. Three sites were identified immediately adjacent to the survey area in the foreshore area in the eastern part of the site. All three sites were open artefact scatters. A further 18 previously recorded sites are located within the foreshore buffer zone, see **Figure 19**. These include 17 middens and one artefact scatter. Seven of the sites are clustered around Cactus Point. The foreshore zone extending 200 m inland from the water's edge was identified as having high potential for archaeological deposits, area shown in pink shading on **Figure 19**.

The ACHA assessed the significance of the Aboriginal heritage sites in accordance with relevant guidelines. The assessment considered the scientific, cultural, educational, historic and aesthetic value of the sites. The assessment concluded the three open artefact scatters (West Culburra 3/A, 4/A and 4/B) are of low to moderate scientific significance with no aesthetic, educational or historic significance. The JLALC and JTOC expressed a strong interest in the identified sites, indicating they have cultural significance. The 17 midden sites were previously assessed by others as having considerable heritage and scientific value. The ACHA concluded these sites (referred to as the 'Crookhaven River midden complex') have regional value as:

- similar evidence of intact midden complexes from the Holocene period are not widely reported in the region
- the sites include a range of contents including mounded deposits of varying extents, artefacts, shell and bone
- the sites have been subject to low impacts and are of moderate to high integrity
- there is a high potential for sub-surface deposits of midden and artefacts to occur, including *in-situ* deposits of high research value.

### 6.4.3. Potential Impacts of the Concept Proposal

The ACHA noted the proposal would not directly impact the three open artefact sites located adjacent to the proposed development area. The assessment concluded there may be indirect impacts through increased recreational use of the area. The ACHA recommended further heritage investigation be undertaken for areas outside of the survey area, if works are proposed in these areas. In particular, the 200 m wide zone extending inland from the water's edge has high archaeological potential and any

proposed walkways or services in this area requires further survey and evaluation. The potential impacts of the proposed tourist development at Cactus Point on the Crookhaven River midden complex was not assessed in the ACHA. However, the ACHA stated the midden complex has potential regional significance and warrants total conservation. The Applicant stated the tourist development would not directly disturb or impact on the midden complex. The Department notes that increased use of the area due to a tourist facility would likely have indirect impacts on the midden complex, such as trampling, shell collection or vandalism.

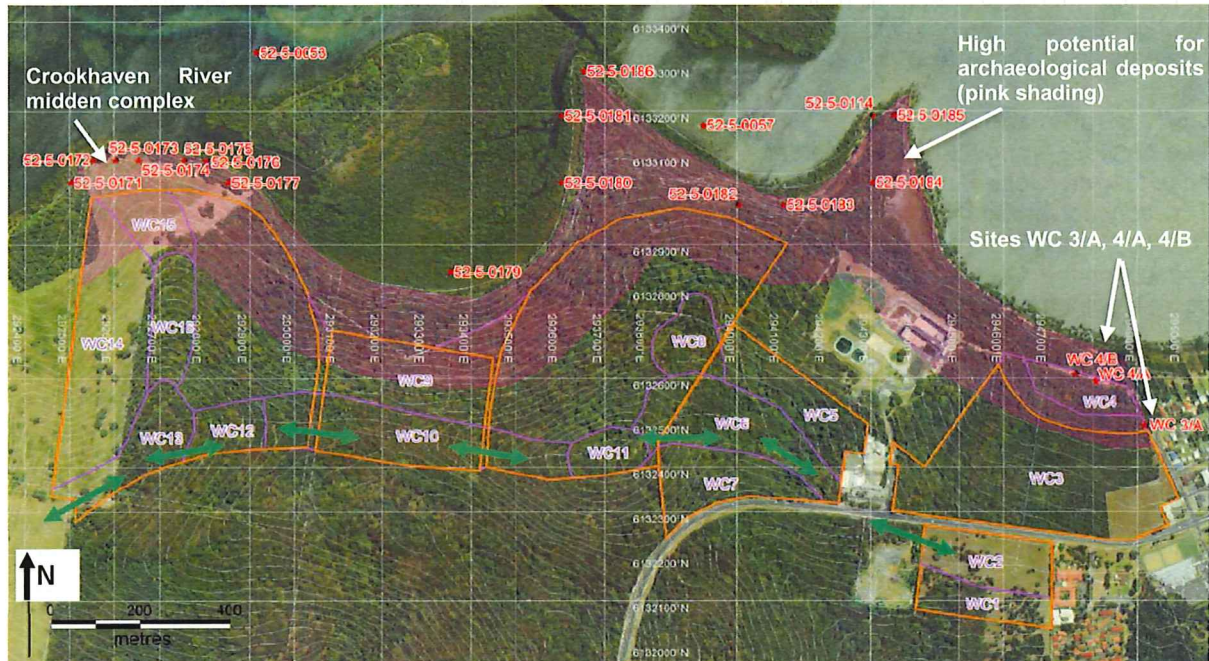


Figure 19: Location of Aboriginal Heritage Sites

#### 6.4.4. Issues Raised in Submissions

OEH supported the recommendations of the ACHA for further survey and assessment of areas of high archaeological potential that may be impacted. OEH reiterated this recommendation in its three submissions (dated 2013, 2014 and 2017). OEH stated it does not support impacts to the Crookhaven River midden complex from the proposed recreational use of the foreshore.

In its last submission on the proposal in January 2017, the JLALC raised serious concerns about the proposal and the protection of cultural and environmental heritage on the site. The JLALC stated that much of the land is adjacent to Jerrinja land titles and include significant areas that fall within traditional land boundaries of the Jerrinja people. The JLALC highlighted that lands in the vicinity are scheduled to be handed back to the traditional owners through National Parks and Wildlife legislation.

The LWPA stated the proposed location and scale of tourist development at Cactus Point is inappropriate given the potential impacts on Aboriginal cultural heritage.

#### 6.4.5. Evaluation and Conclusion

The ACHA did not cover key aspects of the concept proposal including the tourist development at Cactus Point and the walkway/cycleway and recreational structures in the foreshore buffer zone. The Department notes the ACHA identified an area of 200 m extending from the water's edge as having high potential for archaeological deposits. The concept proposal includes a 100 m wide buffer zone, with residential development and roads proposed within the area of high archaeological potential. Whilst the ACHA recommends further survey work, and this recommendation was reiterated by OEH in its 2013 and 2014 submissions, this additional work has not been submitted to support the concept proposal.

Aside from the lack of a complete assessment of the proposal's impacts, the Department understands from the ACHA and OEH's submissions that the Crookhaven River midden complex is of regional significance and warrants total conservation. The Applicant states the proposal would not impact on

the midden complex, however the ACHA did not evaluate the potential impacts of the tourist development at Cactus Point. OEH noted the tourist development would increase public use of the area and this would have indirect impacts (trampling, vandalism) on the midden complex. The Department does not support the proposed tourist development given its potential to impact on these significant Aboriginal heritage values.

The Department's assessment concludes 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.

## 6.5. Traffic and Access

The concept proposal has the potential to considerably increase traffic movements in the local area once fully developed, as it would contain 650 residential dwellings, industrial and tourist developments. The concept proposal would be accessed from Culburra Road, which is a rural road carrying low volumes of traffic to and from the township of Culburra Beach. This section considers the potential impacts on the safety and capacity of Culburra Road and key intersections, including the proposed new access point for the concept proposal.

The EA included a Transport and Accessibility Impact Assessment (TAIA), prepared by GTA Consultants. The TAIA was updated with an Addendum in 2014 and submitted as part of the RTS to address comments from RMS. Notably, RMS' comments related to the estimated traffic volumes from the development and potential impacts on intersection performance. The updated TAIA compared existing traffic volumes and the performance of key intersections against the post-development scenario, including 10 year background traffic growth, consistent with RMS Guidelines. The TAIA provided a concept for a roundabout as the primary access point to the development from Culburra Road. The SRTS makes reference to a secondary access point to Culburra Road at the western edge of the development. This road was shown on earlier versions of the concept plan, however, there is minimal detail in the application documents regarding the proposed secondary access road.

### 6.5.1. Traffic

The road network surrounding the site is characteristic of a rural location with isolated small-scale urban development. Culburra Road is the primary access point for the site and runs in an east-west direction, providing the only access road into Culburra Beach. The route to Nowra travels from Culburra Road north onto Pyree Lane, then west along Greenwell Point Road, connecting to the Princes Highway at the intersection of Kalandar Street, see **Figure 20**.

#### *Intersection Performance*

The TAIA noted existing traffic volumes on Culburra Road are approximately 5,200 vehicle movements per day and existing volumes on the Princes Highway at the Kalandar Street intersection are approximately 35,000 vehicle movements per day. The existing level of service (LOS) at this intersection is 'F – over capacity'.

The TAIA estimated traffic generated from the fully developed site (analysis considered worst-case 685 residential dwellings, industrial and tourist developments) would be approximately:

- 199 vehicle movements per hour in the weekday AM peak
- 192 vehicle movements per hour in the weekday PM peak
- 158 vehicle movements per hour on the weekend.

Using intersection analysis tool SIDRA, the TAIA considered existing traffic volumes, with the full development scenario and 10 year background traffic growth, concluding:

- most intersections would operate well with the full development, with minimal delays and queues during all peak periods (Culburra Road, Coonamia Road, Pyree Lane, Greenwell Point Road and Forest Road)
- the Princes Highway/Kalandar Street intersection would remain at a LOS F – over capacity, with the development. However, the development would only increase traffic by a maximum of 2.5% during peak periods and would result in a minor increase in delays
- the Princes Highway/Moss Street intersection would remain at a LOS F – over capacity, with the development, however the development contributes only a minor increase during peak periods
- the Princes Highway/Moss Street intersection is part of RMS planned upgrade works, which are likely to be completed prior to completion of the concept proposal.



In its final submission, RMS advised it has commenced the planning stage to upgrade the Princes Highway/Kalandar Street intersection, and would require financial contributions from the Applicant for the upgrade works.

Roads in Culburra Beach

The TAIA considered the impact of additional traffic from the concept proposal on the roads and intersections within Culburra Beach. The analysis estimated an additional 288 trips, or 576 vehicle movements per hour would be generated to/within Culburra Beach, and concluded that most intersections would continue to operate at a LOS of A (good) or B (good with acceptable delay) with the additional traffic.

Rural Roads to/from Culburra Beach

The TAIA noted the concept proposal would increase traffic volumes on the surrounding rural road network by between 368 and 2,179 vehicle movements per day during average conditions and up to 2,584 vehicle movements per day during peak periods (summer holidays). This includes Forest Road, Coonamia Road, Pyree Lane and Greenwell Point Road, see **Figure 20**. The TAIA did not analyse the impacts of the additional traffic on these roads, but referred to the intersection performance as the primary indicator of the development's potential impacts.

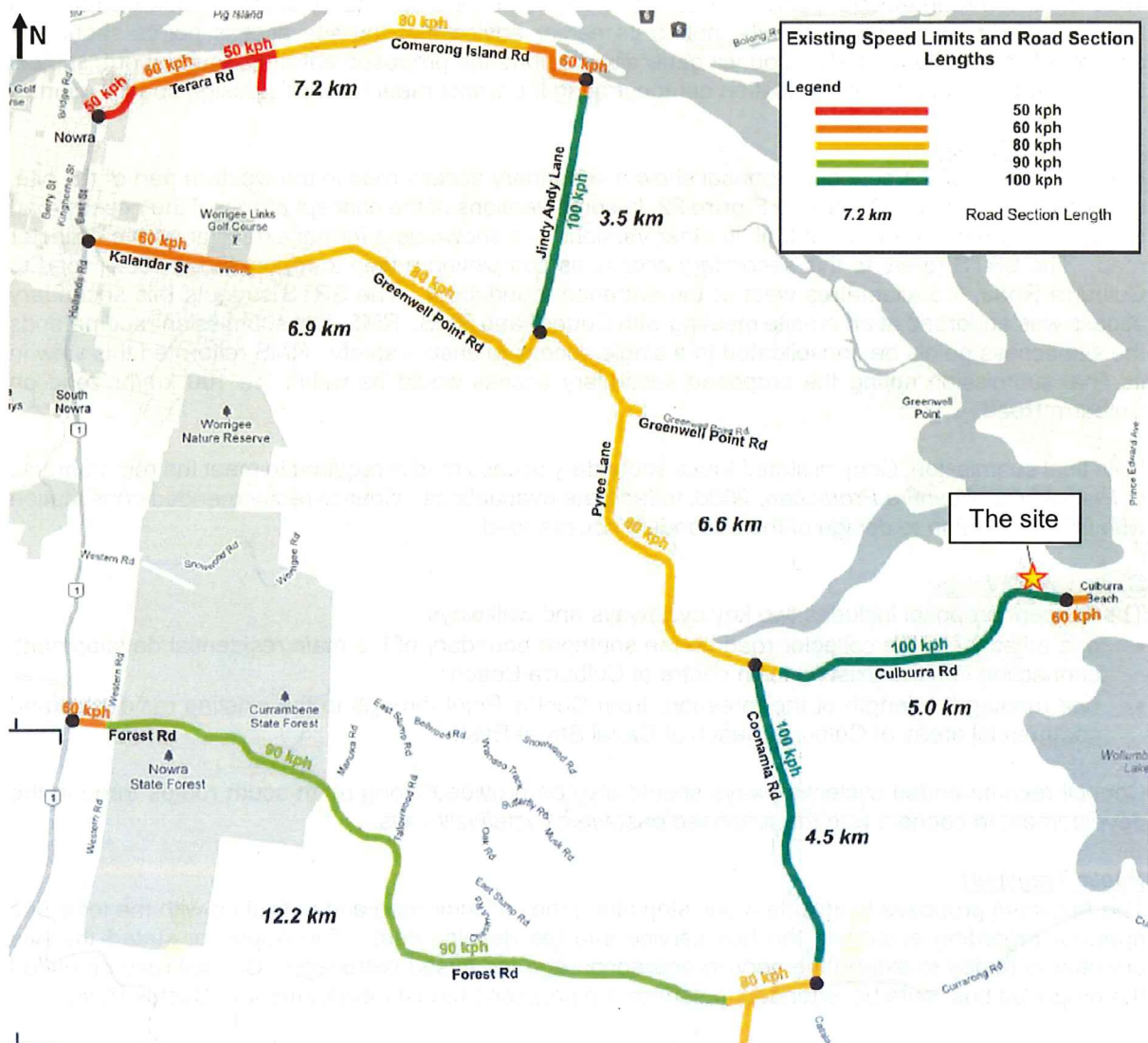


Figure 20: Road Network from Culburra Beach to Nowra



### 6.5.2. Access

#### Main Site Access

The Applicant proposes a new roundabout on Culburra Road as the entrance point to the residential development, see **Figure 21**. The Applicant also proposes a speed reduction on Culburra Road, from the current limit of 100 kilometres per hour (km/hr) to 50 km/hr to facilitate the roundabout and signal the entrance to the new urban area west of Culburra Beach.

The TAIA analysed the intersection of the new roundabout with Culburra Road, noting it would perform at a LOS A – good, under the full development scenario.

Initially, RMS did not support the speed reduction and proposed roundabout, recommending an entrance to the concept proposal further east of the proposed access and closer to the existing industrial area and town centre of Culburra Beach. However, following a review of the RTS, RMS reconsidered its position stating it would agree to a roundabout and speed reduction to 80 km/hr on Culburra Road, subject to specific design elements being demonstrated, prior to determination of the application. These included adequate sight distances for the roundabout and a suite of measures along Culburra Road to alert drivers to the change from a rural speed environment to a slower urban speed environment.

In its final submission, RMS stated the SRTS did not provide the additional design information requested in 2014 for the roundabout. RMS also raised concerns about a secondary access road referred to in the SRTS without additional details, noting its earlier advice that the site access points should be consolidated to ensure safety. Council generally supports the proposed entrance roundabout, subject to a separate development application demonstrating the works meet Council's design specifications.

#### Secondary Site Access

Earlier versions of the concept proposal show a secondary access road in the western part of the site, connecting to Culburra Road, see **Figure 22**. In some versions of the concept proposal the access road is shown as an emergency fire trail, in other versions it is shown as a formal extension to the collector road. The SRTS refers to this secondary access as completing a loop to re-join the collector road to Culburra Road, 2.5 kilometres west of the entrance roundabout. The SRTS suggests this secondary access was endorsed at an on-site meeting with Council and RMS. RMS' first submission recommends the site access points be consolidated to a single access to ensure safety. RMS reiterated this view in its final submission noting the proposed secondary access would be within the 100 km/hr zone on Culburra Road.

In its final submission, Council stated that a secondary access road is required to meet the requirements of *Planning for Bushfire Protection, 2006*, to facilitate evacuations. Council recommended consultation with RFS in relation to design of the secondary access road.

#### Cycleway/Walkway

The concept proposal includes two key cycleways and walkways:

- one adjacent to the collector road on the southern boundary of the main residential development, connecting into the existing town centre of Culburra Beach
- one running the length of the foreshore from Cactus Point through to the existing residential and commercial areas of Culburra Beach at Canal Street East.

Council recommended cycle/walkways should also be provided along north-south routes through the development to connect with the proposed east-west cycle/walkways.

#### Public Transport

The Applicant proposes to include a bus stop along the collector road and consulted with the local bus operator regarding extending the bus service into the development. The Applicant stated the bus operator is happy to extend the service and encourage increased patronage. Council recommended the proposed bus route be extended to service the proposed tourist development at Cactus Point.

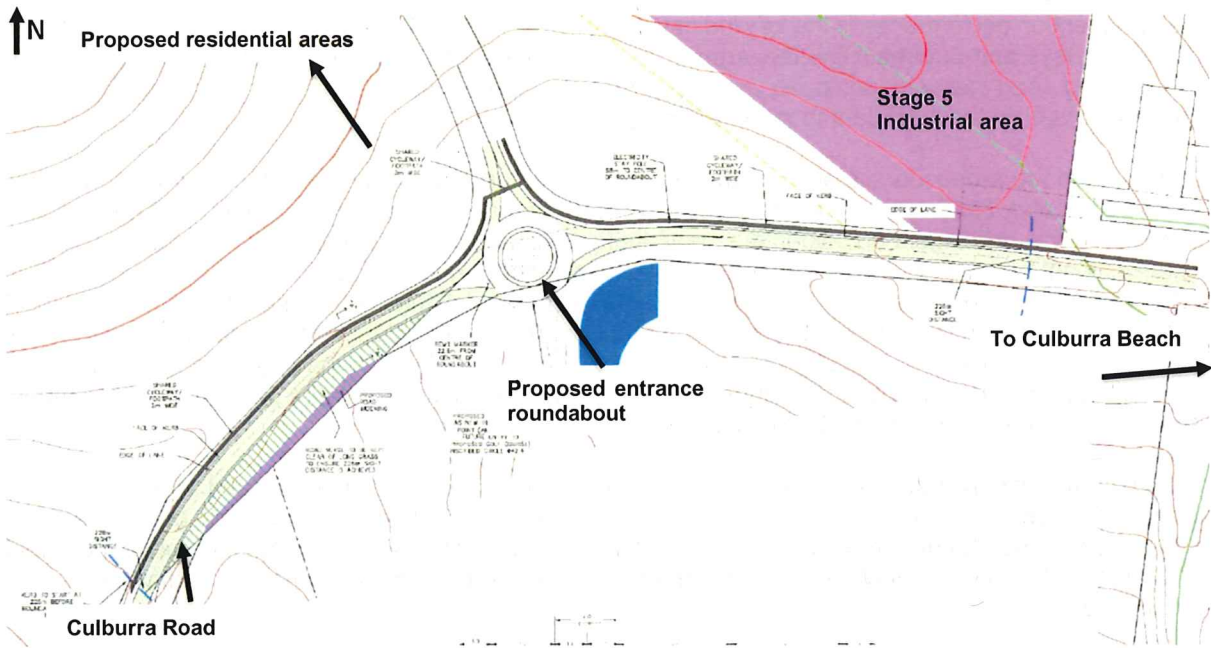


Figure 21: Proposed Entrance Roundabout on Culburra Road

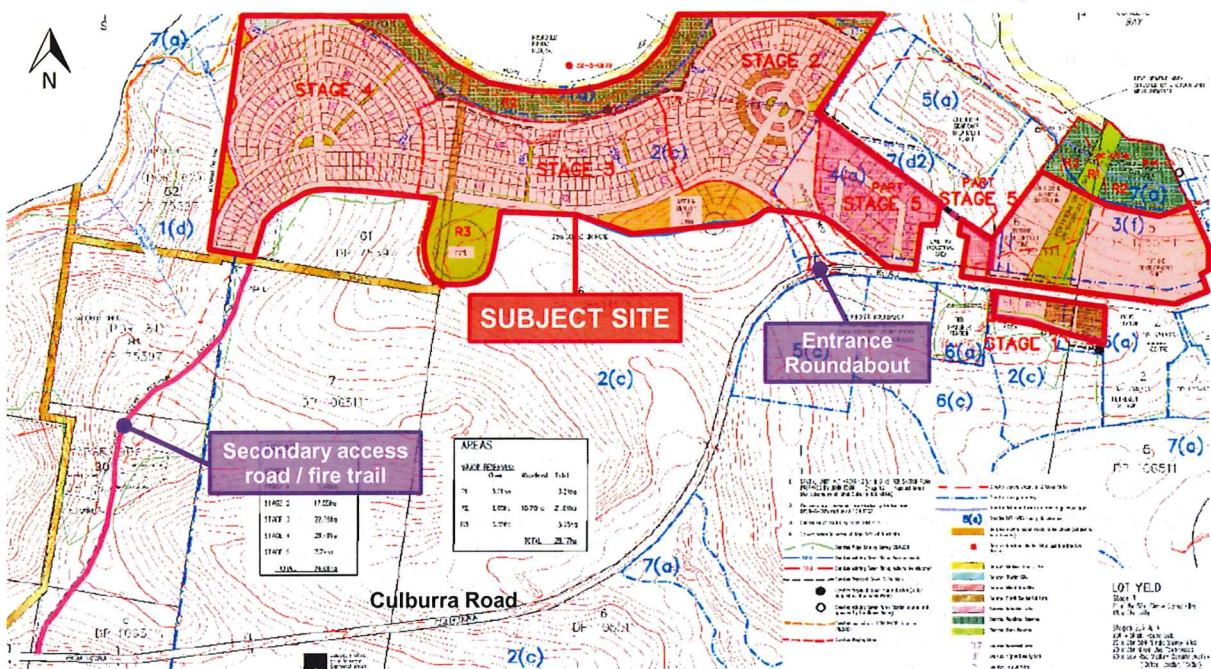


Figure 22: Proposed Secondary Access Road

**6.5.3. Evaluation and Conclusion**

The Department has considered the TAIA and Addendum and submissions from Council and RMS in its assessment of the traffic and access components of the concept proposal.

The Department notes the concept proposal would substantially increase traffic within and from Culburra Beach compared with existing conditions. The increase in traffic would put further pressure on the intersection of the Princes Highway and Kalandar Street, although RMS note it has commenced planning for a future upgrade of this intersection given existing capacity issues. The Applicant states the concept proposal would increase traffic through this intersection by 2.5% and the Department notes this is not substantial on its own, but would place further pressure on the intersection. The potential impacts on the rural road network surrounding the site are less clear, although the Applicant maintains

that intersection performance is the key indicator, with most intersections continuing to operate well with minimal delays and queues. The Department's assessment considers the potential traffic impacts on the existing road network could be managed through appropriate design treatments and financial contributions from the Applicant to intersection upgrades.

In relation to the proposed site access, the Department notes Council supports the proposed entrance roundabout and RMS agreed to a speed reduction to facilitate the roundabout. However, this agreement was contingent on design elements being satisfied, prior to determination of the application. The Applicant has not resolved these design elements prior to determination, as requested by RMS in 2014 and reiterated in 2017. The Department's assessment has determined there is insufficient information to determine whether the entrance roundabout would be designed to a standard that meets the requirements of RMS. The Department also notes the issue of the secondary access road remains unresolved, with Council and RFS recommending its inclusion to meet bushfire protection requirements and RMS recommending its exclusion to meet road safety requirements.

The Department concludes there are several unresolved aspects relating to traffic and access that were identified by relevant Government agencies as early as 2014. The Applicant has been unable to address these outstanding matters to a satisfactory level and without this information, the Department is unable to definitively conclude the concept proposal would be acceptable from a traffic and access perspective.

## 7. CONCLUSION

The Department has assessed the concept proposal against the matters listed in Section 4.15 of the EP&A Act and the objects listed in Section 1.3 of the EP&A Act, including the principles of ESD. The Department has considered the application on its merits, taking into consideration the strategic plans that guide urban development in the Shoalhaven area, the SEPPs that apply specifically to the concept proposal and the strategic studies covering the sensitive coastal ecosystems of the local area.

The assessment has involved considerable consultation with the Applicant, the Government agencies that raised significant concerns about the proposal and the Department's appointed water quality expert. The Department has reviewed and evaluated multiple revisions of the concept proposal and spent three years working with the Applicant and the water quality expert in an attempt to address the concerns about the proposal's water quality impacts.

The concept proposal is located in an area with sensitive environmental attributes including the Crookhaven River estuary that supports priority oyster aquaculture and protected wetlands, and Lake Wollumboola, which is identified as a highly sensitive coastal lake. Development adjacent to these natural environments must achieve a high level of environmental protection. The Department has engaged extensively with the Applicant and its consultants, to resolve outstanding issues regarding the proposal's potential impacts on water quality, biodiversity, Aboriginal heritage and road access. Despite the significant work undertaken, the Department concludes the Applicant has been unable to adequately resolve the outstanding issues and provide the Department with confidence the potential impacts would be acceptable and adequately mitigated. The Department considers the Planning Proposal will evaluate these issues at a strategic level to identify the most appropriate locations for urban development and environmental protection.

The Department's assessment has concluded:

- the site is unsuitable for the scale of urban development proposed and is not consistent with areas identified for urban expansion in current strategic plans
- the proposed 650 dwellings exceeds Council's growth projections for Culburra Beach for the next 20 years (estimated at 280 dwellings)
- the proposed development does not utilise the area identified in strategic plans for future urban development in Culburra Beach (the Culburra investigation area)
- the potential water quality impacts of the concept proposal on the Crookhaven River estuary present an unacceptable risk to oyster aquaculture, protected wetlands, marine vegetation and fish habitat
- there is scientific uncertainty that the water quality impacts can be adequately mitigated by the proposed stormwater management system, and the Applicant has been unable to adequately demonstrate there would not be serious or irreversible impacts



- the potential water quality impacts on Lake Wollumboola are inconsistent with strategic planning objectives to protect the lake from urban development
- the proposal is likely to have serious and irreversible impacts on Aboriginal heritage sites of regional conservation significance and high cultural significance to Aboriginal people
- there are unresolved aspects relating to traffic and access to the concept proposal that the Applicant has been unable to address to a satisfactory level.

The Department concludes the concept proposal is not consistent with the objects of the EP&A Act, is not in the public interest and should be refused.

The Department considers the Planning Proposal is the most appropriate mechanism for determining suitable locations for residential development to support population growth and housing demand across the Halloran landholdings.

Following on from its assessment of the concept proposal, the Department of Planning and Environment considers that the concept proposal may not be approvable. This assessment report is hereby presented to the Independent Planning Commission for determination.

Prepared by: Deana Burn  
Industry Assessments

Endorsed by:

  
Chris Ritchie 14/6/18  
**Director**  
**Industry Assessments**

Endorsed by:

  
Anthea Sargeant 15/6/18  
**Executive Director**  
**Key Sites and Industry Assessments**