



Planning &
Environment

**STATE SIGNIFICANT DEVELOPMENT ASSESSMENT:
Long Bow Point Golf Course
SSD 8406**



Lake Wollumboola at Long Bow Point

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

July 2018



Lake Wollumboola looking towards Long Bow Point, photo taken April 2018



Vegetation on Long Bow Point, photo taken April 2018

© Crown copyright 2018
Published July 2018
NSW Department of Planning and Environment
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	Allen, Price & Associates, on behalf of the Halloran Trust
COI	Commission of Inquiry Report, Long Bow Point 2000
Commission	Independent Planning Commission
Council	Shoalhaven City Council
DA	Development application
Department	Department of Planning and Environment
Development	18-hole championship golf course, practice area, maintenance facility, access road and parking area
DPI	Department of Primary Industries, incorporating Fisheries, NSW Office of Water and Crown Lands
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> (Commonwealth)
EPI	Environmental Planning Instrument
ESD	Ecologically sustainable development as defined in the <i>Protection of the Environment Administration Act 1991</i>
Hgeo 2017	West Culburra Groundwater Assessment, Preliminary Report (Stage 1) June 2017
HRC Inquiry	Healthy Rivers Commission Independent Public Inquiry into Coastal Lakes 2002
ISRP	Illawarra Shoalhaven Regional Plan 2015
IWMP	Integrated Water Management Plan, prepared by Martens Consulting, dated June 2015
JLALC	Jerrinja Local Aboriginal Land Council
JTO	Jerrinja Traditional Owners Corporation
LWPA	Lake Wollumboola Protection Association
Martens 2017	Review of MUSIC Model and OEH Radon Data Review, Martens December 2017
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
NPWS	National Parks and Wildlife Service
OEH	Office of Environment and Heritage
OEH 2016 & 2018	Detection of Groundwater Inputs to Lake Wollumboola, November 2016 and Revised May 2018
Planning Proposal	Proposal to rezone 1,681.5 hectares of the Halloran Trust landholdings including land at Long Bow Point, West Culburra, Callala Bay and Kinghorn Point
Planning Secretary	Secretary of the Department, or nominee
RFS	Rural Fire Service
RTS	Response to Submissions comprising multiple revisions to the SEE, SIS, IWMP and supplementary documents provided in December 2017 including the SIS Addendum and Martens 2017
Santos 2018	Independent Review of OEH 2016, IWMP 2015 and Martens 2017, Dr Santos, Southern Cross University 2018
Scanes Peer Review	OEH's Environmental Sensitivity of Lake Wollumboola: Input to Considerations of Development Applications for Long Bow Point Culburra, Scanes, Ferguson and Potts 2013
SCSULR	South Coast Sensitive Urban Lands Review 2006
SEE	Statement of Environmental Effects titled <i>Statement of Environmental Effects – 18 Hole Championship Golf Course For the Halloran Trust</i> , prepared by Allen, Price & Associates dated December 2017
SEPP	State Environmental Planning Policy
Sensitive receiver	Residence, education institution, health care facility, religious facility and child care facility
SIS	Species Impact Statement titled <i>Culburra Beach Championship Golf Course Species Impact Statement</i> , prepared by F Dominic Fanning – Gunninah with the assistance of SLR Consulting, dated August 2015
SIS Addendum	Species Impact Statement Addendum Report prepared by Cumberland Ecology, dated December 2017
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>
SSD	State Significant Development
TSC Act	<i>NSW Threatened Species Conservation Act, 1995</i>
VEC	Vulnerable ecological community listed on the Commonwealth EPBC Act

TABLE OF CONTENTS

ABBREVIATIONS & DEFINITIONS	i
TABLE OF CONTENTS	ii
TABLE OF FIGURES	iii
EXECUTIVE SUMMARY	i
1. BACKGROUND & SITE DESCRIPTION	1
1.1. The Department's Assessment	1
1.2. Background to Proposed Development on Long Bow Point	2
1.3. The Commission's SSD Call-in Advice	2
1.4. Related Proposals by the Halloran Trust.....	2
1.5. Site Description and Surrounding Land Uses	4
2. PROPOSED DEVELOPMENT.....	5
2.1. Description of the Development	5
2.2. Applicant's Justification	6
2.3. Relevant Documentation	6
3. STRATEGIC CONTEXT	10
3.1. Commission of Inquiry – Long Bow Point, 2000.....	10
3.2. Healthy Rivers Commission (HRC) Inquiry, 2002	10
3.3. South Coast Regional Strategy, 2006	10
3.4. South Coast Sensitive Urban Lands Review, 2006.....	11
3.5. Scanes Peer Review, 2013	11
3.6. Illawarra Shoalhaven Regional Plan 2015	11
3.7. Strategic Summary	11
4. STATUTORY FRAMEWORK	12
4.1. State Significant Development	12
4.2. Consent Authority	12
4.3. Permissibility.....	12
4.4. Other Approvals.....	12
4.5. Considerations under Section 4.15 of the EP&A Act	13
4.6. Environmental Planning Instruments.....	13
4.7. Public Exhibition and Notification	13
4.8. Objects of the EP&A Act.....	13
4.9. Ecologically Sustainable Development	15
4.10. Environmental Planning and Assessment Regulation 2000	15
4.11. Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)	15
5. CONSULTATION & SUBMISSIONS	16
5.1. Consultation Process.....	16
5.1.1. Public Exhibitions by Council	16
5.1.2. Site Visits.....	16
5.1.3. Meetings with Council & the Applicant	17
5.1.4. Meetings with Special Interest Groups	17
5.2. Outcomes of Consultation	17
5.2.1. Submissions Summary	17
5.2.2. Issues Raised by Special Interest Groups and the Public	18
5.2.3. Issues Raised at Meetings with Special Interest Groups.....	21
5.2.4. Issues Raised by Government Agencies	22
5.3. Applicant's Response to Issues Raised	23
5.4. Department's Consideration.....	23
6. ASSESSMENT	25
6.1. Strategic Planning	25
6.2. Water Quality	25
6.2.1. Introduction.....	25
6.2.2. Relevant Water Quality Studies	26
6.2.3. Existing Water Resources around the Site	26
6.2.4. Applicant's Assessment of Impacts.....	29
6.2.5. Issues Raised in Submissions	32
6.2.6. Independent Studies	32

6.2.7.	Evaluation and Conclusion.....	33
6.3.	Flora and Fauna	34
6.3.1.	Introduction.....	34
6.3.2.	Chronology of Studies Submitted by the Applicant.....	34
6.3.3.	Existing Flora and Fauna	35
6.3.4.	Applicant's Assessment of Impacts.....	37
6.3.5.	Proposed Biodiversity Offsets	39
6.3.6.	Issues Raised in Submissions	40
6.3.7.	Evaluation and Conclusion.....	42
6.4.	Other Issues	42
7.	CONCLUSION	44
APPENDIX A:	Draft Instrument of Refusal	46
APPENDIX B:	Considerations under section 4.15	47
APPENDIX C:	Consideration of Environmental Planning Instruments	49
APPENDIX D:	DA Documents.....	51
APPENDIX E:	Supplementary Information.....	52
APPENDIX F:	Gateway Determination for Planning Proposal.....	53
APPENDIX G:	The Commission's Advice on SSD Call-In.....	54

TABLE OF FIGURES

Figure 1:	Regional Location	1
Figure 2:	Planning Proposal Area & Current SSDs	3
Figure 3:	Long Bow Point Site.....	5
Figure 4:	Proposed 18-hole Golf Course, Access Road and Car Park.....	7
Figure 5:	Proposed Clearing – Golf course holes, driving range, access road, car park and wetland	8
Figure 6:	Proposed Clearing – Golf course holes, wetlands and bridge over Downs Creek	9
Figure 7:	Site Zoning under SLEP 1985	12
Figure 8:	Surface water catchment of Lake Wollumboola	27
Figure 9:	SEPP 14 Wetlands at Downs Creek and Wattle Creek.....	28
Figure 10:	Conceptual Groundwater System	28
Figure 11:	Proposed Stormwater Management System	31
Figure 12:	Vegetation Communities on Site.....	36
Figure 13:	Threatened Ecological Communities on Site.....	38
Figure 14:	Vegetation to be retained as an offset	41

EXECUTIVE SUMMARY

Background

The Halloran Trust owns around 1,680 hectares (ha) of land in the Shoalhaven local government area (LGA) on the south coast of NSW, including large parcels to the west of Culburra Beach. The Halloran Trust has proposed various developments on these land parcels over the past 25 years, but to date, the land west of Culburra Beach remains predominantly undeveloped, native vegetated landscape.

In 1992, the Shoalhaven Local Environmental Plan 1985 (SLEP 1985) was amended to rezone the land west of Culburra Beach for residential use.

In 1993, Realty Realizations (a company related to the Halloran Trust) lodged an application for a large (837 lot) residential subdivision on Long Bow Point, just west of Culburra Beach and adjacent to Lake Wollumboola. The residential subdivision application was subject to a Commission of Inquiry (COI) which considered the suitability of the site for residential development. The COI ultimately recommended refusal of the application because of the likely adverse impacts on threatened flora and fauna and the water quality of Lake Wollumboola. In 2000, the then Minister for Planning refused the application.

Following the COI, the State Government commissioned two key independent studies. The first was an independent public inquiry into the coastal lakes of NSW, conducted by the Healthy Rivers Commission (HRC Inquiry). The second was the South Coast Sensitive Urban Lands Review that considered the sensitive lands of the south coast to inform regional planning. These studies aimed to identify the sensitive lands requiring protection and potential areas for urban development. The recommendations of these inquiries were incorporated into the Illawarra Shoalhaven Regional Plan 2015 (ISRP). The ISRP specifically identifies Lake Wollumboola as a sensitive coastal lake requiring protection from further urban development. Following the HRC Inquiry, Lake Wollumboola was incorporated into the Jervis Bay National Park in 2002.

Before the ISRP was finalised, the Halloran Trust lodged two separate applications to develop their land west of Culburra Beach. In 2010, the Halloran Trust lodged a concept plan application with the Department of Planning and Environment (the Department) for a 650 lot residential subdivision on land adjacent to the Crookhaven River (West Culburra Concept Proposal SSD 3846). The Department recently completed its assessment of this application and referred it to the Independent Planning Commission (IPC) for determination. The IPC is currently considering the application.

In 2011, Allen, Price & Associates (the Applicant) on behalf of the Halloran Trust, lodged a development application (DA) with Shoalhaven City Council (Council) for an 18-hole championship golf course at Long Bow Point. Council commenced assessing the DA, including publicly exhibiting the application and consulting with key Government agencies.

During Council's assessment, key Government agencies including the Department, raised concerns about the proposal's consistency with the strategic planning work that recommended protection of the lake and its catchment. In November 2016, the Minister for Planning sought advice from the then Planning Assessment Commission (PAC) as to the State and regional significance of the DA, given its location next to the nationally significant Lake Wollumboola. The PAC considered the DA and concluded the proposal is of State and regional importance because of its proximity to Lake Wollumboola. The PAC noted the lake has been the subject of independent Government inquiries which concluded it is of State and regional significance. In March 2017, the Minister for Planning declared the proposal State Significant Development (SSD) under the *Environmental Planning and Assessment Act, 1979* (EP&A Act).

Under the *Environmental Planning and Assessment Regulation, 2000*, as the development was subject of an application that was made, but not finally determined before the declaration as SSD, the development application is taken to be an application for SSD and any steps taken by the relevant Council in respect of the application are taken to be steps taken by the Secretary or the Minister in relation to the application for SSD, including the assessment and public exhibition of the application.

As of March 2017, Council had reviewed the Applicant's SEE and SIS, publicly exhibited the application on three occasions, collated submissions from the public, Government agencies and special interest groups and requested further assessment information from the Applicant. The Department has not repeated the assessment steps already completed by Council, but has continued with the assessment process.

In 2015, separate to the DA process, the Halloran Trust lodged a Planning Proposal with Council to rezone all of its landholdings in the Shoalhaven LGA, including the land at Long Bow Point. The Planning Proposal recognises the strategic importance and environmental sensitivities of the land. Further details of the Planning Proposal and how it relates to the golf course application is provided on the next page.

Golf Course Application

The Applicant proposes to develop an 18-hole championship golf course on Long Bow Point. The golf course would cover approximately 35 hectares (ha) of the 196 ha site and includes:

- 18 holes including fairways, greens and tees, landscaped with grasses, groundcovers and shrubs
- a driving range and practice putting and chipping greens
- access road and 121 car parking spaces
- internal access roads and a bridge across Downs Creek for golf carts, pedestrians and maintenance vehicles to connect each hole
- green keepers shed, maintenance compound and turf nursery
- stormwater management system comprising 13 constructed wetlands and a central dam for reusing stormwater to irrigate the golf course
- clearing of 32.2 ha of native vegetation, including 10.16 ha of endangered ecological communities and retention of 167.36 ha as an on-site biodiversity offset
- retaining a 100 metre (m) vegetation buffer to the foreshore of Lake Wollumboola.

The proposal has an estimated capital investment value of \$9 million and would be constructed over 12 months. The proposal would provide employment for green keeping and maintenance personnel.

The initial DA lodged with Council proposed a clubhouse and golf pro shop approximately 100 m from the foreshore of Lake Wollumboola. This component was later withdrawn from the DA, but is still shown on the site plans as a possible future development, subject to a separate DA.

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.

Culburra Beach is surrounded by high quality natural features including beaches, the Crookhaven River estuary, Lake Wollumboola and Jervis Bay National Park. Long Bow Point contains threatened flora and fauna species and two wetlands listed on the now repealed State Environmental Planning Policy No. 14 – Coastal Wetlands. Lake Wollumboola, located immediately next to Long Bow Point, is a sensitive ecosystem reliant on high quality surface and groundwater inflows from a predominantly undisturbed catchment, to maintain its biological diversity. The lake is known as an intermittently closing and opening lake or lagoon (ICOLL) that changes significantly when open and closed to the ocean. The lake supports numerous threatened and migratory bird species that are protected by national legislation and international agreements. The lake is listed as a Wetland of National Importance and forms part of the Jervis Bay National Park.

Strategic Planning

The 2002 HRC Inquiry identified Lake Wollumboola as having high conservation value, warranting comprehensive protection and recommended limiting urban development near the lake to within existing developed boundaries. The 2006 South Coast Sensitive Urban Lands Review also concluded that land within the Lake Wollumboola catchment is entirely unsuitable for urban development. These recommendations were incorporated into the ISRP, which recommends the lake be protected from inappropriate development that affects water quality or ecological function.

The Department reviewed the golf course application in light of these strategic studies and plans and concluded the proposal is inconsistent with the recommendations to protect Lake Wollumboola.

Halloran Trust Planning Proposal

Shortly after lodging the golf course DA in 2011, Council had drafted the Shoalhaven Local Environmental Plan 2014 (SLEP 2014) which sought to amend the zoning of Long Bow Point for environmental conservation, 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 golf course application and West Culburra concept proposal were 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 Long Bow Point, West Culburra, and land at Callala Bay and Kinghorn Point, all within the Shoalhaven LGA. The proposal seeks to rezone the land 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 and an investigation into alternative sites for a golf course. 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 catchment. Discussions with Council indicate the Planning Proposal will take 3 to 4 years to finalise.

Golf Course Assessment Process and Consultation

In 2011, Council publicly exhibited the Statement of Environmental Effects (SEE) and associated technical studies including the Applicant's first version of the Integrated Water Management Plan (IWMP). The public exhibition process drew a large response from the local community and special interest groups including businesses and conservation societies. A total of 350 submissions were received, with the majority (86%) supporting the proposal. During this time, Government agencies, including the Office of Environment and Heritage (OEH) and individual departments within Council, requested further detailed assessment information from the Applicant.

Council ran a second public exhibition in 2012 to make the additional assessment information publicly available, including a revised SEE, DA plans, water quality, flora and fauna and Aboriginal heritage assessments. A total of 79 submissions were received, with 51% supporting and 49% objecting to the proposal. Following this exhibition, Council and OEH were still dissatisfied with the water quality and flora and fauna assessments. Council requested the Applicant revise the IWMP and prepare a Species Impact Statement (SIS).

In 2016, Council ran a third public exhibition which included another revision of the SEE and IWMP and the SIS. A total of 88 submissions were received, with 82% objecting to the proposal. A submission from OEH following the 2016 exhibition raised significant concerns about the potential impacts of the development on Lake Wollumboola. OEH advised the revised SEE, IWMP and SIS were not adequate for determining the likely environmental and heritage impacts of the proposal.

In March 2017, the DA was declared SSD and the Department commenced its assessment of the application. The Department obtained all of Council's DA files, visited the site and held meetings with Council, the Applicant, their consultants and key local interest groups. The Department also requested additional information from the Applicant on water quality and flora and fauna, which was provided in December 2017. The Department reviewed all relevant strategic studies and plans, reviewed submissions from all three exhibition periods and consulted with OEH. In its final submission in March 2018, OEH maintained that a precautionary approach should be applied to assessing development near the lake, to avoid irreversible impacts on the lake's ecology and the adjoining Jervis Bay National Park.

Submissions from the public supporting the application stated the golf course would bring economic and social benefits to the people and businesses in Culburra Beach. Supporters stated that Culburra

Beach needs a recreational facility for local residents and it would attract further tourism to the area. The proposal would bring employment opportunities and stimulate further growth and development in the local area.

Submissions objecting to the proposal stated the development would have unacceptable impacts on Lake Wollumboola, including adverse impacts on water quality, affecting the lake's unique ecosystem and the threatened and migratory species that inhabit the lake. Submissions stated the proposal would also adversely impact threatened flora and fauna species on Long Bow Point. Submissions noted the proposal is inconsistent with strategic planning to protect the lake from further urban development and questioned the need for and viability of a golf course in this location.

As the proposal received more than 25 public submissions objecting to the application, the IPC is declared the consent authority in accordance with clause 8A of State Environmental Planning Policy - State and Regional Development (SRD SEPP) and section 4.5(a) of the EP&A Act.

Key Issues

The Department identified the following key issues for assessment:

- consistency with strategic studies and plans
- surface and groundwater quality
- flora and fauna.

Other issues assessed by the Department include the need for the development, social and economic impacts, Aboriginal heritage and traffic.

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. Despite multiple revisions to the assessment documents, the Department and OEH remain dissatisfied with the level of assessment provided and the validity of the conclusions.

The Department's assessment has concluded:

- the proposal is inconsistent with strategic planning objectives to protect Lake Wollumboola from further urban development
- the Applicant has been unable to demonstrate with scientific certainty that the proposed stormwater management system would achieve a neutral or beneficial effect on water quality in the lake
- there is inadequate information on groundwater inputs to the lake to inform an accurate assessment of the proposal's potential impacts on groundwater
- the potential water quality impacts present an unacceptable risk to the lake's unique ecosystems and the threatened and migratory species it supports
- the Applicant has been unable to demonstrate with certainty that the proposal would not have a significant impact on threatened flora and fauna species, despite completing four separate flora and fauna assessments for the application
- the potential impacts on threatened flora and fauna species on Long Bow Point and in Lake Wollumboola are likely to be significant
- the potential economic and social benefits of the golf course are unlikely to significantly outweigh the environmental impacts of the proposal.

On balance, the Department concludes the 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 recreational development and environmental conservation across the Halloran landholdings. The Planning Proposal will be supported by detailed studies, including a two-year groundwater monitoring study that will assist in defining appropriate development boundaries around Lake Wollumboola. The Gateway Determination for the Planning Proposal also requires an investigation into alternative locations for a golf course in the locality, outside of the lake catchment. The Planning Proposal process will allow the strategic objectives of the ISRP to be achieved across the Halloran landholdings.

1. BACKGROUND & SITE DESCRIPTION

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 8406) application for the Long Bow Point Golf Course (the development). Allen, Price & Associates, on behalf of the Halloran Trust (the Applicant) proposes to build an 18-hole championship golf course and associated facilities including practice area, maintenance facilities, access road and car parking at Long Bow Point, west of the township of Culburra Beach in the Shoalhaven local government area (LGA), see **Figure 1**.



Figure 1: Regional Location

The development application (DA) was lodged with Shoalhaven City Council (Council) in 2011. The original proposal included a clubhouse and pro shop, but these aspects were later withdrawn from the DA during Council's assessment. On 7 March 2017, the Minister for Planning declared the DA to be State Significant Development (SSD), following advice from the then Planning Assessment Commission (now known as the Independent Planning Commission). The Independent Planning Commission (the Commission) considered the application of State and regional significance due to the high ecological value and State and regional importance of the adjacent Lake Wollumboola (refer to **Section 1.3**).

The development assessment process followed by Council prior to declaration of the DA as SSD are taken to be steps taken under the SSD assessment process. As of March 2017, Council had reviewed the Applicant's Statement of Environmental Effects (SEE) and Species Impact Statement (SIS), publicly exhibited the application on three occasions, collated submissions from the public, government agencies and special interest groups and requested further information from the Applicant to respond to the issues raised. The Department has not repeated the assessment steps already completed by Council, but has continued with the assessment process.

The Department's assessment involved a review of all information submitted by the Applicant, visits to the site and meetings with the Applicant, their consultants and local interest groups including the Lake Wollumboola Protection Association, the Culburra Chamber of Commerce and the Culburra Beach and

Districts Progress Association. The Department also requested additional information from the Applicant on water quality and flora and fauna, which was provided in December 2017. The Department considered submissions from government agencies, stakeholders and the public and reviewed relevant strategic studies and statutory planning instruments. This report evaluates the key issues associated with the development and provides a recommendation for determining the application.

1.2. Background to Proposed Development on Long Bow Point

Proposed development on Long Bow Point has a long and contentious history. In 1992, land to the west of Culburra Beach, including Long Bow Point, was zoned residential, as part of an amendment to Shoalhaven Local Environmental Plan 1985 (SLEP 1985). In 1993, Realty Realizations (a company related to the Halloran Trust) proposed an 837 lot residential subdivision on Long Bow Point. In 1996 a Commission of Inquiry (COI) was held in relation to that proposal and the suitability of the site for residential development. After a lengthy adjournment to allow the Applicant to prepare a detailed fauna impact statement, the COI recommended refusal of the residential subdivision because of the likely adverse impacts on threatened flora and fauna and the water quality of Lake Wollumboola. The then Minister for Planning subsequently refused the DA in June 2000.

A number of strategic studies followed this decision, with the aim of identifying areas of land suitable for residential development around Culburra Beach 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. **Section 3** provides further discussion of the recommendations of these strategic studies.

1.3. The Commission's SSD Call-in Advice

In November 2016, the Commission provided advice to the Minister for Planning regarding the State and regional significance of the golf course application. The Commission concluded the proposal is of State and regional importance because the site is in close proximity to Lake Wollumboola, which is of State environmental significance. The Commission noted concerns that the proposal is inconsistent with the strategic direction of the Illawarra Shoalhaven Regional Plan and noted Lake Wollumboola has been the subject of four independent Government inquiries which have determined the lake is of State significance. The Commission noted the proposal has the potential to have adverse impacts on the lake and Aboriginal cultural and social heritage.

1.4. Related Proposals by the Halloran Trust

Planning Proposal

When drafting the Shoalhaven Local Environmental Plan 2014 (SLEP 2014), Council sought to amend the zoning of Long Bow Point, consistent with the outcomes of the strategic studies. Following discussions with the Applicant, Council resolved to defer the zoning of the site, and other large parcels of land owned by the Halloran Trust, until the golf course application was determined. The then Minister for Planning agreed on 6 March 2014 to defer the zoning of the site provided a Planning Proposal was submitted for the Halloran landholdings, including a masterplan to determine appropriate development and conservation outcomes for the Halloran owned lands. The SLEP 2014 shows the land as a 'deferred matter' to which SLEP 1985 still applies.

In 2015, the Halloran Trust lodged a Planning Proposal for their 1,681.5 hectares (ha) of land in the Shoalhaven LGA, covering Long Bow Point, West Culburra, West Callala Bay and Kinghorn Point (see **Figure 2**). The Planning Proposal seeks to rezone the land 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. 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, economic studies and an investigation of suitable alternative sites for a

golf course, outside the lake catchment. 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 to complete. 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.

As the initial DA for the Long Bow Point Golf Course was lodged prior to SLEP 2014, the residential zoning under SLEP 1985 applies to the site. Under SLEP 1985, the development is permissible with consent, therefore the application can be determined prior to finalising the Planning Proposal.

West Culburra State Significant Development (SSD 3846)

In April 2010, John Toon Pty Limited lodged an application on behalf of the Halloran Trust for residential development at West Culburra. The application is for a concept proposal, which seeks to develop over 100 ha of land, immediately north of Long Bow Point, to provide 650 residential lots, a tourist facility, sports fields, parks, industrial development and supporting infrastructure.

Figure 2 shows the location of the West Culburra concept proposal, the proposed golf course at Long Bow Point and the area covered by the Planning Proposal. In June 2018, the Department finalised its assessment of the West Culburra concept proposal and provided a recommendation to the Commission. The application is currently being considered and will be determined by the Commission.

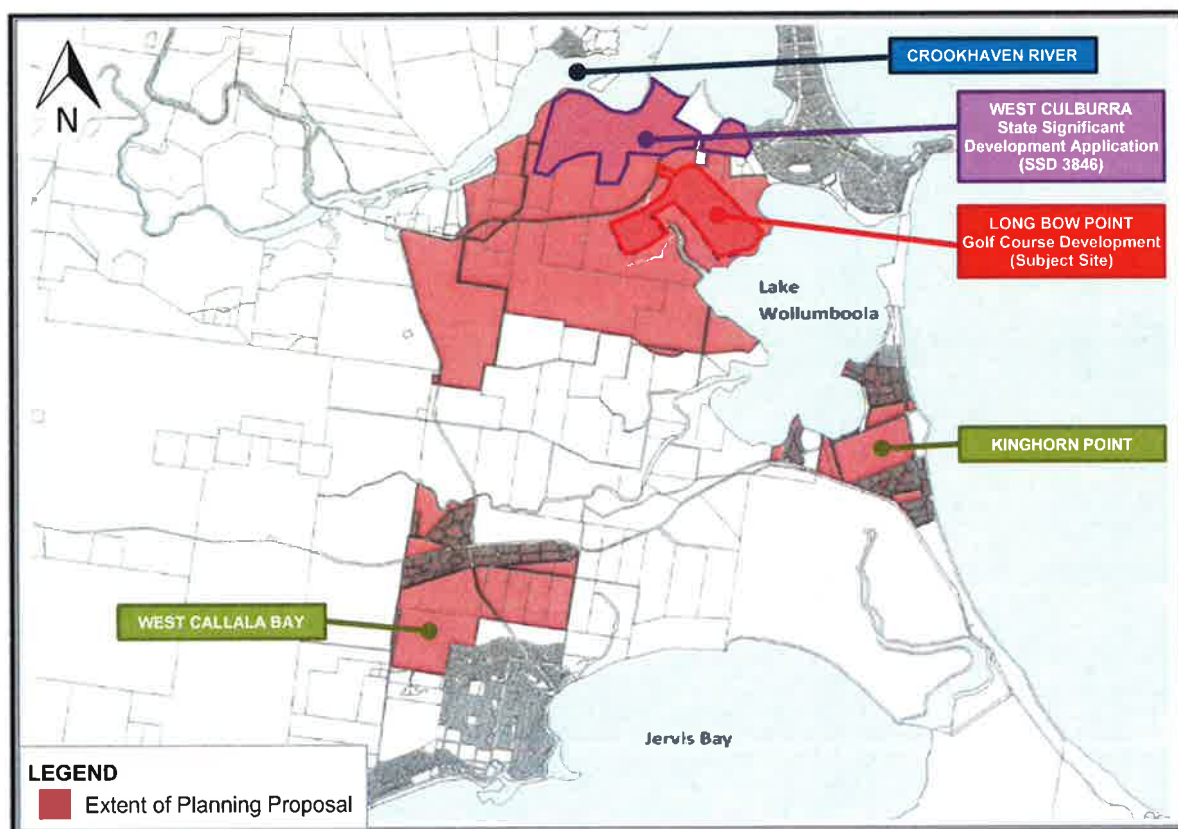


Figure 2: Planning Proposal Area & Current SSDs

1.5. Site Description and Surrounding Land Uses

Long Bow Point is located on the southern side of Culburra Road and is approximately 15 kilometres (km) south-east of Nowra in the Shoalhaven LGA. The small coastal town of Culburra Beach is approximately 2.5 km north-east of the site. The site is located immediately north-west of Lake Wollumboola, which forms part of the Jervis Bay National Park, see **Figure 1**.

The site covers approximately 196 ha and is bound by Culburra Road to the north-west, a retirement village and Bowling Club to the north, Lake Wollumboola and the Jervis Bay National Park to the south-east and dense vegetated areas to the west.

Parts of the site are heavily vegetated and other areas towards the centre of the site are cleared (see **Plates 1 and 2**). There is a ridgeline through the centre of the site in a north-west/south-east alignment. The site ultimately drains to Lake Wollumboola through a series of water courses, including Downs Creek in the southern part of the site and the smaller Wattle Creek in the northern part of the site. The site contains two wetland areas listed on State Environmental Planning Policy No. 14 – Coastal Wetlands (SEPP 14). These are located on the edge of Lake Wollumboola where Downs Creek and Wattle Creek enter the lake (see **Figure 3**). Surrounding land is undeveloped and vegetated. **Figure 3** shows the boundary of the site in red. The cleared and vegetated areas are also visible.



Plate 1: Vegetated area of the site



Plate 2: Cleared area of the site

Lake Wollumboola is considered a unique ecosystem, known as an intermittently closing and opening lake or lagoon (ICOLL). The lake can remain closed to the ocean for up to 5 years and has significantly different chemistry during open and closed periods. Changes in the lake's chemistry makes it a highly diverse ecosystem that supports large populations of water birds and shorebirds. The lake is reliant on high quality surface and groundwater flows to maintain its biological diversity. The lake supports internationally listed migratory bird species, is listed as a Wetland of National Importance and is known as a Globally Important Bird Area for black swan and chestnut teal. The lake supports species listed on the NSW *Threatened Species Conservation Act, 1995*, the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* and international agreements including the China Australia Migratory Bird Agreement (CAMBA), Japan Australia Migratory Bird Agreement (JAMBA) and the Republic of Korea Migratory Bird Agreement (ROKAMBA).



Figure 3: Long Bow Point Site

2. PROPOSED DEVELOPMENT

2.1. Description of the Development

The Applicant proposes to construct and operate an 18-hole championship golf course. **Table 1** summarises the major components of the development and **Figure 4** shows the key elements. **Figures 5** and **6** show more detail of the proposed clearing for the golf course fairways, greens and constructed wetlands. Further details of the proposal are included in the Statement of Environmental Effects (SEE), December 2017 in **Appendix E**.

Table 1: Main Development Components

Aspect	Description
Summary	Construct and operate an 18-hole championship golf course, golf practice area, maintenance buildings, access road and car parking.
Golf Course	<ul style="list-style-type: none"> 18-hole golf course covering 6.4 km. Figure 4 shows the proposed layout practice area including a driving range, putting and chipping greens golf course furniture.
Maintenance Facilities	<ul style="list-style-type: none"> green keepers shed and toilet facilities maintenance compound (approximately 3,500m²), fenced and located on the existing cleared area adjacent to the proposed access road turf nursery.
Landscaping	<ul style="list-style-type: none"> planting of tees, greens, fairways and surrounds with grasses, groundcovers, shrubs and trees bush regeneration works.

Aspect	Description
Access and Parking	<ul style="list-style-type: none"> access road from Culburra Road along the central ridge line of Long Bow Point toward Lake Wollumboola internal access roads for golf carts and pedestrians to connect each hole a bridge across Downs Creek between holes 12 and 14 for pedestrians, golf carts and maintenance vehicles 121 car parking spaces at the end of the main access road between holes 9 and 18.
Integrated Water Management	<ul style="list-style-type: none"> capture and re-use stormwater for golf course irrigation through a series of vegetated swales and 13 constructed wetlands one large detention basin for golf course irrigation and other non-potable uses a sediment basin and gross pollutant traps to treat runoff from the car park a sewer main connecting the green keepers shed to Council's sewerage system in Culburra Road.
Clearing	<ul style="list-style-type: none"> 35.7 ha in total comprising 32.2 ha of native vegetation which includes 10.16 ha of endangered ecological communities and 3.5 ha of already cleared land
Offsets and Buffer Zone	<p>Proposed offset strategy includes:</p> <ul style="list-style-type: none"> retention of 167.36 ha of land at Long Bow Point as private conservation reserve with long-term maintenance and management (see Figure 14) re-introduction of threatened species and habitat creation within the golf course 100 m retained vegetated buffer to the foreshore of Lake Wollumboola.
Construction	<p>Three stages of construction over 7-12 months including:</p> <ul style="list-style-type: none"> Stage 1 – marking the edge of clearing, pre-clearing surveys, relocation of tree-hollows and clearing across the whole development area Stage 2 <ul style="list-style-type: none"> bulk earthworks, drainage, construction of golf course holes 1 to 9, landscaping, green keepers facilities and toilets construction of access road and parking install services including power, sewer, communications, water supply and stormwater detention basins for holes 1 to 9. Stage 3 <ul style="list-style-type: none"> earthworks and construction of golf course holes 10 to 18 and landscaping construction of stormwater detention basins for holes 10 to 18 construction of a bridge over Downs Creek for golf buggies, maintenance vehicles and pedestrians to access holes 13 and 14.
Capital Investment Value	\$9,045,130.

The SEE 2017, refers to a Stage 2 development including a clubhouse, pro shop and change rooms to be built close to Lake Wollumboola, adjacent to the proposed car park and holes 1 and 10. The SEE states these facilities would be subject to a separate DA at a later stage, and are not included in the current application. The Department understands these were part of the original application to Council but were later withdrawn. **Figures 4 and 5** show the clubhouse as possible future development.

2.2. Applicant's Justification

The Applicant has proposed various development on its landholdings in Culburra Beach for over 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 the golf course would provide a recreational and social facility for Culburra Beach that would bring visitors to the area and provide economic benefits to the locality during construction and operation. The Applicant states the proposal would make the land on Long Bow Point accessible to the public, providing locals and visitors with an opportunity to enjoy the natural environment of the area. The Applicant also notes the golf course is consistent with the current development controls (zoning) applying to the site.

2.3. Relevant Documentation

The Applicant has submitted numerous documents and multiple revisions of the key documents since the original application was lodged with Council in 2011. **Table 2** lists the latest versions of the key documents relevant to the Department's assessment of the application.

Table 2: Relevant Documents

Ref.	Date	Title
SEE	December 2017	Statement of Environmental Effects, Allen, Price & Associates
SIS	August 2015	Species Impact Statement, Gunninah & SLR Consulting
SIS Addendum	December 2017	Species Impact Statement Addendum Report, Cumberland Ecology
SER	March 2012	Supplementary Ecological Assessment Report, SLR
ERA	June 2011	Ecological and Riparian Assessment, InSites
Drawings	1 Aug 2014 (Updated November 2017)	DA drawing set, Golf by Design & Allen, Price & Associates
IWMP	June 2015	Integrated Water Management Plan, Martens Consulting
Martens 2017	December 2017	MUSIC Model Review, Martens Consulting
PoM	March 2014	Draft Plan of Management, Golf by Design
ASS	June 2011	Acid Sulfate Soils Assessment, Martens Consulting
BRA	June 2011	Preliminary Bushfire Risk Assessment, Martens Consulting
CA	June 2011	Stage 1 Contamination Assessment, Martens Consulting
TPA	March 2012	Traffic and Parking Assessment, Traffic Solutions
ACHA	May 2012	Aboriginal Cultural Heritage Assessment, South East Archaeology

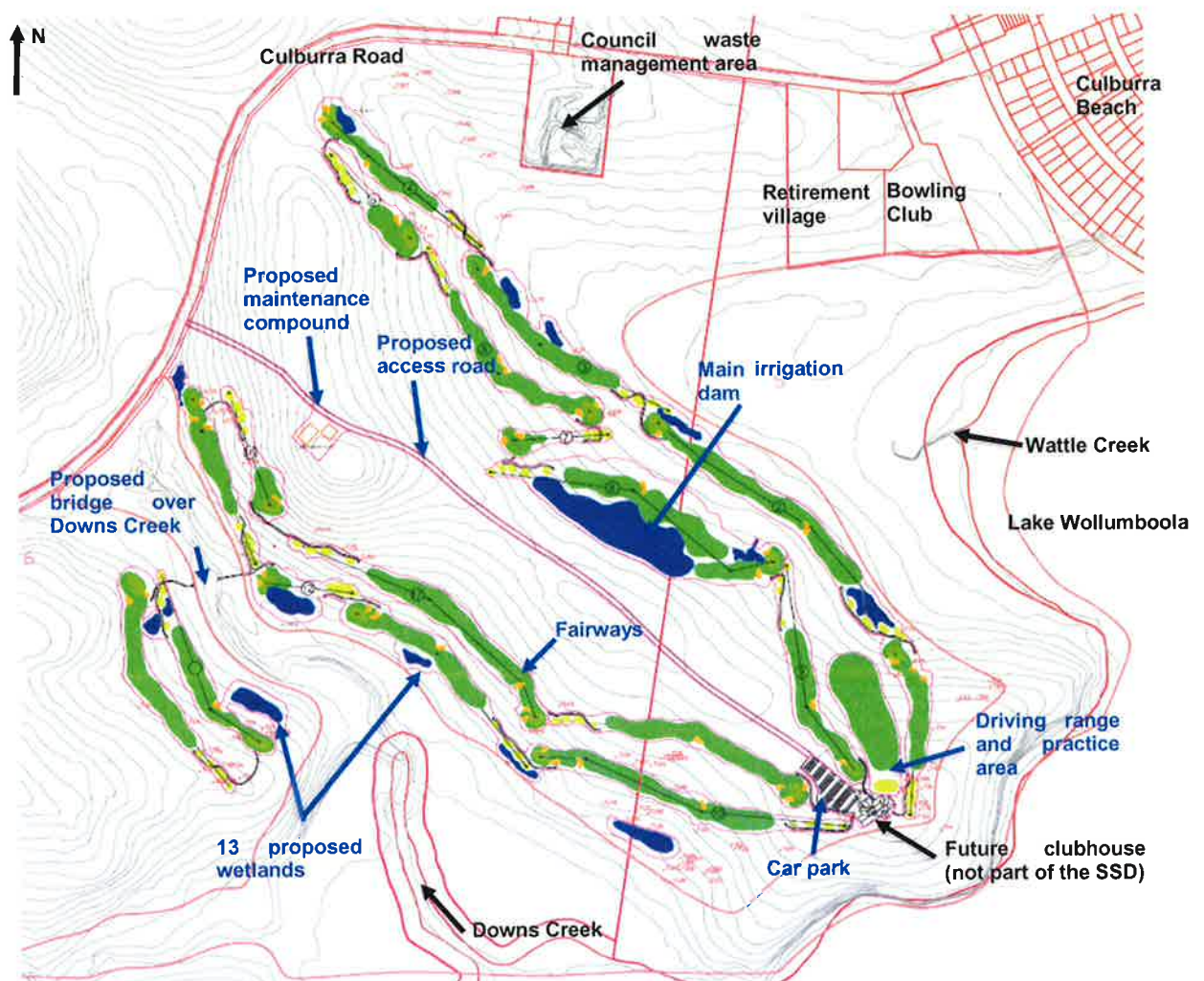


Figure 4: Proposed 18-hole Golf Course, Access Road and Car Park

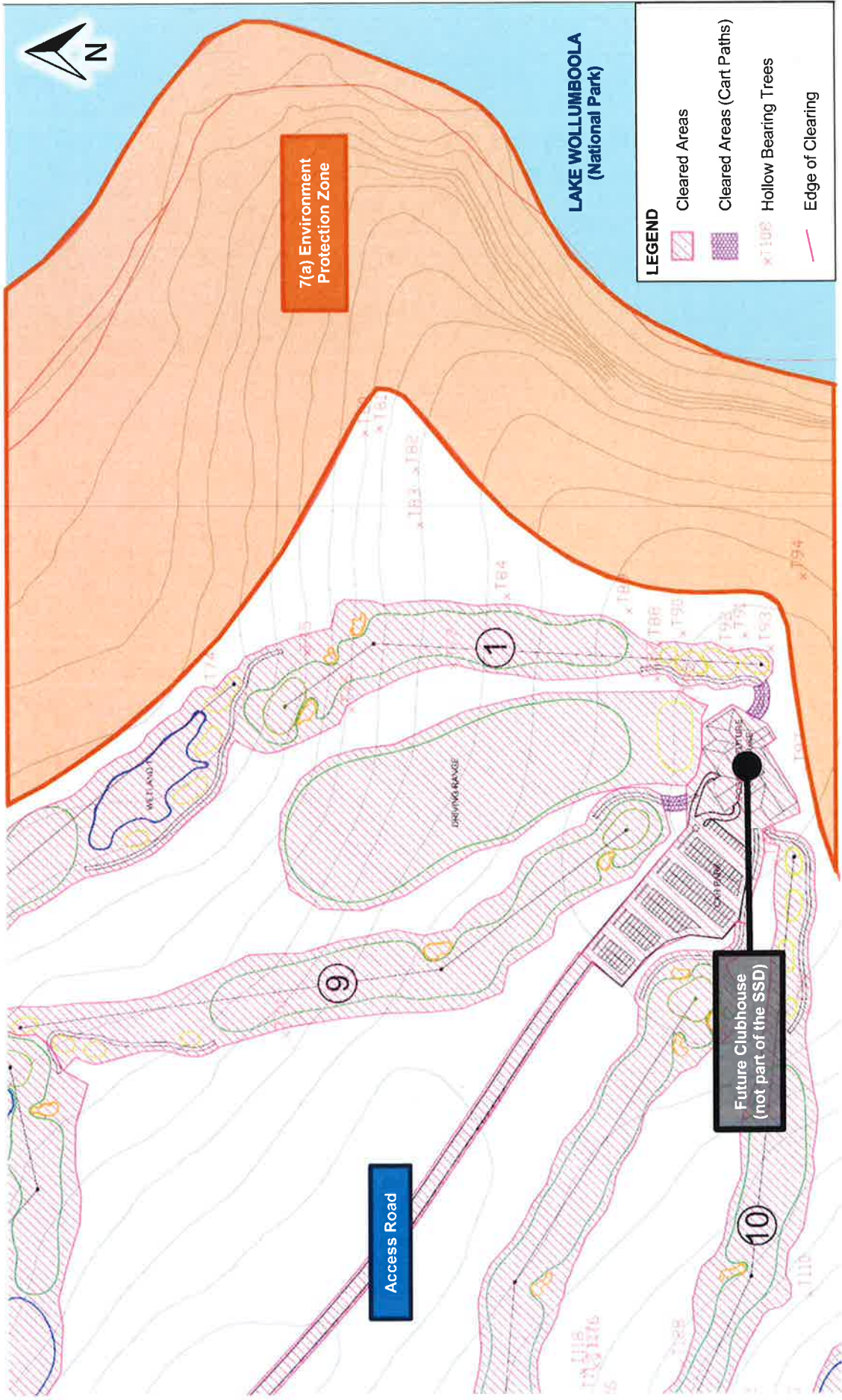


Figure 5: Proposed Clearing – Golf course holes, driving range, access road, car park and wetland

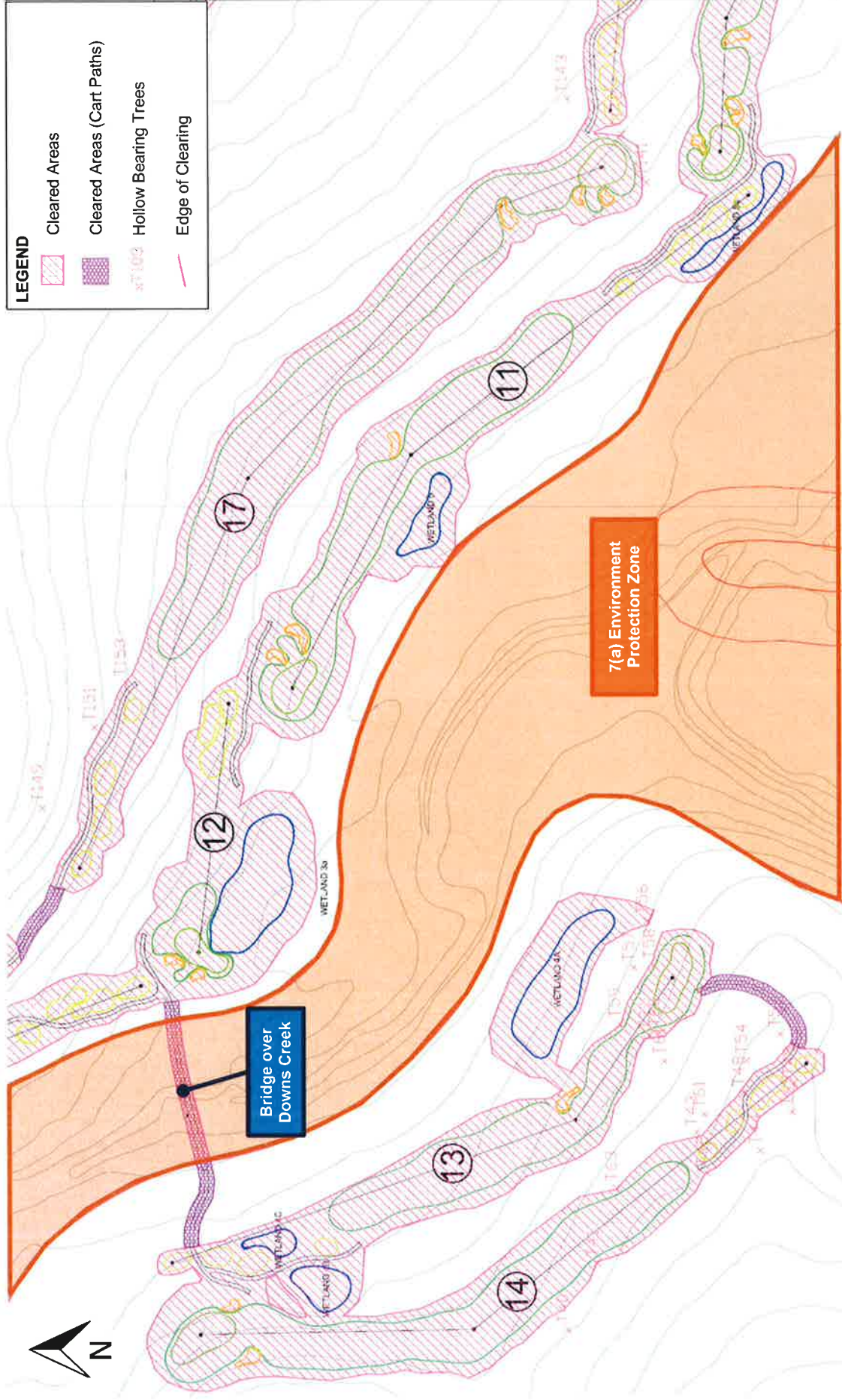


Figure 6: Proposed Clearing – Golf course holes, wetlands and bridge over Downs Creek

3. STRATEGIC CONTEXT

The COI into the proposed residential subdivision at Long Bow Point, recommended a review of the planning controls covering Long Bow Point, noting the high conservation value of Lake Wollumboola and the important biodiversity values of Long Bow Point. Since then, numerous strategic studies have been undertaken. The Department has considered these studies in its assessment of the golf course application. The studies are discussed in chronological order below.

3.1. Commission of Inquiry – Long Bow Point, 2000

In 1993, Realty Realizations lodged an application with Shoalhaven City Council for an 837-lot residential subdivision on Long Bow Point. In 1996, a COI was held to consider the suitability of the site for residential development. Under former section 101 of the *Environmental Planning and Assessment Act 1979*, the Minister became responsible for determining the development application.

The COI reviewed the environmental impacts of the application and its key findings were:

- Long Bow Point is an area of high biodiversity, supporting threatened and endangered fauna
- Lake Wollumboola is of high conservation value being of International, National, State and regional significance and requiring the highest level of protection from pollution or impacts
- the proposed residential subdivision would significantly increase pollutants in runoff draining to the lake and the mitigation measures would not prevent likely serious or irreversible environmental damage.

The COI recommended:

- no subdivision due to the potential water pollution to Lake Wollumboola and related flora and fauna habitat impacts
- a review of planning controls for the site.

The COI noted that despite a lengthy adjournment period (3 years) to enable the Applicant to prepare a fauna impact statement, the Applicant failed to demonstrate the development would not adversely impact on threatened fauna and habitat. Similarly, the Applicant was unable to demonstrate the proposal would not adversely impact the water quality of Lake Wollumboola. The COI recommended refusal of the proposal due to its likely unacceptable environmental impacts on Lake Wollumboola.

Consequently, in June 2000 the then Minister for Urban Affairs and Planning refused the subdivision application.

3.2. Healthy Rivers Commission (HRC) Inquiry, 2002

Following the COI, the State Government commissioned an independent inquiry into the coastal lakes of NSW to inform regional planning. The HRC conducted the Independent Public Inquiry into Coastal Lakes. The HRC Inquiry considered all coastal lakes in NSW and concluded:

- Lake Wollumboola has the highest classification of 'Comprehensive Protection'
- Lake Wollumboola has extreme natural sensitivity, has a largely unmodified catchment, a slightly affected lake condition and high conservation value.

The HRC recommended limiting new urban development near Lake Wollumboola to within existing developed boundaries. The HRC Inquiry highlighted the need for decisions regarding development that may affect coastal lakes be made with rigour and with better information. The HRC Inquiry also recommended the Minister for Planning 'call-in' development affecting a coastal lake if the Minister considers the development may not have a neutral or beneficial effect on natural ecosystem processes, in cases where the lake is classified as Comprehensive Protection (as is Lake Wollumboola).

Consistent with the HRC recommendations, the Minister called-in the golf course development application due to the high ecological value of Lake Wollumboola.

Lake Wollumboola was added to the Jervis Bay National Park in 2002, following the recommendations of the HRC Inquiry.

3.3. 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 then 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 Illawarra Shoalhaven Regional Plan (ISRP), which supersedes the draft SCRS.

3.4. South Coast Sensitive Urban Lands Review, 2006

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

The site of the proposed golf course at Long Bow Point is located within the Culburra Urban Expansion area, which was included in the South Coast Sensitive Urban Lands Review (SCSULR). 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.

The outcomes and recommendations of the review are embodied within the ISRP, to guide the protection and conservation of the Lake Wollumboola catchment and future land use planning decisions.

3.5. Scanes Peer Review, 2013

During its consideration of the Long Bow Point Golf Course DA, the Office of Environment and Heritage commissioned a detailed study to consider the water quality impacts on Lake Wollumboola. The Office of Environment and Heritage (Estuaries and Catchment Science Division) conducted a review titled, Environmental Sensitivity of Lake Wollumboola: Input to Considerations of Development Applications for Long Bow Point, Culburra, prepared by Scanes, Ferguson and Potts, 2013 (referred to as the Scanes Peer Review).

The Scanes Peer Review considered the early water quality studies commissioned by the Applicant for the golf course, and other relevant literature on the water quality and ecology of Lake Wollumboola. The Applicant's view is that the lake catchment can accommodate the golf course without significant impact on water quality or migratory bird habitat, particularly with the use of modern stormwater control and treatment technologies.

The Scanes Peer Review refutes the findings of the Applicant's water quality studies, identifying concerns with the modelling and subsequent assessment. The Scanes Peer Review confirms the lake's extremely high conservation importance and ecological importance as a unique "back-dune lagoon" system. The Scanes Peer Review emphasises the extreme sensitivity of the lake and high susceptibility to catastrophic state change. The Scanes Peer Review recommended a precautionary approach and supported limiting development from the catchment.

3.6. 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 protection of Lake Wollumboola and its catchment is specifically identified in the ISRP. The lake is identified 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 because of potential negative impacts on the lake. Direction 5.4 of the ISRP states Lake Wollumboola needs to be protected as the region grows.

3.7. Strategic Summary

The COI, HRC Inquiry, SCSULR, ISRP 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 Department's assessment (in **Section 6**) supports this view, noting proposed development within the lake catchment is inconsistent with strategic planning and may lead to irreversible impacts on the lake. The Office of Environment and Heritage (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.

4. STATUTORY FRAMEWORK

4.1. State Significant Development

The proposed development was declared State significant development (SSD) under Part 4 of the EP&A Act by an Order made by the Minister for Planning on 7 March 2017. The Order was made by the Minister for Planning with the advice of the Commission, which concluded the proposal is of State and regional significance (see **Section 1.3** and **Appendix G**).

4.2. Consent Authority

The Independent Planning 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 application, 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. Two zones cover the site (see **Figure 7**):

- 2(c) Residential (Living Area)
- 7(a) Environmental Protection 'A' (Ecology).

The proposed golf course is located in the 2(c) Residential 'C' (Living Area) zone. The proposed bridge across Downs Creek is located in the 7(a) Environmental Protection 'A' (Ecology) zone. The proposed development is permissible with consent in these zones.

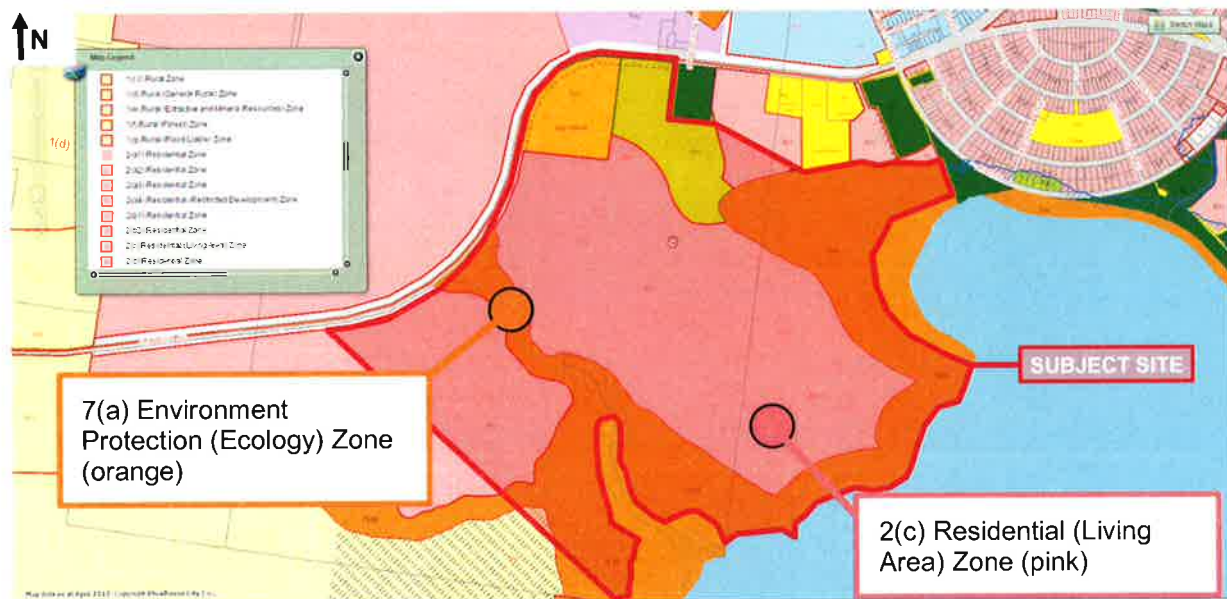


Figure 7: Site Zoning under SLEP 1985

4.4. Other Approvals

The original DA was lodged with Council under Part 4 of the EP&A Act. Under Part 4, Section 4.13, the consent authority must obtain the concurrence of the OEH for development that is likely to significantly affect a threatened species, population, or ecological community, or its habitat. In its 2016 submission, OEH advised that Council had yet to formally request its concurrence. OEH advised it would provide further detailed comments on the SIS once concurrence was requested.

In March 2017, the Minister declared the proposal SSD. Section 4.13 does not apply to SSD, therefore OEH concurrence is not required to determine the application. The Department has considered the issues raised by OEH in its submissions on the application, see **Section 5.2.4**.

Section 4.4.2 of the EP&A Act requires further approvals to be obtained, considered or determined in a manner that is consistent with any Part 4 approval for SSD projects under the EP&A Act. The project does not require any further approvals under Section 4.4.2.

4.5. 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 application 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 Appendix C**
- 4.15 (b) – the likely environmental, social and economic impacts, **Section 6**
- 4.15 (c) – suitability of the site for the development, **Sections 3 and 6**
- 4.15 (d) – submissions, **Section 5**
- 4.15 (e) – the public interest, throughout **Section 6**.

The Department's consideration is included in **Appendix B**. In summary, the Department is not satisfied the proposal is consistent with the requirements of Section 4.15 of the EP&A Act.

4.6. Environmental Planning Instruments

The Department has considered the application against the relevant provisions of the environmental planning instruments (EPIs) and draft EPI's that apply to the application, as required by Section 4.15. State Environmental Planning Policies (SEPP) 14 and 71 have now been repealed by the SEPP (Coastal Management) 2016. The savings provisions in the SEPP (Coastal Management) 2016 note it does not apply to DA's lodged prior to commencement of the SEPP. Therefore, SEPPs 14 and 71 still apply to this application and are considered in this report. The relevant SEPPs are:

- State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP)
- State Environmental Planning Policy No. 14 – Coastal Wetlands (SEPP 14)
- State Environmental Planning Policy No. 71 – Coastal Protection (SEPP 71)
- Illawarra Shoalhaven Regional Plan 2015 (ISRP)
- Jervis Bay Regional Environmental Plan 1996 (JBREP)
- Shoalhaven Local Environmental Plan 1985 (SLEP 1985).

Appendix C provides the Department's detailed consideration of the application against the objectives of these EPI's. The Department considers the application is inconsistent with some of the key EPIs including SEPP 14, SEPP 71, ISRP and JBREP.

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 LGA. Further, as the DCP came into effect in 2014, after the application was lodged, it does not apply to the application.

4.7. Public Exhibition and Notification

The assessment processes undertaken by Council, including public exhibition of the application, are taken to have been undertaken under the SSD process. The application was publicly exhibited by Council on three separate occasions, satisfying the community participation requirements in Schedule 1, Clause 9 of the EP&A Act. Details of the exhibition process and notifications are provided in **Section 5.1**.

4.8. 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 application is not consistent with all objects of the EP&A Act, see **Table 3**.

Table 3: Objects of the EP&A Act and Consistency of the Application

Object of the EP&A Act	Consideration
(a) to promote the social and economic welfare of the community and a better	The Department notes the proposal requires clearing of 32 ha of high quality native vegetation, including over 10 ha of EECs, to provide a recreational facility for Culburra Beach. The social and economic benefits

Object of the EP&A Act	Consideration
environment by the proper management, development and conservation of the State's natural and other resources	<p>of the golf course were not quantified by the Applicant. The Department's assessment has concluded the proposal would have unacceptable impacts on threatened species and water quality on Long Bow Point and Lake Wollumboola. The potential social and economic benefits do not outweigh the ecological impacts of a golf course in this location.</p> <p>The proposal does not promote the proper conservation of the State's natural 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 Department's assessment concludes the golf course application 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 Section 4.9.</p>
(c) to promote the orderly and economic use and development of land	<p>The Department considers the proposal is not orderly development of the land as it would provide a low level recreational use on land identified by numerous strategic studies as high conservation value. The Planning Proposal for the Halloran lands will consider appropriate development and conservation outcomes through detailed environmental, economic and social studies.</p>
(d) to promote the delivery and maintenance of affordable housing	<p>The proposal does not include 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 development would result in clearing 32 ha of high quality native vegetation on the site and would have adverse impacts on Lake Wollumboola and the threatened and migratory species that utilise the lake. The Applicant maintained there would be no significant impacts to threatened species or EECs, however this conclusion was made without adequate scientific justification. It is the firm view of OEH, Council's threatened species officer and the Department that the development would have adverse impacts on threatened species and EECs both on the site and the adjacent Lake Wollumboola. The proposal is not consistent with the aim of protecting threatened species, populations and ecological communities.</p>
(f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage)	<p>The development has the potential to adversely impact on Aboriginal heritage items, although these impacts were not quantified through detailed investigations. The Department concluded the potential impacts on water quality and biodiversity are sufficient to warrant refusal of the application and did not require detailed investigations of Aboriginal heritage due to the potential impacts of clearing to conduct test excavations.</p>
(g) to promote good design and amenity of the built environment	<p>The proposal does not include any buildings aside from a small green keepers shed.</p>
(h) to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants	<p>The proposal does not include any buildings that would be permanently occupied.</p>
(i) to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State	<p>The application was considered by local government (Council) from 2011 until early 2017. Once declared SSD, the Department assessed the application in consultation with, and giving due consideration to, the technical expertise and comments provided by Council and other Government agencies, such as OEH. In addition, the application has been considered in the context of strategic planning studies and inquiries which have involved both local and State government. This is consistent with the object of sharing the responsibility for environmental planning between the different levels of Government in the State.</p>
(j) to provide increased opportunity for community participation in environmental planning and assessment	<p>Council exhibited the application on three separate occasions in 2011, 2012 and 2016. The Department has considered submissions from the public, special interest groups and government agencies in its assessment of the application. The Department has also met with key special interest groups. There has been considerable opportunity for public involvement throughout the assessment process for this application.</p>

4.9. 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 application. The aspects of most relevance 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 impacts on water quality in Lake Wollumboola, see **Section 6.2**. These issues were highlighted by Council when the application was first lodged in 2011 and reiterated in submissions from OEH throughout the assessment of the application. Despite this, the Applicant continues to maintain the development would achieve a neutral or beneficial effect on water quality from the proposed stormwater management system and would not adversely impact on threatened or migratory species that rely on the lake's unique ecosystem.

The Applicant has attempted to address the concerns raised by Council, OEH and the Department through multiple revisions of the Integrated Water Management Plan and four separate flora and fauna assessments. However, the application documents have been unable to convince OEH and the Department that the water quality and biodiversity impacts are not significant. 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.

Conservation of Biological Diversity and Ecological Integrity

The Department's assessment has concluded the impacts of clearing native vegetation on Long Bow Point and the impact on water quality presents an unacceptable risk to biodiversity and ecological integrity. The Department's view is supported by OEH.

The Department's assessment concludes the development poses an unacceptable risk to threatened species, habitat, water quality and ecology of Lake Wollumboola. Therefore, it does not satisfy the objectives of conserving biodiversity and ecological integrity. The proposal is inconsistent with numerous strategic studies and planning instruments that unequivocally recommend the protection of the Lake Wollumboola catchment from urban development that negatively impacts on the lake.

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

4.10. 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.

4.11. 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 Applicant's Species Impact Statement (SIS) and SIS Addendum concluded the proposal would not impose a significant impact on any MNES, including threatened biota or migratory species listed on the EPBC Act, and therefore the Applicant did not make a formal referral to the Commonwealth.

The Department considers that a referral to the Commonwealth Government should have been made given the following:

- during the COI, the National Parks and Wildlife Service (NPWS) noted the lake supports a population of nationally endangered Little Tern as well as internationally listed migratory birds
- the EnviroKey 2012 independent review of the Applicant's first ecological assessment, identified 22 threatened or migratory species listed on the EPBC Act having been recorded on or adjacent to the site
- the Director-General's Requirements (DGRs) issued by the OEH for the SIS strongly advised the Applicant to consult with the Commonwealth Government in relation to potential impacts on MNES, specifically threatened species listed on the EPBC Act
- OEHs submissions advised the SIS and SIS Addendum had not adequately addressed the DGRs and the flora and fauna survey effort was not adequate to determine the impacts on threatened species.

Given these aspects, the Department considers referral to the Commonwealth Government should have been made by the Applicant, 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 application is provided in **Section 6.3**.

5. CONSULTATION & SUBMISSIONS

5.1. Consultation Process

In assessing the application, both Council and the Department undertook a range of consultation activities. Council undertook the public exhibition process, inviting formal submissions from the public and special interest groups. Council also consulted relevant Government agencies and internal departments within Council, in relation to the technical aspects of the application. After March 2017, when the application was declared SSD, the Department conducted its own consultation activities to inform its assessment. This section describes the key consultation activities carried out by both Council and the Department and provides a summary of the outcomes.

5.1.1. Public Exhibitions by Council

Council publicly exhibited the application on three occasions. The first exhibition was undertaken shortly after the application was lodged in 2011. This exhibition resulted in requests for further detailed assessment information from Government agencies. The second exhibition in 2012 made the additional assessment information publicly available, including a revised SEE, DA plans, water quality, flora and fauna and Aboriginal heritage assessments. Council also ran a third public exhibition in 2016, which included another revision of the SEE and the SIS. The public exhibition processes carried out by Council satisfy the community participation requirements of Schedule 1, Clause 9 of the EP&A Act.

All public exhibitions were advertised in the local newspaper, the South Coast Register. The application documents were available to view at Council's office in Nowra and on Council's website. Notification letters were sent to nearby landowners, special interest groups and Government agencies, including the Department. Council referred the application documents to its internal assessment teams including development, environmental health, traffic, threatened species, strategic planning and Shoalhaven Water.

All documents publicly exhibited by Council are available on Council's website (link below) by searching application number DA11/1728. All submissions made, across the three public exhibitions, are also available via the link.

<http://www3.shoalhaven.nsw.gov.au/masterviewUI/modules/ApplicationMaster/default.aspx?page=wrapper&key=58269&propkey=98010>

5.1.2. Site Visits

The Department visited the site on 25 May 2017 and again on 6 April 2018. The site visited covered key accessible areas of Long Bow Point, including the cleared area and dirt access road, the foreshore of Lake Wollumboola and a walk through dense vegetation to Downs Creek in the approximate location of the proposed bridge crossing. The Applicant's EIS consultant (Allen, Price & Associates) pointed out key locations for the proposed golf course, parking area and maintenance shed and indicated the larger and potentially hollow-bearing trees on the site. Department representatives also viewed Long Bow

Point from the developed urban area of Culburra Beach. The Department notes from Council's files that Council officers visited Long Bow Point on many occasions, at times meeting with other Government agencies on site.

5.1.3. Meetings with Council & the Applicant

In May 2017, shortly after the application was declared SSD, the Department met with Council assessment officers to discuss the application and the Planning Proposal for the Halloran landholdings. The Department also met with the Applicant's EIS consultant in May 2017 to discuss the key aspects of the application. On 1 August 2017, the Department requested further assessment information from the Applicant. This information was provided in December 2017 and made publicly available on the Department's Major Projects website. In April 2018, the Deputy Secretary, Planning Services and the Executive Director, Key Sites & Industry Assessments also met with the Applicant and visited the site.

5.1.4. Meetings with Special Interest Groups

In April 2018, the Deputy Secretary, Planning Services and the Executive Director, Key Sites & Industry Assessments met with a representative of the Lake Wollumboola Protection Association (LWPA). The LWPA raised a number of issues with the proposal and outlined reasons for objecting to the development. **Table 8** provides a summary of their key issues. In May 2018, the Executive Director, Key Sites & Industry Assessments met with representatives from the Culburra and Districts Chamber of Commerce and the Culburra Beach Progress Association. These representatives support further development of Culburra Beach. **Table 8** provides a summary of their key reasons for supporting development in Culburra Beach.

5.2. Outcomes of Consultation

Consultation on the golf course proposal has spanned nearly seven years and involves hundreds of pieces of written correspondence. The Department has reviewed all of this information and summarised the key points and themes. Many of the issues raised are common across the submissions, and the following sections represent the collated views of the community and interest groups.

5.2.1. Submissions Summary

This section provides an analysis of the number of submissions received and the percentage that support or object to the development. **Table 4** lists the number of submissions from the public and special interest groups, over the three exhibition periods. **Table 5** lists the special interest groups and if they made a submission supporting or objecting, across the three exhibition periods.

Table 4: Public Exhibition Periods and Number of Submissions (General Public and Special Interest Groups)

Year	Exhibition period	Submissions			
		Support	Object	Comment	Total
2011	20 July 2011 – 17 August 2011	302	47	1	350 ¹
2012	18 April 2012 – 21 May 2012	40	39	1	79
2016	4 May 2016 – 8 June 2016	16	72	0	88

¹ Approximately 284 submissions were received in the month following the 2011 exhibition period. These submissions have also been considered in the Department's assessment of the proposed development.

In 2011: 86% supported, 14% objected

In 2012: 51% supported, 49% objected

In 2016: 18% supported, 82% objected.

Table 5: Submissions from Special Interest Groups, 2011-2016

Organisation	2011	2012	2016
Australasian Orchid Council			
Australian Conservation Foundation			
Australian Coastal Society			
Birdlife Shoalhaven			
Birds Australia			
Clover Moore			
Culburra Beach and Districts Chamber of Commerce			
Culburra Beach Community Consultative Body			
Culburra Beach Progress Association			
Culburra Bowling and Recreation			
Culburra Coaches			
Illawarra Birders			
Jerrinja Local Aboriginal Land Council			
Jervis Bay Regional Alliance			
Lake Wollumboola Protection Association			
Lake Wollumboola Support Group			
Nature Conservation Council of NSW			
The Greens			
Total Environment Centre			
Orient Point Progress Association			

KEY	
	Support
	Object
	Comment
	No submission made in that year

5.2.2. Issues Raised by Special Interest Groups and the Public

Across all submissions, the key issues related to:

- impacts on water quality in Lake Wollumboola
- impacts on flora and fauna on the site and within Lake Wollumboola
- social and economic benefits for the Culburra Beach community.

Tables 6 and 7 provide a summary of the key issues raised in objections and supporting submissions. The issues are presented in the order of frequency that they were raised (most to least).

Table 6: Issues Raised in Objections

Issue	Detail
Impacts on Lake Wollumboola	<ul style="list-style-type: none"> • pollution and runoff into Lake Wollumboola • impacts on water quality and ecology of the lake • contamination of catchment area • detrimental effect on the ecosystem • significance of lake as a wetland • erosion and sedimentation risks
Flora and fauna	<ul style="list-style-type: none"> • clearing loss and degradation of native vegetation and habitat • impact on migratory bird populations • impact on bird nesting and feeding areas
Coastal impacts	<ul style="list-style-type: none"> • need to preserve the coastline in its natural state
Need for golf course	<ul style="list-style-type: none"> • nearby golf courses are under-used • negative impact on nearby golf courses • another golf course in the area is not sustainable
Economic	<ul style="list-style-type: none"> • will not enhance the local economy • no analysis of community needs • not economically viable
Future zoning	<ul style="list-style-type: none"> • rezoning for National Park or environmental conservation
Traffic	<ul style="list-style-type: none"> • increased congestion
Noise	<ul style="list-style-type: none"> • increased noise
Sea-level rise	<ul style="list-style-type: none"> • impact on sea and lake level rise
Aesthetic/Cultural	<ul style="list-style-type: none"> • no aesthetic or cultural benefit • minimal financial benefit

Table 7: Issues Raised in Support

Issue	Detail
Social benefits	<ul style="list-style-type: none"> • community recreation facility • tourist attraction • sport for local schools • provide work for local youth • health activity for locals • attract people and jobs • benefit future generations
Economic benefits	<ul style="list-style-type: none"> • encourage more permanent residents • generate employment • increase revenue for local businesses • expansion of Culburra Beach • encourage additional residential development • complement existing and proposed residential development • viability ensured by the developer
Environmental benefits	<ul style="list-style-type: none"> • decrease run-off into the lake • create environment for frogs to breed (in ponds) • enhance the use of the lake • benefit wildlife • green corridor for native animals
Bushfire	<ul style="list-style-type: none"> • provide a fire break between town and National Park
Access to sporting facility	<ul style="list-style-type: none"> • reduce travel time for Culburra golfers

Submissions from special interest groups include local progress associations and business groups, sporting clubs, nature conservation and wildlife protection organisations. **Table 8** summarises the issues raised by special interest groups.

Table 8: Summary of Special Interest Group Submissions

Special Interest Group	Support or Object	Issues Raised
Australasian Orchid Council	Object	<ul style="list-style-type: none"> • question the viability of the development, no survey of potential client base • golf courses in the area are in financial difficulty • alternative locations for the golf course should be considered • removal of bushland from the lake catchment is likely to have major adverse impacts on the lake, threatened species and migratory birds • orchid surveys and threatened flora and fauna surveys completely inadequate and provide a false result • use of fertilisers and pesticides would have serious detrimental impacts on the lake, water pollution control devices will not prevent migration of fertilisers to groundwater • the development is in conflict with Government policy including the SCSULR and the Planning Proposal which seeks to protect the land for environmental conservation.
Australian Conservation Foundation	Object	<ul style="list-style-type: none"> • proposal presents an unacceptable risk to the lake and the biodiversity of Long Bow Point • impacts on water quality, vegetation clearing, erosion and sedimentation, are in conflict with Government policy, including the SCSULR, to protect the land from urban development.
Australian Coastal Society	Object	<ul style="list-style-type: none"> • proposal is at odds with Government recommendations in the SCSULR and HRC Inquiry for protection of Long Bow Point • proposal is likely to have significant adverse impacts from clearing, changes to hydrology, groundwater impacts and increased nutrient runoff, affecting the unique ecosystems • recommend long term protection of the site.
Birdlife Shoalhaven	Object	<ul style="list-style-type: none"> • Lake Wollumboola is regionally, nationally and internationally significant through various listings including, Jervis Bay National Park, Wetland of National Importance, Globally Important Bird Area for Black Swan and Chestnut Teal and the East Asian-Australasian Flyway • the SIS has not surveyed or assessed the potential impacts on all threatened species, and fails to address deficiencies identified by OEH. The claims of no significant impact on threatened species are not based on evidence and the claims of neutral or beneficial effect on water quality are unsubstantiated

Special Interest Group	Support or Object	Issues Raised
		<ul style="list-style-type: none"> the proposal presents an unacceptable and unjustified risk to the lake support the recommendation of the Planning Proposal to rezone the land for environmental protection.
Birds Australia	Object	<ul style="list-style-type: none"> proposal would remove a significant area of important terrestrial bird habitat and has the potential to threaten the sensitive wetland ecosystem through increased runoff, nutrients, sediments and weed invasion object to the potential impacts on the lake and at least 23 species of migratory birds the site contains important habitat including hollow-bearing trees for threatened bird species and the proposal would impact the connectivity with surrounding national parks and reserves concerned the proposal is likely to impact on matters of national environmental significance recommend land is rezoned for environmental conservation.
Clover Moore	Comment	<ul style="list-style-type: none"> notes the concerns of constituents that have highlighted the high environmental values of the lake and its catchment notes the proposed zoning in the South Coast Regional Strategy and draft SLEP is for environmental protection asks that the assessment protects the high environmental values of the lake and its catchment.
Culburra Beach and Districts Chamber of Commerce	Support	<ul style="list-style-type: none"> the proposal would create jobs and increase tourism in Culburra Beach provide much needed job opportunities during and after construction bring further tourism to the area and will support the declining businesses in Culburra Beach.
Culburra Beach Community Consultative Body	Support	<ul style="list-style-type: none"> community members are enthusiastic about the golf course the golf course will be beneficial to the community and bring opportunities.
Culburra Beach Progress Association	Support	<ul style="list-style-type: none"> golf course will be beneficial for the community and will bring opportunities to Culburra Beach potential to attract many visitors to the area without adverse impact on the lake the proposal would enhance other future proposals such as upgraded boating and sporting facilities proposed as part of the West Culburra SSD
Culburra Bowling and Recreation	Support	<ul style="list-style-type: none"> the development is a positive step for the town it would add another facility for use by local people as well as other Shoalhaven residents and tourists the proposal would bring considerable economic advantages including employment opportunities for young locals, which are currently limited.
Culburra Coaches	Support	<ul style="list-style-type: none"> would bring more people to the local area and increase employment and tourism would retain much needed employment in the town.
Illawarra Birders	Object	<ul style="list-style-type: none"> Lake Wollumboola is an important area for birds and warrants total protection use of fertilisers and pesticides on the golf course would have devastating consequences on the lake Long Bow Point should be given permanent environmental protection.
Jerrinja Local Aboriginal Land Council (JLALC)	Comment	<ul style="list-style-type: none"> strong opposition to development that negatively impacts the health and wellbeing of the lake and its flora and fauna the Jerrinja people have a strong and continued connection to the cultural and natural significance of the land and waters of Lake Wollumboola concerned about the impacts on Aboriginal sites recommended a comprehensive assessment be undertaken in accordance with OEH guidelines, including thorough community consultation and involvement of the JLALC.
Jervis Bay Regional Alliance	Object	<ul style="list-style-type: none"> strongly object the lake is an internationally significant site for migratory shorebirds and waders and supports at least 23 threatened species golf courses require high inputs of fertilisers and herbicides which pose a serious threat to water quality the assessment of impacts on threatened species is not credible there are several golf courses nearby including Vincentia, Nowra and Sanctuary Point protection of Long Bow Point is important for maintaining the long-term economic prosperity of the Shoalhaven area from nature based visitors.

Special Interest Group	Support or Object	Issues Raised
Lake Wollumboola Protection Association (LWPA)	Object	<ul style="list-style-type: none"> object as the proposal does not meet critical assessment requirements and conflicts with Government policy to protect the lake and its catchment the application does not evaluate alternative sites for a golf course claims of a neutral or beneficial effect on water quality are not substantiated and are inconsistent with expert advice lack of groundwater analysis and inconsistencies between the SEE and the Martens modelling reports the SIS Addendum does not address the DGRs and does not adequately address impacts on Lake Wollumboola, SEPP 14 wetlands and threatened and migratory species no referral to the Commonwealth under the EPBC Act, despite potential for impacts on 34 migratory bird species, the green and golden bell frog and coastal saltmarsh communities no assessment of the cumulative impacts of the proposal the Planning Proposal is the most appropriate process for making critical decisions regarding the future of Long Bow Point and Lake Wollumboola.
Lake Wollumboola Support Group	Support	<ul style="list-style-type: none"> golf course would offer much needed long term employment clubhouse should include fine dining, tourist accommodation and have water views lake edges should be supported with an environmental boardwalk allowing access for traditional owners drainage from the site should offer extended wetland habitats.
Nature Conservation Council (NCC) of NSW	Object	<ul style="list-style-type: none"> object on the grounds the proposal is not consistent with the principles of ESD, in particular the precautionary principle environmental assessment is inadequate, claims of no significant impacts on the lake, its catchment and threatened species are unjustified the proposal conflicts with Government policies to protect the lake catchment from urban development the SIS failed to assess impacts on threatened species and its reliance on the conclusions of the water quality assessment make it not credible.
The Greens	Object	<ul style="list-style-type: none"> impacts of the golf course on the sensitive ecological values of the area will be significant and irreversible the development will impact EECs, coastal creeks, two SEPP 14 wetlands and threatened species habitat the proposal will cause damaging changes to hydrology and nutrient loads to the lake causing further loss of biodiversity.
Total Environment Centre	Object	<ul style="list-style-type: none"> support rezoning the catchment for environmental conservation as identified in the SCSULR and Draft SLEP 2014 the proposal should be refused on the basis of the high environmental significance of the lake and its catchment the site supports numerous threatened flora and fauna species and clearing impacts would be unacceptable the proposal presents unacceptable water pollution risks for the lake
Orient Point Progress Association	Support	<ul style="list-style-type: none"> supports the application and recommends its approval.

5.2.3. Issues Raised at Meetings with Special Interest Groups

At the Department's meetings with special interest groups, many of the concerns summarised in **Table 8** were reiterated.

The Lake Wollumboola Protection Association outlined its reasons for objecting to the development, including, inconsistency with Government policy to protect the lake from development, no assessment of alternative golf course sites, un-substantiated claims regarding the proposal's impacts on water quality and inadequate assessment of impacts on threatened species.

The Culburra Beach & Districts Chamber of Commerce and Culburra Beach Progress Association noted their support for further development in Culburra Beach to stimulate the declining resident population and support local businesses. These organisations also noted concerns with the time taken to make a decision on the application and the effect this has had on local businesses, being reluctant to make capital investments if proposed developments do not eventuate.

5.2.4. Issues Raised by Government Agencies

The then **Department of Planning and Infrastructure** (the Department) made a submission to Council during the 2011 public exhibition. The Department reiterated the State Government's position with respect to protecting Lake Wollumboola, noting its designation as a National Park and the commitments of the SCSULR and the SCRS, which identified the need to zone the land within the catchment for conservation purposes. The Department also highlighted the need for the site to be considered as a potential bio-banking site. The Department noted the proposal has the potential to undermine the Government's commitments in the SCSULR, SCRS and Council's draft Shoalhaven LEP 2014, which sought to zone the land E2 - Environmental Conservation.

The **Office of Environment and Heritage** (OEH) provided submissions at all key stages of the assessment process. OEH's final submission was received in March 2018, commenting on the final assessment information submitted by the Applicant. OEH raised significant concerns about the potential impacts of the development on Lake Wollumboola. OEH advised the revised SEE, SIS Addendum and IWMP were not adequate for determining the likely environmental and heritage impacts of the proposal. OEH noted the high ecological sensitivity of Lake Wollumboola and stated it maintains a precautionary approach to assessing development near the lake to avoid irreversible impacts on the lake's ecology and the adjoining Jervis Bay National Park.

OEH reiterated its earlier advice to Council, that the full extent of impacts cannot be established until the detailed studies for the Planning Proposal (including groundwater and biodiversity) are completed.

OEH queried the exclusion of the proposed clubhouse from the revised DA plans, noting a clubhouse would form a critical part of a functioning golf course. In relation to the technical assessments, OEH raised the following specific issues:

Planning Proposal

- the Planning Proposal requires a study to identify alternative golf course sites outside the lake catchment, and this has not yet commenced
- the full extent of impacts of development cannot be established until the groundwater and biodiversity studies for the Planning Proposal are completed

Surface and Groundwater

- the stormwater modelling is fundamentally flawed and the purported outcomes of nutrient loads and post development flows being lower than current land uses, are questionable
- the limitations of the IWMP, identified in OEH's 2016 submission, were not addressed in Martens 2017. OEH does not believe an adequate or realistic assessment of potential impacts on Lake Wollumboola has been completed
- the Applicant's groundwater assessment is limited, inaccurate and not sufficient to fully assess the impacts

Biodiversity

- the SIS and SIS Addendum does not adequately address OEH's DGRs
- the flora and fauna survey effort is lacking, therefore comprehensive assessment of the impacts on all affected species cannot be undertaken
- there is no detailed justification for not using all of the cleared land for the golf course, based on the principle of 'avoiding' impacts on biodiversity
- mitigation measures are not detailed and there is no formal mechanism for securing the proposed biodiversity offset

Aboriginal Heritage

- further archaeological investigation and a clear impact assessment is required, including detailed assessment of areas with archaeological potential that would be impacted by the access road
- outcomes of Aboriginal community consultation have not been included and consultation may need to be re-started given the time elapsed since the application was first lodged.

National Parks and Wildlife Service (NPWS) objected to the proposal on the basis it would likely have significant impacts on the water and ecology of Lake Wollumboola and on the high natural and Aboriginal cultural values of the area. NPWS noted the South Coast Regional Conservation Plan 2010 recognises Long Bow Point as regionally significant for its high biodiversity and habitat corridor values. NPWS state that approval of the golf course would be inconsistent with three Government inquiries including the COI, HRC Inquiry and SCSULR. NPWS noted Lake Wollumboola is a Wetland of National Importance and is a Globally Important Bird Area supporting populations of up to 20,000 birds including migratory and threatened species.

Council (during its assessment of the application) raised a number of concerns with the adequacy of the assessment information provided by the Applicant. Council requested further detailed information on flora and fauna, offsets, water quality, groundwater, traffic and Aboriginal cultural heritage.

Council's review of the SIS identified numerous inadequacies, including:

- the area of impact was not clearly defined
- not clearly shown whether key habitat resources for threatened fauna (such as hollow bearing trees) can be retained. Numerous habitat resources not included in the mapping
- no surveys undertaken for threatened orchid species
- inadequate, or no survey for some threatened fauna species known to occur on the site
- no scientific justification provided for statements that no EECs are located on the site. Council advised that many EECs have been identified on the site
- inadequate assessment of potential impacts on threatened species. The SIS states there will be no impact on threatened species, without scientific justification
- inadequate consideration of viable alternatives, such as an alternative location, or relocating the golf course to already cleared parts of the site to reduce impacts from clearing
- no consideration of threatened species listed on the Commonwealth EPBC Act, and no consideration of internationally listed migratory birds protected under CAMBA and JAMBA.

The **Department of Primary Industries (DPI)** incorporating Fisheries (DPI Fisheries) noted its concern at the potential for the development to have an adverse impact on water quality in Lake Wollumboola. DPI Fisheries noted the need to maintain a minimum 50 m buffer to the foreshore of the lake and the SEPP 14 wetlands. DPI Fisheries noted the proposed bridge over Downs Creek is upstream of key fish habitat and would not require a permit. DPI Fisheries provided recommended conditions for the development including requirements for monitoring, to ensure the stormwater management measures are achieving at least a neutral effect on water quality.

The **Rural Fire Service (RFS)** did not object and recommended the proposed buildings and access road comply with the requirements of Planning for Bushfire Protection and Standards for Asset Protection Zones. The RFS also recommend the Applicant prepare an emergency and evacuation plan.

5.3. Applicant's Response to Issues Raised

The Applicant's response to issues raised is reflected in multiple revisions of key documents and supplementary assessments. The Applicant revised the SEE on four occasions in 2012, 2014, 2015 and 2017 to address issues raised and revised the DA drawings in 2013, 2014 and 2017. The Applicant prepared a SIS in 2014, updated it in 2015 and issued an Addendum to the SIS in 2017. The IWMP was updated in 2014 and 2015 to address the issues raised. The latest revision of each document (referenced in **Table 2**) collectively form the Applicant's Response to Submissions (RTS). These documents are available on Council's website at the link below (search for DA11/1728).

<http://www3.shoalhaven.nsw.gov.au/masterviewUI/modules/ApplicationMaster/default.aspx?page=wrapper&key=58269&propkey=98010>

After reviewing all documents, on 1 August 2017 the Department requested a final response to issues raised in OEH's 2016 submission relating to flora and fauna and water quality. In December 2017, the Applicant provided the following documents, which also form part of the Applicant's RTS. These are included in **Appendix E**:

- Revised SEE, Rev 5, December 2017
- SIS Addendum, Cumberland Ecology, December 2017
- Revised Golf Course Design Plans, November 2017
- Review of MUSIC Model and OEH Radon Data Review, Martens December 2017

5.4. Department's Consideration

The Department has considered the issues raised in submissions throughout its assessment of the application. The submissions have highlighted the issues that are important to the local community, special interest groups and the Government agencies responsible for the management of natural resources. **Sections 6.1 to 6.3** presents the Department's detailed consideration of the key issues. **Section 6.4** provides a summary of the Department's consideration of other relevant issues.

Table 9 summarises the Department's consideration of the key issues and cross references the sections of this report where the issues are discussed in detail.

Table 9: Department's Consideration of Issues Raised

Issues Raised	Department's Consideration	Reference
Water quality impacts on Lake Wollumboola	<ul style="list-style-type: none"> The Department considered the Applicant's Integrated Water Management Plan (IWMP), the Golf Course Plan of Management and independent studies of Lake Wollumboola. The Department considers the Applicant has been unable to provide the quantitative assessment necessary, to confidently demonstrate the water quality objective of neutral or beneficial effect (NorBE) can be achieved. The Department also considers a NorBE on water quality is unlikely, given the proposed change from a densely vegetated site to a highly maintained golf course using fertilisers and pesticides. The Department considers the proposal has the potential to cause serious impacts on Lake Wollumboola and the SEPP 14 wetlands through increased pollutant loads and changes to surface and groundwater discharges. 	Section 6.2
Flora and fauna impacts	<ul style="list-style-type: none"> The Department considered four separate flora and fauna studies submitted by the Applicant, including the SIS and Addendum. OEH has consistently stated that the flora and fauna studies are inadequate as they have not sufficiently surveyed or evaluated the potential impacts on all threatened species. The Applicant has also consistently refuted the need to refer the proposal to the Commonwealth Government. The Department considers the development has the potential to cause significant impacts on threatened flora and fauna species both on site and in Lake Wollumboola. The Department considers the high ecological significance of the lake and the potential for serious and irreversible impacts to occur represents an unacceptable risk. 	Section 6.3
Consistency with strategic planning	<ul style="list-style-type: none"> The Department reviewed all strategic studies relevant to the application including the COI, HRC Inquiry, SCSULR, ISRP and the Scanes Peer Review. These studies consistently recognise the ecological importance of Lake Wollumboola and recommend its protection from urban development. The proposed development is inconsistent with the recommendations of these strategic studies. 	Section 3
Need for the development	<ul style="list-style-type: none"> The Applicant did not provide a study or survey to demonstrate the demand for a golf course at Culburra Beach. The Department notes there are four golf courses within 16 km of Culburra Beach, including Worrigeo Links, Nowra Golf Course, Shoalhaven Heads and Callala Golf Club. The Gateway Determination for the Planning Proposal requires a study to consider alternative sites for a golf course near Culburra Beach, outside the catchment of Lake Wollumboola. In the absence of a clear and demonstrated demand for a local golf course, the Department concludes the Planning Proposal is the most appropriate mechanism for establishing the need for and location of recreational development to service Culburra Beach. 	Section 6.4
Social and economic impacts	<ul style="list-style-type: none"> The Applicant did not provide a socio-economic assessment to demonstrate how, and to what extent the proposal would generate jobs, tourism or flow on economic benefits to local businesses. The Department considers the potential economic and social benefits of the golf course, whilst not quantified by the Applicant, are unlikely to significantly outweigh the environmental impacts of the proposal. 	Section 6.4
Aboriginal heritage	<ul style="list-style-type: none"> The Department considered the revised Aboriginal Cultural Heritage Assessment (ACHA) 2012 and comments from OEH. The Department notes the ACHA did not fully address the concerns raised by OEH and there is a lack of detailed information to determine the actual impacts of the development on Aboriginal heritage. 	Section 6.4

6. ASSESSMENT

The Department's assessment of the application 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 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 proposal is in the public interest.

In preparing this assessment, the Department visited the site on two occasions and considered multiple revisions of the Applicant's SEE, SIS, IWMP and design plans. The Department has considered the submissions made by Government agencies, special interest groups and the public throughout the three public exhibition periods and following review of the final information submitted by the Applicant in December 2017. Despite multiple revisions to the proposal and key environmental studies, the Department and other Government agencies consider the golf course development presents an unacceptable risk to the water quality and ecology of Lake Wollumboola. The Department considers the key issues are:

- consistency with strategic planning
- surface and ground water quality
- flora and fauna

Other issues assessed by the Department include the need for the development, social and economic impacts, Aboriginal heritage and traffic. These issues are considered in **Table 11**.

6.1. Strategic Planning

Development on Long Bow Point has been subject to strategic studies and independent Government inquiries that considered development at a strategic level and considered the unique natural characteristics of Long Bow Point and Lake Wollumboola. The studies identified water quality and biodiversity as fundamental considerations for proposed development near Lake Wollumboola, noting the importance of this sensitive coastal lake in providing habitat for threatened and migratory species.

The HRC Inquiry and SCSULR were prepared to inform strategic planning across the Shoalhaven. The recommendations of these studies, to protect the lake catchment from further urban development, are reflected in the ISRP. The Department notes the COI, HRC Inquiry, SCSULR, ISRP and Scanes Peer Review are consistent in concluding that development in the lake catchment is not suitable, because of adverse impacts on the lake hydrology and ecosystem. The Department's assessment of water quality and biodiversity in the following sections supports this view.

The Department considers the proposed development is inconsistent with the strategic direction taken since the COI in 2000. The ISRP is clear about the need to protect the lake catchment from development because of potential negative impacts on the lake. The Department considers the golf course is inconsistent with this strategic direction, as it represents proposed development in the lake catchment with the potential to cause adverse water quality and ecological impacts on the lake.

The Department concludes the proposal is inconsistent with the recommendations of strategic studies and independent Government inquiries that recommend protecting Lake Wollumboola. On this basis, the application should be refused.

6.2. Water Quality

6.2.1. Introduction

The proposal has the potential to increase runoff and pollutants to the adjacent watercourses of Downs and Wattle Creeks, Lake Wollumboola and the SEPP 14 listed wetlands. Clearing of native vegetation and maintenance of grassed fairways with fertilisers and pesticides can increase sediments and nutrients in soils and runoff. Changes in water quality can adversely impact on aquatic vegetation and the fauna it supports including internationally listed migratory birds and other threatened species. The construction period also has the potential to substantially increase sediments in runoff from the site.

The proposal is located within the surface and groundwater catchment of Lake Wollumboola, which is identified as having high ecological significance and is located within the Jervis Bay National Park (see **Figure 8**). As discussed in **Section 3**, strategic planning studies have identified the importance of protecting the catchment of Lake Wollumboola from the impacts of urban development. A detailed groundwater study has been commissioned as part of the Planning Proposal which covers the site. The groundwater study involves a two-year monitoring period (commenced in November 2017) to define the groundwater catchment and influence of groundwater inputs on Lake Wollumboola.

Given the high ecological value of Lake Wollumboola, the Applicant identified the primary water quality objective for the proposal 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, OEH confirmed the NorBE objective is important for ensuring the proposal does not adversely impact water quality in Lake Wollumboola, given its location in Jervis Bay National Park and the habitat it provides for threatened and migratory species.

6.2.2. Relevant Water Quality Studies

Since the application was first lodged with Council in 2011, the Applicant has submitted numerous versions of its water quality assessment for the development. A range of other water quality studies of Lake Wollumboola have been undertaken by external parties, and the Department also reviewed these as part of its assessment.

Martens prepared an Integrated Water Management Plan (IWMP) for the proposal. The original IWMP submitted in 2011 was updated in 2014 and again in 2015 to address comments from OEH and NPWS. In December 2017, Martens provided a further review of the water quality modelling (Martens 2017), to address comments in OEH's 2016 submission. The Applicant also provided a Golf Course Plan of Management (PoM), prepared by Golf by Design, 2014. The PoM estimated water, fertiliser and pesticide use on the golf course and proposed measures to manage water use and chemical applications.

The Department also reviewed the following water quality studies as part of its assessment:

- Hgeo - West Culburra Groundwater Assessment, Preliminary Report (Stage 1), June 2017 (Hgeo 2017)
- OEH's Environmental Sensitivity of Lake Wollumboola: Input to Considerations of Development Applications for Long Bow Point, Culburra, Scanes, Ferguson and Potts, 2013 (Scanes Peer Review)
- OEH's Detection of Groundwater Inputs to Lake Wollumboola, November 2016 (OEH 2016) and Revised May 2018 (OEH 2018)
- Dr Santos, Southern Cross University, Independent Review of OEH 2016, IWMP 2015 and Martens 2017 (Santos 2018).

6.2.3. Existing Water Resources around the Site

Lake Wollumboola

Lake Wollumboola is located on the south-eastern boundary of the site and is within the Jervis Bay National Park. The lake has been classified as having high conservation value and has been recommended for comprehensive protection. The lake is considered a 'back-dune lagoon' system, which naturally opens and closes to the ocean intermittently. The lake can remain closed to the ocean for periods of up to 5 years. The lake chemistry changes substantially during open periods, with the lake becoming tidal. During low tides, water levels drop exposing large areas of sand and mud. When the lake is closed, water levels rise due to freshwater inputs and possibly groundwater flows. The lake ecology changes with these conditions and is considered highly diverse, supporting large numbers of water birds and shorebirds. NPWS submission stated the lake supports a population of a least 20,000 birds.

Figure 8 shows the surface water catchment of the lake, which incorporates all of Long Bow Point. The catchment of Lake Wollumboola has been identified in various strategic planning documents for environmental protection and has been identified as unsuitable for further urban development (see **Section 3**).

Downs Creek, Wattle (Northern) Creek and Coonemia Creek

Three watercourses drain into Lake Wollumboola. Two are located on Long Bow Point, either side of the ridgeline (Downs on the southern side and Wattle on the northern side, also referred to as Northern

Creek). Coonemia Creek is a larger watercourse located south of Long Bow Point, within the Jervis Bay National Park. The two watercourses on the site both drain in a south-easterly direction into the lake. The preliminary groundwater assessment report, prepared by Hgeo, for the Planning Proposal, noted the majority of the lake catchment is undeveloped bushland, with Coonemia and Downs Creek representing 86% of the lake catchment.

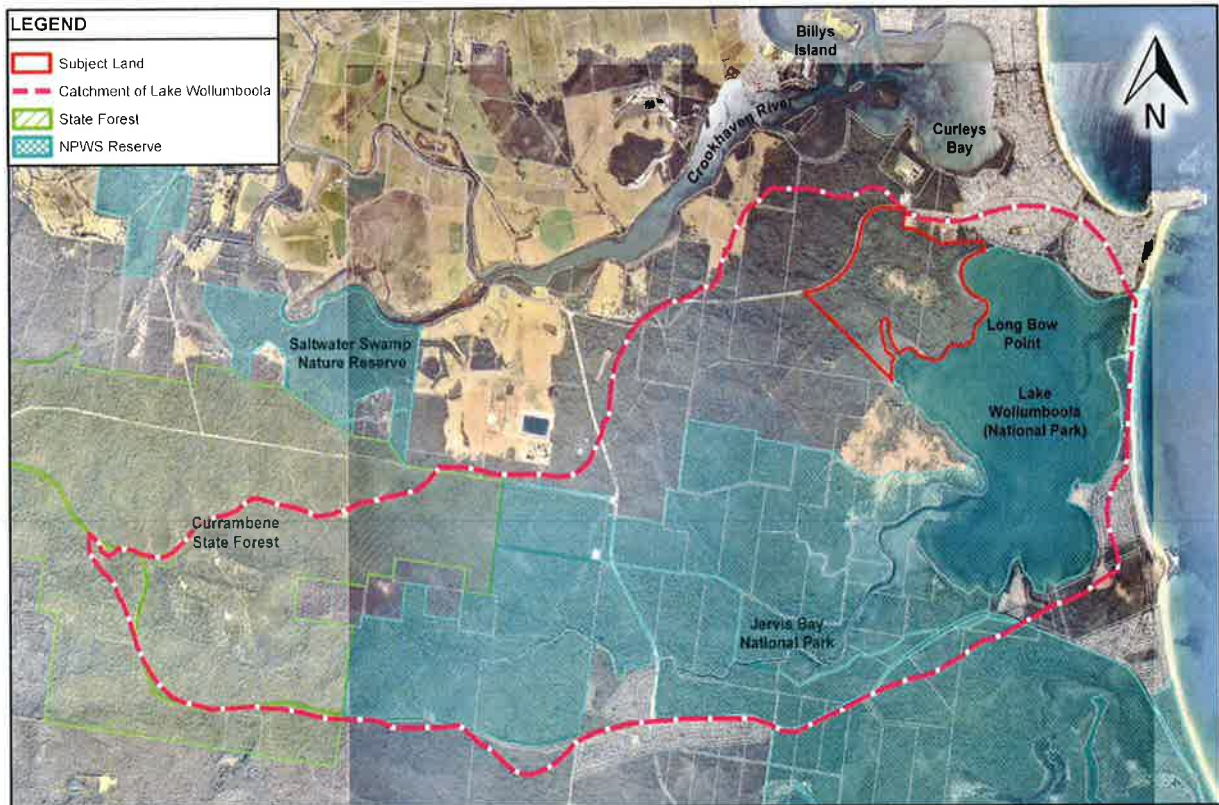


Figure 8: Surface water catchment of Lake Wollumboola

SEPP 14 Wetlands

Two SEPP 14 wetlands are located on the foreshore of Lake Wollumboola, corresponding with the locations where Downs Creek and Wattle Creek enter the lake. **Figure 9** shows the mapped location of the SEPP 14 wetlands on the site. The yellow line is the mapped location included in SEPP 14 and the blue line is the mapped location from field surveys undertaken by SLR Ecology for the SIS. SEPP 14 identifies coastal wetlands in NSW and aims to preserve and protect the wetlands.

Groundwater

There is currently limited knowledge about groundwater on Long Bow Point. Hgeo has been commissioned as part of the Planning Proposal to develop a conceptual model of the groundwater system. The groundwater study will determine the height of the water table, delineate the groundwater catchment for Lake Wollumboola and characterise groundwater quality conditions. **Figure 10** shows a conceptual understanding of the groundwater system, provided in Hgeo 2017.

Various independent studies (Scanes Peer Review, OEH 2016, OEH 2018 and Santos 2018) acknowledge there is a lack of detailed information about groundwater, however each of the studies suggest that groundwater inputs may be important to Lake Wollumboola. The Scanes Peer Review suggested groundwater influence may be significant due to observed tannin water inputs, the indistinct freshwater drainage lines to the lake, and the distribution of aquatic vegetation within the lake.

OEH 2018 concluded that groundwater influence along the western shores of the lake could not be discounted, and that presence of groundwater discharges needs to be quantified through a detailed study. This study would confirm whether groundwater is integral to the overall ecology and water cycle of the lake and if groundwater is a significant pathway for transferring pollutants to the lake.

Santos 2018 considered, based on local conditions and his extensive experience with similar waterways, groundwater discharge may be important in Lake Wollumboola, however the available data is not sufficient to confirm his opinion.

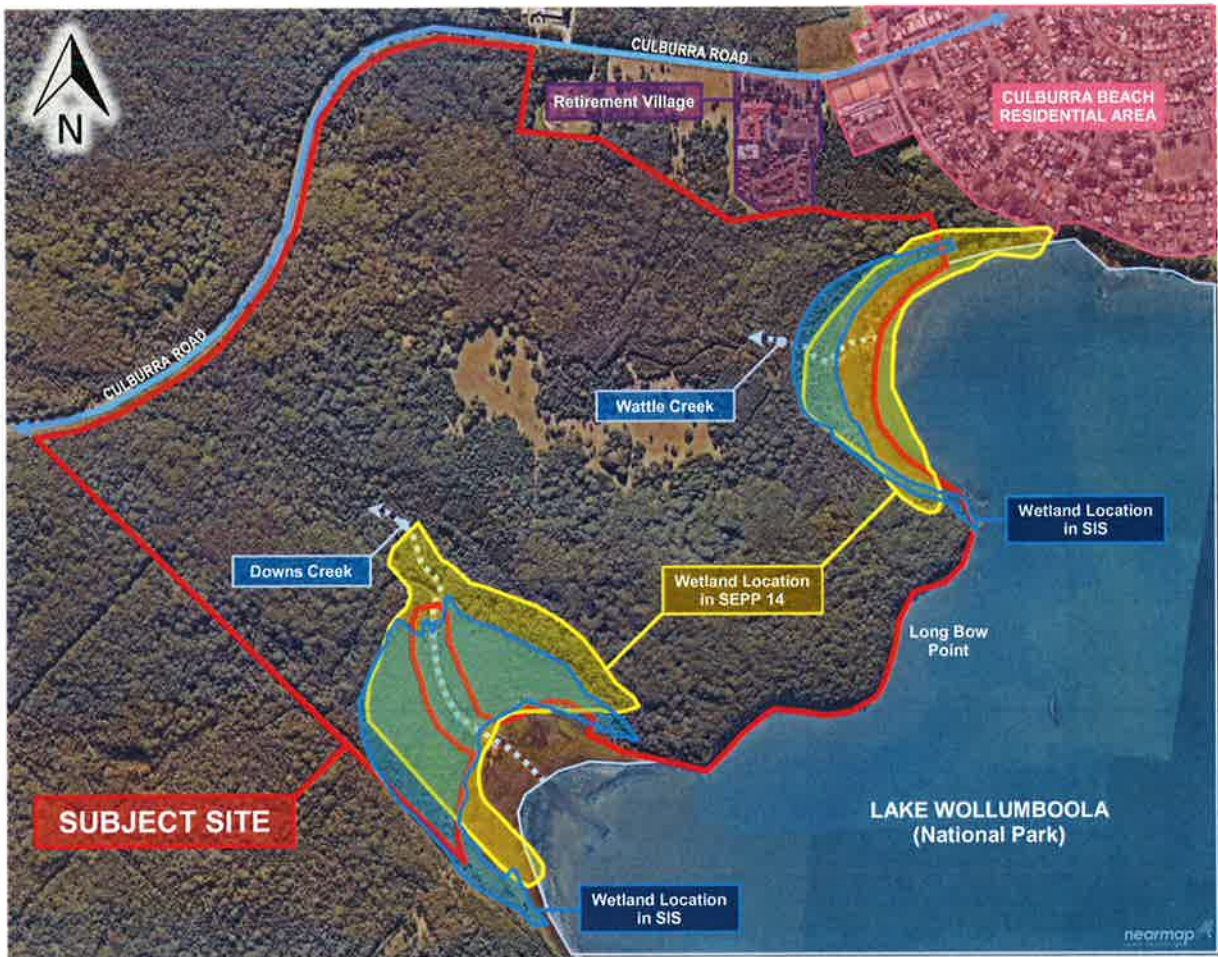


Figure 9: SEPP 14 Wetlands at Downs Creek and Wattle Creek

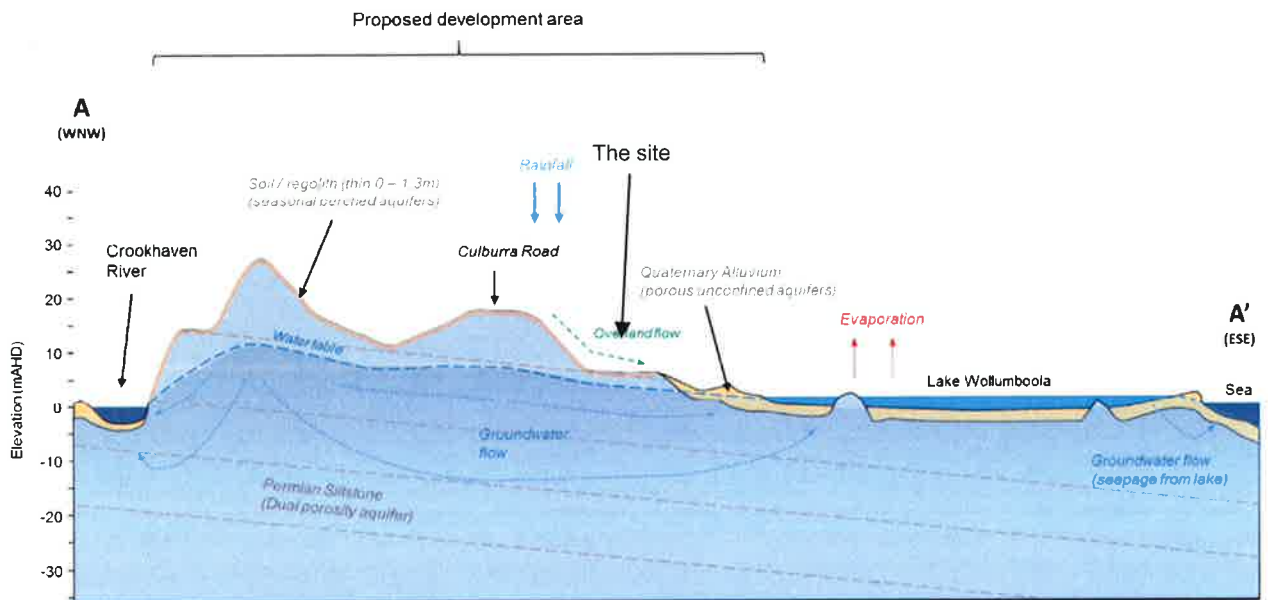


Figure 10: Conceptual Groundwater System

6.2.4. Applicant's Assessment of Impacts

The Applicant's IWMP 2015 provided an assessment of:

- stormwater management
- riparian protection zone requirements
- groundwater management
- water and sewer supply to the site.

To address early comments from OEH, the IWMP 2015 used an up to date version of the MUSIC model and altered the data inputs to reflect an agricultural land use, to more accurately reflect nutrient inputs from the golf course. The IWMP did not adopt the OEH's *Constructed Wetlands Manual* as recommended by OEH, but indicated this would be referenced during detailed design of the proposed wetlands.

Martens 2017 provided updated catchment areas based on the final golf course layout, noting these changes as very minor compared to the previous version of the IWMP.

Surface Water Management System

The Applicant proposes a series of vegetated swale drains to pre-treat and convey stormwater from the golf course to thirteen constructed wetlands adjacent to the fairways. Water from the wetlands would be pumped direct to a central irrigation dam, of 57.8 megalitre (ML) capacity, adjacent to the proposed 8th hole near the central ridgeline of the site (see **Figure 11**). The golf course fairways, greens and tees would be irrigated from the central dam. The PoM estimates the golf course would require 120,000 kilolitres per year for irrigation, with a peak summer demand of 540 kilolitres per day, to be supplied from the central irrigation dam. A detention basin is also proposed adjacent to the car park which would include gross pollutant traps to capture and treat runoff from the car park.

The IWMP utilised DRAINS and MUSIC models to determine the requirements for stormwater infrastructure including the size of the wetlands and the specific water quality treatment devices to achieve the NorBE criteria. **Figure 11** shows the proposed location and size of the thirteen wetlands across the golf course.

Fertiliser and Pesticide Use

The PoM provided indicative fertiliser and pesticide use estimating phosphorus and nitrogen applications to fairways, tees and greens. The PoM noted application rates would vary dependent on testing of soil nutrient levels but estimated the following applications over the first three years, across the 18-hole course:

- 1,013 kilograms of total phosphorus
- 10,916 kilograms of total nitrogen.

The PoM identified the need for preventative applications of insecticides, herbicides and fungicides for the management of turfgrass diseases, pests and weeds. The PoM described controls for the application of pesticides, including avoidance of wet weather and retaining a buffer to environmental protection zones. The PoM indicated chemical soil testing would be carried out at least once a year to monitor chemical content and detect any leaching to groundwater. The PoM also noted the need for nutrient monitoring to determine if there are any impacts from fertiliser application on groundwater. The PoM did not specify the proposed location or quantity of groundwater monitoring sites. The PoM notes the golf course would be designed to a 'championship' standard, indicating the need for a high level of maintenance to achieve excellent quality playable surfaces year round.

Potential Impacts

The Applicant's IWMP 2015 and Martens 2017 Model Review made the following conclusions about the proposal's potential surface water impacts. Compared to pre-development conditions, the proposal would achieve a:

- 30% reduction in total suspended solids
- 20% reduction in total phosphorus
- 20% reduction in total nitrogen
- 37% reduction in flows.

The IWMP 2015 stated there would be no increased runoff from the golf course compared with existing conditions as the golf course is permeable. This conclusion is different to Martens 2017, which concludes there would be a 37% reduction in runoff. The IWMP 2015 concludes water quality monitoring would not be required, but acknowledges it may be included in any condition of consent.

Martens 2017 concluded the development would have a better than neutral effect on water quality leaving the site, due to the extensive water quality control system proposed.

The SIS considered the potential impacts on the SEPP 14 wetlands concluding:

"It is to be noted that the SEPP 14 Wetlands around Long Bow Point are located at a considerable distance from any element of the Culburra Golf Course project. These Wetlands will be protected from any direct or indirect impacts by virtue of the intervening vegetation, as well as by the comprehensive water management regime for the Culburra Golf Course (Martens 2015) and the Draft Culburra Golf Course Plan of Management (GCPoM) –prepared by Golf by Design."

The Department notes the development proposes a 100 m buffer to the foreshore of the lake and is unlikely to require any clearing of the wetlands (although this was not clearly demonstrated in the SIS with mapping). The SIS did not evaluate the potential impacts on the SEPP 14 wetlands from increased nutrient and chemical loads, as it considered the water quality control devices would adequately treat and capture nutrients prior to discharge.

Riparian Protection Zones (RPZs)

The proposed development would retain RPZ's consistent with relevant guidelines for the northern (Wattle Creek) and southern (Downs Creek) drainage channels on the site. Golf course holes and constructed wetlands would be located outside of all RPZ's. One exception is the location of the proposed bridge over Downs Creek for golf buggies and pedestrians, which would impinge on the required 10 m RPZ. The Applicant proposes to prepare and implement a vegetation management plan for the Downs Creek bridge crossing and obtain a controlled activity approval from NOW for the works. The IWMP did not provide any further evaluation of the potential impacts of bridge construction on the riparian zone.

Groundwater

The Applicant installed four groundwater monitoring bores to inform the IWMP. Only two samples were collected in 2011, where groundwater was encountered. The resulting groundwater assessment concluded groundwater is shallow, <1 metre below ground level (mbgl) in low lying areas and around drainage lines, with depth increasing to 2.5 – 6 mbgl beneath ridges and side slopes. Nutrient concentrations, including total nitrogen (TN) and total phosphorus (TP) were tested, with the results used to develop an annual nutrient balance. Nutrient inputs for a typical golf course application of fertilisers and pesticides were compared with existing nutrient concentrations from the two groundwater samples. The assessment estimated groundwater seepage rates, noting rates would increase following development of the golf course. The Department assumes this is due to the cleared fairways and greens increasing seepage, compared with existing densely vegetated areas, although this was not stated in the IWMP.

Despite the acknowledged increased seepage to groundwater, the assessment concluded both TN and TP would be equivalent to existing concentrations in the groundwater, and goes on to conclude there would be a slight nutrient deficit ensuring nutrient transport from the golf course to groundwater does not occur.

The IWMP provided some analysis of the potential for the lake to be a groundwater dependent ecosystem (GDE) and concluded the lake is not groundwater dependent. Martens 2017 concluded the significance of groundwater inflows is likely to be very minor and groundwater has negligible influence on the chemistry of the lake.

The IWMP concludes the development would achieve a NorBE on local and regional groundwater and groundwater receiving environments, given nutrient outputs from the development would be less than existing conditions.

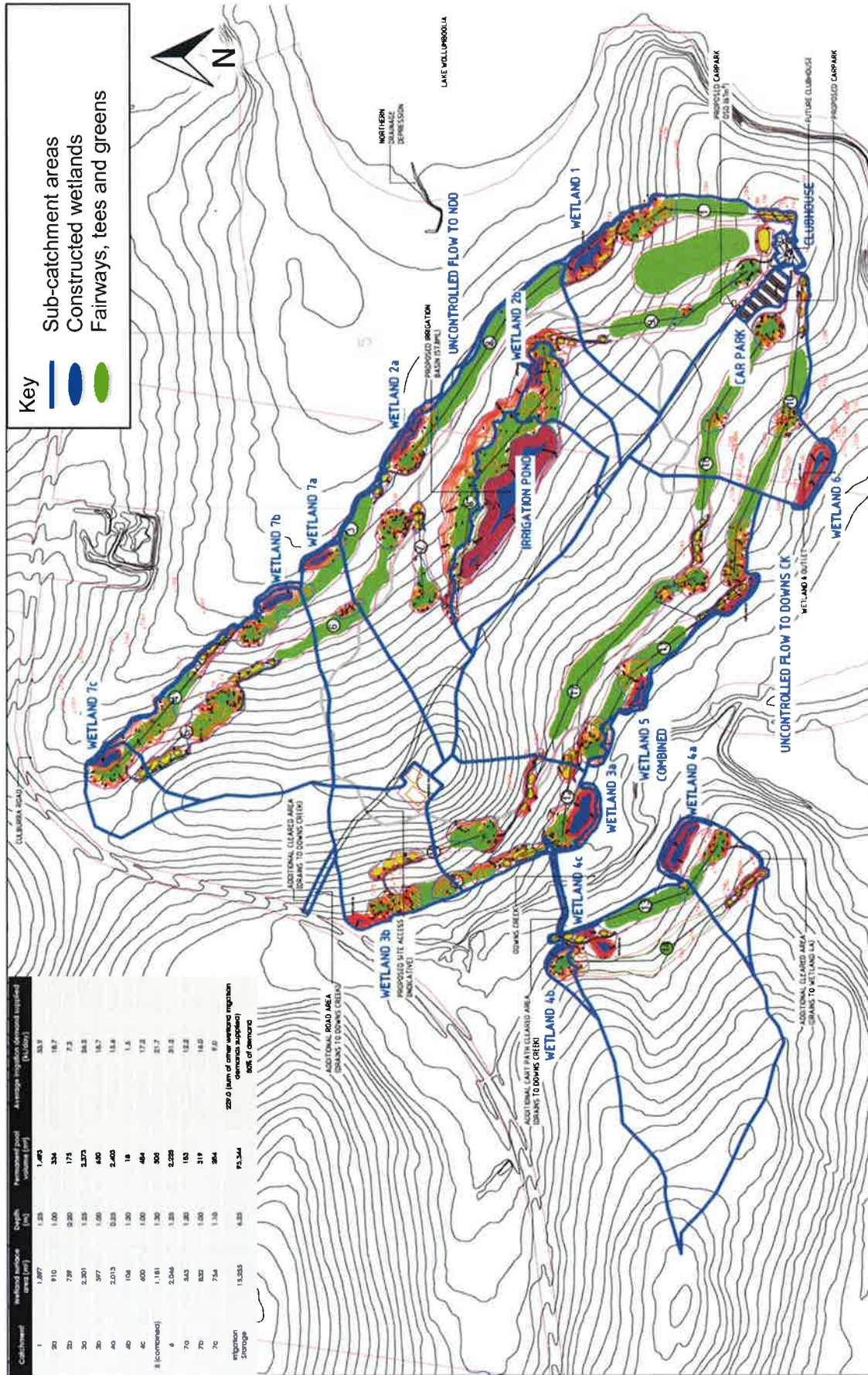


Figure 11: Proposed Stormwater Management System

Water and Sewer Supply

The Applicant consulted Shoalhaven Water regarding connections to potable water mains and the sewerage system. While potable water connection can be provided from Culburra Road, an alternative connection would be required for sewer as the existing Council system finishes to the east of the site at the Culburra Bowling and Recreation Club. The Applicant noted these aspects would be addressed during detailed design.

6.2.5. Issues Raised in Submissions

The potential water quality impacts on Lake Wollumboola was a key issue across all submissions.

OEH questioned the conclusions of the modelling and whether a neutral or beneficial impact on water quality could be achieved. OEH questioned the conclusions with respect to nutrient loads and post development flows and also noted the assessment of groundwater influence on lake ecology is not supported by data or accurate modelling. OEH considered the Applicant's water quality assessment was inadequate for determining the potential impacts on water quality and recommended a precautionary approach to assessing development near the lake to avoid irreversible impacts on the lake's ecology.

NPWS objected to the proposal noting it is likely to have a significant impact on the water and ecology of the lake. NPWS noted as the lake is closed to the ocean for most of the time, nutrients and pollutants would remain in the lake sediments and the risks of water pollution from the golf course is too great.

DPI Fisheries noted concern regarding the potential for adverse impacts on water quality in the lake and the need to maintain a minimum 50 m buffer to the lake foreshore and the SEPP 14 wetlands. (The development proposes a 100 m buffer). DPI Fisheries noted the proposed bridge over Downs Creek is upstream of key fish habitat and would not require a permit from Fisheries.

The LWPA raised water quality impacts as a key concern, see **Table 8**. The LWPA reviewed the revised SEE and Martens 2017 and provided the following specific comments in relation to water quality:

- the Applicant's claims of achieving a NorBE are unsubstantiated and inconsistent with expert advice that water pollution control devices do not achieve reductions in total suspended solids and nutrients from urban developments, compared to natural forested conditions
- the proposed 37% reduction in flows from the post-development scenario would alter the natural hydrological regime and cannot be considered a NorBE
- failure to consider construction phase impacts, when stormwater control ponds may fail during high rainfall events with resulting pollution remaining in the lake
- conflicting conclusions regarding groundwater impacts across the different versions of the Applicant's water quality modelling reports.

The nature conservation and wildlife protection groups collectively raised the following concerns:

- golf courses require high inputs of fertilisers and herbicides which pose a serious threat to water quality
- the lake is highly sensitive to development and is internationally significant for supporting migratory shorebirds and waders and threatened species
- the Applicant's assessment of impacts on the lake and its threatened species is not credible.

6.2.6. Independent Studies

The Department reviewed other water quality studies of Lake Wollumboola, as part of its assessment, including:

- Scanes Peer Review 2013
- OEH 2016
- OEH 2018
- Santos 2018
- Hgeo 2017

The OEH studies highlighted the sensitivity of Lake Wollumboola to changes in water quality and noted the lake is likely to be influenced by groundwater. The OEH studies concluded there is currently inadequate scientific information about the extent of groundwater influence on the lake and a precautionary approach should be taken when considering the proposed development. The Scanes Peer Review recommended limiting development from the catchment of the lake and OEH 2018 noted there is limited ability to predict impacts in the absence of more detailed groundwater studies.

Santos 2018 provided the following conclusions regarding Martens 2017:

- the reviewer has little confidence in the model as it overlooks soil properties to estimate groundwater recharge and discharge
- the reasoning used to dismiss groundwater inputs to the lake is not strong
- the modelling has weak assumptions and analysis, resulting in weak conclusions
- based on local conditions and the reviewer's extensive experience of similar waterways, groundwater discharge may be important in Lake Wollumboola, however there is currently insufficient data to make this conclusion
- the water quality information available is inadequate to make an evidence-based decision on the impacts of the proposed golf course.

Hgeo 2017 reviewed available groundwater data, prepared a conceptual model and proposed a monitoring program over a two-year period. Hgeo 2017 noted groundwater has the potential to influence water quality near the lake-sediment interface. A full report will be provided once the two-year monitoring program is complete (after November 2019).

6.2.7. Evaluation and Conclusion

The Department notes the concerns raised by OEH since its first review of the IWMP in 2011. The Applicant has submitted two further versions of the IWMP and a review of the model in Martens 2017. Despite the revisions, the Department notes OEH's concerns have not been adequately addressed. The Department reiterates OEH's concerns, noting the extremely limited groundwater sampling by the Applicant, the simplistic nutrient analysis and the scientifically unsupported conclusions, as noted in the independent review by Santos 2018. The Applicant has had sufficient time to collect and analyse further groundwater data to inform the assessment of impacts, but has not undertaken this work. The Applicant has maintained a position, despite the lack of supporting data, that groundwater is not a significant contributor to the lake's ecosystem, nor would the golf course have any adverse impact on groundwater. The Department also notes the IWMP does not include any analysis of construction phase impacts.

The Department notes the PoM suggests significant nutrient inputs through phosphorus and nitrogen applications (1,000 kg and 10,000 kg respectively, over the first three years). Despite this, the Applicant maintains the proposal would achieve a 20% reduction in phosphorus and nitrogen concentrations compared to pre-development conditions. The Department questions the validity of this conclusion, given the significant phosphorus and nitrogen applications proposed, compared to the existing unmodified catchment.

The Applicant has been unable to provide the quantitative assessment required to confidently demonstrate the water quality objective of NorBE can be achieved by the development. Lake Wollumboola has been recognised by the State Government as a significant ecosystem warranting the highest level of protection from pollution and this is acknowledged in its designation within the Jervis Bay National Park and its recognition as a Wetland of National Importance. The need to protect the lake from urban development has been recognised in strategic studies and independent Government inquiries (COI, HRC Inquiry, SCSULR and ISRP). Several studies have also identified the existing lack of detailed information on groundwater inputs to the lake and this alone is considered reason enough to defer any decision on the proposed development until the results of the long-term groundwater study are available.

The Department has also reviewed publicly available information on golf courses and notes there is a high level of active management required to limit nitrogen and phosphorus leaching to nearby surface and groundwater. Nitrogen is highly susceptible to loss through volatilisation (dispersal in air), leaching through soils into groundwater, via surface runoff and removal through grass clippings. Phosphorus is lost through movement of soil particles and leaching when loads are in excess of plant requirements, or in sandy soils. Increases in nitrogen and phosphorus in adjacent waterways can lead to algal blooms, growth of aquatic weeds and eutrophication (overgrowth of plants due to excess nutrients). These changes can lead to loss of aquatic species and available food sources for birds and other fauna.

The Department also considers the assessment provided in the SIS (see **Section 6.3**) does not clearly demonstrate the proposal will not adversely impact on the SEPP 14 wetlands, as it relies on the unsupported conclusions of the IWMP to inform this conclusion.

The Department's assessment concludes the proposal has the potential to cause serious impacts on Lake Wollumboola and the SEPP 14 wetlands through increased pollutant loads and changes to surface and groundwater discharges. The Department considers the ecological significance of these receiving environments and the potential for serious and irreversible impacts to occur represents an unacceptable risk. Changes in water quality would upset the unique characteristics of the lake's ecosystem and threatened species, which would adversely impact on the high ecological value of the lake. The Department advises a precautionary approach and concludes the potential benefits of the proposed development in this location do not outweigh the potential adverse impacts.

In addition, Council has commissioned a separate detailed groundwater study for the Planning Proposal. The study will define the extent of the groundwater catchment of Lake Wollumboola to inform development boundaries near Lake Wollumboola. The Planning Proposal will also be supported by an investigation into alternative sites for a golf course. The Department notes this study is yet to commence. The Department considers the Planning Proposal is the appropriate process for determining development boundaries with regard to the catchment of Lake Wollumboola.

6.3. Flora and Fauna

6.3.1. Introduction

The proposal would substantially change the site from a predominantly vegetated native landscape to formal grassed fairways with access roads and constructed wetlands. The Applicant states the golf course design would ensure native vegetation is retained as far as possible between golf course holes and fairways. The access road and part of the main irrigation dam would utilise some of the existing cleared area in the centre of the site.

Long Bow Point has been subject to development proposals dating back to 1993 when Realty Realizations proposed an 837 lot residential subdivision on the site. The COI considering the application in 1996 requested a detailed fauna impact statement from the Applicant. Despite a lengthy adjournment, the COI concluded the Applicant had not demonstrated the proposal would avoid or minimise impacts on threatened flora and fauna and recommended refusal of the application citing unacceptable impacts on biodiversity. The residential subdivision proposed a significantly larger area of clearing than the golf course application.

The Department understands the golf course application originally included a larger scale development including a clubhouse and golf pro shop. These elements were withdrawn from the application, and whilst not expressly stated in the revised SEE or SIS, their removal from the application reduces the amount of vegetation clearing. The Applicant also proposes to retain a 100 m buffer to the foreshore of Lake Wollumboola, with no development proposed in the buffer area. This area is zoned 7(a) Environmental Protection.

6.3.2. Chronology of Studies Submitted by the Applicant

The Applicant submitted four separate flora and fauna assessments for the proposed development. Each assessment has attempted to address concerns raised by Council, and subsequently OEH in relation to the adequacy of the assessment. The assessments include:

- Ecological and Riparian Assessment, Environmental InSites, 2011 (InSites 2011)
- Supplementary Ecological Assessment Report, SLR Consulting, March 2012 (SLR 2012)
- Species Impact Statement, Gunninah & SLR Consulting, 2014 and 2015 (SIS)
- Species Impact Statement Addendum Report, Cumberland Ecology, December 2017 (SIS Addendum).

In 2012 Council appointed an independent ecologist (EnviroKey 2012) to review the Ecological and Riparian Assessment and Supplementary Ecological Assessment provided by the Applicant. The independent review concluded:

- there was a reasonable level of doubt as to whether the likely impacts of the proposal had been fully identified or adequately assessed
- there was a high level of uncertainty as to whether the potential impacts could be successfully mitigated.

The EnviroKey 2012 report led Council to request a Species Impact Statement (SIS) to support the DA. OEH issued DGR's for the SIS in November 2012 as required by the EP&A Act. The DGRs noted at least 22 threatened species are located on or near the site and could be affected by the proposal. The

DGRs required an assessment of the proposal's likely impact on the threatened bird species known to utilise Lake Wollumboola. The DGRs strongly recommended the Applicant consult with the Commonwealth Government, noting the proposal has the potential to impact on 13 migratory bird species listed on the EPBC Act and various international conventions.

The Applicant lodged a SIS in 2014 and an updated SIS in 2015. OEH raised significant concerns with the SIS in its 2016 submission (see **Section 5.2.4** and **Section 6.3.6** for a detailed list of the issues). The key issues raised by OEH included:

- the SIS did not adequately address OEH's DGRs
- the flora and fauna survey effort was lacking and did not enable a comprehensive assessment of the impacts on all affected species
- OEH disputes the claims in the SIS that the habitat of migratory birds would not be affected because there would be a NorBE on water quality.

The Department also notes the author of the SIS maintained that an SIS was not required for the proposal as there would be no impacts on threatened species, populations or ecological communities or their habitats. The author of the SIS also stated the vegetation communities on the site do not constitute EECs.

Following the Department's review of the flora and fauna studies and the submissions from Council and OEH, the Department requested the Applicant provide a final response to address the biodiversity and water quality aspects of OEH's 2016 submission. This included:

- accurate vegetation mapping of the site
- further targeted field survey for threatened species, including orchids
- assessment of impacts on migratory species
- assessment of indirect impacts on the 100 m foreshore buffer zone
- further details to demonstrate the proposal has addressed the avoid, mitigate and offset criteria of OEH's *Principles for the use of biodiversity offsets in NSW*.

In December 2017, the Applicant provided the SIS Addendum prepared by Cumberland Ecology. OEH reviewed the SIS Addendum, noting they were still not satisfied with level of assessment provided and questioned the conclusions of the report (see **Section 5.2.4** and **6.3.6**). The Department's consideration of the proposal's potential impacts on biodiversity has involved a review of all four flora and fauna assessments and the submissions from Council and OEH.

6.3.3. Existing Flora and Fauna

Long Bow Point is primarily covered in mature native vegetation with some small cleared areas along the central ridgeline. The land has been in private ownership for a long time, so information about the flora and fauna on site is informed by the Applicant's studies for this application, database information, vegetation mapping and knowledge of the vegetation and fauna on adjacent lands.

Vegetation Communities

Vegetation mapping of the site was undertaken by Eco Logical Australia (ELA) in 2016 as part of a Strategic Biodiversity Assessment for the Planning Proposal. ELA confirmed the presence of the following vegetation communities, including four threatened ecological communities (TECs), see **Figures 12** and **13**:

- Bangalay sand forest (TEC) – 3.66 ha
- Coastal saltmarsh (TEC) – 4.22 ha
- Swamp sclerophyll forest (TEC) – 39.19 ha
- Swamp oak floodplain forest (TEC) – 39.20 ha
- Red bloodwood – blackbutt – spotted gum shrubby open forest – 58.62 ha
- Blackbutt – turpentine – bangalay moist open forest – 43.21 ha.

Over the 196 ha site, 86 ha contains TECs (44%), 8 ha is cleared and the remaining 102 ha is native vegetation.



Figure 12: Vegetation Communities on Site

Threatened Flora and Fauna Species

OEH listed 11 threatened flora species and 54 threatened fauna species that should be considered as potential subject species in the Applicant’s assessment. The flora species included orchids and wilsonia and the fauna species covered birds, bats, bandicoot, koala, quoll and green and golden bell frog. The adjacent Lake Wollumboola is known to support populations of shorebirds and waterbirds, with 22 threatened or migratory species listed on the Commonwealth EPBC Act, recorded on or adjacent to the site. **Plate 3** shows birds on Lake Wollumboola, including Black Swan, Royal Spoonbill, Grey Teal, Chestnut Teal and Silver Gull. Numerous submissions referenced the threatened species known to inhabit the lake, noting it as a Globally Important Bird Area.



Plate 3: Birds on Lake Wollumboola

6.3.4. Applicant’s Assessment of Impacts

This section summarises the Applicant’s conclusions regarding the potential impacts of the development on flora and fauna. The conclusions are taken from the SIS and SIS Addendum. Conclusions of the earlier assessments (Insites 2011 and SLR 2012) are superceded by the later and more detailed SIS studies.

Clearing of native vegetation

The SIS Addendum utilised the vegetation mapping conducted by Eco Logical Australia (ELA) in 2016, which includes Long Bow Point. The vegetation mapping shows the site contains four TECs (see **Figure 13**). Of these, all four are listed as EECs on the NSW TSC Act and one is listed as a vulnerable ecological community (VEC) on the Commonwealth EPBC Act.

The proposal would require clearing of 35.7 ha of land, including:

- 10.16 ha of EECs
- 22.24 ha of native vegetation
- 3.3 ha of already cleared land

Table 10 lists the vegetation communities that would be cleared for the golf course.

Table 10: Clearing for the Development

Biometric Vegetation Type	Listing	ha cleared
Swamp Oak Floodplain Forest	EEC	2.24
Swamp Sclerophyll Forest	EEC	7.92
Bangalay Sand Forest	EEC	0
Coastal Saltmarsh	EEC and VEC	0
Red Bloodwood – Blackbutt – Spotted Gum	None	11.33
Blackbutt – Turpentine – Bangalay moist open forest	None	10.91
Sub-Total		32.40
Cleared land	None	3.3
Total		35.70

A total of five hollow bearing trees would be removed. The SIS Addendum concludes this would have only minor implications for fauna species due to the remaining available habitat on the site and in the wider locality and due to the high mobility of the species likely to utilise these habitats. The SIS Addendum also noted the drainage lines through the site do not provide significant habitat and would only be disturbed temporarily during construction. The SIS stated the proposal would have no impact on the two SEPP 14 wetlands at Downs and Wattle Creeks.

The Applicant proposes to offset the direct clearing of native vegetation through biodiversity offsets, see **Section 6.3.5**.

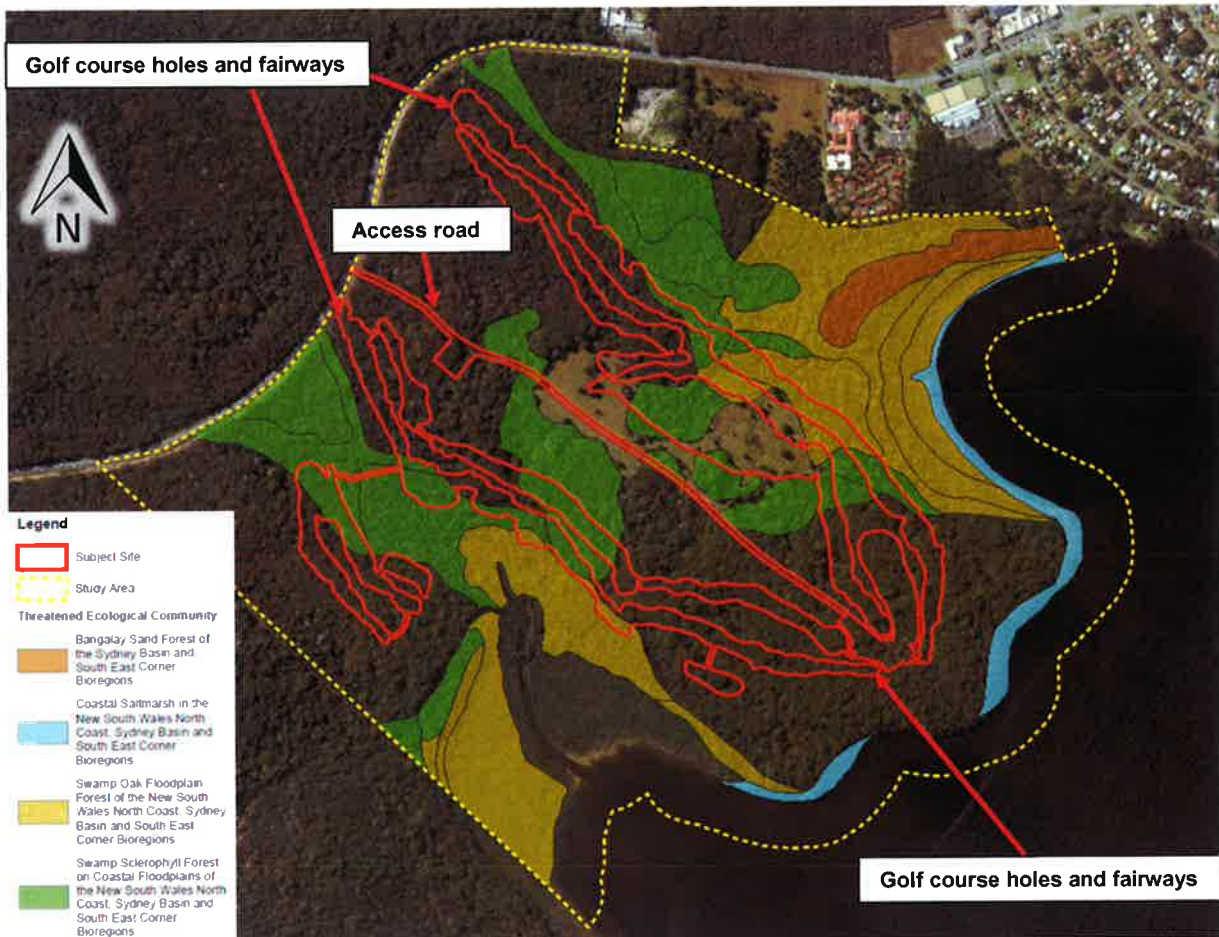


Figure 13: Threatened Ecological Communities on Site

Threatened Flora and Fauna

The SIS considered the potential impacts on one threatened flora species, round-leafed wilsonia and several threatened fauna species including glossy-black cockatoo, powerful owl, square-tailed kite, yellow-bellied glider and a number of microchiropteran bats. The SIS concluded these species would not be significantly impacted by the proposal due to:

- round-leafed wilsonia was identified near the edge of Lake Wollumboola, which won't be impacted
- the design of fairways minimises the loss of hollow-bearing trees
- habitat areas to be cleared is small compared to large areas of undisturbed habitat nearby and protected in nearby conservation reserves
- design of the stormwater management system would minimise impacts on adjacent vegetation and the lake.

The SIS Addendum identified seven threatened flora species (including orchids) and 42 threatened fauna species as subject species based on habitat requirements, survey results and database searches. To address OEH's comments regarding deficiencies in the earlier survey effort for orchids, Cumberland Ecology undertook targeted field surveys for three orchid species in September 2017. Additional fauna surveys were also undertaken between September and November 2017, targeting species that were not covered adequately by earlier surveys.

The SIS Addendum reported that no threatened orchids were recorded during field surveys, although four other species of orchids were recorded. No threatened fauna species listed on the TSC Act or the EPBC Act were recorded. The original SIS identified 11 threatened fauna species on the site during field surveys.

The SIS Addendum included a discussion of the available habitat on site for threatened fauna species. The report did not provide definitive conclusions of the proposal's impact on each species but included statements such as

"the species are highly mobile, and potential corridors created by the proposal are unlikely to impact the movement of these species".

Migratory Birds

The SIS Addendum noted a number of migratory bird species utilise habitats along the foreshore of Lake Wollumboola. The report referenced the conclusions of the IWMP noting that groundwater seepage and stormwater runoff would not have significant effects on the lake's water quality or its habitats and would achieve a NorBE on water quality. The SIS Addendum concluded there would be no corresponding significant impact on the migratory bird species that utilise the lake. This conclusion has remained unchanged across all previous biodiversity studies submitted by the Applicant.

Aquatic Flora and Fauna

The SIS Addendum made the same conclusions with regard to aquatic species, noting that as there would be no water quality impacts on Lake Wollumboola, there would be no impact on aquatic species, therefore no aquatic surveys were undertaken.

Proposed Mitigation

The Applicant proposes a 100 m buffer to the foreshore of Lake Wollumboola indicating the buffer would prevent the golf course development from impacting on the lake and its habitats. The SIS Addendum recommend mitigation measures such as pre-clearing surveys to move fauna to adjacent habitat, delineation of clearing areas to minimise impacts on adjacent habitat, weed management and erosion and sediment controls. The Applicant also proposes to offset the direct clearing of native vegetation.

6.3.5. Proposed Biodiversity Offsets

The Applicant's proposed offset strategy has changed since the application was first lodged. The Applicant has consistently proposed an on-site offset, including the vegetation on Long Bow Point that would not be cleared for the development. Earlier versions of the SEE also referred to dedication of other parcels of land as biodiversity offsets including at East Crescent in Culburra (containing 2 ha of Bangalay Sand Forest) and land at Worroving Heights (containing 6.1 ha of woodland). The latest revision of the SEE and the SIS Addendum do not refer to these land parcels, but a single on-site offset at Long Bow Point.

The SIS Addendum included a biobanking assessment to evaluate the credits generated by the proposed offset area. The report notes that a biobanking assessment is not required for the application, but was included for the purpose of evaluating the impacts of the development and calculating the offset liability. The Applicant proposes to dedicate 167.36 ha of land at Long Bow Point as an offset, comprising 136.88 ha of native vegetation and 0.11 ha of replanted vegetation in cleared areas, see **Figure 14**. This land includes 101.36 ha of EECs. The biobanking assessment excluded areas of retained vegetation between the golf course holes due to edge effects, cleared land and a 5 m buffer around all cleared vegetation.

The Applicant states the offset would be secured by an appropriate mechanism and would be maintained in accordance with a vegetation management plan, yet to be prepared.

The on-site biodiversity offset would generate:

- 594 ecosystem credits for Blackbutt – Turpentine – Bangalay moist open forest
- 183 ecosystem credits for Red Bloodwood – Blackbutt – Spotted Gum open forest
- 364 ecosystem credits for Swamp Mahogany Swamp Sclerophyll forest

The offset provides 68% of the credits required to offset the proposed clearing. There is a shortfall of 719 credits, or 1,123 credits of like-for-like vegetation. The SIS Addendum recommends the remaining offset liability can be achieved by:

- purchasing additional credits
- committing additional land to the conservation area, or

- applying offset variations by financially contributing to biodiversity funds.

There was no further information provided by the Applicant in the RTS on the progress of pursuing the recommendations to make up for the shortfall in credits.

6.3.6. Issues Raised in Submissions

Across most submissions, impacts on threatened flora and fauna and migratory species was raised as a key issue. Submissions from OEH and Council raised concerns with the adequacy of the Applicant's assessment of flora and fauna impacts and submissions from special interest groups and the public raised concerns about the impacts of the proposed clearing on Long Bow Point and Lake Wollumboola.

OEH raised significant concerns with the SIS, which culminated in the Department requesting further information and preparation of the SIS Addendum. OEH's concerns with the SIS included:

- it does not adequately address the DGRs
- the flora and fauna survey effort is lacking, therefore comprehensive assessment of the impacts on all affected species cannot be undertaken
- OEH considers the Applicant's claim that water quality will not be affected is incorrect
- OEH believes (as a result of their own surveys in 2015) that Lake Wollumboola is affected by groundwater inputs and believes water quality in the lake will be impacted by the development. OEH considers this could have serious, irreversible flow-on effects on both the habitat and food sources for migratory birds that use Lake Wollumboola
- OEH reiterated its original request for additional threatened orchid surveys. OEH considers the Applicant's justification for the lack of orchids is inadequate (the SIS proposed that orchids are unlikely to be present on the site because they weren't identified during surveys of the West Culburra site to the north of Culburra Road).

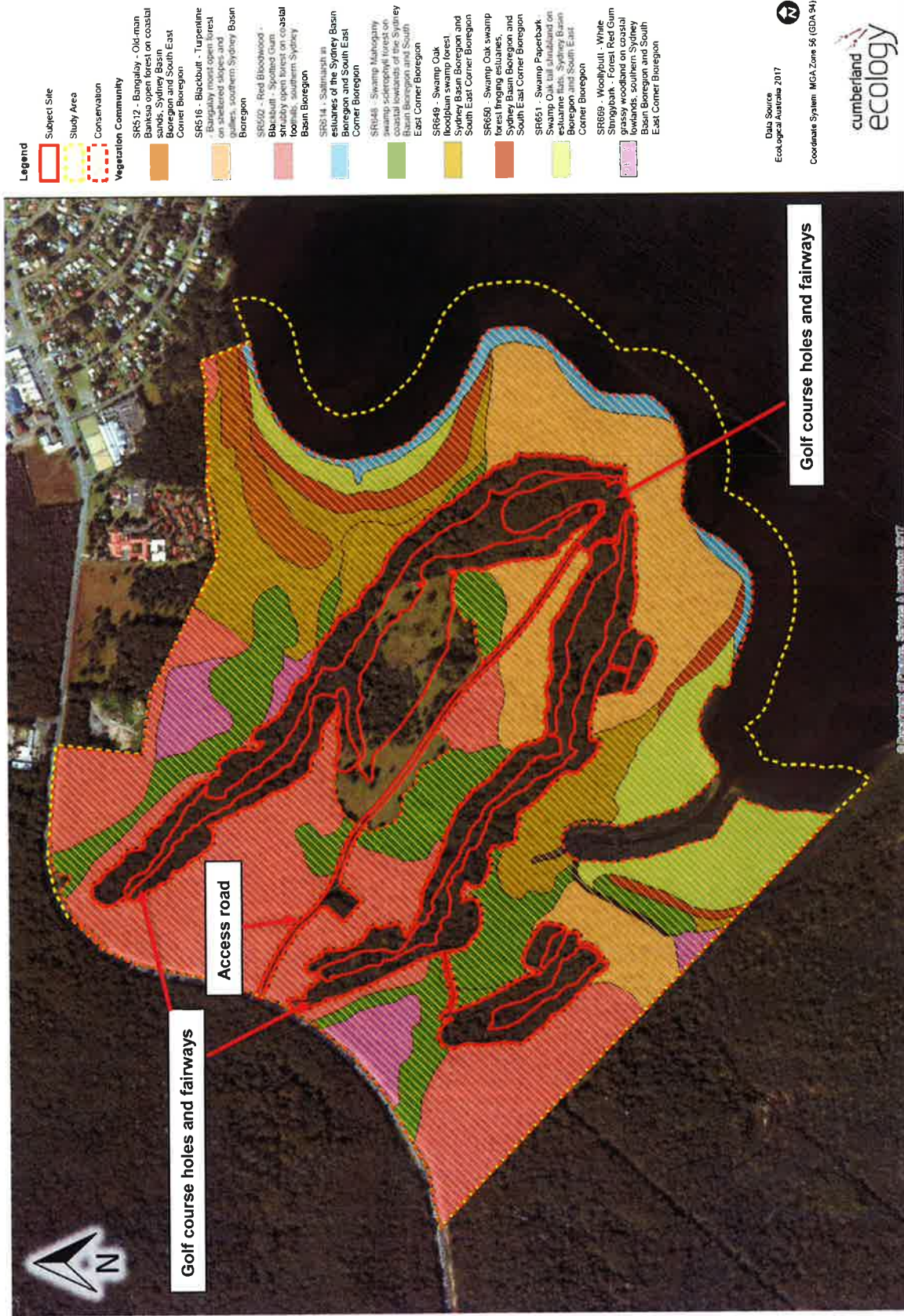
OEHs final submission in March 2018 raised the following residual concerns, after reviewing the Revised SEE, SIS Addendum and Martens 2017:

- the conclusions of likely impact on affected species are not based on adequate observations and evidence
- survey effort for certain species was still lacking, including the glossy black cockatoo, forest owls and orchids
- the principle of 'avoiding' impacts on biodiversity has not been fully addressed as 4.88 ha of cleared area has not been utilised for the golf course
- mitigation measures are not sufficiently detailed to evaluate their effectiveness
- no formal mechanism for securing the offset was established.

In December 2015, Council's threatened species officer reviewed the SIS and noted it did not meet the DGRs and did not provide an adequate level of assessment. Council noted the assessment also failed to address several Commonwealth listed threatened species and migratory birds. Council's threatened species officer recommended the application be refused based on OEH's Threatened Species Assessment Guidelines and the precautionary principle.

Submissions from many special interest groups, including bird and wildlife conservation groups, echoed similar issues to those raised by OEH and Council. These submissions objected to the development citing unacceptable impacts on biodiversity and inconsistency with strategic studies that recommend protection of the biodiversity on Long Bow Point.

Submissions supporting the application suggested the biodiversity impacts would be acceptable and the golf course would enable locals and visitors to enjoy the nature of Long Bow Point and Lake Wollumboola through the provision of public access.



6.3.7. Evaluation and Conclusion

The Department has considered the flora and fauna assessments submitted by the Applicant, strategic studies of Long Bow Point and submissions on the application. The advice of OEH, Council and the independent report prepared by EnviroKey have all consistently requested further detailed assessment to ascertain the significance of the proposal's impacts on biodiversity. These requests have been ongoing since 2012 and after review of the SIS Addendum, OEH maintains there are still deficiencies in the assessment information, warranting a precautionary approach.

The SIS and SIS Addendum contain numerous statements about the development will not impact on threatened flora and fauna species but does not provide sufficient quantitative analysis to support the statements.

OEH has made its position clear that a significant impact on some threatened species cannot be ruled out and the development could have significant impacts on the water quality of Lake Wollumboola, with irreversible flow on effects on habitat for migratory birds.

The Department considers it has sufficient information to form a view on the potential biodiversity impacts of the development. This view has taken account of the following studies:

- 2000 Commission of Inquiry, Long Bow Point
- 2002 Healthy Rivers Commission (HRC), Independent Public Inquiry into Coastal Lakes
- 2006 South Coast Sensitive Urban Lands Review
- 2011 Ecological and Riparian Assessment, Insites
- 2012 Independent Ecological Review, EnviroKey
- 2012 Supplementary Ecological Assessment Report, SLR
- 2015 Species Impact Statement, Gunninah and SLR
- 2017 Species Impact Statement Addendum, Cumberland Ecology
- 2015 Council's Threatened Species Officer advice
- 2016 and 2018 OEH submissions.

The strategic studies undertaken by Government have consistently identified Long Bow Point as an area of high biodiversity that should be protected from urban development. These studies recognise the value of the vegetation on Long Bow Point and the important role it plays in maintaining water quality in Lake Wollumboola and protecting the threatened and migratory birds that rely on the lake's unique ecosystem.

On the basis of reviewing the strategic studies and biodiversity assessments, the Department's assessment concludes the development has the potential to cause significant impacts on threatened flora and fauna species both on the site and the adjacent Lake Wollumboola, which forms part of the Jervis Bay National Park and is a Wetland of National Importance. The Department considers the high ecological significance of Lake Wollumboola and the potential for serious and irreversible impacts to occur represents an unacceptable risk. The Department considers that a precautionary approach should be applied to the proposal and concludes the potential benefits of a golf course in this location do not outweigh the potential adverse biodiversity impacts.

The Department considers the Planning Proposal is the appropriate process for determining the most suitable locations for urban and recreational development at Culburra Beach, as the Planning Proposal is considering the Applicant's landholding as a whole. The Planning Proposal will be informed by strategic studies and technical assessments including groundwater, surface water, biodiversity, heritage and socio-economic and also require consideration of alternative sites for a golf course.

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

6.4. Other Issues

Table 11 details the Department's assessment of other issues including need for the development, socio-economic impacts, Aboriginal heritage and traffic.

Table 11: Assessment of Other Issues

Consideration
<i>Need for the development</i>
<ul style="list-style-type: none">• Several submissions raised concerns about the need for a golf course at Culburra Beach and questioned its viability. Submissions noted there are other courses in the local region, with many golf courses in financial difficulty. Some submissions questioned the championship standard, noting this would require a permanent golf pro, which was not discussed in the application.• OEH questioned the exclusion of the proposed clubhouse from the proposal, noting it would seem integral to a championship level course and would extend the social and economic benefits of the development.• The Department notes a clubhouse would have more impacts on Long Bow Point and Lake Wollumboola, including increased traffic, noise and water quality impacts and considers this was a primary factor for removing the clubhouse from the application.• The Applicant's justification for the development is to increase employment opportunities locally, stimulate economic benefits, provide recreational facilities for local residents and attract further tourism to the area.• The Department has considered the Applicant's position and notes the concerns raised in submissions regarding the lack of a demonstrated demand for a golf course in this location.• The Department notes the proposal may rely on patronage from the proposed residential development at West Culburra (SSD 3846) which is currently being considered by the Commission, as the Applicant has discussed a broad vision to expand Culburra Beach, providing residential and recreational development.• The Department notes there are four golf courses within 16 km of Culburra Beach, including Worrigeer Links, Nowra Golf Course, Shoalhaven Heads and Callala Golf Club. The Applicant has not clearly established a need for another golf course in the locality.• The Gateway Determination for the Planning Proposal requires a study to consider alternative sites for a golf course near Culburra Beach, and outside the catchment of Lake Wollumboola.• In the absence of a clear and demonstrated demand for a local golf course, the Department concludes the Planning Proposal is the most appropriate mechanism for establishing the need for and location of recreational development to service Culburra Beach.
<i>Socio-economic Impacts</i>
<ul style="list-style-type: none">• Many submissions supporting the development stated the golf course would bring social and economic benefits to Culburra Beach through the creation of jobs and increased tourism, and would stimulate existing businesses that have been declining.• The Applicant also made these statements in the SEE, but did not provide any analysis to demonstrate how and to what extent the proposal would generate jobs, tourism or flow on economic benefits to local businesses.• The removal of the proposed clubhouse and pro shop from the application potentially undermines the economic benefits the golf course could generate.• The Department considers the potential economic and social benefits of the golf course, whilst not quantified by the Applicant, are unlikely to significantly outweigh the environmental impacts of the proposal.
<i>Aboriginal Heritage</i>
<ul style="list-style-type: none">• South East Archaeology prepared an Aboriginal Cultural Heritage Assessment (ACHA) in 2011, which was revised in 2012 in response to comments from OEH. The ACHA included site survey with Registered Aboriginal parties.• Site survey was conducted in March 2012 with representatives from the Jerrinja Traditional Owners Corporation (JTO) and Jerrinja Local Aboriginal Land Council (JLALC). Surface visibility was very low given the dense vegetation cover.• The ACHA surveys indicated no evidence of focused occupation close to Lake Wollumboola, due to a lack of shellfish in the lake and the steep slopes of the foreshore, which may limit access.• The Department notes the ACHA references the 1930 reporting of a burial site on the northern shore of Lake Wollumboola not far east of the site, with associated middens and numerous stone artefacts.• Two sites were identified along the cleared access tracks and major ridgeline on the site, both were small open artefact occurrences (silcrete flakes and quartz core). The ACHA concluded the artefact occurrences have low significance but the area up to 200 m from the edge of the lake has moderate to high potential for deposits.• The ACHA concluded the development would have low-level impacts on Aboriginal heritage, provided the impacts are limited in the areas with moderate-high potential near Lake Wollumboola.• The assessment recommended salvage of the two artefact occurrences, further sampling in the area of moderate-high potential where the golf course would impact and re-inspection of areas following clearing.• OEH noted the revised ACHA had not fully addressed its initial concerns. In particular, OEH noted:<ul style="list-style-type: none">- the need for further archaeological test excavation- the assessment did not clearly identify the area of moderate-high potential with respect to the golf course layout, nor did it provide a detailed impacts assessment for this area.• The Department notes there is a lack of detailed information to determine the actual impacts of the development on Aboriginal heritage.• A review of publicly available background information on Aboriginal heritage suggests the area was well utilised by Aboriginal people for seafood resources. The Department understands that Aboriginal people

Consideration

- have retained an important connection to the land in and around Orient Point, the Crookhaven River and Lake Wollumboola, as noted in the submissions from the JTO and JLALC.
- The Department also notes a 1998 study by the Australian Heritage Commission noted around 200 Aboriginal sites have been recorded in the area immediately around the lake.
 - The Jervis Bay National Park and Woollamia Nature Reserve Plan of Management, 2011 notes 15 recorded archaeological sites along the ocean, Jervis Bay and Lake Wollumboola shoreline.
 - Publicly available information and advice from OEH suggests the area extending 200 m from Lake Wollumboola has moderate to high potential for Aboriginal heritage items, however further survey is required to establish this.
 - In order to complete a detailed impact assessment, the Applicant would need to undertake test excavations, which would involve isolated clearing in densely vegetated areas within 200 m of Lake Wollumboola.
 - The Department considers further investigations would require unnecessary removal of native vegetation, given the other impacts of the development are sufficient to warrant its refusal (see **Sections 6.2 and 6.3**).

Traffic

- A Traffic and Parking Assessment (TPA) prepared by Traffic Solutions was submitted in 2011 and revised in 2012 to address comments from Council.
- The TPA considered Annual Average Daily Traffic (AADT) on Culburra Road and estimated traffic movements from the development using data from Nowra Golf Club.
- The Applicant proposes a single access point to Culburra Road, approximately mid-way between the site boundaries, within the 100 kilometre per hour speed zone.
- The TPA concluded Culburra Road would continue to operate at a high level of service (LOS) A and the proposed intersection would also operate at LOS A. The TPA recommended a channelised right (CHR) and auxiliary left (AUL) intersection to provide turning lanes to the development.
- Council commented on the TPA 2012 and noted its initial concerns were not adequately addressed. Council indicated numerous errors with the calculations of AADT on Culburra Road, inadequate survey for golf course traffic generation and inappropriate trip distribution. Council questioned the safety of the proposed access within the 100 km/hr zone and noted a safer location would be within the 50 km/hr zone closer to Culburra Village, near the eastern site boundary. Council also requested the Applicant consider the final proposal including the Clubhouse, as it may generate higher volumes of traffic, necessitating a different intersection design.
- The Department understands additional discussions occurred between the Applicant and Council, including a meeting on site in 2016 to discuss sight distances and the location and design of the intersection.
- Council did not provide a final acceptance of the TPA or proposed intersection design.
- Based on Council's review, the Department considers the TPA 2012 did not adequately evaluate the potential traffic impacts of the development. Despite this, the Department acknowledges golf courses are unlikely to generate excessive traffic movements and an appropriate intersection design could be achieved to meet relevant road design standards.
- As discussed above, corrections to the TPA and further justification for the location and design of the intersection is not considered necessary, as there are more significant impacts that warrant refusal of the application.

7. CONCLUSION

The Department has assessed the golf course 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 studies and plans covering Lake Wollumboola. The assessment has involved consultation with the Applicant, Council and the Government agencies that raised significant concerns about the proposal. The Department has reviewed and evaluated multiple revisions to the technical studies including the water quality and flora and fauna assessments.

The proposal is located adjacent to Lake Wollumboola, which has been identified through independent Government inquiries as a lake of State significance, requiring protection from urban development. The HRC Inquiry, SCSULR, the ISRP all recommend the catchment of the lake be protected from further development. The Gateway Determination for the Planning Proposal recommends the land on Long Bow Point is zoned for environmental protection.

The Applicant has had multiple opportunities to assess and quantify the proposal's impact on water quality and flora and fauna, since the application was first lodged in 2011. Despite this, the Applicant has been unable to demonstrate with scientific rigour and certainty, that the proposal would not

adversely impact on water quality and threatened species on Long Bow Point and in Lake Wollumboola. The Department and OEH considers there is potential for serious and irreversible impacts on the lake, which warrant refusal of the application. The Department also notes the Planning Proposal will evaluate in detail the groundwater catchment and its significance on the lake's ecology and the conservation value of threatened species on Long Bow Point. The Planning Proposal will also identify areas suitable for development and those requiring protection. It is clear from the strategic studies completed to date, the land on Long Bow Point is unsuitable for development.

The Department's assessment of the golf course proposal has concluded:


- it is inconsistent with the recommendations of independent Government inquiries and strategic plans, to protect Lake Wollumboola from further urban development
- the Applicant has been unable to demonstrate with scientific certainty that the proposed water management system would achieve a neutral or beneficial effect on water quality in the lake
- there is inadequate information on groundwater inputs to the lake to inform an accurate assessment of the proposal's potential impacts on groundwater
- the potential water quality impacts present an unacceptable risk to the lake's unique ecosystems and the threatened and migratory species it supports
- the Applicant has been unable to demonstrate with certainty that the proposal would not have a significant impact on threatened flora and fauna species, despite completing four separate flora and fauna assessments for the application
- the potential impacts on threatened flora and fauna species on Long Bow Point and in Lake Wollumboola are likely to be significant
- the potential economic and social benefits of the golf course are unlikely to significantly outweigh the environmental impacts of the proposal.

On balance, the Department concludes the 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 recreational development and environmental conservation across the Halloran landholdings consistent with the objectives of the strategic studies and the ISRP.

Following on from its assessment of the proposal, the Department of Planning and Environment considers the 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 2/7/18.
Director
Industry Assessments

Endorsed by:


Anthea Sargeant 2/7/18
Executive Director
Key Sites and Industry Assessments