

# Proposal Summary

<b>Applicant</b>	Coastplan Consulting
<b>Owner</b>	The Glenworth Valley Pastoral Company Pty Ltd Darkinjung Local Aboriginal Land Council The Treasury – Crown Land
<b>Application Number</b>	PP 38/2013
<b>Description of Land subject of planning proposal</b>	<p><i>Property Description:</i></p> <p>1992 Peats Ridge Road, Calga (part of lot) 2070 Peats Ridge Road 48 and 51 Polins Road, Calga 8, 45 and 81 Cooks Road, Calga 69 and 69A Cooks Road, Glenworth Valley</p> <p><i>Legal Description:</i></p> <p>Lots 19, 20, 21, 23, 24, 25, 30, 31, 32, 33, 37, 50, 53, 64, 65, 68, 81, 82, 85, 86, 87, 89, 91, 108, 145 DP 755221, Lots 22, 23, 32, 73, 75, 76 DP 755253, Lots 1, 3 DP 617088, Lot 881 DP 563889, Lot 1 DP 1222754, Lot 245 DP 48817, Lot 7 DP 1230083, Lot 7012 DP 1059767, Lot 7029 DP 93603, Lot 7035 DP 1051932, Lot 7036 DP 1059768, Lot 7303 DP 1154929, Glenworth Valley, and Lot 882 DP 563889, Lot A DP 365595, Lot C DP 382358, Lot 2 DP 1139242, part of Lot 102 DP 1139060, Lot 7039 DP 1059766, Lot 7303 DP 1161109, Calga</p>
<b>Site Area</b>	1173.6 Ha
<b>Existing Use</b>	Recreation facilities, pasture and natural bushland

### 3.6 Supplementary Report - Amended Planning Proposal Request - Glenworth Valley

**Attachment 2**

**Planning Proposal Summary**

<b>Proposed Amendments – Gosford Local Environmental Plan 2014</b>			
<b>Provisions</b>	<b>Existing Provision</b>	<b>Proposed Amendment</b>	<b>Outcome (Supported/Not Supported)</b>
<b>Zoning</b>	E2 Environmental Conservation  RU2 Rural Landscape	No change	Supported
<b>Minimum Lot Size</b>	40 ha  20 ha	No change	Supported
<b>Schedule 1- Additional permitted uses</b>	Nil	<ol style="list-style-type: none"> <li>1. On land zoned E2 Environmental Conservation, development for the purpose of recreation facilities (outdoor) and eco-tourist facilities.</li> <li>2. On land zoned RU2 Rural Landscape, development for the purposes of eco-tourist facilities, camping grounds, tourist and visitor accommodation.</li> <li>3. On existing cleared land comprising part of Lots 19, 20, 21, 23, 25, 30, 32, 33, 37, 50, 53, 64, 68, 85, 86, 87, 89, 91, 108 and 145 DP 755221, part of Lots 22 and 32 DP 755253, part of Lot 3 DP 617088, part of Lot 245 DP 48817, part of Lot 7039 DP 1059766 and part of Lot 7303 DP 1154929; development for the purpose of extensive agriculture.</li> <li>4. On existing cleared land comprising part of Lots 22 and 32 DP 755253 and part of Lots 19, 37 and 89 DP 755221; development for the purposes of camping ground and function centre.</li> </ol>	Supported

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<b>Proposed Amendments – Gosford Local Environmental Plan 2014</b>			
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		<p>5. On that part of Lot 89 DP 755221 accommodating the existing multi-purpose building; development for the purposes of function centre, entertainment facility and food and drink premises.</p> <p>6. The total floor area for the permanent building for the function centre, entertainment facility and food and drink premises is to be no greater than 1500m<sup>2</sup> and any additions to be attached to, or directly adjacent to, it.</p> <p>7. On existing cleared land comprising part of Lots 108 and 145 DP 755221; development for the purpose of tourist and visitor accommodation.</p>	

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**Attachment 3**

**Former Gosford City Council Resolution to Prepare Planning Proposal (17 December 2013)**

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#### **Resolved Items Action Statement**

Action is required for the following item as per the Council Resolution.

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## **NOTICE OF COUNCIL RESOLUTION**

### **COUNCIL MEETING – 17/12/2013**

#### **TITLE**

Directorate: Environment and Planning  
Business Unit: Integrated Planning

*The following item is defined as a planning matter pursuant to the Local Government Act, 1993 & Environmental Planning & Assessment Act, 1979*

Councillor Ward declared his less than significant non-pecuniary interest in relation to this item, under Chapter 14 of the Local Government Act 1993, as during a recent Gosford City Council delegation to Tokyo, he represented some local tourist destinations, however considered he was capable of making an impartial decision in respect to this matter.

MOVED (Doyle/Morris) that the recommendation of the Director - Environment and Planning be adopted subject to the amendment of Parts A and B as follows:

- A ***Council request the General Manager, prior to sending the Planning Proposal to the Department of Planning, to amend it to give effect to the following:***
- ***For the land located down in the valley list the land in Schedule 1 of LEP 2013 and insert Extensive Agriculture as an additional nominated use.***
  - ***For the land located in the ridge tops above the valley, rezone the residual cleared, pasture improved, farmland that is scheduled to be zoned E2 so that it matches the adjoining land in this area which is zoned RU2.***
  - ***Reinstate the originally requested tourist uses in the Schedule 1 list of uses that apply to the site, being Camping Ground and Visitor and Tourist Accommodation.***
- B ***Subject to Part A*** Council initiate the Local Environmental Plan 'Gateway' process pursuant to Section 55 Environmental Planning and Assessment Act by endorsing the preparation of a Planning Proposal to list in Schedule 1 of Gosford Local Environmental Plan 2013 to provide for:

On being put to the meeting the MOTION WAS CARRIED with the following votes being recorded:

For the Motion: Councillors Ward, Bocking, Bowles, Burke, Doyle, Macfadyen, Morris and Scott.

**RESOLVED** that:

- A ***Council request the General Manager prior to sending the Planning Proposal to the Department of Planning to amend it to give effect to the following:***



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- **For the land located down in the valley list the land in Schedule 1 of LEP 2013 and insert Extensive Agriculture as an additional nominated use.**
- **For the land located in the ridge tops above the valley, rezone the residual cleared, pasture improved, farmland that is scheduled to be zoned E2 so that it matches the adjoining land in this area which is zoned RU2.**
- **Reinstate the originally requested tourist uses in the Schedule 1 list of uses that apply to the site, being Camping Ground and Visitor and Tourist Accommodation.**

**B Subject to Part A** Council initiate the Local Environmental Plan 'Gateway' process pursuant to Section 55 Environmental Planning and Assessment Act by endorsing the preparation of a Planning Proposal to list in Schedule 1 of Gosford Local Environmental Plan 2013 to provide for:

- a on that land that is zoned E2 Environmental Conservation, development for the purposes of eco-tourist facilities and recreation facilities (outdoor)
- b on land that is zoned RU2 Rural Landscape, development for the purposes of eco-tourist facilities.

on the following lots

- i Land owned by Glenworth Valley Pastoral Company Pty Ltd, being Lots 1 and 3 DP 617088, Lots 19, 20, 21, 23, 24, 25, 30, 31, 32, 33, 37, 50, 53, 64, 65, 68, 81, 82, 85, 86, 87, 89, 91, 108 and 145 DP 755221, Lots 22, 23, 32, 73, 75 and 76 DP 755253, part of Lot 102 DP 1139060, Lot C DP 382358, Lot 2 DP 1139242, Lots 881 and 882 DP 563889 or are the subject of a Permissive Occupancy held by Glenworth Valley, being Lot 7012 DP 1059767, Lot 7039 DP 1059766, Lot 7303 DP 1161109, and Lot 7303 DP 1154929;
- ii Land that is Crown land and not the subject of permissive occupancy, being Lot 7027 DP 1051931, Lot 7029 DP 93603, Lot 7035 DP 1051932, Lot 7036 DP 1059768, Lot 7037 DP 1059769, and Lot 7038 DP 1059769; and
- iii Land owned by the Darkinjung Local Aboriginal Land Council, being Lot 245 DP 48817

**C** Prior to referral of the Planning Proposal to the Department of Planning and Infrastructure, Council write to the owners of Crown Land (being Lot 7027 DP 1051931, Lot 7029 DP 93603, Lot 7035 DP 1051932, Lot 7036 DP 1059768, Lot 7037 DP 1059769, Lot 7038 DP 1059769) and Darkinjung LALC land (being Lot 245 DP 48817) inviting them to advise Council whether they consent to the inclusion of their land in this Planning Proposal. If not, the Planning Proposal is to be amended to delete these lots.

**D** Council notify the Department of Planning and Infrastructure of Council's resolution requesting a 'Gateway' determination pursuant to Section 56(1) Environmental Planning and Assessment Act and forward the Planning Proposal and all necessary documentation according to their requirements and this report:

**E** Council recommend to the Gateway that the following public authorities be consulted:

- Office of Environment and Heritage
- National Parks and Wildlife Service
- Rural Fire Service
- Trade and Investment - Mineral Resources
- Environment Protection Authority

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#### **Attachment 3**

#### ***Former Gosford City Council Resolution to Prepare Planning Proposal (17 December 2013)***

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- Roads and Maritime Service
  - Darkinjung Local Aboriginal Land Council
  - Destination NSW
- F After public exhibition of the Planning Proposal, should the Minister for Planning and Infrastructure support it, if no submissions objecting to the planning proposal are received, the Planning Proposal is to be sent to the Department of Planning and Infrastructure in order to make the plan.
- G The applicant be advised of Council's resolution.
- H Council seeks delegations from the Department of Planning and Infrastructure for this Planning Proposal.

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**Attachment 4**

**Former Gosford City Council Resolution to Prepare Planning Proposal (10 June 2014)**

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**NOTICE OF COUNCIL RESOLUTION  
COUNCIL MEETING – 10/06/2014**

**TITLE**

Department: Governance & Planning  
Service Unit: Sustainable Corporate & City Planning

*The following item is defined as a planning matter pursuant to the Local Government Act, 1993 & Environmental Planning & Assessment Act, 1979.*

Councillor Morris declared her pecuniary interest in relation to this item, under Chapter 14 of the Local Government Act 1993, as her firm is currently involved in a matter with the applicant and did not take part in the consideration or discussion of, or vote on any question relating to this item.

Councillor Morris left the meeting at 6.50 pm.

ADJOURNMENT OF MEETING AT 6.50 PM

The Chairperson advised the meeting that due to a lack of quorum the meeting was adjourned.

Councillors Morris returned to the meeting at 6.51 pm.

The meeting resumed at 6.51 pm. The following Councillors were present:

Councillors G L Bowles, C L Doyle, J M Macfadyen, H A Morris, V L Scott and J C Strickson.

MOVED (Strickson/Macfadyen) that ***this matter be referred to the Chief Executive Officer to be considered under delegated authority.***

On being put to the meeting the MOTION WAS CARRIED.

**RESOLVED** that ***this matter be referred to the Chief Executive Officer to be considered under delegated authority.***

For the Resolution: Councillors Bowles, Doyle, Macfadyen, Morris, Scott and Strickson.

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#### **Attachment 5**

#### **Former GCC CEO Approval under Delegated Authority - 27 June 2014 (Glenworth Valley)**

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On 27 June 2014 the Acting CEO approved the following amendment:

- A *With regard to the subject Planning Proposal for various lots in Glenworth Valley and Council's resolution of 17 December 2013 to support a request for a 'Gateway' determination pursuant to Section 55 Environmental Planning and Assessment Act, that Crown Land (being Lot 7027 DP 1051931, Lot 7029 DP 93603, Lot 7035 DP 1051932, Lot 7036 DP 1059768, Lot 7037 DP 1059769, Lot 7038 DP 1059769) be included in an amended Planning Proposal to be sent to the Department of Planning and Environment for a Gateway determination, and Department of Trade and Investment be consulted during consultation with public agencies.*
- B *Council seeks delegations from the Department of Planning and Infrastructure for this Planning Proposal.*
- 1 *Upon Council receipt of the Department of Planning & Infrastructure's intention to issue delegation, Council will submit to the Department of Planning & Infrastructure a "Written Authorisation to Exercise Delegation" for the same*
  - 2 *Any delegation to Council is to be delegated to the Chief Executive Officer - Paul Anderson, per s381 of the Local Government Act 1993, who will complete the "Authorisation" on behalf of Council and submit to the Department of Planning & Infrastructure.*



## Central Coast Council

### Strategic Planning Framework Assessment

Lots 19, 20, 21, 23, 24, 25, 30, 31, 32, 33, 37, 50, 53, 64, 65, 68, 81, 82, 85, 86, 87, 89, 91, 108, 145 DP 755221, Lots 22, 23, 32, 73, 75, 76 DP 755253, Lots 1, 3 DP 617088, Lot 881 DP 563889, Lot 1 DP 1222754, Lot 245 DP 48817, Lot 7 DP 1230083, Lot 7012 DP 1059767, Lot 7029 DP 93603, Lot 7035 DP 1051932, Lot 7036 DP 1059768, Lot 7303 DP 1154929, Glenworth Valley, and Lot 882 DP 563889, Lot A DP 365595, Lot C DP 382358, Lot 2 DP 1139242, part of Lot 102 DP 1139060, Lot 7039 DP 1059766, Lot 7303 DP 1161109, Calga

PP/38/2013;  
November 2019

(a) ***Relationship to strategic planning framework***

**Where a regional or sub-regional strategy is in place:**

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#### Strategic Assessment

1. *Is the planning proposal consistent with the objectives and actions of the applicable regional, sub-regional or district plan or strategy (including any exhibited draft plans or strategies)?*

#### Central Coast Regional Plan 2036

The *Central Coast Regional Strategy 2036 (CCRP)* applies to both of the former Gosford and Wyong local government areas (LGAs). The vision of the CCRP is for a healthy natural environment, a flourishing economy and well-connected communities.

The CCRP is to provide the basis of planning by Council and sets out a number of actions. The table below demonstrates that the Planning Proposal is consistent with the relevant actions identified in the CCRP:

3	Direction 3: Support priority economic sectors	
	Action	Assessment
3.5	Capitalise on the region's location and coastline to enhance the visitor economy with a focus on events-based tourism and update planning controls.	The Planning Proposal will allow a regionally significant nature-based tourist development to add complementary nature based tourist facilities, including accommodation that will build on existing capital investment, and allow additional outdoor recreational opportunities as they emerge.
7	Direction 7: Increase job containment in the region	
	Action	Assessment
7.1	Facilitate economic development that will lead to more local employment opportunities on the Central Coast.	The applicant has advised that the current use of the land for a range of outdoor recreation activities employs approximately 25 full-time and 80 part-time employees and attracts up to 200,000 tourists per annum. The planning proposal will enable the continued operation and ongoing growth and development of the business which will provide additional employment opportunities and growth within the tourist industry.
8	Direction 8: Recognise the cultural landscape of the Central Coast	
	Action	Assessment
8.1	Protect the Central Coast's scenic amenity by planning for development that respects the distinct qualities of different places.	The scenic significance of Glenworth Valley will be retained by including additional permitted uses in Schedule 1 of GLEP 2014 whilst retaining the E2 Environmental Conservation zone.
12	Direction 12: Protect and manage environmental values	

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	Action	Assessment
12.1	Identify terrestrial and aquatic biodiversity values and protect areas of high environmental value to sustain lifestyle, economic success and environmental health of the region.	That part of the subject land zoned E2 consists of coastal wetlands to the south and vegetated escarpment surrounding the valley. It has characteristics of environmental value, scenic quality and habitat for native flora and fauna which is reflective of the environmental and scenic significance of the locality.
12.5	Sensitively manage natural areas on the fringe of urban areas to mitigate land use incompatibility issues and provide important quality of life and tourism benefits	Some of the proposed recreational and tourism uses currently operate on the site and are not incompatible with the site's natural setting. Specific on-site effects of any proposed uses are able to be managed through the development assessment process.

Table 1: Central Coast Regional Plan Assessment

## 2. Is the planning proposal consistent with the local Council's Community Strategic Plan, or other local strategic plan?

### Central Coast Community Strategic Plan (One – Central Coast)

One – Central Coast outlines a set of guiding principles, aspirations and values for the community. These reflect on social, economic, environmental and governance aspects for now and the future.

The following objectives outlined in One- Central Coast are applicable to this Planning Proposal:

<b>C</b>	<b>Focus Area – A growing and competitive region</b>	
	<b>Objectives</b>	<b>Assessment</b>
C4	Promote and grow tourism that celebrates the natural and cultural assets of the Central Coast in a way that is accessible, sustainable and eco-friendly.	The planning proposal will showcase the environmental values and recreational opportunities of the region and offer significant economic benefits and synergies. The planning proposal will also have the potential to encourage greater expenditure by tourists and therefore benefit the local economy.
<b>F</b>	<b>Focus Area – Cherished and protected natural beauty</b>	
	<b>Objectives</b>	<b>Assessment</b>
F1	Protect our rich environmental heritage by conserving beaches, waterways, bushland, wildlife corridors and inland areas and the diversity of local native species.	The Planning Proposal will protect the intrinsic environmental values of the land by retaining it generally in an environmental zone, whilst allowing it to grow and develop with additional recreation activities and to provide a range of appropriate tourist accommodation.
<b>L</b>	<b>Focus Area – Healthy lifestyles for a growing community</b>	
	<b>Objectives</b>	<b>Assessment</b>
L1	Promote healthy living and ensure sport, leisure, recreation and aquatic	The planning proposal will enable the public to participate in outdoor recreational activities within a natural setting which would enhance personal well-

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	facilities and open spaces are well maintained and activated.	being. The planning proposal will permit additional uses on-site which have the potential to encourage greater expenditure by tourists and therefore benefit the local economy.
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**Table 2** – Central Coast Community Strategic Plan Assessment

#### Biodiversity Strategy

The Biodiversity Strategy provides a framework and guide for the management of biodiversity in Gosford area that is consistent with regional, state, national and international strategies, plans and policies. The following Actions in the Biodiversity Strategy are applicable to the Planning Proposal:

- *enable biodiversity conservation to be taken into consideration in Council's strategic planning.*
- *environmental zoned lands need to be retained with current minimum lot area standards to enable the lot sizes to allow sufficient space for land uses to occur without loss of biodiversity.*
- *the land zoning and permitted land uses within identified vegetation and wildlife corridors and riparian habitats need to reflect the biodiversity values.*
- *consider biodiversity criteria for conserving areas of high biodiversity working towards maintenance and enhancement of existing biodiversity as a key priority with the aim of no net loss in development assessments and future LEPs.*
- *identify, protect and manage wildlife and vegetation corridors to maintain biodiversity.*

The Planning Proposal is consistent with these actions in that the land will be retained in the existing RU2 Rural Landscape and E2 Environmental Conservation zones, and that appropriate activities will be listed in Schedule 1 of GLEP 2014 that are intrinsically linked to the environmental values of the land.

#### **Policy D2.02 – Rezoning of Land Zoned Conservation & Scenic Protection (Conservation) 7(a)/Environmental Conservation E2**

As part of the subject land is zoned E2, this Policy applies. The Policy objectives are:

- 1 *To define objectives for the Conservation 7(a) / E2 zone to ensure the long term preservation of the scenic and environmental qualities of the region and to ensure Planning Proposals (ie LEPs) are consistent with the prescribed objectives.*
- 2 *To establish criteria to be used by Council to assess requirements to prepare a Planning Proposal. (ie local environmental plan) primarily for the purpose of providing dedication of strategically environmentally/scenically important land for the community benefit in exchange for additional development rights having regard to the land's attributes pertaining to the zone boundary of the 7(a) Conservation zone / Environmental Conservation E2, but also for the purpose to alter the zone, uses, subdivision or other provisions.*

All Planning Proposals must be in conformity with the objectives of the Conservation and Scenic Protection 7(a) (Conservation) / Environmental Conservation E2 as prescribed within this Policy.

The objectives of the Conservation 7(a) / Environmental Conservation E2 Zone:

- a *The conservation and rehabilitation of areas of high environmental value.*



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#### **Strategic Assessment**

*b The preservation and rehabilitation of areas of high visual and scenic quality in the natural landscape.*

*c The provision and retention of suitable habitats for native flora and fauna.*

*d The prohibition of development on or within proximity to significant ecosystems, including rainforests, estuarine wetlands etc.*

*e The provision and retention of areas of visual contrast within the City, particularly the "backdrop" created by retention to the ridgelines in their natural state.*

*f The provision of opportunities for informal recreation pursuits, such as bushwalking, picnic areas, environmental education, etc in appropriate locations.*

*g The minimisation or prohibition of development so that the environmental and visual qualities of the natural areas are not eroded by the cumulative impact of incremental individually minor developments.*

*h The minimisation or prohibition of development in areas that are unsuitable for development by virtue of soil erosion, land slip, slope instability, coastal erosion or bushfire hazard.*

The additional uses proposed to be permitted on land within the E2 zone are outdoor recreation facilities, extensive agriculture, camping grounds and function centre/entertainment facility/food and drink premises. These uses are the standard LEP definitions of the existing uses operating on the site at present. These low impact uses, or similar, are generally compatible with the E2 zone. Any other uses permitted under the definition of recreation facility (outdoor) would be required to satisfy the objectives of the E2 zone.

The overall use and management of the site as a nature based recreation facility would be consistent with the policy, as it promotes environmental awareness and education by users and provide opportunities for informal recreation. The more environmentally sensitive parts of the site would be evaluated and protected as part of the assessment process for individual applications.

Besides being assessed on environmental, statutory and strategic grounds any Planning Proposal pertaining to 7(a)/E2 zoned land must include the following:

- Land capability assessment
- Vegetation analysis
- Faunal analysis
- Visual assessment
- Bushfire hazard analysis
- SEPP 19 - Bushland in Urban Areas
- Strategic basis
- Preparation of DCP
- Dedication of land to COSS

Since the preparation of this Policy, the matters relating to land capability, vegetation, fauna and bushfire have become statutory matters which have to be addressed in any Planning Proposal assessment, and have been addressed separately to this Policy later in the report. SEPP 19 is a statutory matter and has been addressed later in the report. The matters relating to visual quality and COSS are

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the subject of Council's DCPs or strategies which have also been addressed separately in the report, if applicable.

### 3. *Is the planning proposal consistent with applicable state environmental planning policies?*

The proposal has been considered against the relevant State Environmental Planning Policies (SEPPs) as detailed below.

State Environmental Planning Policy	Comment
<b>SEPP No 19 – Bushland in Urban Areas</b>	
<p>The general aim of this Policy is to protect and preserve bushland within the urban areas referred to in Schedule 1 because of:</p> <ul style="list-style-type: none"> <li>(a) its value to the community as part of the natural heritage,</li> <li>(b) its aesthetic value, and</li> <li>(c) its value as a recreational, educational and scientific resource.</li> </ul> <p>The specific aims of this policy are:</p> <ul style="list-style-type: none"> <li>(a) to protect the remnants of plant communities which were once characteristic of land now within an urban area,</li> <li>(b) to retain bushland in parcels of a size and configuration which will enable the existing plant and animal communities to survive in the long term,</li> <li>(c) to protect rare and endangered flora and fauna species,</li> <li>(d) to protect habitats for native flora and fauna,</li> <li>(e) to protect wildlife corridors and vegetation links with other nearby bushland,</li> <li>(f) to protect bushland as a natural stabiliser of the soil surface,</li> <li>(g) to protect bushland for its scenic values, and to retain the unique visual identity of the landscape,</li> <li>(h) to protect significant geological features,</li> <li>(i) to protect existing landforms, such as natural drainage lines, watercourses and foreshores,</li> </ul>	<p>The objectives of the SEPP relate to protecting rare and endangered flora and fauna, protecting habitat, protecting vegetation links and retaining the unique visual identity of the landscape within the E2 zoned part of the subject site.</p> <p>Glenworth Valley adjoins both National Park and Crown Land which accommodate significant bushland areas, as do substantial areas of the subject site. The planning proposal seeks to permit additional uses on the site and given its large size, any effects on any particular part of the site will be subject to detailed development assessment of the effects on bushland, with the opportunity for site works in less significant areas..</p>

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State Environmental Planning Policy	Comment
<p>(j) to protect archaeological relics,</p> <p>(k) to protect the recreational potential of bushland,</p> <p>(l) to protect the educational potential of bushland,</p> <p>(m) to maintain bushland in locations which are readily accessible to the community, and</p> <p>(n) to promote the management of bushland in a manner which protects and enhances the quality of the bushland and facilitates public enjoyment of the bushland compatible with its conservation..</p>	
<b>SEPP No 44 – Koala Habitat</b>	
<p>Aims to encourage the proper conservation and management of areas of natural vegetation that provide habitat for koalas to ensure a permanent free-living population over their present range and reverse the current trend of koala population decline:</p> <p>(a) by requiring the preparation of plans of management before development consent can be granted in relation to areas of core koala habitat, and</p> <p>(b) by encouraging the identification of areas of core koala habitat, and</p> <p>(c) by encouraging the inclusion of areas of core koala habitat in environment protection zones</p>	<p>Individual assessment of any potential koala habitat would need to be undertaken on a case by case basis depending on where works were proposed to be undertaken. It is envisaged that any works would be located away from areas that may provide koala habitat, or otherwise assessment would need to be undertaken to ensure no adverse impact.</p>
<b>SEPP No. 55 – Remediation of Land</b>	
<p>Aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment</p> <p>(b) by specifying when consent is required, and when it is not required, for a remediation work, and</p> <p>(c) by specifying certain considerations that are relevant in rezoning land and in determining development applications in general and development applications for</p>	<p>The SEPP lists some activities that may cause contamination, one of which is agricultural or horticultural activities.</p> <p>The initial Gateway Determination required an initial site contamination investigation to be undertaken to demonstrate that the site is suitable for rezoning. A Stage 1 Site Contamination Assessment was prepared and the conclusion states:</p> <p><i>Based on the desk study and field investigation the site is assessed to be of low risk of contamination. It is assessed that a Stage 2 Contamination Assessment is not required for the proposed re-zoning of land.</i></p>

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<p>consent to carry out a remediation work in particular, and</p> <p>(d) by requiring that a remediation work meet certain standards and notification requirements.</p>	<p>The then owner of Lot A DP 365595 Cooks Road submitted a Preliminary Site Contamination Investigation Report which concludes:</p> <p><i>A Preliminary Site Contamination Investigation Report has been prepared for Lot A DP 365595, as is required under SEPP 55 for Planning Proposal. The report finds there is unlikely to be any contamination of the site arising from the previous use as a citrus orchard and current use for cattle grazing. There is storage of diesel fuel and oil on the property, consistent with rural use, and there could be some minor contamination associated with this in 2 small, localised areas. Any future development application impacting on these areas would be able to address the issue in more detail through soil testing and remediation, if required. If remediation was required, this would be expected to be minor and not of a nature or scale that the land could not be made suitable for the uses proposed in the Planning Proposal.</i></p> <p><i>The report concludes that Lot A DP 365595 is suitable or can be made suitable for the uses proposed in Planning Proposal.</i></p>
<b>SEPP Mining, Petroleum Production and Extractive Industries 2008</b>	
<p>Aims to :</p> <p>(a) provide for the proper management and development of mineral, petroleum and extractive material resources for the purpose of promoting social and economic welfare of the State;</p> <p>(b) to facilitate the orderly and economic use of development of land containing mineral, petroleum and extractive material resources; and</p> <p>(c) to establish appropriate planning controls to encourage ecologically sustainable development through the environmental assessment and sustainable management of development of mineral, petroleum and extractive material resources.</p> <p>Before determining a development application in the vicinity of an existing mine, petroleum</p>	<p>Calga Sands, an existing quarry of regional significance, immediately adjoins part of the site located off Cooks Road, being located on Lot 2 DP 229889. It is noted that this quarry has been the subject of protracted concerns by the community in relation to its impacts. It is considered that there is sufficient area on the Glenworth Valley landholding overall so as to locate activities, including those which will be permitted through the Schedule 1 listing, in areas remote from the impacts of the quarry. The Planning Proposal should not have the effect of restricting the obtaining of extractive material from the Calga Sands Quarry.</p>

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<p>production facility or extractive industry, the consent authority must consider:</p> <p>(a) the existing uses and approved uses of land in the vicinity of the development;</p> <p>(b) whether or not the development is likely to have a significant impact on current or future extraction or recovery of minerals, petroleum or extractive materials;</p> <p>(c) any ways in which the development may be incompatible with any of the existing or approved uses or that current or future extraction or recovery.</p>	
<b>SEPP Coastal Management 2018</b>	
<p>The aim is to promote an integrated and co-ordinated approach to land use planning in the coastal zone in a manner consistent with the objects of the Coastal Management Act 2016, including the management objectives for each coastal management area, by</p> <p>(a) managing development in the coastal zone and protecting the environmental assets of the coast; and</p> <p>(b) establishing a framework for land use planning to guide decision-making in the coastal zone; and</p> <p>(c) mapping 4 coastal management areas that comprise the NSW coastal zone for the purpose of the definitions in the Coastal Management Act 2016.</p> <p>All development within the Coastal Wetlands Area requires development consent. All development, except environmental protection works is declared designated development. Consent must not be granted for development within the Coastal Wetlands Area unless sufficient measures have been or will be taken to protect the biophysical, hydrological and ecological integrity of the coastal wetland.</p> <p>Development consent must not be granted to development on land identified as "proximity area for coastal wetlands" unless the proposed development will not significantly impact on:</p>	<p>The southern part of the subject site adjoining Popran Creek is identified as "coastal wetlands" and "proximity area for coastal wetlands". Therefore the additional permitted uses allowed on this land as a result of the planning proposal would be treated as designated development if a development application was received to locate such uses within the coastal wetlands.</p> <p>Future development applications for uses in the Coastal Wetland Area and the Proximity Area for Coastal Wetlands will be assessed to ensure the biophysical, hydrological and ecological integrity of the coastal wetland is maintained.</p> <p>The flats adjoining the upper reaches of Popran Creek and the lower slopes are located within the Coastal Environmental Area. The proposal to permit additional uses within this Area would not adversely impact on the coastal environment values and natural processes of the locality. However the future outdoor recreation proposed for this land would have to be considered in detail at the development application stage when and if such uses are proposed.</p>

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<p>(a) the biophysical, hydrological or ecological integrity of the adjacent coastal wetland, or</p> <p>(b) the quantity and quality of surface and ground water flows to and from the adjacent coastal wetland.</p> <p>Consent must not be granted for development within the Coastal Environment Area if the proposed development is likely to cause adverse impacts on the following</p> <p>(a) the integrity and resilience of the biophysical, hydrological and ecological environment;</p> <p>(b) coastal environmental values and natural coastal processes;</p> <p>(c) the water quality of the marine estate, in particular the cumulative impacts of the proposed development on any sensitive coastal lakes</p> <p>(d) marine vegetation, native vegetation and fauna and their habitats, undeveloped headlands and rock platforms</p> <p>(e) existing public open space and safe access to and along the foreshore, beach, headland or rock platform for members of the public</p> <p>(f) Aboriginal cultural heritage, practices and places</p> <p>(g) The use of the surf zone.</p>	
<b>Deemed SEPP Sydney REP No 8 – Central Coast Plateau Areas</b>	
<p>Aims:</p> <p>(a) to provide for the environmental protection of the Central Coast plateau areas and to provide a basis for evaluating competing land uses,</p> <p>(b) to encourage the use of land having a high agricultural capability for that purpose and, as much as possible, to direct development for non-agricultural purposes to land of lesser agricultural capability,</p> <p>(c) (Repealed)</p>	<p>All of the land is within the boundary of SREP 8, however only the land near Cooks Road which is zoned RU2 has been the subject of detailed mapping of agricultural land. This land is identified as Classes 3 and 4 (coloured in pink) Prime Agricultural Land, with the upper side slopes as Classes 4-5 and 5, which are not prime agricultural land. Land within the valley floor has not been mapped under the REP. The planning proposal does not reduce the agricultural capability of the land as it seeks to</p>

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State Environmental Planning Policy	Comment
<p>(d) to protect regionally significant mining resources and extractive materials from sterilization,</p> <p>(e) to enable development for the purposes of extractive industries in specified locations,</p> <p>(f) (Repealed)</p> <p>(g) to protect the natural ecosystems of the region, and</p> <p>(h) to maintain opportunities for wildlife movement across the region, and</p> <p>(i) to discourage the preparation of draft local environmental plans designed to permit rural residential development, and</p> <p>(j) to encourage the preparation of draft local environmental plans based on merits.</p> <p>In preparing any draft local environmental plan applying to land to which this plan applies, the council should have regard to the objective that any development allowed by the plan should:</p> <p>(a) not impact upon the current or future use of adjoining land for existing or future agricultural uses, and</p> <p>(b) not result in an increased settlement pattern (by way of urban development, rural residential development, residential accommodation of a permanent or semi-permanent nature, community titles subdivisions or any other features that would facilitate increased settlement), and</p> <p>(c) have a significant positive economic contribution to the area and result in employment generation, and</p> <p>(d) not result in any adverse environmental effect on or off the site, and</p> <p>(e) be consistent with the strategic direction for water quality standards and river flow objectives developed through the State Government's water reform process, and</p> <p>(f) be consistent with rural amenity (including rural industries) and not detract significantly from scenic quality, and</p> <p>(g) not encourage urban (residential, commercial or industrial) land uses, and</p> <p>(h) not require augmentation of the existing public infrastructure (except public infrastructure that is satisfactory to the council</p>	<p>retain the RU2 zone and all the uses permitted within that zone.</p> <p>The issues to be addressed in any draft local environmental plan are addressed in order below:</p> <p>(a) The additional uses are proposed to be undertaken on the E2 component of the site and are located away from any adjoining agricultural operation. For the RU2 component located off Cooks Road, adjoining land is within the same RU2 zoning, and the planning proposal reflects existing approved uses (i.e. the motel). It is considered there is adequate separation between Glenworth Valley holdings land and adjoining agricultural land to provide sufficient separation between uses.</p> <p>(b) An eco-tourist facility, camping ground and tourist accommodation will not practically be able to be separately titled, and is only for the transient accommodation of tourists/visitors to the site. Hence the planning proposal would not result in an increased settlement pattern.</p> <p>(c) Allowing additional outdoor recreation facilities and tourist facilities will value add to the existing tourist infrastructure at the site and have a positive economic contribution and employment generation, and will benefit wider local businesses.</p> <p>(d) Adverse environmental effects will be minimised through regulation of development, and allowing flexibility in siting of works and activities.</p> <p>(e) Water quality standards will be assessed on an individual case by case basis and do not represent an impediment to the planning proposal as they can be managed through appropriate on-site practices.</p> <p>(f) The additional uses proposed will need to be sited and designed so as to not detract from scenic quality.</p> <p>(g) The land use will remain for conservation and environmental values for the valley floor, side slopes and ridgelines, with additional uses complementary to these values. The proposal will not encourage urban development.</p>

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<p>concerned and is provided without cost to public authorities), and</p> <p>(i) result in building works being directed to lesser class soils.</p>	<p>(h) Augmentation of any infrastructure that may be required (e.g. electricity) will need to be funded by the developer dependent upon what is required.</p> <p>(i) Building location within the RU2 zoned land can be assessed on an individual case by case basis and do not represent an impediment to the planning proposal. Soil classes within the valley have not been mapped.</p>
<b>Deemed SEPP Sydney REP No 9 - Extractive Industry (No 2 - 1995)</b>	
<p>Aims:</p> <p>(a) to facilitate the development of extractive resources in proximity to the population of the Sydney Metropolitan Area by identifying land which contains extractive material of regional significance, and</p> <p>(b) to permit, with the consent of the council, development for the purpose of extractive industries on land described in Schedule 1 or 2, and</p> <p>(c) to ensure consideration is given to the impact of encroaching development on the ability of extractive industries to realise their full potential, and</p> <p>(d) to promote the carrying out of development for the purpose of extractive industries in an environmentally acceptable manner, and</p> <p>(e) to prohibit development for the purpose of extractive industry on the land described in Schedule 3 in the Macdonald, Colo, Hawkesbury and Nepean Rivers, being land which is environmentally sensitive.</p>	<p>Division 4 of Schedule 1 of the SREP identifies Lot 2 DP 229889 (Calga Sands) as a "sand extraction area of regional significance - current and potential". Lot 108 DP 755221, owned by Glenworth Valley holdings, off Cooks Road immediately adjoins this land. A separate DA has already been approved on the RU2 zoned part of Lot 108 for a motel comprising a 3 unit motel and five caravan park sites (as permissible in the existing zoning) (DA 43465 approved on 11 November 2013 refers). The proposed listing of tourist and visitor accommodation in Schedule 1 of GLEP 2014 as it relates to the RU2 zone will reflect existing approved uses. Other eco-tourist components would be located further away from the Calga Sands Quarry and hence would not have the impact of sterilising the extractive resource.</p> <p>The amended Gateway is likely to require consultation with Director General of Trade and Investment - Mineral Resources and The Director General of the Environment Protection Authority (or their equivalent under the new State Government structure).</p>
<b>Deemed SEPP Sydney REP No 20 - Hawkesbury-Nepean River (No 2 - 1997)</b>	
<p>The aim of this plan is to protect the environment of the Hawkesbury-Nepean River system by ensuring that the impacts of future land uses are considered in a regional context.</p> <p>The plan contains a number of specific policies aimed at protecting water quality, recreational values, ecosystems, cultural heritage, flora and</p>	<p>Popran Creek (including the creekline, river flats and vegetated hillsides) are within the riverine corridor as mapped under SREP 20. There are also mapped SREP 20 wetlands on the lower portions of Glenworth Valley landholding, and further downstream. Retention of the valley area and ridgelines in the E2 zone will assist in ensuring that</p>



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fauna communities, scenic quality and tourist values.	downstream impacts and effects on receiving wetlands are considered as part of any future application. There is sufficient area available on-site to manage water quality and nutrients. The Planning Proposal seeks to permit extensive agriculture on the cleared riverflats. The grazing of horses and growing of fodder is already operating on the site so no additional impact on the environment would occur. The Planning Proposal seeks to facilitate a range of nature-based recreational activities (as outdoor recreation facilities), and environmentally appropriate tourist accommodation. This will further achieve the goals of SREP 20 by building on the existing tourist values of Glenworth Valley.

**Table 3** – State Environmental Planning Policy Assessment

#### 4. Is the planning proposal consistent with applicable Ministerial Directions (s.9.1 directions)?

No.	Direction	Applicable	Consistent
<b>Employment &amp; Resources</b>			
1.1	Business & Industrial Zones	N	N/A
1.2	Rural Zones	Y	Y
1.3	Mining, Petroleum Production and Extractive Industries	Y	Y
1.4	Oyster Aquaculture	N	N/A
1.5	Rural Lands	N	N/A
<b>Environment &amp; Heritage</b>			
2.1	Environmental Protection Zones	Y	Y
2.2	Coastal Management	Y	Y
2.3	Heritage Conservation	Y	Y
2.4	Recreation Vehicle Areas	N	N/A
2.5	Application of E2 and E3 Zones and Environmental Overlays in Par North LEPs	N	N/A

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No.	Direction	Applicable	Consistent
<b>Housing, Infrastructure &amp; Urban Development</b>			
3.1	Residential Zones	N	N/A
3.2	Caravan Parks and Manufactured Home Estates	N	N/A
3.3	Home Occupations	N	N/A
3.4	Integrating Land Use & Transport	N	N/A
3.5	Development Near Licensed Aerodromes	N	N/A
3.6	Shooting Ranges	N	N/A
3.7	Reduction in non-hosted short term rental accommodation period	N	N/A
<b>Hazard &amp; Risk</b>			
4.1	Acid Sulfate Soils	Y	Y
4.2	Mine Subsidence and Unstable Land	N	N/A
4.3	Flood Prone Land	Y	Y
4.4	Planning for Bushfire Protection	Y	Y
<b>Regional Planning</b>			
5.1	Implementation of Regional Strategies	N	N/A
5.2	Sydney Drinking Water Catchments	N	N/A
5.3	Farmland of State and Regional Significance on the NSW Far North Coast	N	N/A
5.4	Commercial and Retail Development along the Pacific Highway, North Coast	N	N/A
5.8	Sydney's Second Airport: Badgery's Creek:	N	N/A
5.9	North West Rail Link Corridor Strategy	N	N/A
5.10	Implementation of Regional Plans	Y	Y
5.11	Development of Aboriginal Land Council land	N	N/A
<b>Local Plan Making</b>			

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No.	Direction	Applicable	Consistent
6.1	Approval and Referral Requirements	Y	Y
6.2	Reserving Land for Public Purposes	N	N/A
6.3	Site Specific Provisions	Y	Y
<b>Metropolitan Planning</b>			
7.1	Implementation of A Plan for Growing Sydney	N	N/A
7.2	Implementation of Greater Macarthur Land Release Investigation	N	N/A
7.3	Parramatta Road Corridor Urban Transformation Strategy	N	N/A
7.4	Implementation of North West Priority Growth Area Land Use and Infrastructure Implementation Plan	N	N/A
7.5	Implementation of Greater Parramatta Priority Growth Area Interim Land Use and Infrastructure Implementation Plan	N	N/A
7.6	Implementation of Wilton Priority Growth Area Interim Land Use and Infrastructure Implementation Plan	N	N/A
7.7	Implementation of Glenfield to Macarthur Urban Renewal Corridor	N	N/A
7.8	Implementation of Western Sydney Aerotropolis Interim Land Use and Infrastructure Implementation Plan	N	N/A
7.9	Implementation of Bayside West Precincts 2036 Plan	N	N/A
7.10	Implementation of Planning Principles for the Cooks Cove Precinct	N	N/A

Table 4 – S9.1 Ministerial Direction Compliance

### Ministerial Section 9.1 Directions

Direction	Comment
<b>Employment &amp; Resources</b>	
<b>1.2 Rural Zones</b>	
Aims to protect the agricultural production value of rural land.	Some of the subject land fronting Cooks Road is zoned RU2 so this Direction applies. The planning proposal does not propose to rezone rural land to a more intensive zone nor is it increasing density

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Direction	Comment
<p>Applies when the relevant planning authority prepares a planning proposal that will affect land within an existing or proposed rural zone.</p> <p>A planning proposal must not:</p> <p>(a) rezone land from a rural zoned to a residential, business, industry, village or tourist zone;</p> <p>(b) contain provisions that will increase the permissible density of land within a rural zone.</p>	<p>within the RU2 zone. However it is proposing to include additional uses on the RU2 zoned land which would be permitted subject to development consent. These uses for tourist accommodation are temporary and generally low key thus unlikely to affect the agricultural viability of the land. Hence the Planning Proposal is consistent with this Direction.</p>
<b>1.3 Mining, Petroleum Production and Extractive Industries</b>	
<p>Aims to ensure that the future extraction of State or regionally significant reserves of coal, other minerals, petroleum and extractive materials are not compromised by inappropriate development.</p> <p>Applies when a relevant planning authority prepares a planning proposal that would have the effect of:</p> <p>(a) prohibiting the mining of coal or other minerals, production of petroleum, or winning or obtaining of extractive materials, or</p> <p>(b) restricting the potential development of resources of coal, other minerals, petroleum or extractive materials which are of State or regional significance by permitting a land use that is likely to be incompatible with such development.</p> <p>The relevant planning authority must consult with the Director-General of the Department of Primary Industries regarding the development potential of resources and any likely land use conflicts.</p>	<p>Part of the subject land (i.e. Lot 108 DP 755221) immediately adjoins the existing Calga Sands quarry. However is considered that the planning proposal is satisfactory, as a motel has already been approved on the RU2 zoned part of Lot 108 in the vicinity of the quarry. Furthermore the majority of the land subject to this planning proposal is located away from the quarry and any additional uses would not impact on the quarry or would be impacted upon by the quarry operation. However the planning proposal will be referred to the relevant State Department for comment.</p>
<b>Environment &amp; Heritage</b>	
<b>2.1 Environmental Protection Zones</b>	
<p>Aims to protect and conserve environmentally sensitive areas.</p> <p>Applies when the relevant planning authority prepares a planning proposal.</p> <p>A planning proposal must include provisions that facilitate the protection and conservation of environmentally sensitive areas.</p> <p>A planning proposal that applies to land within an environment protection zone or land otherwise identified for environment protection purposes in a LEP must not reduce the environmental protection</p>	<p>The additional outdoor recreational facilities proposed to be permitted in the E2 zone reflect the existing uses operating on site at present i.e. horse riding trails, quad biking, kayaking, and abseiling. These low impact uses, or similar, are compatible with the Environmental Conservation zone. Any other uses permitted under the definition of recreation facility (outdoor) would be required to satisfy the objectives of the E2 zone.</p> <p>The use of extensive agriculture in the E2 zone is proposed to be permitted on the cleared land within the valley and on the escarpment adjacent to RU2 zoned land. The use is currently conducted in these</p>

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Direction	Comment
standards that apply to the land (including by modifying development standards that apply to the land). This requirement does not apply to a change to a development standard for minimum lot size for a dwelling in accordance with clause (5) of Direction 1.5 "Rural Lands".	<p>areas so no additional environmental impact would occur.</p> <p>The additional uses of function centre, entertainment facility and food and drink premises are proposed to be permitted in, and around the existing multi-purpose building. The surrounding land is generally cleared so will not impact on the environmental qualities of the site.</p> <p>Likewise, the cleared areas of adjoining lots are suitable for outdoor functions and camping.</p> <p>The additional use of tourist and visitor accommodation on cleared E2 zoned land adjoining the RU2 zone is considered to be compatible with the scenic amenity and environmental character of the locality.</p>
<b>2.2 Coastal Management</b>	
<p>Aims to protect and manage coastal areas of NSW.</p> <p>Applies when a relevant planning authority prepares a planning proposal that applies to land within the coastal zone as identified by SEPP (Coastal Management) 2018.</p> <p>A planning proposal must include provisions that give effect to and are consistent with:</p> <p>(a) the objects of the Coastal Management Act 2016 and the objectives of the of the relevant coastal management areas, and</p> <p>(b) the NSW Coastal Management Manual and associated toolkit,</p> <p>(c) the NSW Coastal Design Guidelines 2003.</p> <p>A planning proposal must not rezone land which would enable increased development or more intensive land use on land:</p> <p>(a) within a coastal vulnerability area identified by the SEPP (Coastal Management) 2018, or</p> <p>(b) that has been identified as land affected by current or future coastal hazard in a LEP or DCP, or a</p>	<p>That part of the subject land adjacent to Popran Creek, which is a tidal creek, is in the coastal zone. The land is an estuarine environment and not subject to active coastal processes.</p> <p>The objects of the Coastal Management Act 2016 are to manage the coastal environment of New South Wales in a manner consistent with the principles of ecologically sustainable development for the social, cultural and economic well-being of the people of the State.</p> <p>The additional uses proposed for the site relate to forms of outdoor recreational pursuits, camping ground and use of an existing building and surrounds for functions. These additional uses would be able to fit unobtrusively within the landscape and be ecologically sustainable. The operation of these tourist related uses would benefit the local economy and benefit the well-being of the people who visit the site and partake in the activities.</p> <p>The NSW Coastline Management Manual provides "information to assist present and potential users and occupiers of the coastline to understand the nature of coastline hazards and the options available for their management." As the site is not subject to immediate coastal processes it is not relevant to the Planning Proposal.</p> <p>The Coastal Design Guidelines relates to design of dwellings and location of new settlements and is not</p>

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<p>study or assessment undertaken by a public authority or a relevant planning authority.</p>	<p>strictly relevant to this Planning Proposal. The following objective is however pertinent to this Planning Proposal:</p> <p>-To protect and enhance the cultural, ecological and visual characteristics of a locality.</p> <p>Due to the size of the subject land (approx. 1000 Ha), the additional permitted uses would be able to be accommodated within the landscape with minimal impact on the cultural, ecological and visual characteristics of the locality.</p> <p>The listing of additional permitted uses in the planning instrument will not have any substantive impact in terms of coastal protection and the proposal is considered to be consistent with this direction.</p>
<h4>2.3 Heritage Conservation</h4>	
<p>Aims to conserve items, areas, objects and places of environmental heritage significance and indigenous heritage significance.</p> <p>Applies when the relevant planning authority prepares a planning proposal.</p>	<p>Since 1 October 2019 Calga Aboriginal Cultural Landscape became a State Heritage Item. This area generally applies to Australian Wildlife Walkabout Park and surrounding landscape. Part of this surrounding landscape applies to the eastern part of Lot 108 DP 755221. Future uses permitted in this area of Lot 108 would be low impact activities identified in a future Conservation Management Plan endorsed by the Heritage Council.</p> <p>The area of Lot 108 affected by the State Heritage Item is zoned E2 and inaccessible from Cooks Road so the proposed additional permitted uses of eco-tourist facilities and recreation facilities (outdoor) are unlikely to occur in this area.</p> <p>There are currently three (3) local environmental heritage items in the Valley:</p> <ul style="list-style-type: none"> <li>- Grave of Owen Maloney - Lot 19 DP 755221</li> <li>- Remains of stone walling - Lot 37 DP 755221</li> <li>- House "Glenworth Valley" - Lot 89 DP 755221</li> </ul> <p>These heritage items are identified and protected under the provisions of the Gosford LEP 2014.</p> <p>In relation to aboriginal archaeology, given the setting of the land, with a permanent creek, sandstone ridgelines and exposed rocky outcrops, it could be expected that items may be identified. Future development would need to comply with relevant legislation (National Parks and Wildlife Act,</p>

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Direction	Comment
	1974) in relation to archaeological heritage. Given the variability of site characteristics, there is flexibility in the location of works to minimise disturbance and the E2 zone over the valley area is the most appropriate having regard to potential for further archaeological sites. Archaeological values could also be complementary to nature-based recreational activities. Given the size of the subject site (i.e. approx. 1000 Ha) it is unreasonable to undertake a detailed Aboriginal Heritage Study over the whole site when only small areas will in reality be subject to future development applications. A more reasonable approach would be to undertake detailed investigations for the specific locations of future individual development applications.
<b>Hazard &amp; Risk</b>	
<b>4.1 Acid Sulfate Soils</b>	
Aims to avoid significant adverse environmental impacts from the use of land that has a probability of containing acid sulfate soils.  Applies when a relevant planning authority prepares a planning proposal that will apply to land having a probability of containing acid sulfate soils.	Land adjacent to Popran Creek is identified on the Acid Sulfate Soils Planning Maps as having a probability of acid sulfate soils. Planning for acid sulphate soils is now incorporated as a general provision in the LEP and will apply to any future development on land affected by acid sulfate soils.
<b>4.3 Flood Prone Land</b>	
Aims to ensure that development of flood prone land is consistent with the NSW Government's Flood Prone Land Policy and the principles of the Floodplain Development Manual 2005, and ensure that the provisions of an LEP on flood prone land is commensurate with flood hazard and includes consideration of the potential flood impacts both on and off the subject land.  Applies when a relevant planning authority prepares a planning proposal that creates, removes or alters a zone or a provision that affects flood prone land.	The river flats adjacent to Popran Creek are mapped as flood liable. If building works are proposed in proximity to the creek, a specific flood investigation may be required to support future development and there may be issues associated with flood free access and/or isolation as a result of flood waters. The management of the site would respond to adverse weather conditions, including rain events and flooding, and adapt to conditions appropriate at the time.  The rezoning is consistent with this Direction.
<b>4.4 Planning for Bushfire Protection</b>	
Aims to protect life, property and the environment from bushfire hazards, and encourage sound management of bushfire prone areas.  Applies when a planning proposal affects or is in proximity to land mapped as bushfire prone land.	The land is mapped as Vegetation Categories 1 and 2 as well as Buffer. As the subject site is bushfire prone, it is considered necessary to refer the Planning Proposal to the Rural Fire Service for comment following the receipt of a Gateway

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Direction	Comment
	determination. Issues that may be of relevance would relate to emergency evacuation procedures, on-site fire refuge, etc that may be more of an operational than planning nature.
<b>Regional Planning</b>	
<b>5.10 Implementation of Regional Plans</b>	
Aims to give legal effect to the vision, land use strategy, policies, outcomes and actions contained within regional strategies. Applies when the relevant planning authority prepares a planning proposal.	The Planning Proposal is considered to be consistent with the directions and actions contained in the Central Coast Regional Plan as indicated in the response to Question 1 above.
<b>Local Plan Making</b>	
<b>6.1 Approval and Referral Requirements</b>	
Aims to ensure that LEP provisions encourage the efficient and appropriate assessment of development. A Planning Proposal must minimise the inclusion of provisions that require concurrence, consultation or referral of development applications to a Minister or public authority and not identify development as designated development.	The planning proposal will not increase the need for referrals for development applications.
<b>6.3 Site Specific Provisions</b>	
Aims to discourage unnecessarily restrictive site specific planning controls. Applies when the relevant planning authority prepares a planning proposal to allow particular development to be carried out. The Planning Proposal must use an existing zone already applying in an environmental planning instrument and not impose any development standards in addition to those already contained in the environmental planning instrument. The proposal shall not contain or refer to drawings/concept plans that show details of the proposed development.	The Glenworth Valley site is unique in that it is of significant size (approx. 1000 Ha), allowing uses to be dispersed through the site and being located in less constrained areas, is relatively isolated from more urbanised coastal areas and has an existing nature based tourist development operating from the land. Given this and the inappropriateness of other zones (other than those existing) for the overall holding, the addition of uses in Schedule 1 of the relevant LEP is justified. If relevant mapping was updated no additional development standards than currently exist would be applied.

**Table 5** – S9.1 Ministerial Direction Assessment



# Proposal Summary

<b>Applicant</b>	Urbis		
<b>Owner</b>	Doyalson Wyee RSL Club Ltd		
<b>Application Number</b>	RZ/4/2018		
<b>Description of Land subject of planning proposal</b>	<p><i>Property Description:</i> 49-65 Wentworth Avenue and 80-120 Pacific Highway Doyalson</p> <p><i>Legal Description:</i> Lots 1-9 DP 215878; Lot 1 DP 503655; Lot 11 DP 240685; Lot 49 DP 707586; Lot 7 DP 240685; and Lot 62 DP 755266</p>		
<b>Site Area</b>	Approximately 45h		
<b>Existing Use</b>	Doyalson-Wyee RSL Club, gymnasium, sporting fields, Raw Challenge course, a dwelling house, greenhouses, offices and ancillary facilities to support a former agricultural business (Pacific Hydroponics).		
<b>Proposed Amendments – Wyong Local Environmental Plan 2013 or Central Coast Local Environmental Plan</b>			
<b>Provisions</b>	<b>Existing Provision</b>	<b>Proposed Amendment</b>	<b>Outcome (Supported/Not Supported)</b>
<b>Zoning</b>	RE2 Private Recreation RU6 Transition	R2 Low Density Residential RE2 Private Recreation	Supported
<b>Minimum Lot Size</b>	40 ha for land zoned RU6 Transition	450m2 for land zoned R2 Low Density Residential	Supported

# Strategic Assessment

## Central Coast Regional Plan Assessment

<i>Direction</i>	<i>Applicable</i>	<i>Assessment/Comment</i>
1. <i>Grow Gosford City Centre as the region's capital</i>	No	Not located within the regions capital
2. <i>Focus economic development in the Southern and Northern Growth Corridors</i>	No	The subject proposal is located at Doyalson and not within the Southern or Northern Growth Corridors. The proposal provides for a variety of residential, health, tourism, recreation and commercial uses and will not detract from the focus of economic development proposed in the Growth Corridors. The proposal is consistent with the Direction.
3. <i>Support priority economic sectors</i>	Yes	The concept plan proposes a range of employment uses including hospitality, health, childcare, retail and tourism. These uses are recognised in the Regional Plan as within the top 6 local employment industries. The site is well located to accommodate destination-based events and tourism activities and is therefore consistent with the Direction.
4. <i>Strengthen inter-regional and intra-regional connections for business</i>	Yes	The proposal is consistent with this Direction as the proposal seeks to utilise existing road infrastructure.
5. <i>Support new and expanded industrial activity</i>	N/A	This proposal does not relate to industrial activity.
6. <i>Strengthen the economic self-determination of Aboriginal communities</i>	N/A	The proposal is not on land owned by the LALC.

### 3.7 Planning Proposal - Doyalson Wyee RSL Club - Pacific Hwy, Doyalson

#### Attachment 2

#### Strategic Assessment Doyalson Wyee RSL Club

<i>Direction</i>	<i>Applicable</i>	<i>Assessment/Comment</i>
7. <i>Increase job containment in the region</i>	Yes	The subject proposal will increase employment opportunities in hospitality, health, childcare, retail, tourism and construction and is consistent in with the Direction.
8. <i>Recognise the cultural landscape of the Central Coast</i>	Yes	The subject proposal does not detract from the cultural landscape of the Central coast as the proposal relates to an existing developed area.
9. <i>Protect and enhance productive agricultural land</i>	N/A	The subject site is not located on or near productive agricultural lands, located west of the M1 Pacific Motorway.
10. <i>Secure the productivity and capacity of resource lands</i>	Yes	<p>The site is within a designated Mine Subsidence District and is within the Consolidated Coal lease (CCL 721) held by Centennial Mannering Pty Ltd. The lease expires in July 2026.</p> <p>The past mining beneath the site was part of Wyee Colliery and occurred in the late 1990s and up to 2002. The mining occurred in the Great Northern Seam at depths of about 170m to 200m beneath parts of 110 and 120 Pacific Highway, as well as beneath land to the north and east.</p> <p>While Centennial Mannering Pty Ltd has no plans to mine coal beneath the site, it is underlain by minable coal within the Great Northern Seam and there is potential for mining in the future.</p> <p>Centennial Mannering Pty Ltd undertook a subsidence review of the project area (based on the indicative concept plan) and has agreed to specific subsidence design criteria being applied to future developments.</p> <p>Preliminary advice was also sought from Subsidence Advisory NSW (SA) who advised that Surface</p>

### 3.7 Planning Proposal - Doyalson Wyee RSL Club - Pacific Hwy, Doyalson

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#### Strategic Assessment Doyalson Wyee RSL Club

<i>Direction</i>	<i>Applicable</i>	<i>Assessment/Comment</i>
		<p>Development Guideline 7 (on application) currently applies to the site.</p> <p>SA advised following discussion with Centennial Coal, it is likely Guideline 6 (Active Mining Areas – minimal predicted subsidence impact) will be appropriate for the commercial precinct and mine subsidence parameters consistent with Guideline 4 (Active mining areas – High predicted subsidence impact) will be appropriate in other areas.</p> <p>Further consultation will be undertaken with Subsidence Advisory NSW and Centennial Coal following issue of a Gateway Determination.</p>
<p>11. <i>Sustain and balance productive landscapes west of the M1</i></p>	<p>N/A</p>	<p>The subject site is not located west of the M1 Pacific Motorway</p>
<p>12. <i>Protect and manage environmental values</i></p>	<p>Yes</p>	<p>A Biodiversity Assessment was undertaken by Eco Logical Australia Pty Ltd (June 2019) for 80-120 Pacific Highway, Doyalson and has been reviewed by staff. The Biodiversity Assessment did not include 49-65 Wentworth Avenue as these sites are already developed (car park and RSL access) and contain no vegetation.</p> <p>Figure 2 below outlines the proposed location of biodiversity corridors and riparian areas. The corridors provide important connections for fauna through the site and protect habitat for the Glossy Black Cockatoo. The corridors will also protect hollow bearing trees and EEC vegetation.</p> <p>The proponent has offered to enter into a Planning Agreement with Council to ensure appropriate vegetation and biodiversity corridors</p>

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#### Strategic Assessment Doyalson Wyee RSL Club

<i>Direction</i>	<i>Applicable</i>	<i>Assessment/Comment</i>
		are provided in perpetuity on site. The draft Planning Agreement will be prepared post Gateway and exhibited with the Planning Proposal.
13. <i>Sustain water quality and security</i>	N/A	Based on the location of the site relative to the proximity area for coastal wetlands, there is no direct impact to the wetland from the development.
14. <i>Protect the coast and manage natural hazards and climate change</i>	Yes	The site is within a Mine Subsidence District and consultation with Subsidence Advisory NSW will be required post Gateway.
15. <i>Create a well-planned, compact settlement pattern</i>	Yes	The indicative concept plan for the site includes low density residential (including seniors housing), health, employment, recreation, entertainment and tourist and visitor accommodation. These uses will be co-located with the redevelopment of the Doyalson Wyee RSL Club. The proposed redevelopment of the site supports the regions urban areas by providing open space, recreation and services to the current and future residents and visitors to the area.
16. <i>Grow investment opportunities in the region's centres</i>	N/A	The proposal will not detract from surrounding commercial centres as the non-residential uses are predominately entertainment and sports and recreation and therefore will not compete with surrounding centres.
17. <i>Align land use and infrastructure planning</i>	Yes	The site is located along the Pacific Highway corridor which will provide good exposure to the proposed retail, recreation and entertainment uses. The health related uses proposed in the indicative concept plan will support the future residential development.
18. <i>Create places that are inclusive, well-</i>	Yes	The redevelopment of the site will create a mixed use development which

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#### Strategic Assessment Doyalson Wyee RSL Club

<i>Direction</i>	<i>Applicable</i>	<i>Assessment/Comment</i>
<i>designed and offer attractive lifestyles</i>		will provide entertainment, health, retail and recreation uses as well as seniors living, low density residential and tourist and visitor accommodation. The mix of uses will offer an attractive lifestyle for future residents and visitors to the site.
19. <i>Accelerate housing supply and improve housing choice</i>	Yes	The indicative concept plan proposes approximately 220 seniors living dwellings and approximately 141 residential dwellings. The additional dwellings will increase the housing choice and supply in Doyalson.
20. <i>Grow housing choice in and around local centres</i>	Yes	The subject site is located within close proximity to the Lake Munmorah and Budgewoi local centres as well as Lake Haven Shopping Centre and Morisset Train Station.
21. <i>Provide housing choice to meet community needs</i>	Yes	The proposal provides a mix of short term tourist and visitor accommodation, seniors housing and low density residential dwellings.
22. <i>Deliver housing in new release areas that are best suited to building new communities</i>	N/A	<p>The current RE2 Private Recreation zone and provisions of the WLEP 2013 (applying to 80 &amp; 90 Pacific Highway) allow for residential development in the form of Seniors Housing, Caravan Parks and manufactured home estates.</p> <p>The proposal is rezone this area to R2 Low Density Residential to allow the construction of dwelling houses and seniors living adjacent to an existing residential area in Wentworth Avenue.</p> <p>The site is not considered to be a new release area</p>
23. <i>Manage rural lifestyles</i>	N/A	The change in zone will not impact on rural development to the north of the site. The proposed residential development is proposed to be located on the southern portion of the

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#### Strategic Assessment Doyalson Wyee RSL Club

Direction	Applicable	Assessment/Comment
		site adjacent to residential development in Wentworth Avenue.

### State and Sydney Region Environmental Planning Policy Assessment

State/Sydney Region Environmental Planning Policy	Comment
<b>SREP 8 – Central Coast Plateau Areas</b>	
<p>Aims:</p> <ul style="list-style-type: none"> <li>(a) to provide for the environmental protection of the Central Coast plateau areas and to provide a basis for evaluating competing land uses,</li> <li>(b) to encourage the use of land having a high agricultural capability for that purpose and, as much as possible, to direct development for non-agricultural purposes to land of lesser agricultural capability,</li> <li>(c) (Repealed)</li> <li>(d) to protect regionally significant mining resources and extractive materials from sterilization,</li> <li>(e) to enable development for the purposes of extractive industries in specified locations,</li> <li>(f) (Repealed)</li> <li>(g) to protect the natural ecosystems of the region, and</li> <li>(h) to maintain opportunities for wildlife movement across the region, and</li> <li>(i) to discourage the preparation of draft local environmental plans designed to</li> </ul>	Not Applicable

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State/Sydney Region Environmental Planning Policy	Comment
<p>permit rural residential development, and</p> <p>(j) to encourage the preparation of draft local environmental plans based on merits.</p>	
<b>SREP 20 - Hawkesbury Nepean River (No 2 – 1997)</b>	
<p>The aim of this plan is to protect the environment of the Hawkesbury-Nepean River system by ensuring that the impacts of future land uses are considered in a regional context.</p>	Not Applicable
<b>SEPP No. 19 – Bushland in Urban Areas</b>	
<p>Aims to protect and preserve bushland within urban areas because of:</p> <p>a) Its value to the community as part of the natural heritage,</p> <p>b) Its aesthetic value, and</p> <p>c) Its value as a recreational, educational and scientific resource</p>	Not Applicable – Does not apply to the site.
<b>SEPP (Koala Habitat Protection) 2019</b>	
<p>This Policy aims to encourage the conservation and management of areas of natural vegetation that provide habitat for koalas to support a permanent free-living population over their present range and reverse the current trend of koala population decline.</p>	<p>The subject site has a vegetated area greater than 1 hectare, therefore triggering the provisions of the State Environmental Planning Policy (Koala Habitat Protection) 2019.</p> <p>The Ecological surveys undertaken as part of the Biodiversity Assessment confirmed core Koala habitat and Koalas were not present on site.</p>
<b>SEPP 55 – Remediation of Land</b>	
<p>Aims to promote the remediation of contaminated land for the purpose of</p>	<p>A Stage 1 Preliminary Site Investigation was undertaken to confirm potential</p>



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#### Strategic Assessment Doyalson Wyee RSL Club

State/Sydney Region Environmental Planning Policy	Comment
<p>reducing the risk of harm to human health or any other aspect of the environment</p> <p>(a) by specifying when consent is required, and when it is not required, for a remediation work, and</p> <p>(b) by specifying certain considerations that are relevant in rezoning land and in determining development applications in general and development applications for consent to carry out a remediation work in particular, and</p> <p>(c) by requiring that a remediation work meet certain standards and notification requirements.</p>	<p>contamination within the site. Based on the findings of the historical information review, an understanding of current land use and observations during the site walkover, potential sources of contamination have been identified on site.</p> <p>The Preliminary Site Investigation recommended four mitigation measures including the preparation of a detailed site investigation targeting the potential onsite contaminate sources noted in the Preliminary Site Investigation. A detailed site investigation will be prepared post Gateway.</p>
<b>SEPP (Coastal Management ) 2018</b>	
<p>Aims:</p> <p>The aim of this Policy is to promote an integrated and co-ordinated approach to land use planning in the coastal zone in a manner consistent with objects of the <i>Coastal Management Act 2016</i>, including the management objectives for each coastal management area, by:</p> <p>(a) managing development in the coastal zone and protecting the environmental assets of the coast, and</p> <p>(b) establishing a framework for land use planning to guide and decision-making in the coastal zone, and</p> <p>(c) mapping the 4 coastal management areas that comprise the NSW coastal zone for the purpose of the definitions in the Coastal Management Act 2016.</p>	<p>Not Applicable – the site is not within a Coastal Management Area.</p>

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#### Strategic Assessment Doyalson Wyee RSL Club

State/Sydney Region Environmental Planning Policy	Comment
<b>SEPP – (Mining, Petroleum &amp; Extractive Industries) 2007</b>	
<p>Aims:</p> <ul style="list-style-type: none"> <li>(a) to provide for the proper management and development of mineral, petroleum and extractive material resources for the purpose of promoting the social and economic welfare of the State, and</li> <li>(b) to facilitate the orderly and economic use and development of land containing mineral, petroleum and extractive material resources, and</li> <li>(b1) to promote the development of significant mineral resources, and</li> <li>(c) to establish appropriate planning controls to encourage ecologically sustainable development through the environmental assessment, and sustainable management, of development of mineral, petroleum and extractive material resources, and</li> <li>(d) to establish a gateway assessment process for certain mining and petroleum (oil and gas) development:               <ul style="list-style-type: none"> <li>(i) to recognise the importance of agricultural resources, and</li> <li>(ii) to ensure protection of strategic agricultural land and water resources, and</li> <li>(iii) to ensure a balanced use of land by potentially competing industries, and</li> </ul> </li> <li>(iv) to provide for the sustainable growth of mining, petroleum and agricultural industries.</li> </ul>	<p>The site is within a designated Mine Subsidence District (Swansea/North Entrance) and is within the Consolidated Coal lease (CCL 721) held by Centennial Coal.</p> <p>Centennial Coal has advised the project area is underlain by mineable coal within the Great Northern Seam; however, Centennial Coal does not currently have a timeframe for when mining would occur. Centennial Coal have reviewed the Indicative Concept Plan and undertook a subsidence review of the project area and has agreed to specific subsidence criteria and development guidelines being applied to future developments.</p> <p>Preliminary advice has also been sought from Subsidence Advisory NSW which advised the development guidelines which would apply to future developments on the site. Discussions have also been undertaken between Subsidence Advisory NSW, Centennial Coal and the proponent. Future consultation will be undertaken post Gateway Determine.</p>

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State/Sydney Region Environmental Planning Policy	Comment
<b>SEPP (Primary Production and Rural Development) 2019</b>	
<p>The aims of this Policy are as follows:</p> <p>(a) to facilitate the orderly economic use and development of lands for primary production,</p> <p>(b) to reduce land use conflict and sterilisation of rural land by balancing primary production, residential development and the protection of native vegetation, biodiversity and water resources,</p> <p>(c) to identify State significant agricultural land for the purpose of ensuring the ongoing viability of agriculture on that land, having regard to social, economic and environmental considerations,</p> <p>(d) to simplify the regulatory process for smaller-scale low risk artificial waterbodies, and routine maintenance of artificial water supply or drainage, in irrigation areas and districts, and for routine and emergency work in irrigation areas and districts,</p> <p>(e) to encourage sustainable agriculture, including sustainable aquaculture,</p> <p>(f) to require consideration of the effects of all proposed development in the State on oyster aquaculture,</p> <p>(g) to identify aquaculture that is to be treated as designated development using a well-defined and concise development assessment regime based on environment risks associated with site and operational factors.</p>	<p>Applicable</p> <p>Part of the site is proposed to be zoned from RU6 Transition to RE2 Private Recreation. The site is not currently used for agricultural production or for rural purposes. 120 Pacific Highway was previously used for the production of fruit and vegetables but his use has now ceased.</p> <p>The future development of the site has been positioned to reduce land use conflict and sterilisation of rural land by balancing primary production, residential development and the protection of native vegetation, biodiversity and water resources.</p> <p>This is to be achieved by locating residential development generally towards the southern end of the site (adjacent to existing residential development) and locating the recreation uses further north to provide a transition to the adjacent RU6 zoned land to the north of the site.</p>
<b>SEPP (Vegetation in Non-Rural Areas) 2017</b>	

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#### Strategic Assessment Doyalson Wyee RSL Club

State/Sydney Region Environmental Planning Policy	Comment
<p>The aims of this Policy are as follows:</p> <ul style="list-style-type: none"><li>(a) to establish the process for assessing and identifying sites as urban renewal precincts,</li><li>(b) to facilitate the orderly and economic development and redevelopment of sites in and around urban renewal precincts,</li><li>(c) to facilitate delivery of the objectives of any applicable government State, regional or metropolitan strategies connected with the renewal of urban areas that are accessible by public transport.</li></ul>	<p>Not Applicable – This SEPP does not apply to the Central Coast Local Government Area.</p>

### 3.7 Planning Proposal - Doyalson Wyee RSL Club - Pacific Hwy, Doyalson

#### Ministerial Section 9.1 Directions

Direction	Comment
<b>Employment &amp; Resources</b>	
<b>1.1 Business &amp; Industrial Zones</b>	
<p>Aims to encourage employment growth in suitable locations, protect employment land in business and industrial zones and to support the viability of identified strategic centres.</p> <p>Applies when a planning proposal affects land within an existing or proposed business or industrial zone.</p>	<p>Not Applicable</p> <p>The site does not have an existing or proposed business or industrial zone.</p>
<b>1.2 Rural Zones</b>	
<p>Aims to protect the agricultural production value of rural land.</p> <p>Applies when a planning proposal affects land within an existing or proposed rural zone.</p>	<p>Applicable</p> <p>The proposal is consistent with the direction.</p>
<b>1.3 Mining, Petroleum Production and Extractive Industries</b>	
<p>Aims to ensure that the future extraction of State or regionally significant reserves of coal, other minerals, petroleum and extractive materials are not compromised by inappropriate development.</p> <p>Applies when a planning proposal would have the effect of prohibiting the mining of coal or other minerals, production of petroleum, or winning or obtaining of extractive materials, or restricting the potential of development resources of coal, other mineral, petroleum or extractive materials which are of State or regional significance by permitting a land use that is likely to be incompatible with such development.</p>	<p>Applicable</p> <p>The site is within a designated Mine Subsidence District and is within the Consolidated Coal lease (CCL 721) held by Centennial Mannering Pty Ltd. The lease expires in July 2026.</p> <p>The past mining beneath the site was part of Wyee Colliery and occurred in the late 1990s and up to 2002. The mining occurred in the Great Northern Seam at depths of about 170m to 200m beneath parts of 110 and 120 Pacific Highway, as well as beneath land to the north and east of the proposal area.</p> <p>While Centennial Mannering Pty Ltd has no plans to mine coal beneath the site, it is underlain by minable coal within the Great</p>

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Direction	Comment
	<p>Northern Seam and there is potential for future mining in this seam.</p> <p>To ensure future development of the site is suitable and does not restrict further resource extraction, Centennial Mannering Pty Ltd undertook a subsidence review of the project area (based on the indicative concept plan) and has agreed to specific subsidence design criteria being applied to future developments. Further consultation will be undertaken with Subsidence Advisory NSW and Centennial Coal following issue of Gateway Determination.</p>
<p><b>1.4 Oyster Aquaculture</b></p>	
<p>Aims to ensure that Priority Oyster Aquaculture Areas and oyster aquaculture outside such an area are adequately considered, and to protect Priority Oyster Aquaculture Areas and oyster aquaculture outside such an area from land uses that may result in adverse impacts on water quality and the health of oysters and consumers. Applies when a planning proposal could result in adverse impacts on a Priority Oyster Aquaculture Areas or current oyster aquaculture lease in the national parks estate or results in incompatible use of land between oyster aquaculture in a Priority Oyster Aquaculture Area or current oyster aquaculture lease in the national parks estate and other land uses.</p>	<p>Not Applicable</p>
<p><b>1.5 Rural Lands</b></p>	
<p>Aims to protect the agricultural production value of rural land; and facilitate the orderly and economic development of rural lands for rural and related purposes.</p>	<p>Applicable</p> <p>The site is not used for significant agriculture or primary production uses and therefore the rezoning of the site will not impact on rural activities or farmers.</p>

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Direction	Comment
	<p>The proposed rezoning will also not cause the fragmentation of exiting rural lands. The proposed development has been designed to locate residential development generally towards the southern end of the site (adjacent to existing residential development) and locate recreation uses further north to provide a transition to the adjacent RU6 zoned land to the north of the site.</p>
<b>Environment &amp; Heritage</b>	
<b>2.1 Environmental Protection Zones</b>	
<p>Aims to protect and conserve environmentally sensitive areas.</p> <p>Applies when the relevant planning authority prepares a planning proposal.</p>	<p>A Biodiversity Assessment undertaken by Eco Logical Australia Pty Ltd (June 2019) was submitted with the proposal.</p> <p>Figure 2 below outlines the proposed location of biodiversity corridors and riparian areas. The corridors provide important connections for fauna through the site and protect habitat for the Glossy Black Cockatoo. The corridors will also protect hollow bearing trees and EEC vegetation.</p> <p>The proponent has offered to enter into a Planning Agreement with Council to ensure appropriate vegetation and biodiversity corridors are provided in perpetuity on site. The draft Planning Agreement will be prepared post Gateway and exhibited with the Planning Proposal.</p>
<b>2.2 Coastal Management</b>	
<p>Aims to implement the principles in the NSW Coastal Policy.</p>	<p>Not Applicable</p> <p>The subject site is not located within the Coastal Zone.</p>

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Direction	Comment
Applies when a planning proposal applies to land in the <i>Coastal Zone</i> .	
<b>2.3 Heritage Conservation</b>	
<p>Aims to conserve items, areas, objects and places of environmental heritage significance and indigenous heritage significance.</p> <p>Applies when the relevant planning authority prepares a planning proposal.</p>	<p>Applicable</p> <p>There are no items of European heritage identified on the site. The site is highly disturbed and generally clear. An Aboriginal Due Diligence Assessment has been undertaken for the site. The site does not comprise Aboriginal objects or Aboriginal places that are protected under the National Parks and Wildlife Act 1974.</p>
<b>2.4 Recreational Vehicle Areas</b>	
<p>Aims to protect sensitive land or land with significant conservation values from adverse impacts from recreational vehicles.</p> <p>Applies when the relevant planning authority prepares a planning proposal.</p>	<p>Applicable</p> <p>There are no recreational vehicle areas proposed as part of the Planning Proposal.</p>
<b>2.5 Application of E2 and E3 Zones and Environmental Overlays in Far North Coast LEPs</b>	
<p>Aims to ensure that a balanced and consistent approach is taken when applying environmental protection zones and overlays to land on the NSW Far North Coast.</p>	<p>Not Applicable</p> <p>This Direction does not apply to the Central Coast Local Government Area (or former Wyong or Gosford LGAs).</p>
<b>Housing, Infrastructure and Urban Development</b>	
<b>3.1 Residential Zones</b>	
<p>Aims to encourage a variety and choice of housing types to provide for existing and future housing needs, to make efficient use of existing infrastructure and services and ensure that new housing has appropriate access to infrastructure and services, and to minimise the impact of residential development on the environmental and resource lands.</p>	<p>Applicable</p> <p>The proposal includes approximately 360 low density residential dwellings (including seniors housing).</p> <p>The proposed residential development will be located adjacent to existing residential development in Wentworth Avenue, with</p>



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Direction	Comment
<p>Applies when a planning proposal affects land within an existing or proposed residential zone, and any other zone in which significant residential development is permitted or proposed to be permitted.</p>	<p>the entertainment and recreation uses located further north on the site.</p> <p>The proposed development will utilise existing road infrastructure and is located within close proximity to the Lake Munmorah and Budgewoi local centres as well as Lake Haven Shopping Centre and Morisset Train Station.</p> <p>Health and childcare services will be provided on site.</p>
<p><b>3.2 Caravan Parks and Manufactured Home Estates</b></p>	
<p>Aims to provide for a variety of housing types and provide opportunities for caravan parks and manufactured home estates.</p> <p>Applies when the relevant planning authority prepares a planning proposal.</p>	<p>Applicable</p> <p>Caravan parks and manufactured home estates are a permissible land use in the RE2 Private Recreation Zone.</p>
<p><b>3.3 Home Occupations</b></p>	
<p>Aims to encourage the carrying out of low impact small business in dwelling houses.</p> <p>Applies when the relevant planning authority prepares a planning proposal.</p>	<p>Applicable</p> <p>Home occupations are a permissible land use in the R2 Low Density Residential Zone.</p>
<p><b>3.4 Integrating Land Use &amp; Transport</b></p>	
<p>Aims to ensure that urban structures, building forms, land use locations, development designs, subdivision and street layouts to achieve: improving access to housing, jobs and services by walking, cycling and public transport; increasing choice of available transport and reducing transport on cars; reducing travel demand; supporting efficient and viable public transport services; and provide for efficient movement of freight.</p>	<p>Applicable</p> <p>The indicative concept plan shows a mixed use development that combines low density residential development with health, retail, entertainment and recreation uses. The site is within close proximity to Budgewoi and Lake Munmorah local centres, Lake Haven Shopping Centre and Morisset Train Station.</p>

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Direction	Comment
<p>Applies when a planning proposal creates alters or moves a zone or provision relating to urban land, including land zoned for residential, business, industrial, village or tourist purposes.</p>	
<b>3.5 Development Near Licensed Aerodromes</b>	
<p>Aims to ensure the effective and safe operation of aerodromes, their operation is not compromised by development which constitutes an obstruction, hazard or potential hazard to aircraft flying in the vicinity, development for residential purposes or human occupation (within the ANEF contours between 20 &amp; 25) incorporates appropriate mitigation measures so that the development is not adversely affected by aircraft noise.</p> <p>Applies when a planning proposal creates, alters or removes a zone or provision relating to land in the vicinity of a licensed aerodrome.</p>	<p>Not Applicable</p>
<b>3.6 Shooting Ranges</b>	
<p>Aims to maintain appropriate levels of public safety and amenity when rezoning land adjacent to an existing shooting range, to reduce land use conflict arising between existing shooting ranges and rezoning of adjacent land, and to identify issues that must be addressed when giving consideration to rezoning land adjacent to an existing shooting range.</p> <p>Applies when a relevant planning authority prepares a planning proposal that will affect, create, alter or remove a zone or a provision relating to land adjacent to and/ or adjoining an existing shooting range.</p>	<p>Not Applicable</p> <p>Subject site is not near a shooting range.</p>
<b>3.7 Reduction in non- hosted short term rental accommodation period</b>	
<p>Applies when a Council prepares a planning proposal to identify or reduce the number of days that non- hosted short term rental</p>	<p>Not Applicable</p>

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Direction	Comment
<p>accommodation may be carried out in parts of its local government area.</p> <p>Applies to Byron Bay Shire Council</p>	<p>This Direction does not apply to the Central Coast Local Government Area (or former Wyong or Gosford LGAs).</p>
<b>Hazard &amp; Risk</b>	
<b>4.1 Acid Sulfate Soils</b>	
<p>Aims to avoid significant adverse environmental impacts from the use of land that has a probability of containing acid sulfate soils.</p> <p>Applies when a planning proposal applies to land having a probability of containing acid sulfate soils on the Acid Sulfate Soils Planning Maps.</p>	<p>Applicable</p> <p>The site is classified as Class 5 and poses a low danger. Any future development applications will need to comply with the provision relating to Acid Sulfate Soils in Council's LEP.</p>
<b>4.2 Mine Subsidence &amp; Unstable Land</b>	
<p>Aims to prevent damage to life, property and the environmental on land identified as unstable or potentially subject to mine subsidence.</p> <p>Applies when a planning proposal permits development on land which is within a mine subsidence district, or identified as unstable in a study or assessment undertaken by or on behalf of the relevant planning authority or other public authority and provided to the relevant planning authority.</p>	<p>Applicable</p> <p>The site is within a designated Mine Subsidence District and is within the Consolidated Coal lease (CCL 721) held by Centennial Mannering Pty Ltd. The lease expires in July 2026.</p> <p>The past mining beneath the site was part of Wyee Colliery and occurred in the late 1990s and up to 2002. The mining occurred in the Great Northern Seam at depths of about 170m to 200m beneath parts of 110 and 120 Pacific Highway, as well as beneath land to the north and east.</p> <p>While Centennial Mannering Pty Ltd has no plans to mine coal beneath the site, it is underlain by minable coal within the Great Northern Seam and there is potential for future mining in this seam.</p>

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Direction	Comment
	<p>To ensure the longer-term resources are not sterilised and to provide mitigation measures against subsidence, Centennial undertook a subsidence review of the project area (based on the indicative concept plan) and has agreed to specific subsidence design criteria being applied to future developments. Further consultation will be undertaken with Subsidence Advisory NSW and Centennial Coal following issue of a Gateway Determination.</p>
<b>4.3 Flood Prone Land</b>	
<p>Aims to ensure: development on flood prone land is consistent with NSW Government's Flood Prone Land Policy and principles of the Floodplain Development Manual 2005; and provisions of an LEP on flood prone land are commensurate with flood hazard and include consideration of the potential flood impacts both on and off the subject land.</p> <p>Applies when a planning proposal creates, removes or alters a zone or provision that affects flood prone land.</p>	<p>Not Applicable</p>
<b>4.4 Planning for Bushfire Protection</b>	
<p>Aims to protect life, property and the environment from bushfire hazards, and encourage sound management of bushfire prone areas.</p> <p>Applies when a planning proposal affects or is in proximity to land mapped as bushfire prone land.</p>	<p>Applicable</p> <p>A Bushfire Assessment Report has been prepared and submitted with the application. The Assessment concluded that the proposed development could be undertaken based on the following recommendations with further detailed design being undertaken prior to lodgement of the development application:</p> <ul style="list-style-type: none"> <li>• Setbacks from bushfire prone vegetation (APZs);</li> </ul>

### 3.7 Planning Proposal - Doyalson Wyee RSL Club - Pacific Hwy, Doyalson

#### Attachment 2

#### Strategic Assessment Doyalson Wyee RSL Club

Direction	Comment
	<ul style="list-style-type: none"> <li>• Integration of non-combustible infrastructure within APZs such as roads, easements and parking areas;</li> <li>• Access and egress from the site through a well-designed road system with multiple connections to existing roads;</li> <li>• Underground electricity and gas services;</li> <li>• Compliant water supplies; and</li> <li>• Emergency response planning.</li> </ul>
<b>Regional Planning</b>	
<b>5.2 Sydney Drinking Water Catchments</b>	
<p>Aims to protect water quality in the hydrological catchment.</p> <p>Applies when a relevant planning authority prepares a planning proposal that applies to Sydney's hydrological catchment.</p>	<p>Not Applicable.</p> <p>This Direction does not apply to the Central Coast Local Government Area (or former Wyong or Gosford LGAs).</p>
<b>5.3 Farmland of State and Regional Significance on the NSW Far North Coast</b>	
<p>Aims to: ensure that the best agricultural land will be available for current and future generations to grow food and fibre; provide more certainty on the status of the best agricultural land, assisting councils with strategic settlement planning; and reduce land use conflict arising between agricultural use and non-agricultural use of farmland caused by urban encroachment into farming areas.</p> <p>Applies to Ballina, Byron, Kyogle, and Tweed Shire Councils, Lismore City Council and Richmond Valley Council.</p>	<p>Not Applicable.</p> <p>This Direction does not apply to the Central Coast Local Government Area (or former Wyong or Gosford LGAs).</p>
<b>5.4 Commercial and Retail Development along the Pacific Highway, North Coast</b>	
<p>Aims to manage commercial and retail development along the Pacific Highway, North Coast.</p>	<p>Not Applicable.</p>

### 3.7 Planning Proposal - Doyalson Wyee RSL Club - Pacific Hwy, Doyalson

#### Attachment 2

#### Strategic Assessment Doyalson Wyee RSL Club

Direction	Comment
Applies to all councils between and inclusive of Port Stephens and Tweed Shire Councils.	This Direction does not apply to the Central Coast Local Government Area (or former Wyong or Gosford LGAs).
<b>5.8 Second Sydney Airport: Badgerys Creek</b>	
<p>Aims to avoid incompatible development in the vicinity of any future second Sydney Airport at Badgerys Creek.</p> <p>Applies to land located within the Fairfield, Liverpool and Penrith City Council and Wollondilly Shire Council Local Government Areas.</p>	<p>Not Applicable.</p> <p>This Direction does not apply to the Central Coast Local Government Area (or former Wyong or Gosford LGAs).</p>
<b>5.9 North West Rail Link Corridor Strategy</b>	
<p>Aims to promote transit-oriented development and manage growth around the eight train stations of the North West Rail Link (NWRL) and ensure development within the NWRL corridor is consistent with the proposals set out in the NWRL Corridor Strategy and precinct Structure Plans.</p> <p>Applies to the This Direction applies to Hornsby Shire Council, The Hills Shire Council and Blacktown City Council.</p>	<p>Not Applicable</p> <p>This Direction does not apply to the Central Coast Local Government Area (or former Wyong or Gosford LGAs).</p>
<b>5.10 Implementation of Regional Plans</b>	
<p>Aims to give legal effect to the vision, land use strategy, goals, directions and actions contained within Regional Plans.</p> <p>Applies when the relevant planning authority prepares a planning proposal.</p>	<p>Applicable</p> <p>The proposal is consistent with the Central Coast Regional Plan and North Wyong Shire Structure Plan.</p>
<b>5.11 Development of Aboriginal Land Council Land</b>	
<p>Aims to provide for the consideration of development delivery plans prepared under the State Environmental Planning Policy (Aboriginal Land) 2019.</p> <p>Applies when the relevant planning authority prepares a planning proposal for land shown on</p>	<p>Not Applicable</p>

### 3.7 Planning Proposal - Doyalson Wyee RSL Club - Pacific Hwy, Doyalson

#### Attachment 2

#### Strategic Assessment Doyalson Wyee RSL Club

Direction	Comment
the Land Application Map of the SEPP (Aboriginal Lands) 2019.	
<b>Local Plan Making</b>	
<b>6.1 Approval and Referral Requirements</b>	
<p>Aims to ensure that LEP provisions encourage the efficient and appropriate assessment of development.</p> <p>Applies when the relevant planning authority prepares a planning proposal.</p>	<p>Applicable</p> <p>The proposal is consistent with this Direction</p>
<b>6.2 Reserving Land for Public Purposes</b>	
<p>Aims to facilitate the provision of public services and facilities by reserving land for public purposes, and facilitate the removal of reservations of land for public purposes where land is no longer required for acquisition.</p> <p>Applies when the relevant planning authority prepares a planning proposal.</p>	<p>Applicable</p> <p>The proposal is consistent with this Direction</p>
<b>6.3 Site Specific Provisions</b>	
<p>Aims to discourage unnecessarily restrictive site specific planning controls.</p> <p>Applies when the relevant planning authority prepares a planning proposal to allow particular development to be carried out.</p>	<p>Applicable</p> <p>The proposal is consistent with this Direction</p>
<b>Metropolitan Planning</b>	
<b>7.1 Implementation of A Plan for Growing Sydney</b>	
<p>Aims to give legal effect to the planning principles, directions and priorities for sub regions, strategic centres and transport gateways contained in A Plan for Growing Sydney</p>	<p>Not Applicable.</p> <p>This Direction does not apply to the Central Coast Local Government Area (or former Wyong or Gosford LGAs).</p>
<b>7.2 Implementation of Greater Macarthur Land Release Investigations</b>	

### 3.7 Planning Proposal - Doyalson Wyee RSL Club - Pacific Hwy, Doyalson

#### Attachment 2

#### Strategic Assessment Doyalson Wyee RSL Club

Direction	Comment
Aims to ensure development within the Greater Macarthur Land Release Investigation Area is consistent with the Greater Macarthur Land Release Preliminary Strategy and Action Plan.	Not Applicable.  This Direction does not apply to the Central Coast Local Government Area (or former Wyong or Gosford LGAs).
<b>7.3 Parramatta Road Corridor Urban Transformation Strategy</b>	
Aims to facilitate development within the Parramatta Road Corridor that is consistent with the Parramatta Road Corridor Urban Transformation Strategy (November, 2016) and the Parramatta Road Corridor Implementation Tool Kit.	Not Applicable.  This Direction does not apply to the Central Coast Local Government Area (or former Wyong or Gosford LGAs).
<b>7.4 Implementation of North West Priority Growth Area Land Use and Infrastructure Implementation Plan</b>	
Aims to facilitate development within the Parramatta Road Corridor that is consistent with the Parramatta Road Corridor Urban Transformation Strategy (November, 2016) and the Parramatta Road Corridor Implementation Tool Kit.	Not Applicable.  This Direction does not apply to the Central Coast Local Government Area (or former Wyong or Gosford LGAs).
<b>7.5 Implementation of Greater Parramatta Priority Growth Area Interim Land Use and Infrastructure Implementation Plan</b>	
The objective of this direction is to ensure development within the Greater Parramatta Priority Growth Area is consistent with the Greater Parramatta Priority Growth Area Interim Land Use and Infrastructure Implementation Plan dated July 2017 (the interim Plan).	Not Applicable.  This Direction does not apply to the Central Coast Local Government Area (or former Wyong or Gosford LGAs).
<b>7.6 Implementation of Wilton Priority Growth Area Interim Land Use and Infrastructure Implementation Plan</b>	
The objective of this direction is to ensure development within the Wilton Priority Growth Area is consistent with the Wilton Interim Land	Not Applicable.



### 3.7 Planning Proposal - Doyalson Wyee RSL Club - Pacific Hwy, Doyalson

#### Attachment 2

#### Strategic Assessment Doyalson Wyee RSL Club

Direction	Comment
Use and Infrastructure Implementation Plan and Background Analysis.	This Direction does not apply to the Central Coast Local Government Area (or former Wyong or Gosford LGAs).
<b>7.7 Implementation of Glenfield to Macarthur Urban Renewal Corridor</b>	
The objective of this direction is to ensure development within the precincts between Glenfield and Macarthur is consistent with the plans for these precincts.	Not Applicable.  This Direction does not apply to the Central Coast Local Government Area (or former Wyong or Gosford LGAs).
<b>7.8 Implementation of Western Sydney Aerotropolis Interim Land Use and Infrastructure Implementation Plan</b>	
The objective of this direction is to ensure development within the Western Sydney Aerotropolis is consistent with the Stage 1 Western Sydney Aerotropolis Land Use and Infrastructure Implementation Plan dated August 2018 (the Stage 1 Land Use and Implementation Plan).  This direction applies to Liverpool, Penrith Blue Mountains, Blacktown Campbelltown City Council and Fairfield City Councils, Camden Council and Wollondilly Shire Council.	Not Applicable.  This Direction does not apply to the Central Coast Local Government Area (or former Wyong or Gosford LGAs).
<b>7.9 Implementation of Bayside West Precincts 2036 Plan</b>	
The aim is to ensure development within the Bayside West Precincts (Arncliffe, Banksia and Cooks Cove) is consistent with the Bayside West Precincts 2036 Plan (the Plan).  This direction applies to land within the Bayside local government area.	Not Applicable.  This Direction does not apply to the Central Coast Local Government Area (or former Wyong or Gosford LGAs).
<b>7.10 Implementation of Planning Principles for the Cooks Cove Precinct</b>	
The objective of this direction is to ensure development within the Cooks Cove Precinct is consistent with the Cooks Cove Planning Principles.  This direction applies to land within the Cooks Cove Precinct in the Bayside local government	Not Applicable.  This Direction does not apply to the Central Coast Local Government Area (or former Wyong or Gosford LGAs).

### 3.7 Planning Proposal - Doyalson Wyee RSL Club - Pacific Hwy, Doyalson

Attachment 2

Strategic Assessment Doyalson Wyee RSL Club

Direction	Comment
area, as shown on Map Sheet LAP_001 Cooks Cove Precinct Section 9.1 Direction	

#### North Wyong Shire Structure Plan

Objective/Requirement	Comment
Precinct 15 – Doyalson North East <ul style="list-style-type: none"> <li>• Employment (259-518 Jobs)</li> </ul>	<p>The proposal is consistent with the North Wyong Shire Structure Plan. 110 and 120 Pacific Highway are included within Precinct 15, which is proposed as long-term employment land. The NWSSP proposes a job yield for Precinct 15 of between 259-518 jobs (based on 10-20 jobs per hectare). The Economic Impact Assessment (Urbis, 2019) submitted with the Planning Proposal notes the proposed development has the potential to accommodate up to 920 direct jobs on site, reflecting significant employment uplift across the site.</p> <p>The North Wyong Shire Structure Plan estimates jobs based on an industrial land use. The concept plan proposes employment uses with a higher job density, such as retail, entertainment, hospitality, health services and childcare, which far exceeds the job targets for Precinct 15.</p>

#### Community Strategic Plan Assessment

### 3.7 Planning Proposal - Doyalson Wyee RSL Club - Pacific Hwy, Doyalson

#### Attachment 2

#### Strategic Assessment Doyalson Wyee RSL Club

Objective/Requirement		Comment
<b>GREEN</b>		
<b>CHERISHED AND PROTECTED NATURAL BEAUTY</b>		
	F2 Promote greening and ensure the wellbeing of communities through the protection of local bushland, urban trees, tree canopies and expansion of the Coastal Open Space System (COSS)	The proposal includes biodiversity corridors that will protect native vegetation, urban trees and tree canopy.
<b>RESPONSIBLE</b>		
<b>BALANCED AND SUSTAINABLE DEVELOPMENT</b>		
	I2 Ensure all new developments are well planned with good access to public transport, green space and community facilities and support active transport.	The proposal is located adjacent to the Pacific Highway transport corridor and has access to active and passive recreation, childcare and health services on site. The indicative concept plan also includes an expanded RSL Club and health and wellness precinct.
	I3 Ensure land use planning and development is sustainable and environmentally sound and considers the importance of local habitat, green corridors, energy efficiency and stormwater management	Figure 2 below outlines the biodiversity corridors proposed for the site. A stormwater strategy has been prepared for the site, with the detailed design to be submitted with future development applications.

#### Environmental, Social and Economic Impact

##### Ecology

A Biodiversity Assessment was undertaken by Eco Logical Australia Pty Ltd (June 2019) for 80-120 Pacific Highway, Doyalson and has been reviewed by staff. The Biodiversity Assessment did not include 49-65 Wentworth Avenue as these sites are already developed (car park and RSL access) and contain no vegetation.

The site is approximately 45 hectares in size and contains 2.8 hectares of Endangered Ecological Community (EEC) and 12.8 hectares of native vegetation. The proposed development based on the indicative concept plan proposes the removal of approximately 0.1 hectares of EEC and 8.9 hectares of native vegetation.

2.7 hectares of EEC (90%) and 3.9 hectares of native vegetation (30%) is proposed to be retained. This includes 36 hollow bearing trees within Central Park, road corridors, buffer zones and Corridor E (see Figure 3). 4.3 hectares of native vegetation within the proposed biodiversity corridors will also be revegetated onsite. The total area of retained vegetation

### **3.7 Planning Proposal - Doyalson Wyee RSL Club - Pacific Hwy, Doyalson**

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#### ***Attachment 2***

#### ***Strategic Assessment Doyalson Wyee RSL Club***

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and rehabilitated vegetation is 10.9 hectares, which is more than the total area of vegetation to be removed.

The removal of EEC and native vegetation has been assessed in accordance with the Biodiversity Assessment Method. The biodiversity impact will require an off-site offset in accordance with the Biodiversity Certification Assessment Report (BCAR) as well as the rehabilitation of on-site native vegetation.

Figure 2 and 3 below outline the proposed location of biodiversity corridors, riparian areas and biodiversity outcomes. The corridors provide important connections for fauna through the site and protect habitat for the Glossy Black Cockatoo. The corridors will also protect hollow bearing trees and EEC vegetation.

#### ***Bushfire***

A Bush Fire Strategic Study has been prepared by Eco Logical Australia for the study area. A number of strategies have been provided in the form of planning controls such that the risk from bushfire is reduced to an appropriate level and a level that meets or exceeds the deemed to satisfy bushfire protection requirements for NSW. The bushfire measures applied represent best practice bushfire risk reduction.

The strategies used to reduce the bushfire risk associated with the rezoning include:

- Setbacks from bushfire prone vegetation (APZs);
- Integration of non-combustible infrastructure within APZs such as roads, easements and parking areas;
- Access and egress from the site through a well-designed road system;
- Landscaping and garden design principles and guidance to minimise bushfire risk;
- Underground electricity and gas services;
- Compliant water supplies; and
- Emergency response planning.

More detailed bushfire assessment to accurately prescribe setbacks, roads and landscaping is required for development application, however the re-zoning application has provisions that allow this more detailed designed to occur smoothly and achieve the deemed to satisfy standards within NSW.

#### ***Aboriginal and European Cultural Heritage Items***

A preliminary Archaeological assessment was undertaken for the site; the assessment included a search of the OEH Aboriginal Heritage Information Management System (AHIMS) database. The search was conducted over a 5x5 kilometre search area, centred on the proposed study area. There were no Aboriginal archaeological sites located within the study area.

### **3.7 Planning Proposal - Doyalson Wyee RSL Club - Pacific Hwy, Doyalson**

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The site also does not contain any state or local heritage items.

#### **Contaminated Land and Acid Sulfate Soils**

GHD was engaged by the proponent to complete a preliminary site investigation to identify potential sources of contamination which may impact the site for future development, and to provide recommendations for further detailed site investigations, if required, to assess areas of potential environmental concern.

Based on the findings of the historical information review, understanding of current land use and observations made during the site walkover potential sources of contamination has been identified at the site. These include:

- Storage of chemicals in un-bunded areas across several areas of the site
- Imported fill from unknown sources used for landscaping, building up sports fields and backfilling waterways
- Potential former industrial use at 110 Pacific Highway
- Uncontrolled dumping and stockpiles of waste materials located in several areas across the site
- Leaking irrigation systems
- Incinerator and associated coal bunker and ash/coke stockpile.

In addition, the proximity of the site to Mannering Lake and the adjacent PFAS investigation area associated with Munmorah and Colongra Power Stations, indicate that off-site sources of contamination may exist.

The GHD study recommends a detailed site investigation be undertaken targeting the potential on-site contaminant sources to characterise the nature and extent of contamination at the site. Further investigation will be undertaken post Gateway Determination.

#### **Flooding and Drainage**

A Stormwater Management Report has been prepared by ADW Johnson Pty Limited and assesses the potential impact on water quality, quantity, effect to downstream wetlands and assessment of flooding for local overland flows and accessibility during flood events. The findings from ADW Johnson are summarised below:

##### *Stormwater.*

Stormwater modelling indicated that stormwater detention basins will be required to attenuate storm flows to pre-development conditions. The report recommends three

### **3.7 Planning Proposal - Doyalson Wyee RSL Club - Pacific Hwy, Doyalson**

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#### ***Attachment 2***

#### ***Strategic Assessment Doyalson Wyee RSL Club***

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detention basins. The final location and detailed design of the detention facilities will be determined in conjunction with future engineering works as part of a development application.

#### *Riparian corridor*

There is an existing watercourse running through the northern end of the site (running through 120 Pacific Highway) which drains water towards the nearby Colongra Lake to the east. This watercourse is a riparian corridor and consists of a few first order stems with a main second order branch leaving the site.

Setbacks are required for the Core Riparian Zone and any Vegetated Buffers. The proposed riparian zone widths in accordance with the *Guidelines for Controlled Activities under the Water Management Act (2000)* are as follows:

- First order classification = 10m setback;
- Second order classification = 20m setback;
- Third order classification = 20m - 40m setback;
- Vegetated Buffer = 10m setback from Core Riparian Zone.

The assessment confirmed that proposed development in the Concept Plan is able to comply with the riparian zone setbacks. The location of the riparian corridor is provided in Figure 2 below.

#### *Flooding*

An analysis of the *Central Coast Council Wyong Shire* flood map showed no potential risk of flooding, given the RL's of the existing and potential future site. An analysis of the *NSW Department of Planning and Environment – Coastal Management map* confirmed that the development poses no impact on coastal wetlands in the nearby area as it does not drain directly towards these areas.

#### *Water Quality*

Rainwater tanks, biofiltration swales, gross pollutant traps and constructed quality treatment ponds are recommended as the most appropriate treatment controls for the site.

The results of the water quality modelling (MUSIC) indicates that the Concept Plan can achieve the objectives for reduction in pollutant loads and peak discharge entering receiving waters.

#### *Wetland Management Considerations*

### **3.7 Planning Proposal - Doyalson Wyee RSL Club - Pacific Hwy, Doyalson**

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#### ***Attachment 2***

#### ***Strategic Assessment Doyalson Wyee RSL Club***

Based on the location of the site relative to the proximity area for coastal wetlands, there is no direct impact to the wetland from the development. Any increase in surface flows caused by increasing the impervious area will discharge directly to Colongra Lake. The potential effect on any downstream wetland including "Colongra Swamp" is insignificant. Flows discharged from the site will be clear of any gross pollutants, utilising the recommendations above (water quality).

#### *Erosion and Sedimentation Control*

Erosion and sedimentation control measures need to be implemented during construction to minimise the risk of erosion to disturbed areas and limit the transport of sediments from the construction site to downstream waterways. Plans for erosion and sediment control will be further detailed at the Development Application stage.

During the construction period, it is recommended that the detention basins and wetlands are constructed early and used as a temporary sediment basin.

It is recommended that initially all water runoff from the site is diverted to the wetland prior to the wetland being planted out. It is also recommended that an appropriate Erosion and Sedimentation Control Plan is implemented throughout the entire construction period to minimise the quantity of sediments being conveyed to the temporary sediment basin

A preliminary Erosion and Sediment Control Plan has been provided within the within the concept engineering drawings included in the Stormwater Management Report.

#### ***Mine Subsidence***

As the site is located within the Swansea North Entrance Mine Subsidence District and Consolidated Coal Lease (CCL 721), held by Centennial Mannering Pty Ltd (Centennial), preliminary consultation has been undertaken with Subsidence Advisory NSW and Centennial.

CCL 721 lease expires in 2026 and is sub-leased to LakeCoal who operate the adjacent Chain Valley Colliery and become the operator of Mannering Colliery in 2013 under agreement with Centennial. Past mining beneath the site was part of Wyee Colliery and occurred in the late 1990's, concluding in 2002. While Centennial has no plan to mine coal beneath the site, it is underlain by mineable coal within the Great Northern seam and there is potential for future mining in this seam.

Urbis (the applicant), GHD, Subsidence Advisory NSW and Centennial have agreed on development conditions, including subsidence design criteria. The subsidence design criteria will apply to both new buildings as well as associated infrastructure such as pavements,

### **3.7 Planning Proposal - Doyalson Wyee RSL Club - Pacific Hwy, Doyalson**

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#### ***Attachment 2***

#### ***Strategic Assessment Doyalson Wyee RSL Club***

retaining walls, detention basins, kerb and gutter, stormwater drains and inground and above ground utilities.

Further consultation will be required with Centennial Mannering Pty Ltd and Subsidence Advisory NSW following Gateway Determination.

#### **Has the planning proposal adequately addressed any social and economic impacts?**

##### ***Social Issues***

The Planning Proposal would result in a positive social impact through the delivery of increased housing in the northern part of the Central Coast, while exceeding the employment targets proposed in the North Wyong Shire Structure Plan. The proposed concept plan will also increase the availability of health and childcare services.

##### ***Economic Impacts***

An Economic Impact Assessment has been prepared by Urbis and submitted with the proposal. The Economic Impact Assessment anticipates approximately 920 jobs will be created on site from the proposed health, childcare, entertainment, retail and recreation uses on site. Jobs will also be created through a re-located and expanded RSL club building, a relocated and expanded health and wellness precinct (gym/fitness centre), a medical centre, hotel, childcare centre, service station, car wash, food outlets and leisure and recreation uses such as indoor sport centre, Raw Challenge, go-kart track and paintball field.

The construction of the proposed development has the potential to generate between 122 and 184 jobs per year across NSW for the duration of the construction period. This includes direct jobs in the construction industry and supply chain jobs in supporting sectors.

##### ***Traffic***

A Transport Impact Assessment has been prepared by The Transport Planning Partnership to assess the impacts of the indicative concept plan. The relocation of the Doyalson Wyee RSL Club and redevelopment of the site will require the construction of an intersection at Pacific Highway and the boundary (approximately) of 100 and 110 Pacific Highway to allow vehicles and pedestrians to access the site.

The existing left in/left out access to 120 Pacific Highway would be formalised to be compliant with Austroads guidelines. Negotiations for an easement across crown land are ongoing to enable a vehicular link between 110 and 120 Pacific Highway. Upgrades may also be required to the intersection of Wentworth Avenue and the Pacific Highway.

Consultation will be required with Transport for NSW post Gateway Determination to discuss the proposed intersections.

#### **Consultation**



### 3.7 Planning Proposal - Doyalson Wyee RSL Club - Pacific Hwy, Doyalson

Consultation with the following internal staff was carried out

Unit/Section	Comments
Environmental Strategies	<p>A Biodiversity Assessment was undertaken by Eco Logical Australia Pty Ltd (June 2019) for 80-120 Pacific Highway, Doyalson and has been reviewed by staff.</p> <p>Council staff, the applicant and Eco Logical Australia Pty Ltd met several times to discuss biodiversity corridors and the biodiversity strategy for the site. The outcomes of these discussions and agreed corridors are show in Figure 2 and 3.</p>
Development Engineering (Traffic)	<p>A Transport Impact Assessment was submitted with the proposal and reviewed by Council staff. The redevelopment of the site requires the construction of a signalised intersection on the Pacific Highway (approximately at the boundary of 100 and 110 Pacific Highway, Doyalson). The Transport Impact Assessment and conceptual intersection design are required to be reviewed by Transport for NSW, following Gateway Determination. It is likely further refinement of the traffic study and intersection design will be required following consultation with Transport for NSW.</p>
Open Space and Recreation	<p>The playing fields, amenities and cricket facilities located on 90 Pacific Highway are owned and maintained by the Doyalson Wyee RSL Club Pty Ltd. Council does not lease or have an agreement with the Club for the ongoing use of these facilities.</p> <p>Council staff have been working with the Doyalson RSL Club Pty Ltd through the assessment process to ensure that prior to the redevelopment of the site, the sporting associations currently using their facilities are relocated to other suitable grounds. Consultation between representatives of Doyalson Wyee RSL, Doyalson Dragons Touch Football, Northern Lakes Warriors and Doyalson Wyee Soccer Club has been undertaken and will be ongoing to ensure suitable replacement fields and facilities are found.</p>

### 3.7 Planning Proposal - Doyalson Wyee RSL Club - Pacific Hwy, Doyalson

*Attachment 2*

*Strategic Assessment Doyalson Wyee RSL Club*

Unit/Section	Comments
	Doyalson Wyee RSL Club has written to Council advising they will continue their commitment to facilitate the relocation of sporting codes and have agreed, that if the relocation is not resolved prior to the LEP Amendment being made, they will enter into a Planning Agreement with Council to ensure this process is completed prior to the issue of the first construction certificate for 90 Pacific Highway, Doyalson.

**Figure 1 – Indicative Concept Plan**

### 3.7 Planning Proposal - Doyalson Wyee RSL Club - Pacific Hwy, Doyalson

#### Attachment 2

#### Strategic Assessment Doyalson Wyee RSL Club



Figure 2 – Proposed Zoning and Biodiversity Corridors



### 3.7 Planning Proposal - Doyalson Wyee RSL Club - Pacific Hwy, Doyalson

#### Attachment 2

#### Strategic Assessment Doyalson Wyee RSL Club

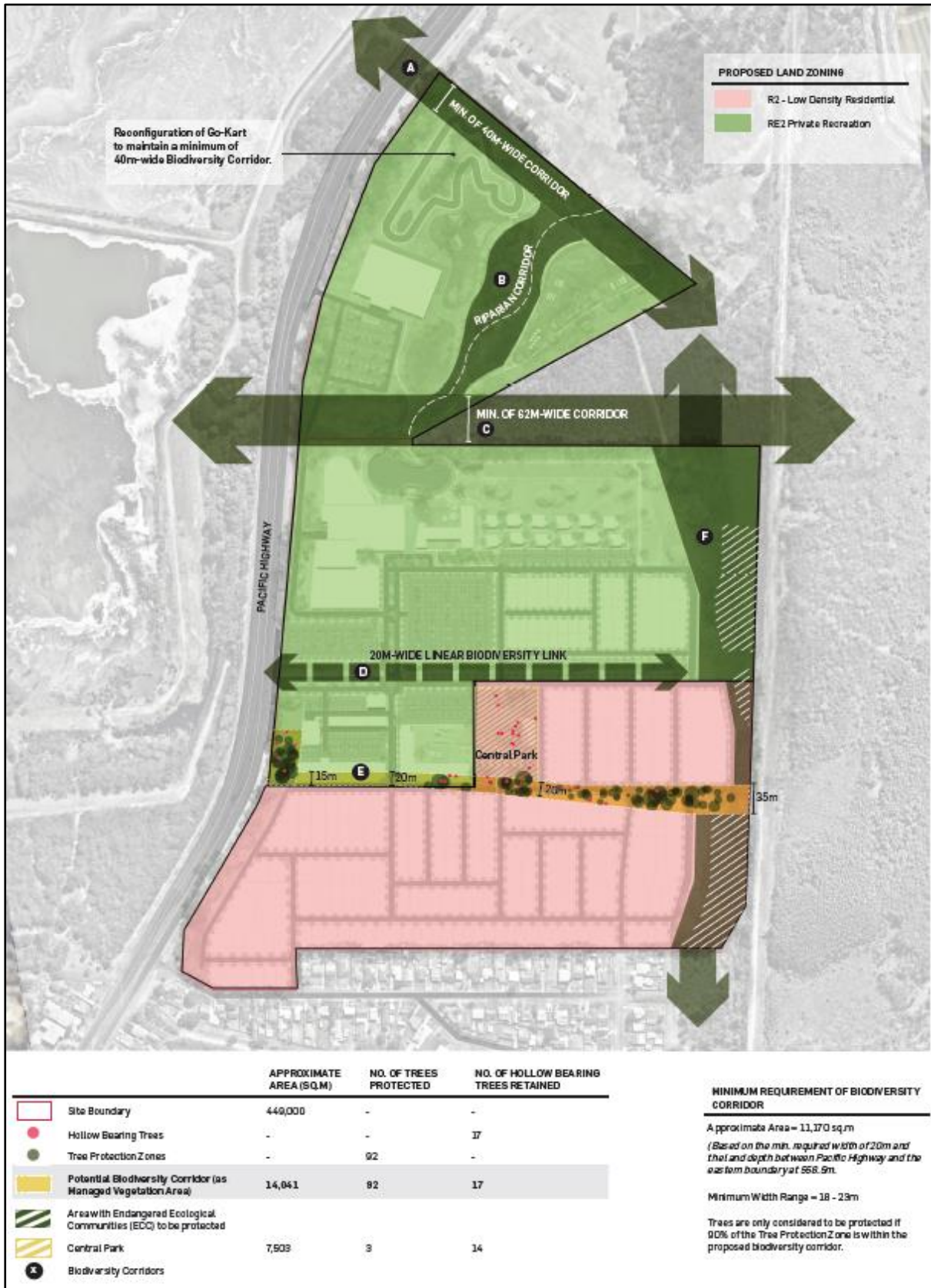


Figure 3 – Biodiversity Outcomes



### 3.7 Planning Proposal - Doyalson Wyee RSL Club - Pacific Hwy, Doyalson

#### Attachment 2

#### Strategic Assessment Doyalson Wyee RSL Club



### 4.3 Reappointment of Independent Audit Risk and Improvement Committee Members and provision of the 2019 ARIC Annual Report

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*Attachment 1*

*ARIC Annual Report 2019*

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## Audit, Risk and Improvement Committee



Central  
Coast  
Council

Annual Report 2019

## **Audit, Risk and Improvement Committee Annual Report 2019**



### **About the report**

This annual report documents the operation and activities of the Audit, Risk and Improvement Committee for Central Coast Council during the 2019 calendar year.

### **The Central Coast Council Audit, Risk and Improvement Committee**

Central Coast Council (Council) is committed to open and transparent governance that meets community expectations. To enhance its governance framework, Council established an Audit, Risk and Improvement Committee (ARIC) nearly three years ago in 2017.

The ARIC has an important role in the governance framework of Council by providing Council with independent oversight, objective assurance and monitoring of Council's audit processes, internal controls, external reporting, risk management activities, compliance of and with Council's policies and procedures, and performance improvement activities.

The establishment of the ARIC via Council Resolution on 26 April 2017 places Council in an excellent position in the pursuit of good corporate governance, which in turn promotes effective and efficient delivery of services to the Central Coast community with transparency, honesty and integrity.

The ARIC also assists Council accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance processes.

There are currently three independent members on the Committee and two Councillor members who are nominated by Council.

All Committee member profiles are featured on pages three to five of this report.



## 4.3 Reappointment of Independent Audit Risk and Improvement Committee Members and provision of the 2019 ARIC Annual Report



# Audit, Risk and Improvement Committee Annual Report 2019

## Central Coast Council

Central Coast Council is responsible for the sixth largest urban area in Australia. The Council area is 1681 square kilometres, which makes it geographically larger than Canberra.

The most recent projected population of the Central Coast by 2036 is 415,050. That is a 23% increase in population, of approximately 80,000 people. Planning for growth and maintaining the lifestyle that our community enjoys is important for Council.

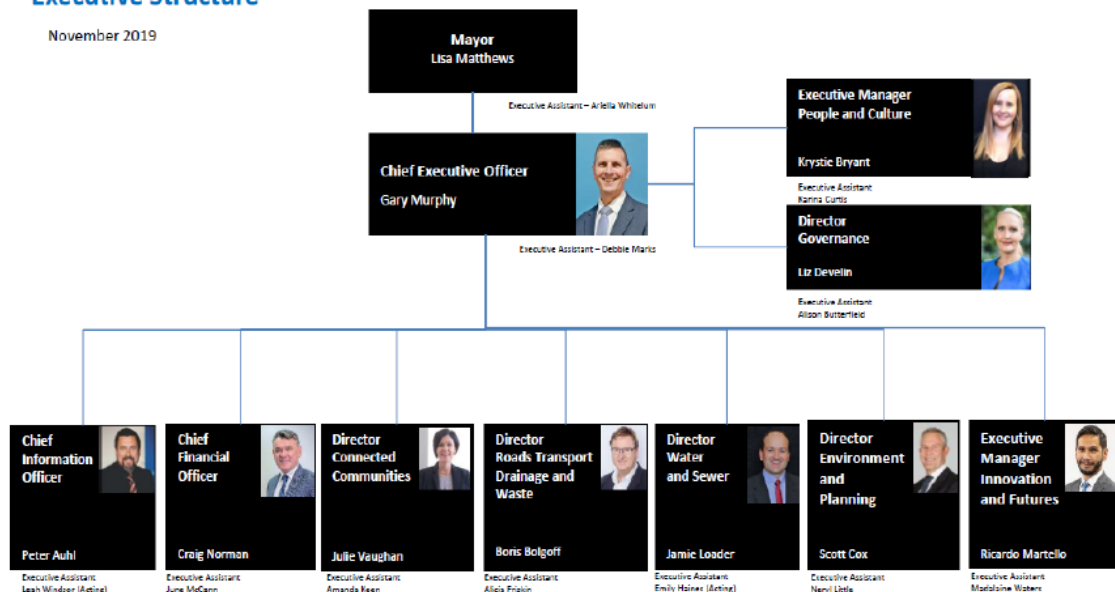
## Council Structure

Central Coast Council’s organisation is led by the Chief Executive Officer and comprises of the following ten sections: Office of the Chief Executive, Connected Communities, Environment and Planning, Finance, Governance, Information Management and Technology, Innovation and Futures, People and Culture, Roads Transport Drainage and Waste, and Water and Sewer.

The Executive Leadership Team (ELT) make day-to-day decisions on operational matters that comply with Council’s policies and procedures.

### Central Coast Council Executive Structure

November 2019





## Audit, Risk and Improvement Committee Annual Report 2019



### Community Vision

We are *One Central Coast*. A smart, green and liveable region with a shared sense of belonging and responsibility. *One Central Coast* is the Community Strategic Plan (CSP) for the Central Coast Local Government Area. It defines the Community's vision and is Council's roadmap for the future.

*One Central Coast* brings together extensive community feedback to set key directions and priorities and has been built around five key themes that reflect the need and values of the people who live in our region:

**BELONGING**

**SMART**

**GREEN**

**RESPONSIBLE**

**LIVEABLE**

## Audit, Risk and Improvement Committee Annual Report 2019



### Independent Member profiles

#### Dr Colin Gellatly (AO)



Dr Gellatly (AO) is one of Australia's most successful public servants, having served as Director General in several Government Departments, including the Premier's Department, the Industrial Relations, Employment, Training and Further Education Department and the Land and Water Conservation Department. He has held various Board and Authority Chair and Director roles as well as being a member of many Federal and State Committees and Working Parties. He has a Ph.D. in Economics and Statistics and was awarded an AO in 2008 for services to the public sector.

#### Mr Carl Millington



Mr Millington has over 30 years' experience in providing business consulting, auditing and accounting advice to Not-for-Profit organisations including government and community-based organisations, sporting associations, NSW Local Government, business groups and employer organisations. He is a senior partner at Pitcher Partners Sydney in the Business Advisory and Assurance Group, a member of the firm's Advisory Board, and a member of the firm's Business Consulting group.

#### Mr John Gordon



Mr Gordon is a Chartered Accountant and Chartered Secretary with 40 years' experience providing assurance, advisory and corporate governance assistance to a broad range of clients in the private and public sectors. This includes 22 years as a senior Audit/Assurance Partner with PwC Australia. He has 38 years of continuous involvement in the Local Government, Health and Not-For-Profit (NFP) sectors. Since 2009, Mr Gordon has served as Chair or Member on Audit & Risk Committees for 20 State, Territory, Local Government and NFP organisations including 11 NSW Local Government Councils.

## 4.3 Reappointment of Independent Audit Risk and Improvement Committee Members and provision of the 2019 ARIC Annual Report

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Attachment 1

ARIC Annual Report 2019

### Audit, Risk and Improvement Committee Annual Report 2019



The following Councillors were appointed to the Committee by Council Resolution on 9 October 2017.

#### Councillor Representatives

##### [Councillor Doug Vincent](#)



Budgewoi Ward

##### [Councillor Louise Greenaway](#)



Wyong Ward

#### Alternative Councillor Representatives

##### [Mayor Lisa Matthews](#)



The Entrance Ward

##### [Councillor Jeff Sundstrom](#)



Gosford East Ward

#### Other Regular Attendees

Non-Committee Members who regularly attend meetings include the Audit Office of NSW, relevant ELT members, Chief Internal Auditor, Senior Internal Ombudsman, General Counsel and Governance Staff.

## Audit, Risk and Improvement Committee Annual Report 2019



In 2019 the Central Coast Council Audit, Risk and Improvement Committee convened four times to review internal audit reports and the internal audit program for Central Coast Council.

### Audit Committee Performance

#### Committee meeting dates and members' participation in 2019.

- Tuesday 5 March 2019
- Wednesday 19 June 2019
- Tuesday 1 October 2019
- Wednesday 4 December 2019\*

\* At the 4 December 2019 meeting the Committee noted that the extraordinary meeting scheduled for November to review the draft Financial Statements for 2018-19 had been delayed to 20 February 2020.

#### Attendance details

Name	Role	Meetings Attended
Colin Gellatly (AO)	Chair (Independent)	4
Carl Millington	Independent	4
John Gordon	Independent	4
Doug Vincent	Councillor	3
Louise Greenaway	Councillor	4

Prior to the 4 December 2019 meeting, an "in-camera" meeting was held with the Committee and the Chief Internal Auditor, without the presence of management, as per the clause 4.5 Audit, Risk and Improvement Committee Charter.

## 4.3 Reappointment of Independent Audit Risk and Improvement Committee Members and provision of the 2019 ARIC Annual Report

### Audit, Risk and Improvement Committee Annual Report 2019



#### Committee Report Card

Committee Charter	Compliance
Committee Meetings	A quorum was maintained at every meeting. Committee is Chaired by an Independent Member Dr. Gellatly AO.
Composition	Three Independent Members and two Councillors.
Broad range of skills and experience	A diverse Committee with strong local government and commercial experience.
Sufficient time allocated to tasks	The Committee agenda allowed equal time to discuss all audit reviews, status of implementation of audit recommendations and the strategic internal audit plan
Risk Management	Enterprise Risk Management Framework (ERMF) reviewed. Risk register developed and currently being tested and refined. Development of a Data Breach Policy and Procedure.
Control Framework	Effective review of controls and policies and procedures through audit reports and high-level briefings received. The development of a Performance Dashboard is proposed to cover Financial, People, Service Delivery and Governance.
External Accountability	Provides input and feedback on the financial statements and considers control issues identified by the external auditors
Legislative Compliance	A register of legislative compliance requirements has been developed.
Internal Audit	Review and approval of the Internal Audit Plan; review of audit findings; monitoring of implementation of Internal Audit recommendations; in-camera meeting with Internal Audit Manager. Provision of advice on tendering for co-source Internal Audit contractor. Internal Audit co-sourced partner, Centium has been engaged.
External Audit	Discussed review of financial statements, compliance with local government regulatory requirements and resolution of audit findings. NSW Audit Office officially invited to attend all meetings. In-camera meeting with External Auditors as per clause 4.6. Monitoring implementation of NSW Audit Office recommendations.
Responsibilities of Members	Members remain aware of changing regulatory requirements and receive regular briefings on Council developments. Completion of annual conflict and register of interests' declarations. Attended tour of Council area and facilities

## 4.3 Reappointment of Independent Audit Risk and Improvement Committee Members and provision of the 2019 ARIC Annual Report

# Audit, Risk and Improvement Committee Annual Report 2019



## Agenda Items

The following highlights the formal matters consider by the Audit, Risk and Improvement Committee at meetings throughout 2019.

### 5 March 2019

Report Title	Report purpose
<i>Update on GIPA Requests</i>	To provide the Committee with details relating to information requests made under the Government Information (Public Access) Act 2009, including themes of such requests.
<i>Report on Councillor Expense Claims for the twelve-month period from 16 September 2017 to 28 September 2018</i>	To provide the Committee with details of Councillors' expense claims for the twelve-month period from 16 September 2017 to 28 September 2018.
<i>Implementation of Management Actions Arising from IA Reviews and Reports</i>	To report on Implementation of Management Actions Arising from IA Reviews forms part of the standard suite of reports presented by the Chief Internal Auditor to the quarterly ordinary meeting of the Audit, Risk and Improvement Committee.
<i>CIA Progress Update</i>	The <i>Chief Internal Auditor's (CIA) Quarterly Progress Report</i> forms part of the standard suite of reports presented by Internal Audit to each ordinary meeting of the Audit, Risk and Improvement Committee.
<i>Draft Water Supply Authority Financial Statements for the reporting period 1 July 2017 to 30 June 2018</i>	To present the draft 2017-18 Central Coast Council Water Supply Authority Financial Statements, which cover the period from 1 July 2017 to 30 June 2018, including analysis of the financial position and financial performance for the reporting period.
<i>Reports from Audit Office of NSW</i>	Final Management Letter for Council's 30 June 2018 Audit, and the Engagement Closing Report for the Water Supply Authority provided by Audit Office of NSW for consideration of the Committee.



## 4.3 Reappointment of Independent Audit Risk and Improvement Committee Members and provision of the 2019 ARIC Annual Report

### Audit, Risk and Improvement Committee Annual Report 2019



19 June 2019

Report Title	Report purpose
<i>Development of the IA Work Program</i>	To provide an update from the Chief Internal Auditor on how the Internal Audit work program is compiled.
<i>Chief Internal Auditor's Quarterly Progress Report</i>	The Chief Internal Auditor's (CIA) Quarterly Progress Report forms part of the standard suite of reports presented by Internal Audit to each ordinary meeting of the Audit, Risk and Improvement Committee (ARIC) and reports on the activities of Internal Audit since the last update to the Committee.
<i>Implementation of Management Actions Arising from IA Reviews</i>	To report on Implementation of Management Actions Arising from IA Reviews forms part of the standard suite of reports presented by the Chief Internal Auditor to the quarterly ordinary meeting of the Audit, Risk and Improvement Committee.
<i>Deferred Management Actions, Risk and Solutions</i>	To report on a proposed process in respect of: keeping the ARIC informed of (i) management actions relating to significant issues arising from IA reviews where the actions are overdue or have been closed; (ii) how the identified risk exposures are being managed in the period between being highlighted by IA and being fixed by management; and (iii) providing the ARIC with some assurance that closed off actions have actually been done.
<i>Comparison of allowable Councillor Expenses</i>	To provide a report comparing the allowable Councillor costs for Central Coast Council to other NSW Councils as requested by the Committee.
<i>Policy for Investment Report</i>	To present a Policy for Investment Management provided to the Committee for comments and recommendations for consideration prior to inclusion in a report to Council.
<i>Presentation on Asset Management</i>	To give a presentation provided by Director Roads Transport Drainage and Waste on Asset Management.
<i>Co-Source Internal Audit Model</i>	To provide an update by Director Governance on the Co-Source Model arrangements.
<i>Update on the Gosford Cultural Precinct</i>	To provide an update on the Gosford Cultural Precinct including project overview, probity matters and development of Terms of Reference.
<i>Funding Agreement between Central Coast Council and CCGT</i>	To provide an update by Director Governance on the funding agreement between Central Coast Council and CCGT.
<i>Report from Audit Office of NSW</i>	To provide an update by Audit Office of NSW on the Annual Engagement Plan and the Auditor General's report to Parliament.
<i>Update on Legal Matters</i>	To provide the Committee with details relating to Legal matters.

## 4.3 Reappointment of Independent Audit Risk and Improvement Committee Members and provision of the 2019 ARIC Annual Report

### Audit, Risk and Improvement Committee Annual Report 2019



1 October 2019

Report Title	Report purpose
<i>CIA Quarterly Progress Report</i>	The Chief Internal Auditor's (CIA) Quarterly Progress Report forms part of the standard suite of reports presented by Internal Audit to each ordinary meeting of the Audit, Risk and Improvement Committee (ARIC) and reports on the activities of Internal Audit since the last update to the Committee.
<i>Implementation of Management Actions arising from IA Review</i>	To report on Implementation of Management Actions Arising from IA Reviews forms part of the standard suite of reports presented by the Chief Internal Auditor to the quarterly ordinary meeting of the Audit, Risk and Improvement Committee.
<i>IA Balanced Scorecard Report</i>	To deliver a balanced scorecard progress report to each quarterly meeting.
<i>IA Annual Assurance Statement</i>	To provide the Audit, Risk and Improvement Committee (ARIC) with an annual assurance statement for 2018/19 from the Chief Internal Auditor in line with the Institute of Internal Auditors professional practices and Office of Local Government <i>Internal Audit Guidelines</i> .
<i>IA Work Program to December 2020</i>	To present the <i>IA Four Year Audit Schedule and Work Programme</i> for consideration and approval.
<i>IA Year in Review</i>	To provide the <i>IA Year In Review</i> - a look back at the deliverables and some of the key achievements of the IA function over the period 1 July 2018 to 30 June 2019, aligned to the IA framework.
<i>IA Emerging Themes Report</i>	To present an annual report to the Audit and Risk Committee on <i>Emerging Themes</i> that captures the recurring issues that have arisen during the year as a result of the business assurance work and root cause analyses on audit findings.
<i>Information Technology General Controls (ITCG) Interim Management Letter</i>	To present the Audit Office of NSW Information Technology General Controls Management Letter for the year ended 30 June 2019 outlining matters of governance interest identified during the current audit, unresolved matters identified during previous audits and matters required to be communicated under Australian Auditing Standards.
<i>Risk Management Framework and Risk Register</i>	To provide an update to the Audit, Risk and Improvement Committee on the progress of the Central Coast Council Enterprise Risk Management Framework. To also offers the opportunity for the Audit, Risk and Improvement Committee to have input into the future reporting of risk management across Council.
<i>Fraud and Corruption Control Policy</i>	To present a draft policy to the Audit, Risk and Improvement Committee for review and comment prior to going to Council for consideration.
<i>Business Continuity Plan – Implementation and Update</i>	To provide ARIC with a summary update on Council's Business Continuity Planning (BCP) process.



## 4.3 Reappointment of Independent Audit Risk and Improvement Committee Members and provision of the 2019 ARIC Annual Report

### Audit, Risk and Improvement Committee Annual Report 2019



Report Title	Report purpose
<i>Dashboard – Collection of performance measurement data by Council</i>	To consider a proposed reporting dashboard and seek comment from the Committee.
<i>Update on Legal Matters</i>	To provide the Committee with details relating to Legal matters.
<i>Legislation Compliance Reporting Process</i>	To provide the Committee with an update on Council's Legislation Reporting Status.
<i>GIPA Review Outcomes</i>	To provide the Committee with further details than those contained in Council's Annual Report relating to information requests made under the <i>Government Information (Public Access) Act 2009 (GIPA Act)</i> , including the outcomes of any external review requests.
<i>Council Resolution to establish an Integrity and Ethical Standards Unit</i>	To present a discussion paper to assist the Audit, Risk and Improvement Committee in providing input about a mechanism and process for the establishment of an 'Integrity and Ethical Standards Unit' as per a July 2019 Council Resolution.
<i>Policy for Investment Management</i>	To present the Audit, Risk and Improvement Committee with the Policy for Investment Management for comment.
<i>Chain of Responsibility</i>	To present on the Chain of Responsibility.
<i>Response to GB5/19 The use of Roundup weed killer in Council's operations</i>	To provide the Committee with an update on the use of Roundup weed killer in Council's operations.
<i>Notice of Motion – Independent Audit Investigation into RPAC</i>	To present a Notice of Motion from to 8 October 2019 Council Meeting regarding RPAC.

## 4.3 Reappointment of Independent Audit Risk and Improvement Committee Members and provision of the 2019 ARIC Annual Report

### Audit, Risk and Improvement Committee Annual Report 2019



#### 4 December 2019

Report Title	Report purpose
<i>Co-Source Partner Presentation</i>	A Presentation provided by Penny Corkill (Centium) on the Co-source Model.
<i>Chief Internal Auditor's Quarterly Progress Report</i>	The Chief Internal Auditor's (CIA) Quarterly Progress Report forms part of the standard suite of reports presented by Internal Audit to each ordinary meeting of the Audit, Risk and Improvement Committee (ARIC) and reports on the activities of Internal Audit since the last update to the Committee.
<i>Implementation of Management Actions Arising from IA Reviews</i>	The report on Implementation of Management Actions Arising from IA Reviews forms part of the standard suite of reports presented by the Chief Internal Auditor to the quarterly ordinary meeting of the Audit, Risk and Improvement Committee.
<i>Internal Audit Four Year Audit Schedule and Work Programme</i>	To provide schedule of audits for Q2 2019 through to December 2020 (to cover the early election period of the next Council term), a longer-term projected plan of audits through to the end of Financial Year 2022/2023 and a proposed work programme covering the other elements of the IA Framework for the same period.
<i>Performance Audit – Governance and Internal Controls over Local Infrastructure Contributions</i>	To advise the committee on the Performance Audit being undertaken by the Audit Office of New South Wales (Audit NSW). The audit is to assess Council's effectiveness of governance and internal controls over Local Infrastructure Contributions, otherwise known as Developer Contributions, collected by Councils.
<i>Update on Enterprise Risk Management Framework</i>	To provide the Audit, Risk and Improvement Committee information on the progress of the Central Coast Council Enterprise Risk Management Framework.
<i>Combustible Cladding</i>	To provide the Audit, Risk and Improvement Committee with an update on building cladding, as requested at the 1 October 2019 meeting.
<i>Dashboard – Collection of Performance Measurement Data by the Council</i>	To update the Audit, Risk and Improvement Committee on Council's Progress with establishment of a Performance Dashboard (including Governance indicators).
<i>ICAC / Code of Conduct</i>	To provide an update by Senior Internal Ombudsman regarding ICAC and Code of Conduct as well as key figures.
<i>Update on Legal Matters</i>	To provide the Committee with details relating to Legal matters.
<i>Revised Charter for Audit, Risk and Improvement Committee</i>	To present a revised Charter for the Audit Risk and Improvement Committee for reporting to Council for determination, and to consider the reappointment terms.

### 4.3 Reappointment of Independent Audit Risk and Improvement Committee Members and provision of the 2019 ARIC Annual Report

## Audit, Risk and Improvement Committee Annual Report 2019



Report Title	Report purpose
<i>Integrity and Ethical Standards Unit Update</i>	To provide the Audit, Risk and Improvement Committee with an update on Council's resolution with regard to actions to support functions that promote integrity and high ethical standards.
<i>Business Continuity Management Update</i>	To provide further information regarding Council's Business Continuity Management and how it operates in relation to Emergency Management. Disaster recovery of systems is a subset of the Business Continuity Management and is being developed as part of that.
<i>Report on Council's draft Data Breach Policy and Procedures</i>	To provide the Audit, Risk and Improvement Committee with an opportunity to provide feedback on a Draft Data Breach Policy and Draft Data Breach Procedures.
<i>Feedback on Management Actions identified in the ITGC Management Letter</i>	Verbal update provided by Unit Manager IMT Assure
<i>Complaints and Compliments Report – Q1 2019/20</i>	To provide an overview of complaints and compliments received during the first quarter period, 1 July 2019 to 30 September 2019, to the Audit Risk and Improvement Committee (Committee). The information included in this report was based on reports from Council's Customer Experience (CX) system.
<i>Customer Experience Survey Results</i>	During the period of 30 May – 7 June 2019, Micromex Research conducted the second annual customer experience telephone survey of 602 Central Coast Council (CCC) residents to identify customer perceptions. This report identified the key survey results, changes to last year's survey and Council's focus for this year, as well as next steps.
<i>Policy for Investment Management – ESG Investments</i>	To provide a response to Resolution 1043/19 from the Ordinary Council meeting on 28 October 2019 requesting an investigation of the suitability of incorporating ESG investments into Council's investment policy.
<i>Update on Financial Audit</i>	Verbal update provided by Chief Financial Officer on the status of the financial audit.

### Audit, Risk and Improvement Committee Annual Report 2019



#### Internal Audit

Internal Audit plays a key role in helping Council to achieve its objectives by testing how effectively controls are operating across specific systems, processes and activities in order to manage the associated risks.

Internal Audit is responsible for conducting risk based business assurance and consultancy review across Council's operations in accordance with a pre-approved work program to provide assurance to Council (via the Audit, Risk and Improvement Committee) and the Chief Executive Officer on the effectiveness of controls.

Internal Audit also provides advice, training and education on various governance, risk and compliance matters to assist business improvement.

A Charter governs the Internal Audit function at Central Coast Council. The Charter, which is reviewed every two years, outlines the purpose, authority and responsibility of management and the Internal Audit function. The Chief Internal Auditor presents their findings and recommendations to the ARIC in an audit report at each meeting. To monitor the effectiveness of the control environment, the ARIC reviews the reports and progress on implementation of recommendations.

The following Internal Audit reports were presented at each ARIC meeting:

- Implementation of Management Actions Arising from IA Reviews
- Chief Internal Auditor's Quarterly Progress Report

The following additional Internal Audit reports were presented throughout the year:

- Development of the IA Work Program
- Deferred Management Actions, Risks and Solutions
- IA Balanced Scorecard Report
- IA Annual Assurance Statement
- IA Four Year Audit Schedule and Work Programme
- IA Year in Review 2018/19
- IA Emerging Themes, Operational Risks and Opportunities Report 2018/19

### Audit, Risk and Improvement Committee Annual Report 2019



#### External Audit

The Committee receives an annual report from the External Auditor (Audit Office of New South Wales) on the status of our financial statements. Representatives from the Audit Office attended Committee meetings as observers and advisors with regard to the external audit process.

#### Chair's Summary

2019 was a productive year for the Committee, which involved several key achievements.

The Committee refined the standing agenda for meetings during 2019 and as a result important regular updates were included. For example, the Committee now receives quarterly updates on significant legal matters and risks. The Committee also received regular updates on IM+T matters, including a review of the Information Technology General Controls Management Letter and feedback of management actions arising.

Providing advice on the shaping of key policies and procedures was a focus for the Committee. A number of policies were reviewed with comment provided. The Committee reviewed a report on Councillor Expense Claims for the twelve-month period from 16 September 2017 to 28 September 2018. Following this, a further report comparing allowable Councillor costs for Central Coast Council to other NSW Councils was brought to the 19 June 2019 meeting. The Committee also reviewed a draft Policy for Investment, Fraud and Corruption Control Policy and Data Breach Policy.

The Committee also turned its focus to a number of key risk management tools. A significant amount of attention was given to Council's developing Enterprise Risk Management Framework. The Committee provided feedback on the Enterprise Risk Management Framework (ERMF), which was developed by staff earlier in the year. At the 4 December 2019 meeting the Committee endorsed Council seeking support of external experts to assist with improving the ERMF and associated processes. This is expected to occur early 2020.

In addition, the development of a Business Continuity Plan for Central Coast Council was a recurring topic of discussion.

The Committee welcomed Penny Corkill (Centium) as part of the Co-Source Model at the 4 December 2019 meeting. Penny will be assisting the Chief Internal Auditor with the four-year audit schedule and providing valuable input advice and feedback.

## Audit, Risk and Improvement Committee Annual Report 2019



The Committee also considered a proposal regarding the establishment of an Integrity and Ethical Standards Unit, as requested by Council at the 22 July 2019 Ordinary Council Meeting. This matter was discussed at the 1 October 2019 ARIC meeting, and the Committee determined the functions identified for the proposed Unit were already addressed within the existing structure. Furthermore, the Committee recommended that Council review current resourcing to improve delivery. It is expected that this report will be provided to the ARIC meeting scheduled for 17 June 2020.

Best practice has been a focus for the Committee this year, resulting in the development of a draft Performance Dashboard which will promote accountability and drive improvement in the business areas of finance, people, governance and service delivery. ARIC members will provide feedback on the draft, which will continue to be refined.

In accordance with best practice, the Committee also considered a revised ARIC Charter at the 4 December 2019 meeting. The revised ARIC Charter aligns with the *Model Audit and Risk Committee Charter* as set out in the NSW Audit Office guidelines TPP 15-03 Internal Audit and Risk Management Policy for the NSW Public Sector. The ARIC Charter was endorsed by the Committee and will be reported to Council at an open meeting in 2020 for determination.

The above is in addition to the regular Internal Audit work which is referred to the Committee. This includes quarterly progress updates, review of management actions in response to Internal Audit reviews and consideration of the Internal Audit program of work.

I also take the opportunity to specially acknowledge and express my appreciation for all of the work undertaken by my fellow ARIC Committee Members, the Chief Executive Officer, the Executive Leadership Team and the Governance Secretariat. Their respective contributions have been instrumental in establishing a firm foundation for the ARIC to add further value to Council's governance processes going forward.



Colin Gellatly  
ARIC Chair

20/2/2020





**POLICY NO: CCC023**

## **Policy for Debt Management**

Version 0.4  
Carlton Oldfield  
6 April 2017

Page | 1

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AUTHORITY	NAME & TITLE
<b>AUTHOR</b>	Carlton Oldfield, Financial Controller, Finance Operations
<b>MANAGER</b>	
<b>GROUP LEADER</b>	Stephen Naven, Chief Financial Officer
<b>CHIEF EXECUTIVE OFFICER</b>	Rob Noble

**CERTIFIED A TRUE COPY OF POLICY ADOPTED BY COUNCIL**

<b>COUNCIL RESOLUTION DATE</b>	<b>26 APRIL 2017</b>
--------------------------------	----------------------

**History of Revisions:**

Version	Date	TRIM Doc. #
	March 2017	D12669904





### A Policy Summary

- A.1 This policy defines how Central Coast Council ("CCC") will manage its debt, including, but not limited to internal and external borrowing activities, defining key responsibilities, operating procedures and risk management requirements.

### B Policy Background

- B.1 Council utilises debt to assist in funding facilities and services for our community. The funding of long dated assets requires Council to use debt finance to ensure there is intergenerational equity, that is, that current and future ratepayers both contribute towards the assets they utilise now and in the future.
- B.2 Council acknowledges there are various risks associated with managing debt including but not limited to interest rate, liquidity, funding and credit risk. Council will not incur unnecessary risk through its debt management and will mitigate/hedge any risk to tolerable levels as defined within this policy.
- B.3 Council is required to conform to the *Local Government Act 1993*, *Local Government (General) Regulations 2005* and *Borrowing Order dated 13 May 2009* pursuant to section 624 of the *Local Government Act 1993*.

### C Definitions

- C.1 **Council** means the appointed administrator and/or the elected representatives, Councillors, who form the governing body of Central Coast Council at any given time.
- C.2 **The Act** means the *Local Government Act 1993*.
- C.3 **CCC** means Central Coast Council
- C.4 **Council policy** means policy created and approved by the Council, as well as any policy of either the former Gosford City Council or the former Wyong Shire Council that applies to Council by the operation of the *Local Government (Council Amalgamations) Proclamation 2016* under the *Local Government Act 1993*.
- C.5 **Floating rate debt** means debt where the borrowing cost fluctuates in line with a common banking index. E.g. Bank Bill Swap Rate or Commonwealth Bond Yield.
- C.6 **Fixed rate debt** means debt with borrowing cost that is fixed for the duration of the loan period.
- C.7 **CEO** means the person appointed to the position of Chief Executive Officer of the Council, who undertakes the functions of the General Manager under the Act.



### D Policy Statements

#### Jurisdiction

- D.1 This Policy covers all elected members of Council, all personnel employed by CCC, any person or organisation contracted to or acting on behalf of CCC, any person or organisation employed to work on CCC premises or facilities and all activities of the CCC.
- D.2 This policy does not confer any delegated authority upon any person. All delegations to staff are issued by the CEO.
- D.3 It is the personal responsibility of all CCC employees and agents thereof to have knowledge of, and to ensure compliance with, this policy.

#### General

- D.4 Council will continually monitor and review Treasury credit limits and financial market exposures within these limits provided for in this policy.
- D.5 Council will manage its borrowing cost through effective hedging of its interest rate risk within the limits provided for in this policy.
- D.6 Council will ensure it meets its debt repayment obligations as they fall due through appropriate liquidity and funding risk management.
- D.7 Council will manage the spread of its debt maturities within the set funding/ refinancing risk limits.
- D.8 Council will ensure it complies with internal and external borrowing covenants and ratios.
- D.9 Council will allow debt under interest only repayments where it meets the restrictions under this policy.

### E Management of Policy Risks

#### Liquidity and Funding Risk Management

- E.1 The CCC Treasury team in managing its liquidity risk will ensure:
  - (a) Borrowing activities with external parties including committed term funding facilities and overdraft facilities shall be obtained from banks licensed by the Australian Prudential Regulation Authority (APRA) with a minimum Standard & Poors's (S&P) rating of 'A'. Equivalent ratings from Moody's Investor Services or Fitch Ratings are acceptable.
  - (b) Borrowings terms will balance off between obtaining funding facilities to match the underlying asset useful life with the cost of long dated funding.



- (c) The CCC Treasury team will ensure there is sufficient working capital to meet short and long term commitments of Council as they fall due in an orderly manner. The Treasury team aims to have immediate access to working capital of approximately 5 - 10% of the total projected long term core debt.
- (d) The CCC Treasury team will manage funding risk by ensuring that no more than 33% of external funding facilities expire within a 12 month period.
- (e) The CCC Treasury team will aim to have committed funding facilities in place that equate to 110-133% of projected long term core debt.

**Interest Rate Risk Management**

- E.2 The CCC Treasury team will manage the interest rate risk to mitigate unfavourable variations in the Council’s borrowing cost but enable Council to take advantage of any favourable interest rate movements that may arise.
- E.3 The CCC Treasury team will be able to, upon CEO approval, hedge Council’s interest rate exposures by obtaining either fixed rate debt or floating rate debt coupled with interest rate management instruments.
- E.4 The specific hedging operating parameters are outlined below. Any hedging outside of the operating parameters requires approval by Council:

Fixed Rate Hedging		
	Minimum Fixed Rate	Maximum Fixed Rate
0-2 years	50%	100%
2-5 years	30%	100%
5-10 years	0%	100%

- E.5 Authorised Interest Rate Management Instruments. Council may use interest rate management instruments such as interest rate swaps to manage Council bank floating rate debt and fixed rate debt.
- E.6 Interest rate management instruments with a maturity exceeding 5 years will be required to be approved by Council.
- E.7 Counterparties. Council may only enter into interest rate management instrument transactions with banks licensed by APRA with a minimum Standard & Poor’s (S&P) rating of ‘A’. Equivalent ratings from Moody’s Investor Services or Fitch Ratings are acceptable.

**Legal Risk Management**

- E.8 Execution of all debt financing and interest rate management instrument legal agreements will be under the guidance of the legal advisors for Council.



### F Internal Controls

- F.1 Council is responsible for:
- Adopting this policy
  - Approving the interest rate management activities outside the parameter detailed in this policy
  - Approving all funding facilities
  - Approving the use of any risk management products not authorised in this policy
- F.2 The Chief Financial Officer and delegated staff are responsible for:
- Managing the relationships with banking counterparties
  - Formulating and executing CEO approved interest rate risk management strategies in accordance with this policy
  - Ensuring liquidity and funding risks are managed in accordance with this policy
  - Ensuring hedging ratios are maintained in accordance with clause E.4 of this policy
  - Ensure compliance with internal and external debt covenant ratios
  - Ensure segregation of duties – Staff responsible for executing interest rate management instruments will not be responsible for the accounting treatment applied within the financial statements of CCC.
  - Prepare the annual proposed borrowing return required by the Office of Local Government.

### Variation

- F.3 Council reserves the right to amend this policy from time to time in accordance with the policy for the establishment of policies.

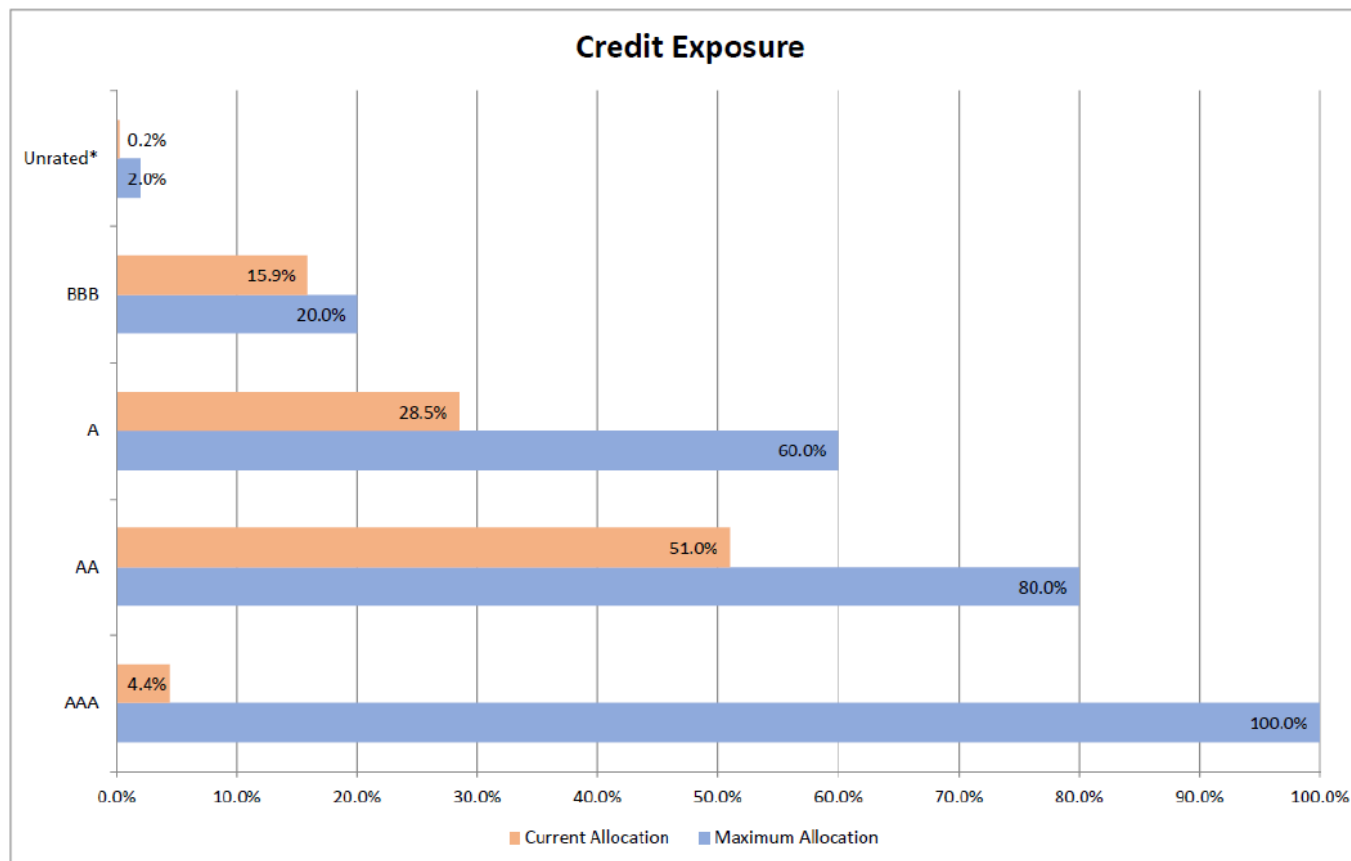
4.6 Investment Report for February and March 2020

Attachment 1

Summary of Investments by Type at 29 February 2020

Central Coast Council Summary of Investments as at 29-February-2020							
Financial Institution	Type of Investment	Short Term Rating	Long Term Rating	Maturity Date	Portfolio Balance \$	As a % of the total Portfolio	Interest Rate %
<b>CASH AT CALL:</b>							
Westpac Banking Corporation	Corporate Investment Account	A1	AA	Daily	10,164,642	2.52%	1.10%
NSW Treasury Corporation	At Call Deposit	A1	AAA	Daily	807,000	0.20%	1.25%
Commonwealth Bank of Australia	Business On-line Saver	A1	AA	Daily	17,500,000	4.34%	0.90%
<b>Total Cash At Call</b>					<b>28,471,642</b>	<b>7.05%</b>	
<b>TERM DEPOSITS, FLOATING RATE NOTES &amp; BONDS:</b>							
Australia New Zealand Banking Group	Term Deposit	A1	AA	02-Mar-2020	10,000,000	2.48%	2.50%
Westpac Banking Corporation	Floating Rate Note	A1	AA	05-Mar-2020	10,000,000	2.48%	BBSW + 0.77%
ING	Term Deposit	A2	A	12-Mar-2020	10,000,000	2.48%	2.55%
Westpac Banking Corporation	Term Deposit	A1	AA	17-Mar-2020	10,000,000	2.48%	3.10%
Australia New Zealand Banking Group	Term Deposit	A1	AA	18-Mar-2020	10,000,000	2.48%	2.55%
AMP limited	Term Deposit	A1	A	18-Mar-2020	5,000,000	1.24%	1.75%
Members Equity Bank	Floating Rate Note	A2	BBB	06-Apr-2020	10,000,000	2.48%	BBSW + 1.25%
National Australia Bank	Term Deposit	A1	AA	14-Apr-2020	10,000,000	2.48%	2.58%
SIRA / Workcover / NSW Treasury	Term Deposit	A1	AA	02-May-2020	8,098,000	2.01%	2.40%
Westpac Banking Corporation	Term Deposit	A1	AA	07-May-2020	10,000,000	2.48%	2.65%
ING	Term Deposit	A2	A	21-May-2020	10,000,000	2.48%	2.70%
Rural Bank	Term Deposit	A2	BBB	03-Jun-2020	10,000,000	2.48%	1.94%
Macquarie Bank	Term Deposit	A1	A	17-Jun-2020	10,000,000	2.48%	1.85%
Suncorp-Metway Limited	Term Deposit	A1	A	17-Jun-2020	5,000,000	1.24%	1.65%
Macquarie Bank	Term Deposit	A1	A	13-Jul-2020	10,000,000	2.48%	1.85%
Macquarie Bank	Term Deposit	A1	A	07-Aug-2020	10,000,000	2.48%	1.55%
Bendigo and Adelaide Bank	Floating Rate Note	A2	BBB	18-Aug-2020	4,000,000	0.99%	BBSW +1.10%
Rabo Bank	Term Deposit	A1	AA	07-Sep-2020	5,000,000	1.24%	3.50%
National Australia Bank	Term Deposit	A1	AA	15-Sep-2020	10,000,000	2.48%	1.55%
Bendigo and Adelaide Bank	Term Deposit	A2	BBB	21-Sep-2020	10,000,000	2.48%	1.62%
National Australia Bank	Term Deposit	A1	AA	28-Sep-2020	10,000,000	2.48%	1.50%
National Australia Bank	Term Deposit	A1	AA	06-Oct-2020	10,000,000	2.48%	1.48%
National Australia Bank	Term Deposit	A1	AA	12-Oct-2020	10,000,000	2.48%	1.48%
Suncorp-Metway Limited	Floating Rate Note	A1	A	20-Oct-2020	4,500,000	1.12%	BBSW +1.25%
Suncorp-Metway Limited	Floating Rate Note	A1	A	20-Oct-2020	500,000	0.12%	BBSW +1.25%
National Australia Bank	Term Deposit	A1	AA	10-Dec-2020	5,000,000	1.24%	2.80%
Westpac Banking Corporation	Term Deposit	A1	AA	10-Dec-2020	10,000,000	2.48%	2.90%
Westpac Banking Corporation	Term Deposit	A1	AA	21-Jun-2021	10,000,000	2.48%	3.06%
Rabo Bank	Term Deposit	A1	AA	05-Jul-2021	10,000,000	2.48%	2.92%
Bank of Queensland	Term Deposit	A2	BBB	26-Aug-2021	10,000,000	2.48%	1.75%
Westpac Banking Corporation	Floating Rate Note	A1	AA	26-Nov-2021	5,000,000	1.24%	BBSW + 0.93%
Newcastle Permanent Building Society	Floating Rate Note	A2	BBB	24-Jan-2022	10,000,000	2.48%	BBSW + 1.65%
Rabo Bank	Term Deposit	A1	AA	12-Dec-2022	10,000,000	2.48%	3.18%
Westpac Banking Corporation	Floating Rate Note	A1	AA	27-Nov-2023	5,000,000	1.24%	BBSW + 0.93%
Bank of Queensland	Term Deposit	A2	BBB	26-Sep-2024	10,000,000	2.48%	2.00%
NSW Treasury Corporation	Bonds	A1	AAA	20-Mar-2025	2,000,000	0.50%	1.25%
NSW Treasury Corporation	Bonds	A1	AAA	15-Nov-2028	15,000,000	3.72%	3.00%
Macquarie Bank	Term Deposit	A1	A	11-May-2020	10,000,000	2.48%	1.55%
Macquarie Bank	Term Deposit	A1	A	27-Apr-2020	10,000,000	2.48%	1.60%
ING	Term Deposit	A2	A	20-Jul-2020	5,000,000	1.24%	1.60%
ING	Term Deposit	A2	A	21-Jul-2020	5,000,000	1.24%	1.60%
National Australia Bank	Term Deposit	A1	AA	17-Aug-2020	10,000,000	2.48%	1.55%
Macquarie Bank	Term Deposit	A1	A	03-Jun-2020	10,000,000	2.48%	1.60%
Macquarie Bank	Term Deposit	A1	A	17-Jun-2020	10,000,000	2.48%	1.60%
Unity Bank	Term Deposit	Unrated	Unrated	15-Feb-2021	1,000,000	0.25%	1.65%
<b>Total Term Deposit &amp; Bonds:</b>					<b>375,098,000</b>	<b>92.95%</b>	
<b>TOTAL PORTFOLIO</b>					<b>403,569,642</b>	<b>100.00%</b>	
Current					316,569,642	78.44%	
Non-Current					87,000,000	21.56%	
<b>TOTAL PORTFOLIO</b>					<b>403,569,642</b>	<b>100.00%</b>	

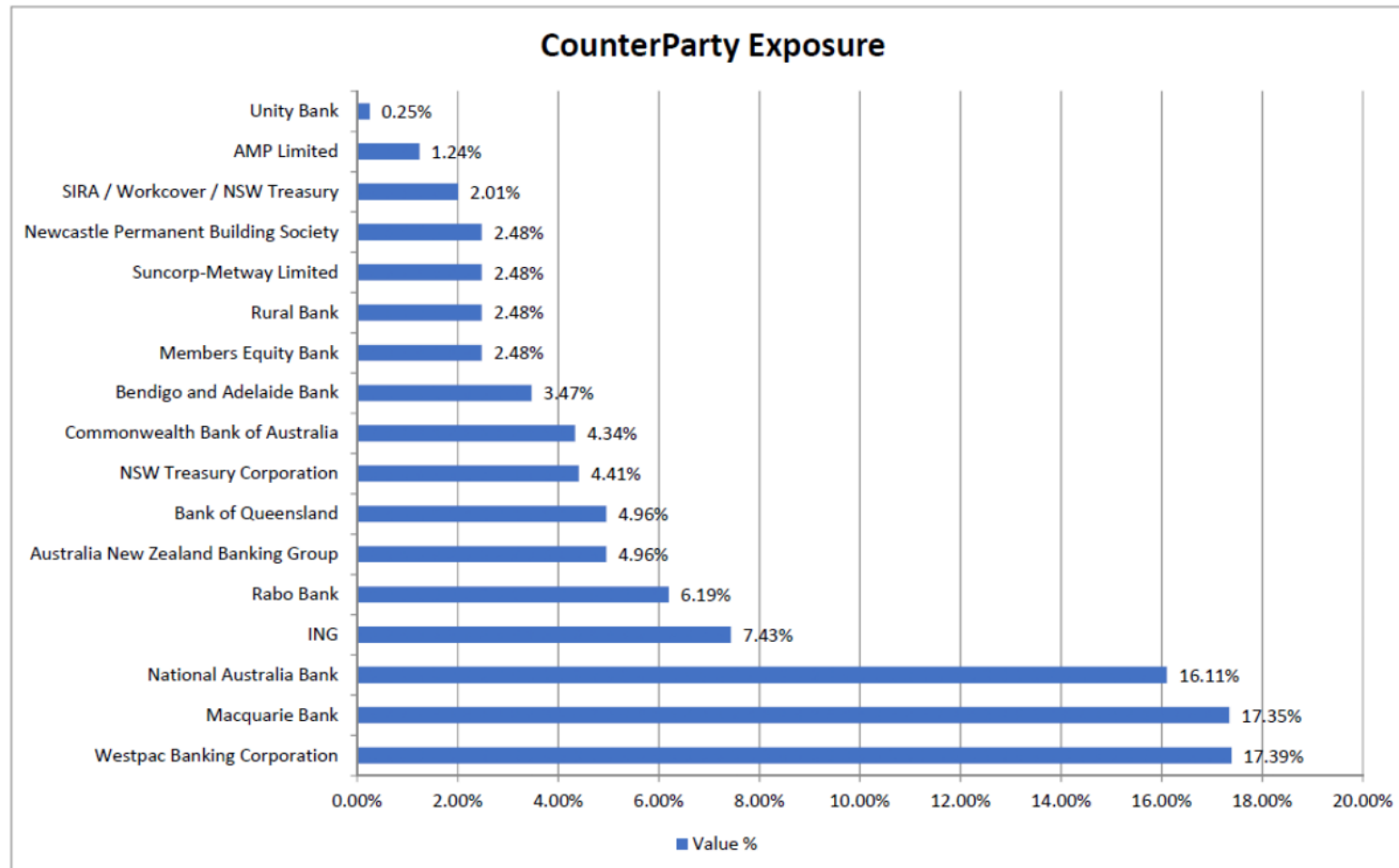
Graph 1 – Credit Exposure



\* **AA:** Council has provided security for self-insurance by way of a term deposit invested in an ADI through State Insurance Regulatory Authority (formerly WorkCover NSW). This security has been included as part of the investment portfolio.

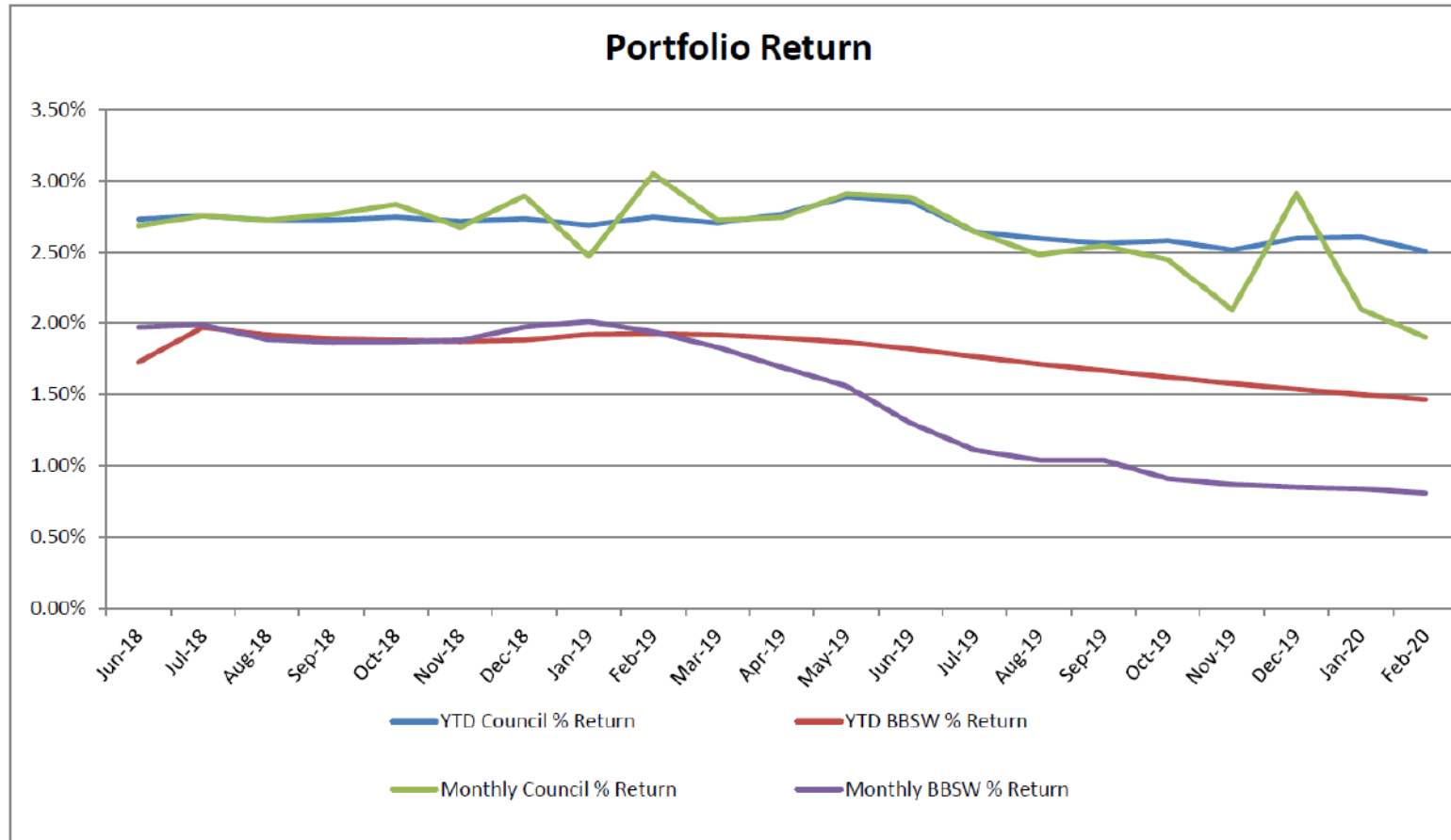
\*\* **Unrated:** Unrated investment comprises of a term deposit with Central Coast Credit Union

Graph 2 - Counterparty Exposure



4.6 Investment Report for February and March 2020

Graph 3 - Portfolio Return





Central Coast Council Summary of Investment as at 31-March-2020							
Financial Institution	Rating	Type of Investment	Maturity Date	Portfolio Balance Market Value	As a % of the Total Portfolio	Interest Rate %	
<b>CASH AT CALL:</b>							
Westpac Banking Corporation	AA-	CASH	31/03/2020	11,168,214	2.88%	0.00%	
Commonwealth Bank of Australia	AA-	CASH	31/03/2020	23,400,000	6.03%	0.00%	
<b>Total Cash At Call</b>				<b>34,568,214</b>	<b>8.91%</b>		
<b>TERM DEPOSITS, FLOATING RATE NOTES &amp; BONDS:</b>							
Members Equity Bank	BBB	FRN	6/04/2020	10,001,130	2.58%	2.17%	
National Australia Bank	AA-	TD	14/04/2020	10,000,000	2.58%	2.58%	
Macquarie Bank	A+	TD	27/04/2020	10,000,000	2.58%	1.60%	
NSW Treasury Corp	AAA	TD	4/05/2020	8,098,000	2.09%	2.40%	
Westpac Banking Corporation	AA-	TD	7/05/2020	10,000,000	2.58%	2.65%	
Macquarie Bank	A+	TD	11/05/2020	10,000,000	2.58%	1.55%	
ING	A	TD	21/05/2020	10,000,000	2.58%	2.70%	
Rural Bank	BBB+	TD	3/06/2020	10,000,000	2.58%	1.94%	
Macquarie Bank	A+	TD	3/06/2020	10,000,000	2.58%	1.60%	
NSW Treasury Corp	AAA	TD	3/06/2020	807,000	0.21%	1.43%	
Australia New Zealand Banking Group	AA-	TD	4/06/2020	5,000,000	1.29%	1.25%	
Macquarie Bank	A+	TD	17/06/2020	10,000,000	2.58%	1.85%	
Suncorp-Metway Limited	A+	TD	17/06/2020	5,000,000	1.29%	1.65%	
Macquarie Bank	A+	TD	17/06/2020	10,000,000	2.58%	1.60%	
Australia New Zealand Banking Group	AA-	TD	6/07/2020	10,000,000	2.58%	1.23%	
Macquarie Bank	A+	TD	13/07/2020	10,000,000	2.58%	1.85%	
ING	A	TD	20/07/2020	5,000,000	1.29%	1.60%	
ING	A	TD	21/07/2020	5,000,000	1.29%	1.60%	
Macquarie Bank	A+	TD	7/08/2020	10,000,000	2.58%	1.55%	
National Australia Bank	AA-	TD	17/08/2020	10,000,000	2.58%	1.55%	
Bendigo and Adelaide Bank	BBB+	FRN	18/08/2020	4,007,532	1.03%	2.00%	
Australia New Zealand Banking Group	AA-	TD	4/09/2020	10,000,000	2.58%	1.21%	
Rabobank Australia Branch	A+	TD	7/09/2020	5,000,000	1.29%	3.50%	
National Australia Bank	AA-	TD	15/09/2020	10,000,000	2.58%	1.55%	
Bank of Queensland	BBB+	TD	21/09/2020	10,000,000	2.58%	1.62%	
National Australia Bank	AA-	TD	28/09/2020	10,000,000	2.58%	1.50%	
National Australia Bank	AA-	TD	6/10/2020	10,000,000	2.58%	1.48%	
National Australia Bank	AA-	TD	12/10/2020	10,000,000	2.58%	1.48%	
Suncorp-Metway Limited	A+	FRN	20/10/2020	4,515,719	1.16%	2.10%	
Suncorp-Metway Limited	A+	FRN	20/10/2020	501,747	0.13%	2.10%	
National Australia Bank	AA-	TD	10/12/2020	5,000,000	1.29%	2.80%	
Westpac Banking Corporation	AA-	TD	10/12/2020	10,000,000	2.58%	2.90%	
Unity Bank	Unrated	TD	15/02/2021	1,000,000	0.26%	1.65%	
MyState Bank	BBB+	TD	4/03/2021	5,000,000	1.29%	1.50%	
Westpac Banking Corporation	AA-	TD	21/06/2021	10,000,000	2.58%	3.06%	
Rabobank Australia Branch	A+	TD	5/07/2021	10,000,000	2.58%	2.92%	
Bank of Queensland	BBB+	TD	26/08/2021	10,000,000	2.58%	1.75%	
Westpac Banking Corporation	AA-	FRTD	26/11/2021	5,000,000	1.29%	1.67%	
Newcastle Permanent Building Society	BBB	FRN	24/01/2022	10,085,120	2.60%	2.54%	
Rabobank Australia Branch	A+	TD	12/12/2022	10,000,000	2.58%	3.18%	
Westpac Banking Corporation	AA-	FRTD	27/11/2023	5,000,000	1.29%	1.78%	
Bank of Queensland	BBB+	TD	26/09/2024	10,000,000	2.58%	2.00%	
NSW Treasury Corp	AAA	BOND	20/03/2025	2,033,684	0.52%	1.25%	
NSW Treasury Corp	AAA	BOND	15/11/2028	17,172,285	4.43%	3.00%	
<b>Total Term Deposit &amp; Bonds</b>				<b>353,222,216</b>	<b>91.09%</b>		
<b>TOTAL PORTFOLIO</b>				<b>387,790,430</b>	<b>100.00%</b>		

Green Investments

## 4.6 Investment Report for February and March 2020

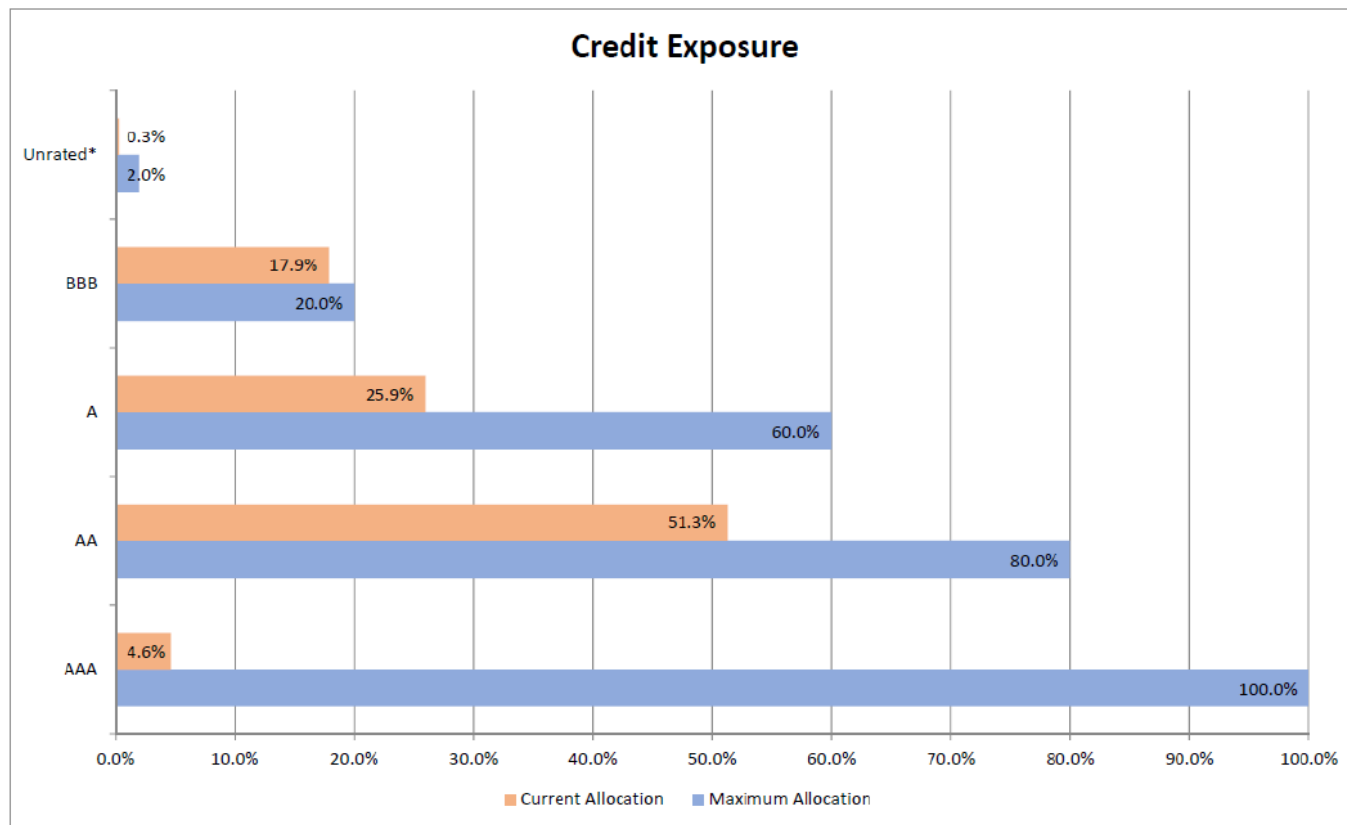
Attachment 4

Summary of Proposed Restrictions at 31 March 2020

### SUMMARY OF RESTRICTIONS as at 31 March 2020

FUND	SOURCE	Principal Amount \$'000
<b>GENERAL FUND</b>	Developer contributions	84,935
	Developer contributions – bonus provisions	5,029
	Developer Contributions – Sec 94A Levy	15,203
	Developer contributions – VPA	2,631
	Specific purpose unexpended grants	11,354
	Self insurance claims	5,976
	Stormwater Levy	790
	RMS Advance	289
	Holiday Parks	10,304
	Cemeteries	739
	Coastal Open Space	6,396
	Bio Banking	301
	Crown Land Business Enterprises	787
	Crown Land Patonga Camping Ground	912
	Other External	586
	Terrigal Tourism Special Rate Levy	1,479
	Tourism Special Rate	2,701
	Gosford CBD Special Rate Levy	292
	Gosford Parking Station Special Rate Levy	1,254
	The Entrance Town Centre Special Rate Levy	99
	Toukley Town Centre Special Rate Levy	83
Wyong Town Centre Special Rate Levy	6	
	<b>TOTAL GENERAL FUND RESTRICTIONS</b>	<b>152,148</b>
<b>Water FUND</b>	Developer contributions	39,244
	Developer contributions – VPA	1,034
	Specific purpose unexpended grants	2,456
	Self insurance claims	798
	Other External	45
	<b>TOTAL WATER FUND RESTRICTIONS</b>	<b>43,577</b>
<b>SEWER FUND</b>	Developer contributions	22,002
	Developer contributions – VPA	485
	Self insurance claims	2,131
	<b>TOTAL SEWER FUND RESTRICTIONS</b>	<b>24,618</b>
<b>DRAINAGE FUND</b>	Developer contributions	32,893
	Developer contributions – VPA	1,344
	Specific purpose unexpended grants	77
	Other External	100
	<b>TOTAL DRAINAGE FUND RESTRICTIONS</b>	<b>34,415</b>
<b>DOMESTIC WASTE FUND</b>	Specific purpose unexpended grants	1,332
	Domestic Waste Management	71,133
	<b>TOTAL WASTE FUND RESTRICTIONS</b>	<b>72,464</b>
<b>TOTAL EXTERNALLY RESTRICTED FUNDS</b>		<b>327,222</b>
<b>GENERAL FUND</b>		105,249
<b>Water FUND</b>		873
<b>SEWER FUND</b>		955
<b>DRAINAGE FUND</b>		66
<b>DOMESTIC WASTE FUND</b>		0
<b>INTERNALLY RESTRICTED FUNDS</b>		<b>107,143</b>

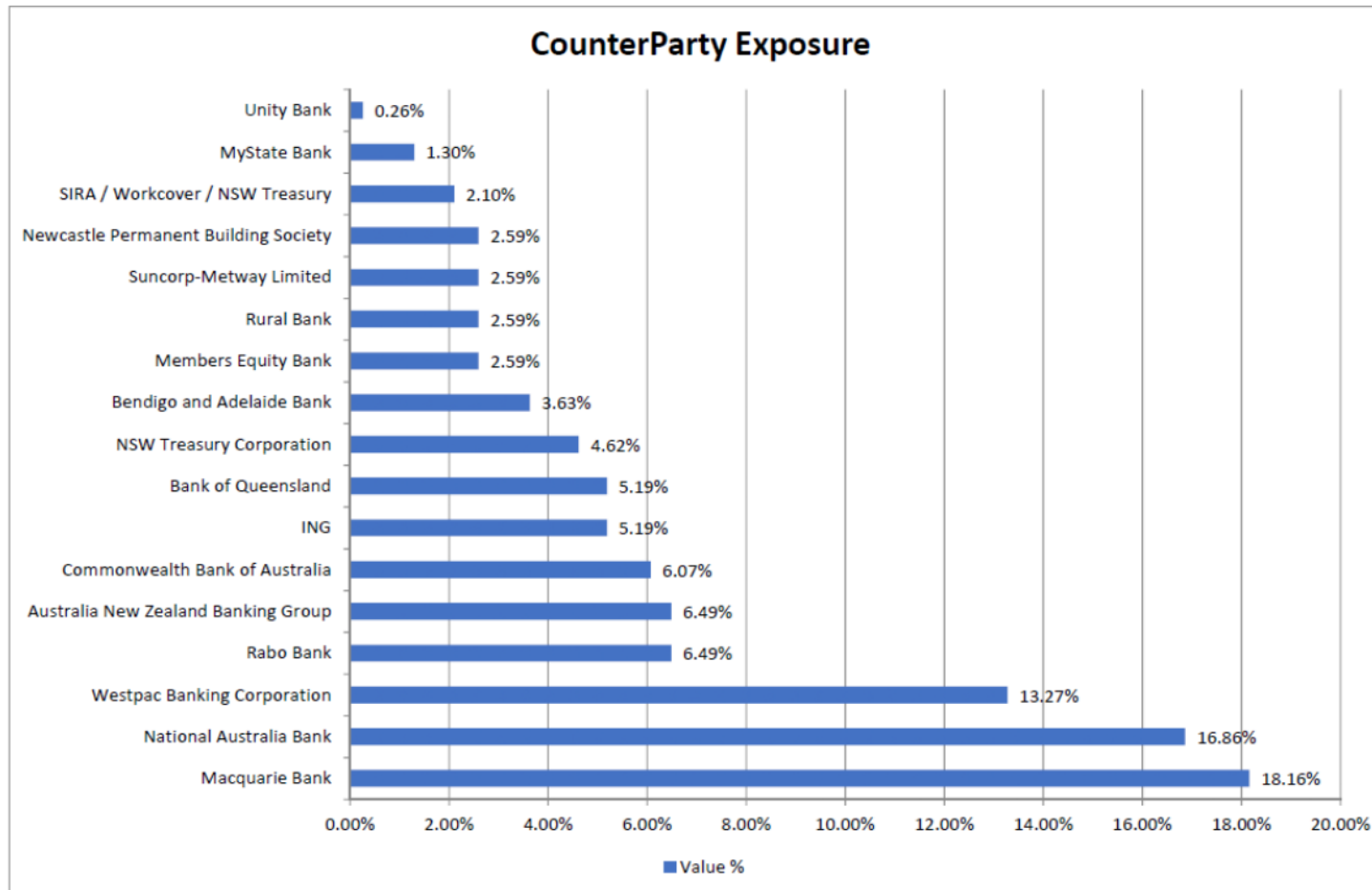
Graph 1 – Credit Exposure



\* **AA:** Council has provided security for self-insurance by way of a term deposit invested in an ADI through State Insurance Regulatory Authority (formerly WorkCover NSW). This security has been included as part of the investment portfolio.

\*\* **Unrated:** Unrated investment comprises of a term deposit with Central Coast Credit Union

Graph 2 – Counterparty Exposure

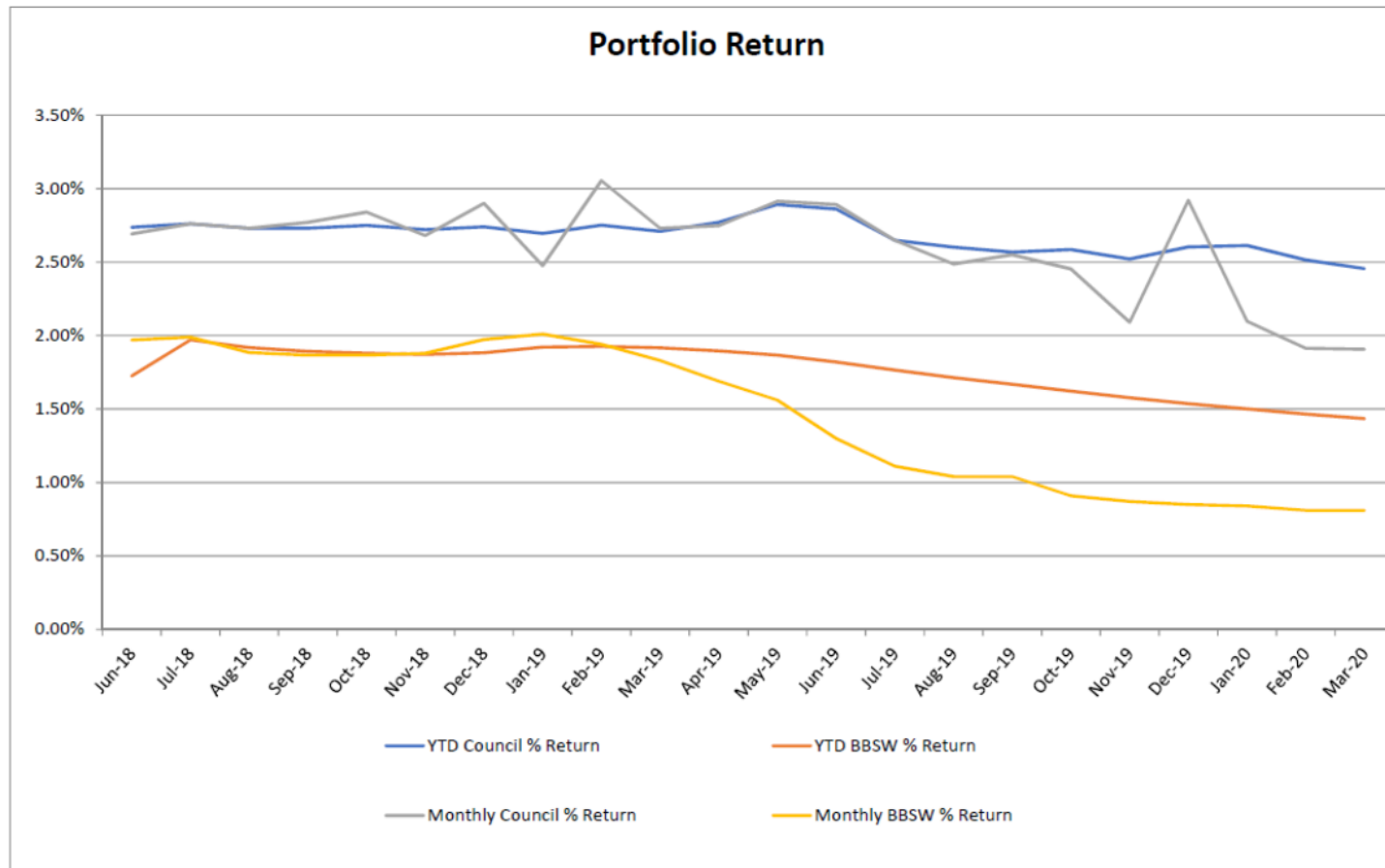


## 4.6 Investment Report for February and March 2020

Attachment 5

Investment Report for March 2020 - Graph 1, 2 & 3

Graph 3 – Portfolio Return



### **DREDGING REPORT**

This report considers the dredging requirements for the relevant waterways of the Central Coast, being The Entrance Channel and Ettalong. It is acknowledged that Council has undertaken or considered dredging programs at other locations in the past as well, these locations have not been discussed in detail in the development of this report as the current relevant dredging locations for discussion are the Entrance Channel and Ettalong.

The report also provides an overview of the dredging requirements, legal responsibility and relevant actions for dredging in these locations.

All the navigational waterways within the Central Coast Local Government Area (LGA) which have had maintenance dredging undertaken or considered are:

- The Entrance Channel, Tuggerah Lakes, The Entrance
- Ettalong Channel (Little Box Head to Half Tide Rocks), Brisbane Water, Ettalong

## 4.7 Dredging on the Central Coast

### Attachment 1

### Dredging Report

**Table 1: Summary of dredging assessment and recommendation**

Location	Drivers	History of dredging	Legal Obligation	Drivers	Current feasibility of dredging	Recommendations
The Entrance Channel	Navigability for boating activity in The Entrance area alone.	Every 2 or 3 years since 1993 east of bridge (clean sand). In early 1900s west of bridge – channel dredged between boat shed and main lake (mud)	Crown	Several: navigation, aesthetics, estuary health, flooding.	<ul style="list-style-type: none"> <li>• Moderate cost</li> <li>• Moderate environmental risks</li> <li>• Feasible</li> </ul>	<ul style="list-style-type: none"> <li>• Dredging as outlined in the GHD report has been found to have limited benefits for each of the drivers.</li> <li>• Investigate a channel opening procedure (similar to coastal lagoons) together with ongoing monitoring,</li> <li>• Postpone any long term decisions on dredging or replacement of the Council owned dredge until review by NSW Gov. expert panel and development of the new Coastal Management Program has been completed.</li> <li>• Utilise a contract dredge for any short term dredging requirements.</li> </ul>
Ettalong (Little Box Head to Half Tide Rocks)	Navigability to and from Brisbane Water	2009, 2017, 2018 (clean sand)	Crown, RMS	Navigation	<ul style="list-style-type: none"> <li>• Moderate cost</li> <li>• Low environmental risks</li> <li>• Feasible</li> </ul>	Council to complete the follow up dredging as per the 'Rescuing Our Waterways' funding agreement.
Within Brisbane Water	Navigability within Brisbane Water	Early to mid-1900s (mud)	Crown, RMS	Navigation	<ul style="list-style-type: none"> <li>• High cost</li> <li>• High environmental risks</li> <li>• Not feasible</li> </ul>	Dredging not feasible



## 4.7 Dredging on the Central Coast

### The Entrance Channel, Tuggerah Lakes, The Entrance

#### The 2018 Dredging Program at The Entrance Channel

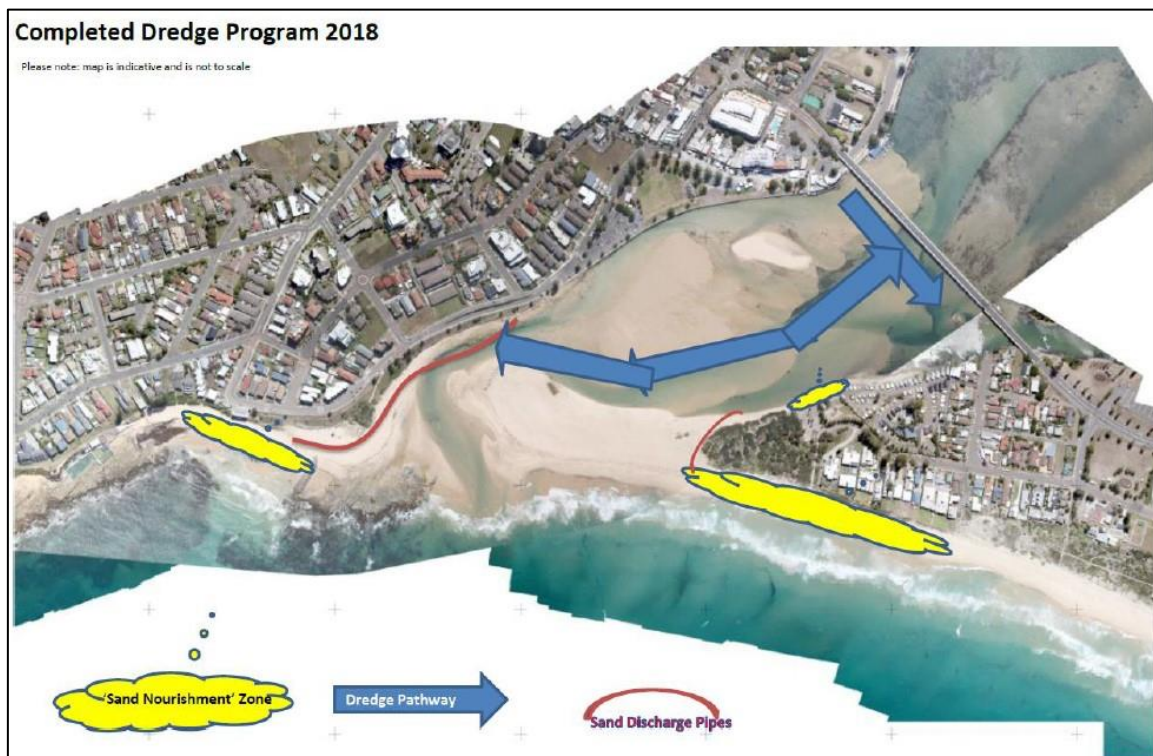
Following the most recent dredging program completed in December 2018, a post-dredging hydrographic survey was conducted and completed.

Dredging was undertaken during 2018 due to the sand shoals within the channel restricting the ebb tide dominant channel along the north/eastern side. In addition, sand from dredging was used to nourish The Entrance Beach following the construction of the rock groyne by the NSW Government.

This dredging program was carried out at a cost of \$1.019 million. This included \$225,000 'Rescuing Our Waterways' grant and a \$99,000 contract with the Crown (to place sand on The Entrance Beach following NSW Government construction of the rock groyne).

The dredging program ran from April to November 2018 with approximately 40,000m<sup>3</sup> of sand dredged and utilised for beach nourishment at The Entrance Beach and North Entrance Beach.

The dredged and nourished areas are shown in Figure 1. The dredge is not able to dredge the throat of the channel at the beach berm due to natural rock bar just below sea level, additionally this location is too dangerous due to waves and current actions.



**Figure 1.** The dredge pathways and sand nourishment areas (2018 program).

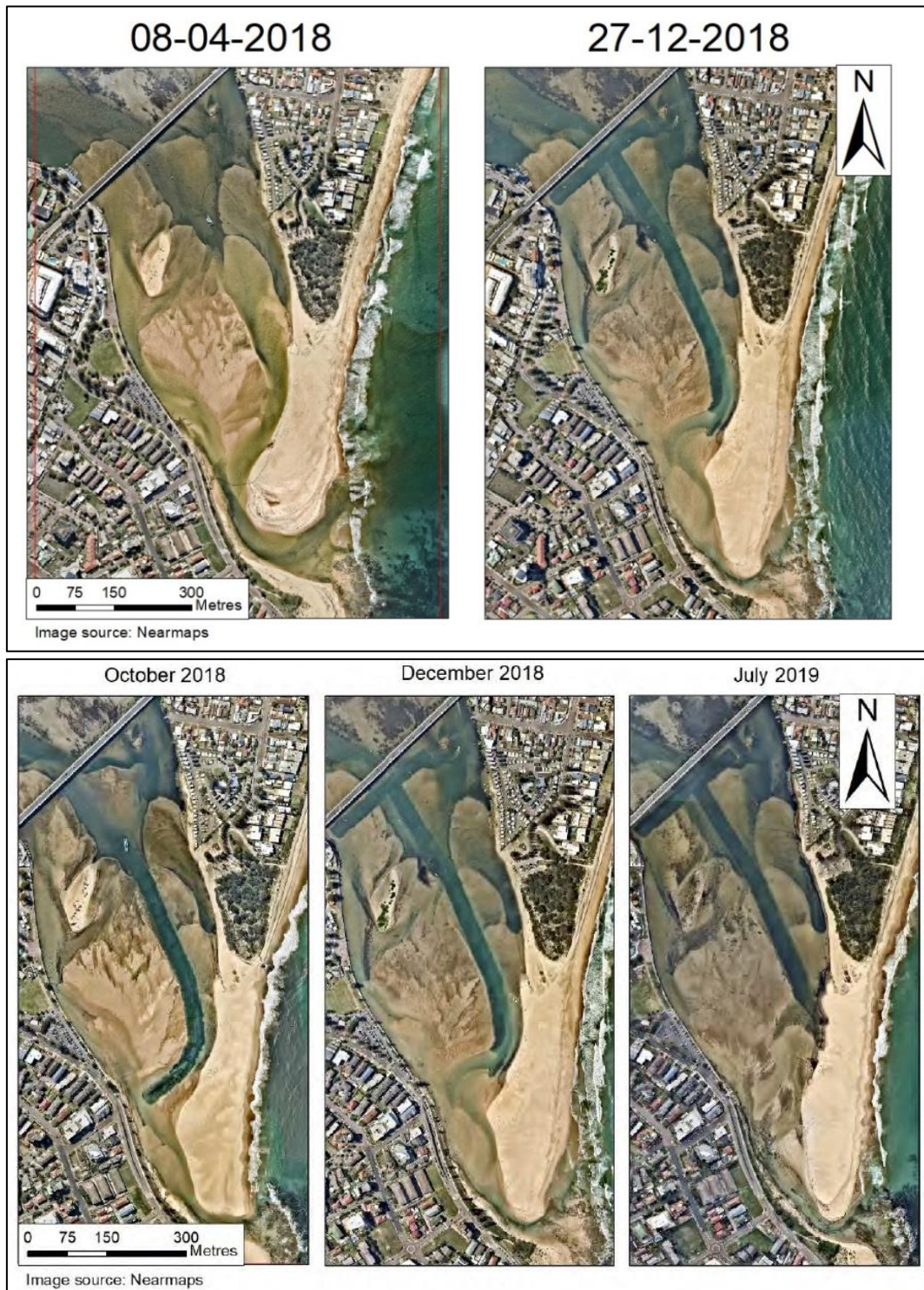
Aerial photos taken before and after the dredging program demonstrates the extent of the dredging works (Figure 2). It is noted that sand accumulation near the eastern most end of the channel (referred to as the throat) appears to be greater at the end of the program than

## 4.7 Dredging on the Central Coast

### Attachment 1

### Dredging Report

it was at the commencement of the program.



**Figure 2.** The Entrance Channel before and after dredging

### Legal Obligation for Dredging at The Entrance Channel

Council has both internal and external legal advice to the effect that Council is under **no statutory obligation** to dredge the bed of any waterway that is Crown Land.



## 4.7 Dredging on the Central Coast

---

### *Attachment 1*

### *Dredging Report*

Council must seek authority and relevant licensing to carry out any proposed dredging work, as it is not Council 'land', nor is it under Council care and control:

- The bed of Tuggerah Lake, including The Entrance channel, is a State-owned asset (NSW Dept of Planning, Industry and Environment - DPIE).
- Roads and Maritime Services (RMS) is the authorised agency responsible for navigation markers and ensuring that navigational channels are safe for boat users, and also raise revenue through boating activities via registration and licensing.
- NSW Department of Primary Industries (Fisheries) is responsible for what is in the water and the immediate foreshore, including fish and seagrass.
- The NSW Environmental Protection Authority (EPA) oversees and regulates any licenses that may be required to dredge, and any water pollution incidents that may occur as a result of a dredging program.
- Council is aware that the NSW State Government also completes dredging for many Councils including dredging in the Swansea channel at Lake Macquarie with no funding required from Lake Macquarie Council. The NSW Government have not identified The Entrance or Tuggerah Lakes as a Key Investment Location or a Priority Regional Location in the NSW Coastal Dredging Strategy 2019-2024. Locations that are considered key investment locations include:
  - Forster/ Tuncurry – Entrance channel to Point Road moorings
  - Port Stephens – Entrance channel at and within Nelson Bay boat harbour
  - Swansea Channel from ocean entrance to Marks Point

### Requirements/Drivers for Dredging

Dredging at The Entrance channel was initially undertaken in order to assist in meeting the following objectives:

- Maintaining an exchange of water between the Tuggerah Lakes estuary and the ocean
- Preserving the existing ecological values of the Tuggerah Lakes estuary
- Reducing flood risks to life and property in low-lying areas around the Tuggerah Lakes estuary
- Providing sand nourishment to aid in coastal protection against erosion of the North Entrance and Entrance beaches
- Enhancing navigation within the channel

The current indicators for dredging, as identified in the current approved Review of Environmental Factors (Worley Parsons, 2009) include:

- The throat of the channel (near the southern tip of the sand spit) at The Entrance reduces to an estimated width of less than 15 metres measured at mid tide level.
- The flood tide sand shoals threaten to block the ebb tide dominant channel along the northern/eastern side of the entrance area and/or
- The flood tide shoals threaten to block the main channel east of the bridge.

## 4.7 Dredging on the Central Coast

Not all indicators have to be met to initiate the dredging program.



**Figure 3.** Key locations where triggers for dredging at The Entrance Channel are considered

In terms of reducing flood risks, the Tuggerah Lakes Floodplain Risk Management Study and Plan (TLFRMP) identifies that although the REF mentions flood risk several times there is no quantitative assessment of the benefit of the dredging program in relation to flood risk. The TLFRMP identifies that dredging will not adversely affect flooding except for potentially in an elevated ocean event with large waves that may enter the entrance more. The TLFRMP also advises that it is difficult to determine the benefits of dredging for flooding, and that dredging cannot be used as a means of lowering the design flood levels adopted for flood related development control purposes. The TLFRMP provides an indicative assessment that dredging of The Entrance Channel, via indicative assessment, may provide for a less than 30mm reduction in peak level, and maybe a 6 hour reduction in duration of inundation.

The TLFRMP concludes that there is very limited justification for dredging of the entrance to Tuggerah Lakes in terms of reducing flood damages and that other measures may provide a greater benefit cost ration in reducing flood damages. Despite the actual benefits being less significant, the intangible benefits in appeasing the broader community's concerns through delivery of a recurrent dredging program cannot be ignored.

Current status of The Entrance channel (as at February 2020)

## 4.7 Dredging on the Central Coast

### Attachment 1

### Dredging Report

Recently the throat of the channel (the narrowest point of the channel where the estuary meets the ocean) has been approximately 20 metres wide, which is common. It has been narrower where water spills out at various points on the rock shelf, but the average throat measurement is taken in the mobile sandy section of Karagi sandspit. The current state of the channel at The Entrance is typical of what historically has been experienced during prolonged period of reduced catchment rainfall.

There is currently some shoaling upstream of the road bridge at The Entrance affecting navigability of the waterway for boating generally and specifically in the vicinity of The Entrance Boatshed. A review of more recent aerial photography by staff has identified that this shoal had started to form following the June 2016 storm, due to migration of sand from the east of the channel, when a second channel was created at The Entrance. The increased flow through the channel caused the migration of the flood tide delta pushing sand further west into the area near the boat shed. Since the dredging of the sump in 2018 the movement of sand west has been halted.

Note, the current Crown Licence 368371 does not permit dredging within 15 metres of bridge pylons and 10 metres within jetty, wharves and moorings and this would assist in sand migration on the south western side of the bridge.

#### Funding Opportunities for Dredging Programs at The Entrance

Council staff have actively sought funding from the NSW Governments Rescuing Our Waterways Program. A summary of the grants received and applied for under this Program since 2015 are summarised in Table 2 below:

**Table 2: Central Coast Council dredging projects under Rescuing Our Waterways Program (since 2015)**

Project Name	Grant Amount	Funding Term	Status
The Entrance Channel Dredging Project	\$200,000	2015	Completed
The Entrance Channel Dredging Project	\$225,000	12/2017 – 12/2018	Completed
The Entrance Channel Dredging Project	\$600,000	12/2019-12/2020	Application submitted June 2019. Awaiting response.

For the 2019-20 financial year, a grant funding application under the Rescuing Our Waterways

## **4.7 Dredging on the Central Coast**

---

### ***Attachment 1***

### ***Dredging Report***

(ROW) program to dredge The Entrance Channel was submitted to The NSW Department of Planning, Industry and Environment (DPIE). The project application included a total estimated project cost of \$1,200,000 with Council seeking 50% contribution (\$600,000) from DPIE. Council is expecting a response to the application in December 2019 - early 2020.

#### Recommendations relating to dredging at The Entrance

A review of dredging at The Entrance was undertaken by GHD (See full report at Attachment 4). The work by GHD included a review of several previous technical studies. The review indicated that whilst dredging in The Entrance channel provides limited benefits for each of the drivers discussed it is an issue that has a high level of community interest and that there are a variety of strongly held and in many cases opposing views.

In the interim it was recommended to investigate an entrance opening procedure and policy (similar to that performed at the coastal lagoons) together with ongoing monitoring should the sand spit completely close off the channel to the ocean. The objective of this would be to ensure rainfall from the catchment can escape through the channel during a significant rain event, and to allow the channel to naturally scour and open.

It was recommended that additional investigations and stakeholder consultation be undertaken as part of the development of the new Coastal Management Program and advice of the NSW expert panel in determining the preferred long term option for management of The Entrance Channel. Further to this it was recommended that any major decisions on replacement of the Council owned dredge be postponed until the outcomes of the above are finalised. With Council to utilise a contract dredge for any short term dredging requirements.

At it's Ordinary Council meeting 25 November 2019 Council recently resolved to adopt the recommendations of the Coast and Catchments Committee Tuggerah Lakes of their meeting date of 28 August 2019:

- 2 *That Council note that a decision regarding acquisition of a new dredge will be deferred until the expert panel report due in December 2020 has been considered. This does not prevent Council from carrying out dredging work under contract if required. Alternative entrance management options at the sand berm are currently being considered by Council staff.*

### **Ettalong Channel (Little Box Head to Half Tide Rocks), Brisbane Water, Ettalong**

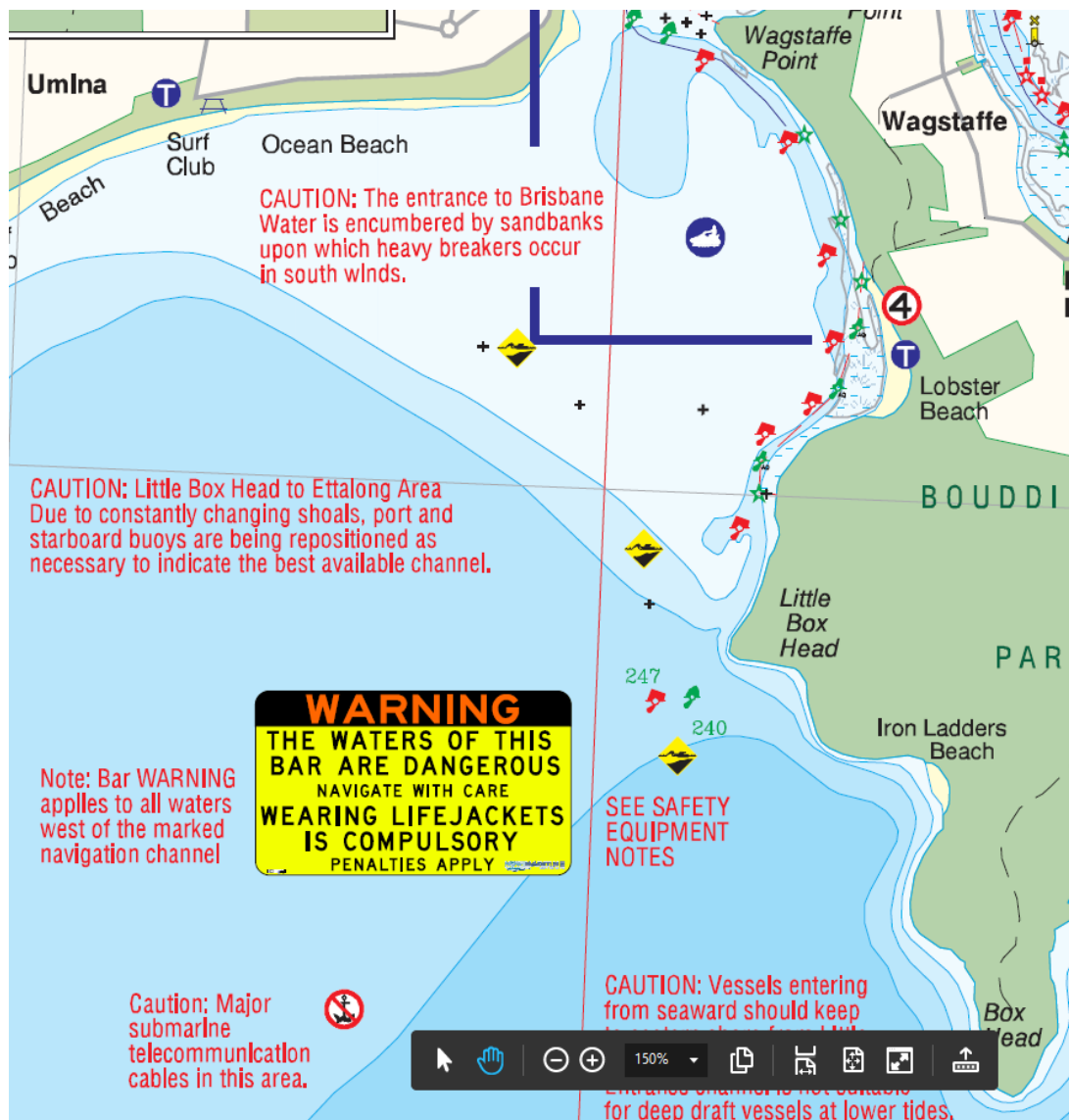
#### Description of the Waterway

The navigational channel into Brisbane Water is located immediately to the north of Little Box Head and generally follows the eastern shoreline up to Half Tide Rocks. The channels are a vital waterway connecting Brisbane Water to Broken Bay and Sydney's northern beaches.

Ettalong and Box Head Channels are the only entry point to Brisbane Water which is a tidal arm of Broken Bay. The channels are surrounded by coastal villages featuring commercial

## 4.7 Dredging on the Central Coast

enterprises and attracting recreational activities. The channel is used daily by commercial ferries and recreational boaters. Around 200,000 trips by tourists and residents were taken through the channel in 2016.



**Figure 4.** The channel at the entrance to Brisbane Water – Portion of RMS Boating Map (see full map at <https://www.rms.nsw.gov.au/maritime/using-waterways/maps/boating-maps.html>)

The Roads and Maritime Service (RMS) boating map is shown at Figure 4 and indicates navigational markers and a notation that it is a dangerous bar crossing. A number of historical aerial photographs from 1957 to 2016 are shown in Attachment 2 - Historical Aerial Photos – Brisbane Water and Tuggerah Lakes entrance channel at The Entrance, with the large sand shoal and the approximate width of the channel at Little Box Head shown. Note that some of these photos show the channel width to be narrower than it has been in more recent years.



## **4.7 Dredging on the Central Coast**

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### ***Attachment 1***

### ***Dredging Report***

Historical records available to Council indicate that the entrance to Brisbane Water has always been much as it is today. The large shoal of sand between Little Box Head and Ettalong Point, termed the Ettalong Point Shoal, is a natural geomorphic feature. There are very early reports of this shoal in the journal accounts of Lieutenant William Bradley from expeditions in 1788. It also features in Captain Hunter's chart from the same time.

Flooding within Brisbane Water Estuary is dominated by ocean surge associated with each high-tide cycle during East Coast Lows. Dredging of the Little Box Head to Half-tide rocks part of the channel will not reduce flooding within the estuary, but rather, it is more likely to exacerbate flooding.

#### Requirements/Drivers for Dredging at The Ettalong Channel

The entrance channel to Brisbane Water is reported to have narrowed and become shallower and unsafe as a result of sand movement from the sand shoal off Ettalong Point and the broader waterway. While the seabed of Broken Bay is owned by the NSW Government, Council has resolved to work with the NSW Government on a long-term solution regarding maintenance of a navigable channel into Brisbane Water.

Many local residents use the ferry link between Ettalong and Palm Beach to go to school or work. The operator of the Palm Beach Ferries continues to alert Council and Government authorities to the navigational issues that the ferry service encounters in the entrance to the channel.

Council has received numerous requests from a broad range of community and commercial groups, industry representatives, and private maritime operators for decisive action to be taken, to rectify this issue.

The community is also concerned that sedimentation at the entrance to Brisbane Water has impacts on the tidal flushing of the estuary upstream of this point, and also that tidal velocity in the main channels decreases resulting in reduced scour, thereby exacerbating the sedimentation issues throughout the channels in the estuary.

#### Legal Responsibility for Dredging

As discussed previously Council has both internal and external legal advice to the effect that Council is under no statutory obligation to dredge the bed of any waterway that located on Crown Land.

#### Existing Council Resolutions/strategies/plans requiring dredging by Council

The Brisbane Water Estuary CZMP was adopted by Gosford Council in 2015. The Plan includes Action W18 – *Periodically dredge the navigation channel up to 50,000m<sup>3</sup> in the Estuary entrance to ensure safe navigation.* This Action was assigned to the NSW Government as having the Primary Responsibility for this action, however Council resolved to apply for funding for dredging under the 'Rescuing Our Waterways' grant program.

### History of Dredging at The Ettalong Channel

The channel was previously dredged using a sweeper dredge by the former Gosford City Council in the summer of 2009/10. The sweeper dredge moved approximately 30,000 cubic metres of sand away from the main navigation channel. The NSW Government, through the Rescuing Our Waterways fund, contributed 50% of the funding. The total cost was \$360,000 which equates to approximate costs of or \$12/m<sup>3</sup>. Note that this was the cost of dredging clean marine sand that was 'side cast' onto the shoal and did not require any treatment or disposal as would occur in estuarine areas such as Ourimbah Creek or Tumbi Creek.

Together with other approvals and permits, Council obtained a licence under the then *Crown Lands Act* to undertake the dredging. The objective of the dredging campaign was to produce a navigation channel 30m wide and 2.5m deep at the lowest astronomical tide.

Dredging in Broken Bay is effectively open ocean and different equipment is required to that at The Entrance. The dredge used at The Entrance has not been placed in a class of maritime survey that would allow it to be used at this location.

### Recent Dredging at The Ettalong Channel

During 2017, the NSW Government (Department of Industry –Lands) dredged approximately 3,000 m<sup>3</sup> of sand from the channel in two 'emergency dredging' exercises. This was reported to have cost \$150,000 on each occasion. A third 'emergency dredging' exercise was completed by the NSW Government in 2018.

In 2018 Council resolved to lodge an application for funding for dredging under the 'Rescuing Our Waterways' program. Once this 50% funding agreement was signed the NSW Government offered to continue with the same contractor used for the 'emergency dredging' so as to reduce the mobilisation and demobilisation costs of equipment. This continuation of dredging commenced in May 2019 and was funded from approximately \$1 million of the NSW Governments total \$1.225 million contribution to the funding agreement. The NSW Government completed the dredging using the same contractor that they used for their initial "emergency" dredging in 2018. This dredging was completed in October 2019 with approximately 22,000 cubic metres of sand removed from the navigation channel and 10,000 cubic metres of this sand placed on Ocean Beach for nourishment purposes. This equates to approximately \$45 per cubic metre.

Agreement was been reached between Council and the NSW Government, that the funding for Broken Bay – Ettalong be split across two dredging campaigns. The first campaign was undertaken in 2019 and was managed by the NSW Government. The second follow up dredging campaign is to be completed by Council in the financial year 2020/21 (should the channel require dredging by this time).

### Recommendations relating to dredging at The Ettalong Channel

## **4.7 Dredging on the Central Coast**

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### ***Attachment 1***

### ***Dredging Report***

A follow up dredging campaign utilising the Council 50% funding contribution and the remainder of the NSW Government contribution (\$1.450 million total) is earmarked to occur during 2020/21 should it be required for navigation. Council staff have included this in the initial 2020/21 draft Council budget preparation process.

Council staff intend to work with the NSW Government to monitor the depths and width of the channel to provide sufficient lead time to engage contracted resources to undertake the dredging if and when required.

Beyond completion of the follow up dredging in 2020/21 under the Rescuing Our Waterways funding agreement Council has not resolved to apply for further funding to undertake future dredging requirements.

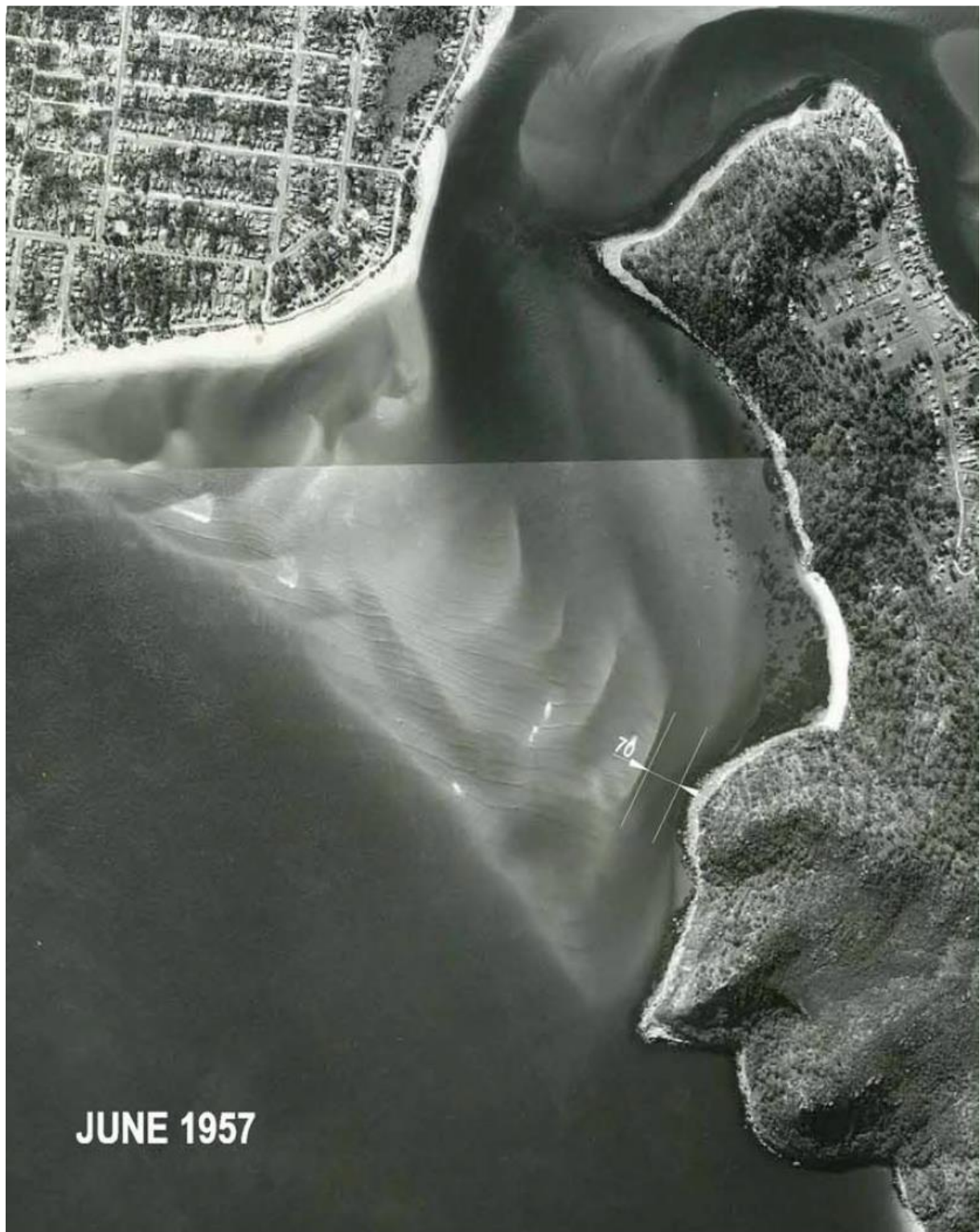
## 4.7 Dredging on the Central Coast

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### *Attachment 2      Historical Aerial Photos Brisbane Water and Tuggerah Lakes Entrance Channel at The Entrance*

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*Attachment 2 – Historical Aerial Photos – Brisbane Water*



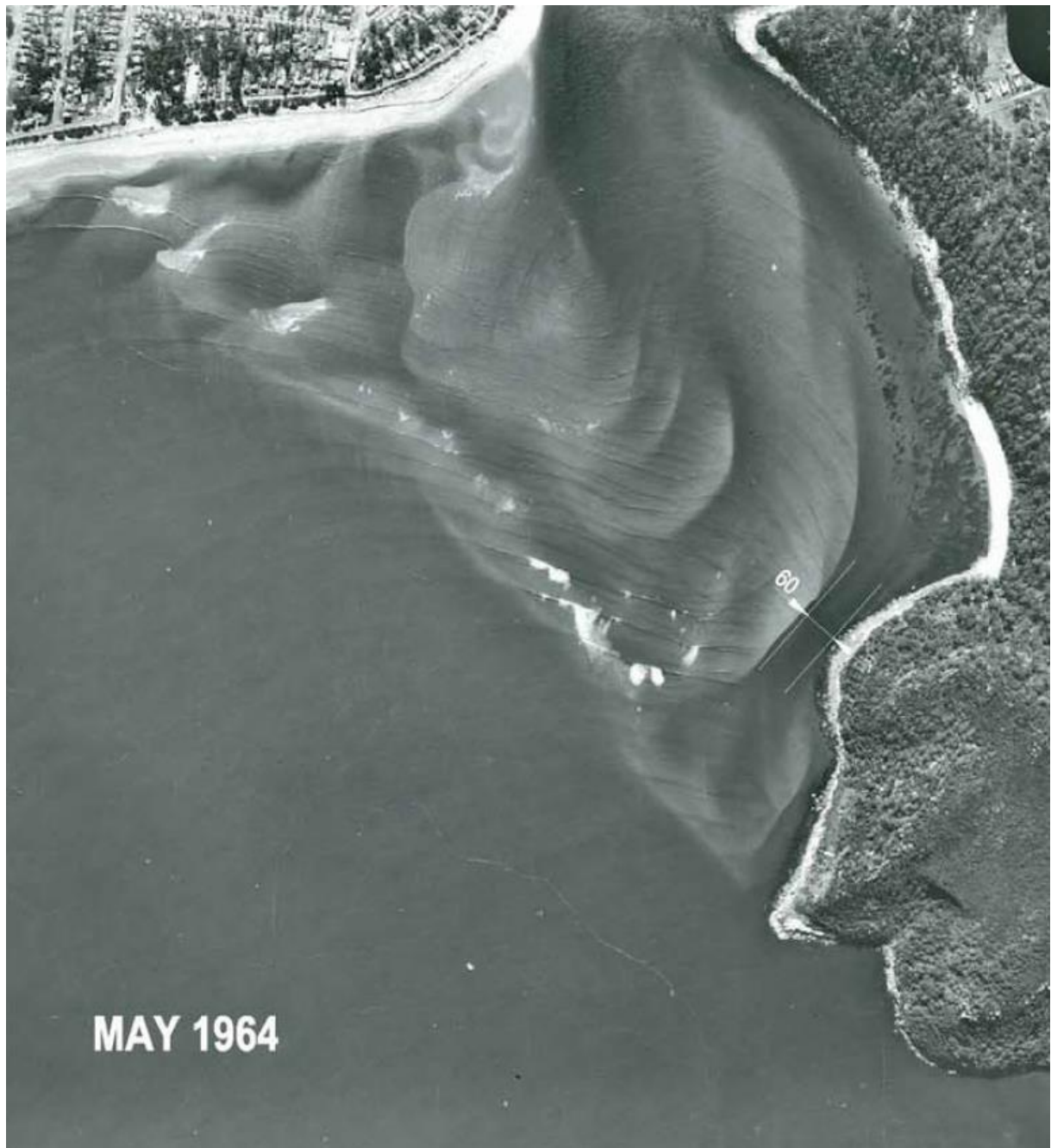
## 4.7 Dredging on the Central Coast

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*Attachment 2*

*Historical Aerial Photos Brisbane Water and Tuggerah Lakes Entrance  
Channel at The Entrance*

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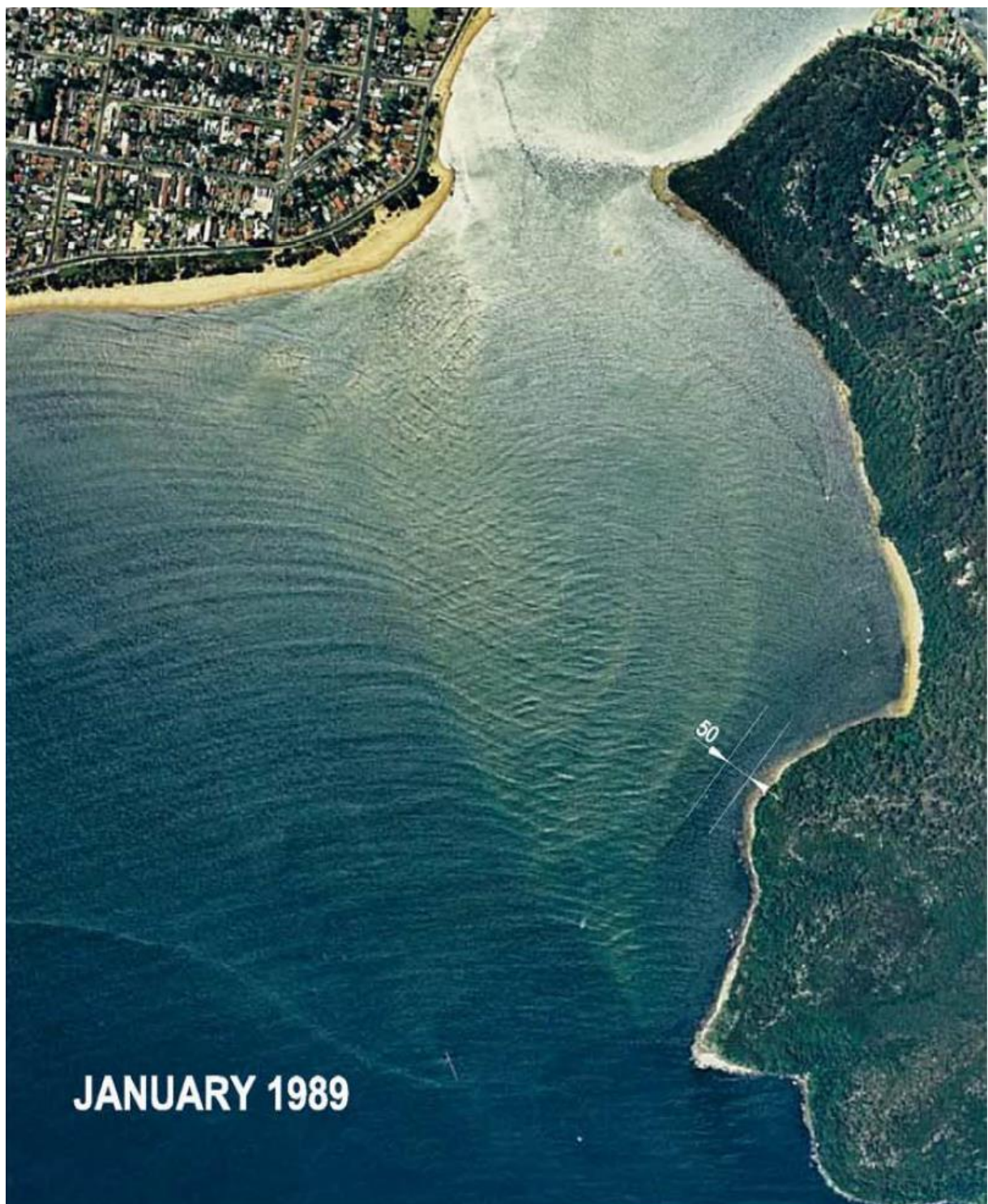




## 4.7 Dredging on the Central Coast

Attachment 2

*Historical Aerial Photos Brisbane Water and Tuggerah Lakes Entrance  
Channel at The Entrance*



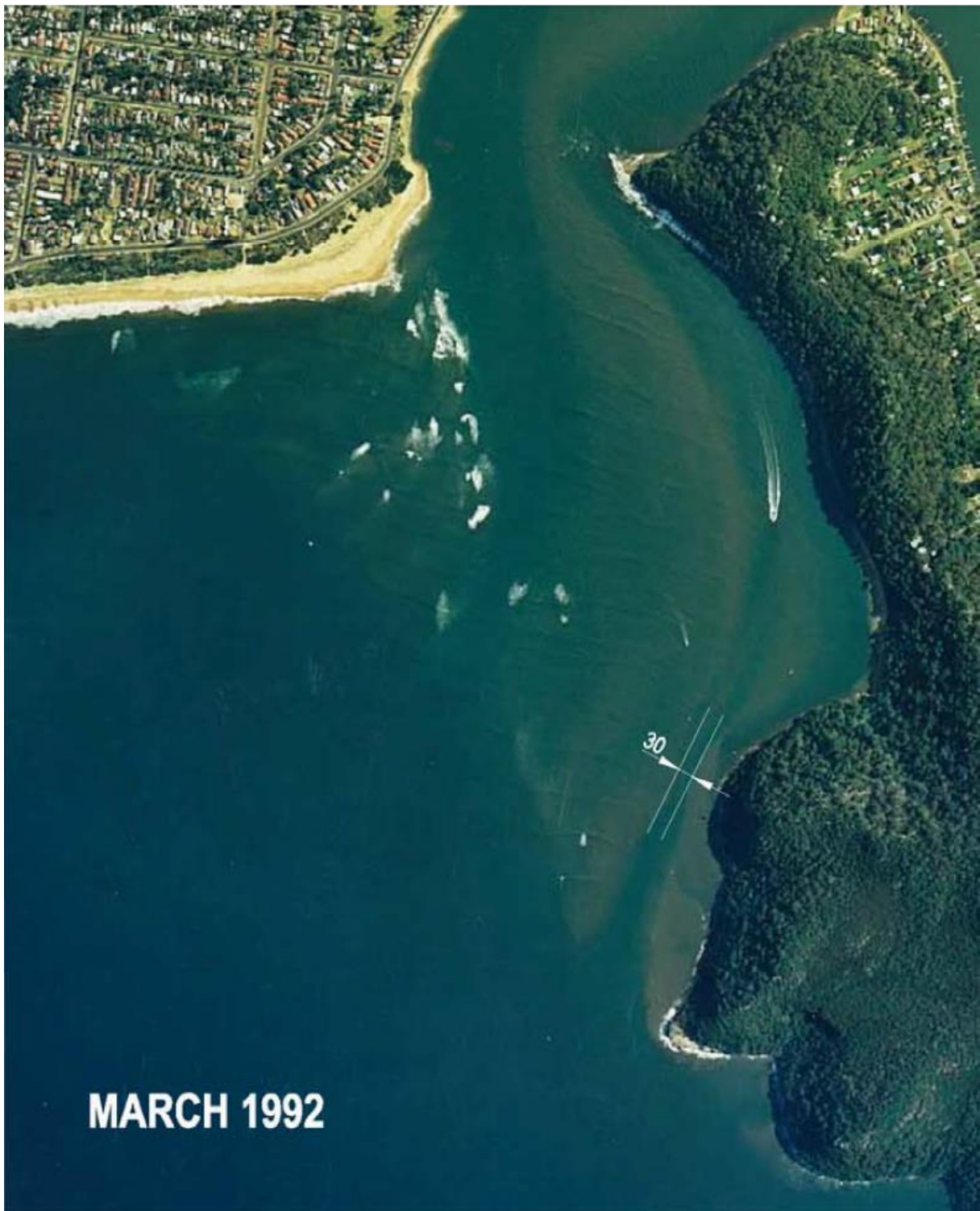
## 4.7 Dredging on the Central Coast

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Attachment 2

*Historical Aerial Photos Brisbane Water and Tuggerah Lakes Entrance  
Channel at The Entrance*

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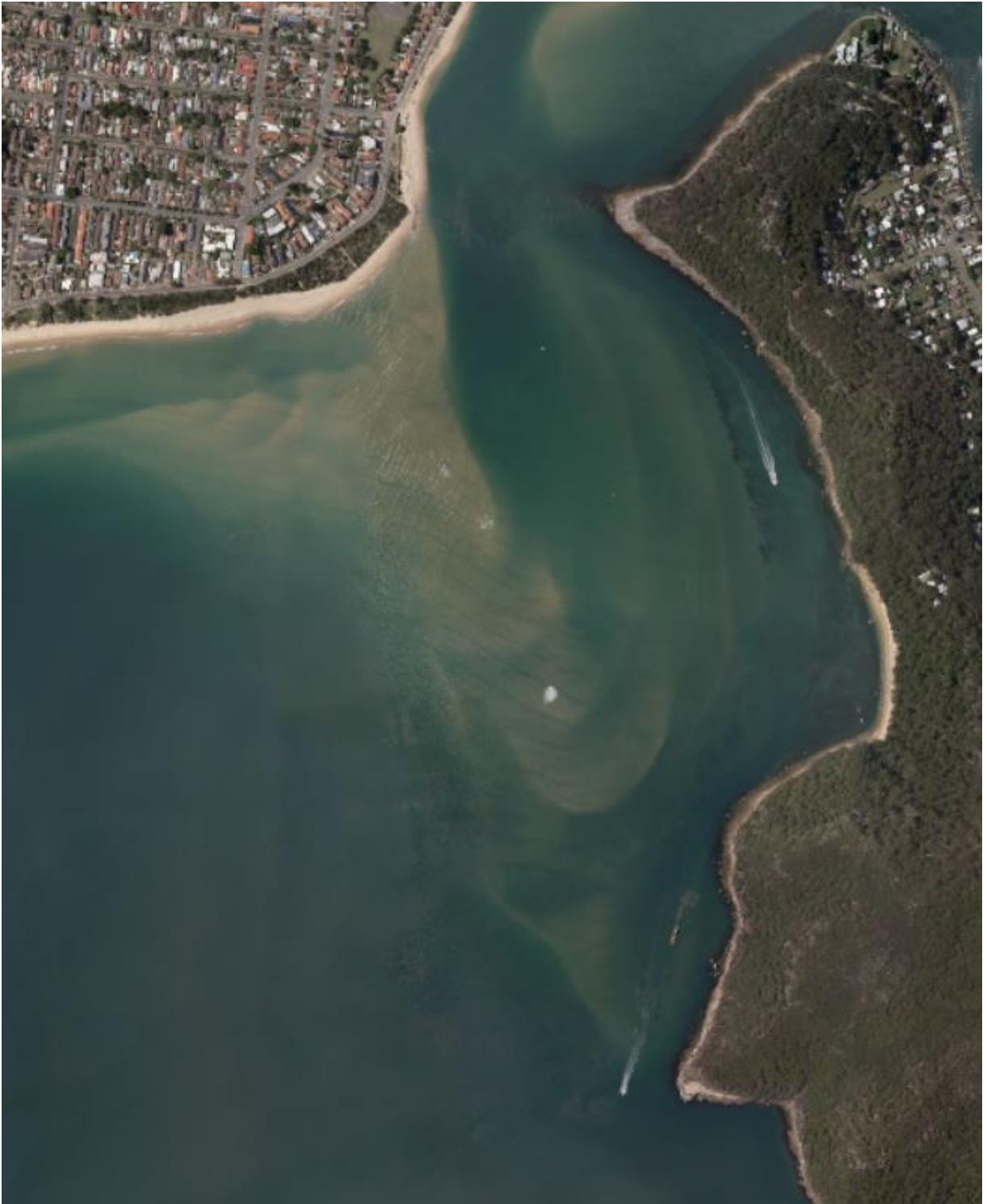
## 4.7 Dredging on the Central Coast

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*Attachment 2*

*Historical Aerial Photos Brisbane Water and Tuggerah Lakes Entrance  
Channel at The Entrance*

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2010

## 4.7 Dredging on the Central Coast

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*Attachment 2*

*Historical Aerial Photos Brisbane Water and Tuggerah Lakes Entrance  
Channel at The Entrance*

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2012

## 4.7 Dredging on the Central Coast

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*Attachment 2*

*Historical Aerial Photos Brisbane Water and Tuggerah Lakes Entrance  
Channel at The Entrance*

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2014



## 4.7 Dredging on the Central Coast

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*Attachment 2*

*Historical Aerial Photos Brisbane Water and Tuggerah Lakes Entrance  
Channel at The Entrance*

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2015

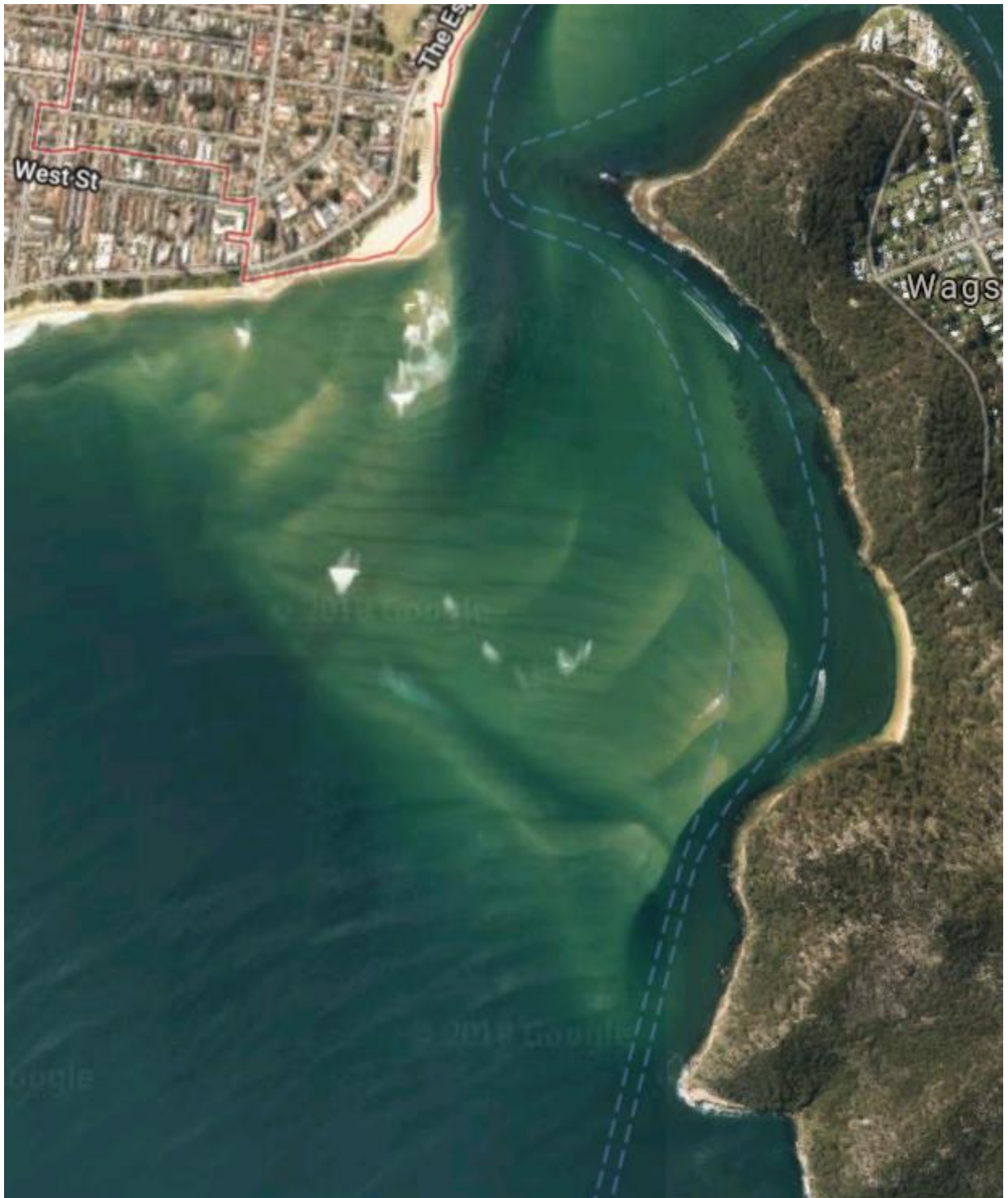
## 4.7 Dredging on the Central Coast

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Attachment 2

*Historical Aerial Photos Brisbane Water and Tuggerah Lakes Entrance Channel at The Entrance*

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**2017 (Google Maps Image)** Attachment 2 – Historical Aerial Photos – Tuggerah Lakes entrance channel at The Entrance



## 4.7 Dredging on the Central Coast

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Attachment 2

*Historical Aerial Photos Brisbane Water and Tuggerah Lakes Entrance  
Channel at The Entrance*

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2003



## 4.7 Dredging on the Central Coast

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Attachment 2

*Historical Aerial Photos Brisbane Water and Tuggerah Lakes Entrance  
Channel at The Entrance*

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2006



## 4.7 Dredging on the Central Coast

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Attachment 2

*Historical Aerial Photos Brisbane Water and Tuggerah Lakes Entrance  
Channel at The Entrance*

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2010



## 4.7 Dredging on the Central Coast

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Attachment 2

*Historical Aerial Photos Brisbane Water and Tuggerah Lakes Entrance  
Channel at The Entrance*

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2012



## 4.7 Dredging on the Central Coast

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Attachment 2

*Historical Aerial Photos Brisbane Water and Tuggerah Lakes Entrance  
Channel at The Entrance*

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2014



## 4.7 Dredging on the Central Coast

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Attachment 2

*Historical Aerial Photos Brisbane Water and Tuggerah Lakes Entrance  
Channel at The Entrance*



2016



10 January 2020

Mr Adam Crouch MP  
PO Box 3618  
ERINA NSW 2250

Dear Mr Crouch,

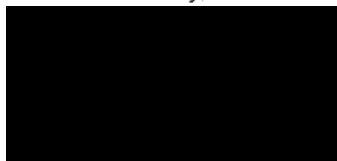
**Closure of Iconic Entrance Boatshed**

At its Ordinary Council Meeting of 9 December 2019, Council in consideration of Item 8.3, Notice of Motion "Closure of Iconic Entrance Boatshed" resolved:

*1331/19 That Council request the Chief Executive Officer to write to Adam Crouch MP, Member for Terrigal, for advice as to whether a portion or all of the \$1.4 million in funding left over from dredging the Ettalong Channel can be diverted to fund dredging of The Entrance Channel as an interim solution.*

In accordance with Council's resolution, could you please advise of any further information in relation to this funding.

Yours faithfully,



Scott Cox  
**Director**  
**Environment and Planning**





**Central Coast Council**

The Entrance Channel Dredging Operations  
Feasibility Review

Final Report

August 2019

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# 1. Introduction

## 1.1 Background

Central Coast Council (Council) has owned and operated a small Cutter Suction Dredge (CSD) and associated discharge pipelines since 1992/1993. Since that time, the dredge has been used to undertake regular maintenance dredging (approximately every two years) of The Entrance sand shoals to improve navigability and tidal flushing.

Council staff operate the dredging equipment for six months during each maintenance dredging campaign. During the remaining eighteen months between dredging campaigns, these staff operate Council's wrack and algal collection equipment.

Given the relatively high costs of maintaining aging dredging equipment and the associated environmental, financial and reputational risks, Council has commissioned GHD to undertake a review of the current dredging and wrack collection programs.

## 1.2 Purpose of this report

This report documents the findings of the feasibility review into Council's dredging operations. In particular, this report covers the following:

- Agreed scope of works
- Historical reasons for dredging and current dredging requirements
- Benefits of ongoing dredging operations as concluded by previous studies
- Challenges associated with current dredging operations
- Alternative dredging work methods and procurement strategies
- Review of effectiveness of dredging operation and potential impacts of the 'do nothing' option

Findings relating to the review of Council's wrack and algal collection program have been documented in a separate report *Review of Wrack and Algal Collection Program, GHD 2019*.

## 1.3 Scope of works

### 1.3.1 Information compilation and review

- Review package of background information provided by Council
- Interviews with selected Council staff (in conjunction with Wrack Collection Works Package)

### 1.3.2 Review of dredging equipment methodology

- Assess the condition of Council's existing dredge based on discussion with Council plant and fleet staff and visual inspection
- Establish the remaining life of Council's dredge and forecast maintenance/repair costs
- Investigate circumstances surrounding Council's recent alleged non-compliance with EPL 3200
- Discuss potential improvements for current work methods, particularly for placement of sand on North Entrance Beach, also known as Tuggerah Beach in geographical mapping

## 4.7 Dredging on the Central Coast

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- Identify alternate dredging work methods and evaluate them from a constructability, safety, environmental and economic perspective
- Establish indicative costs of different work methods and external contracting of ongoing periodic maintenance dredging
- Assess desired improvements for new dredge purchase and identify costs of purchase, operations and maintenance of new dredge
- Liaise with council to establish estimates of the costs of tendering and management of contractors
- Develop whole of life cost for self-performed vs contract dredging campaigns
- Assess the risks associated with the following dredging management options:
  - ‘Do nothing’ option
  - Current dredging method
  - Alternate dredging methods
  - Self-performed vs contract dredging campaigns

### 1.3.3 Limitations

This report: has been prepared by GHD for Central Coast Council (Council) and may only be used and relied on by Council for the purpose agreed between GHD and the Council as set out in section 1.2 of this report.

GHD otherwise disclaims responsibility to any person other than Council arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

GHD has prepared this report on the basis of information provided by Council and others who provided information to GHD (including Government authorities), which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

GHD has prepared the preliminary estimates of costs set out in Section 5 of this report using information reasonably available to the GHD employee(s) who prepared this report; and based on assumptions and judgments made by GHD.

The cost estimates have been prepared for the purpose of initial options comparison and must not be used for any other purpose.

## 4.7 Dredging on the Central Coast

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This cost estimates are based on the preliminary project requirements and construction methodology outlined. Where information is unavailable, GHD has made assumptions in relation to scope, design and construction methodology. GHD recommends testing and monitoring the assumptions made throughout the design development process. GHD also recommends ratifying the assumptions made against detailed design information as it becomes available, noting that actual scope, methodologies, or costs may differ from the assumptions outlined above. Detailed quotations have not been obtained for any element of the works, however GHD has undertaken preliminary liaison with potential contractors and suppliers in relation to this project. Based on the design information currently available, GHD recommends a review of costs against detailed design information and refined project methodology once available.

It should be noted that this estimate is subject to market forces and fluctuations in fuel, wages and currency and excludes an allowance for activities such as:

- Seeking project funding
- Detailed design and documentation
- Environmental approvals such as revision of the 2009 Review of Environmental Factors prepared for Council by Worley Parsons
- Additional environmental monitoring and mitigation measures which may be agreed as part of ongoing discussions between council and EPA
- Tender evaluation and negotiation
- Construction supervision and administration
- Environmental monitoring and validation sampling within the dredge area
- Validation testing within the disposal area

## 2. Overview of dredging requirements

### 2.1 Historical dredging

In the mid 1900's the water quality within the Tuggerah Lakes estuary (estuary) experienced significant degradation, due to increased farming, urbanisation and the use of non-reticulated sewerage systems (Worley Parsons 2009). The estuary experienced eutrophic conditions with the foreshore dominated by decaying weed, algae and black ooze (PBP, 1992).

The original dredging strategy was developed from the dredging investigations carried out in 1991. Dredging works were first undertaken by Council in 1993 as part of the Tuggerah Lakes Restoration Project.

Dredging activities were initially commissioned to maintain tidal flushing and reduce the risk of flooding to life and property in low-lying areas of the estuary (Worley Parsons 2009). The REF also notes that an open channel is likely to prevent the degradation of water quality within the Tuggerah Lakes, which in turn preserves the existing ecological values of the lake such as seagrass, fish stocks and foreshore vegetation (Worley Parsons 2009).

The dredging has secondary benefits such as nourishing the eroded foreshore with the dredged material and improving recreational amenity (SMEC 2011).

Dredging is performed by Council's Waterways and Coastal Protection (WCP) unit, which operates a small Cutter Suction Dredge which Council owns and is dry hired to the WCP Unit from the Plant and Fleet Unit. During the period between dredging campaigns, the WCP staff operate Council's wrack and algal collection equipment.

Historically, council's maintenance dredging campaigns usually take three to four months to complete and have been undertaken on an 'as needs' basis, approximately yearly since (Worley Parsons, 2009).

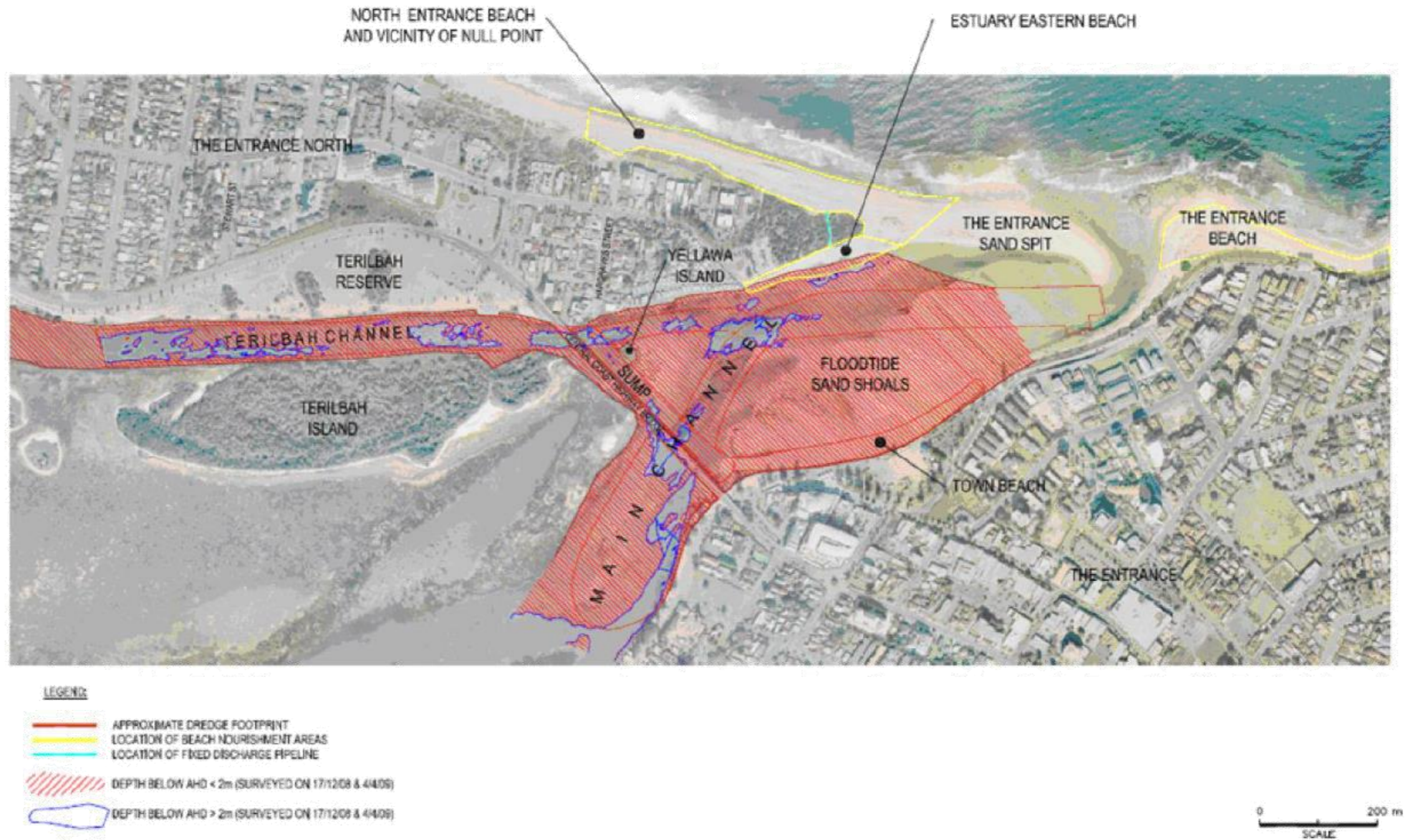
Each new dredging campaign is similar to the previous campaign, with moderate refinements made to account for additional dredging requirements on an 'as needed' basis to fulfil the goals outlined above.

Typically, dredging is undertaken as follows (Worley Parson 2009):

- The channel and sumps that are dredged annually include main channel to the east of the road bridge, the northern channel through the flood tide shoal and the southern tip of the main sand spit
- Biennial dredging occurs for the northern channel just downstream of the road bridge
- Dredging as required for the Terilbah Channel (every five years), main channel to the west of the road bridge (most recently in 1995) and occasional dredging of a sump perpendicular to the south of the main channel and the flood dominate southern channel

Depending on the build-up of sand in the channel, a dredging campaign can involve the removal of approximately 30,000 cubic metres to 80,000 cubic metres per annum (up to 100,000 cubic metres). The indicative map (Figure 2-1) details the location of key dredging sites within The Entrance.





**Figure 2-1 Location of dredging activities at The Entrance channel (Worley Parsons, 2009)**



### 2.2 Current dredging requirements

Currently, dredging is performed only when one or more of the following indicators are reached (Central Coast Council, 2019):

1. The throat of the channel at the southern tip of the sand spit at The Entrance reduces to a width of 15 metres at mid tide level
2. The flood tide sand shoals threaten to block the ebb tide dominant channel along the northern/eastern side of The Entrance area
3. The flood tide shoals threaten to block the main channel east of the bridge

These indicators were recommended action from the Tuggerah Lakes Management Plan, to reduce costs so that dredging is only performed when required. Under these triggers, dredging is not necessarily required every year, however, on average dredging is performed every one to two years. The installation of a monitoring camera at the site assists with monitoring the above criteria and enables correlation between entrance widths and natural events impacting broader coastal processes.

Maintenance dredging works were conducted in 2018 due to trigger 2 being reached. Figure 2-2 outlines the sequence of maintenance dredging works conducted in 2018 to remove the flood tide sands. The materials extracted from the channel were pumped to approved discharge locations (refer Figure 4-4) to nourish the three approved placement areas of The Entrance and North Entrance beaches, as well as inside the channel fronting Dunleith Caravan Park and Karagi car park shown in yellow in Figure 2-2.

#### Completed Dredge Program 2018

Please note: map is indicative and is not to scale and the numbering on the dredge pathway indicates the sequence of dredge cut.

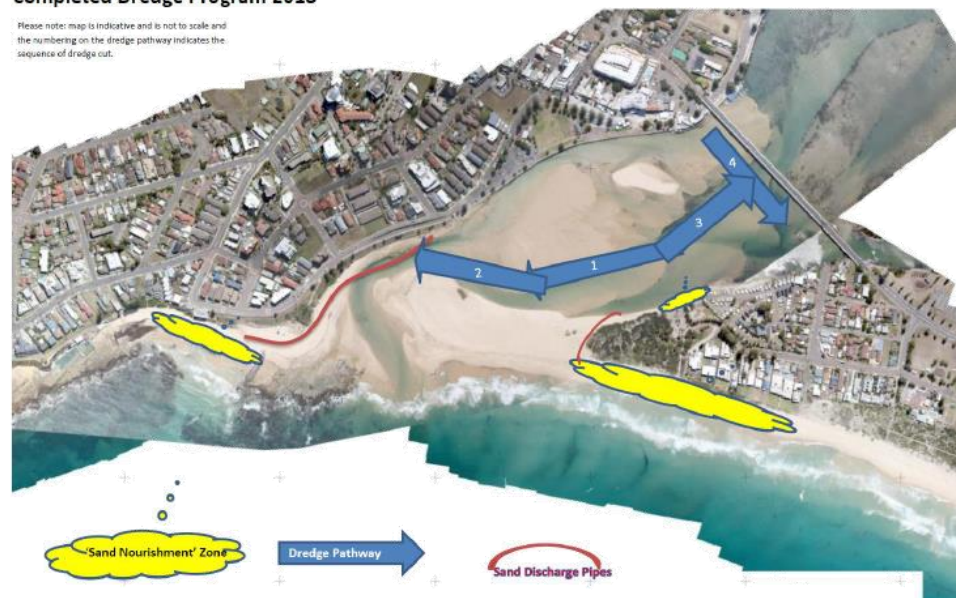


Figure 2-2 Dredge pathway and sand nourishment areas (CCC, 2019)

### 3. Review of objectives and benefits

Dredging at The Entrance channel was initially undertaken in order to assist in meeting the following objectives:

- Maintaining an exchange of water between the Tuggerah Lakes estuary and the ocean
- Preserving the existing ecological values of the Tuggerah Lakes estuary
- Reducing flood risks to life and property in low-lying areas around the Tuggerah Lakes estuary
- Providing sand nourishment aiding in erosion and coastal protection of the North Entrance and Entrance beaches
- Enhancing navigation within the channel (Central Coast Council, 2019)

A review of available literature has been undertaken with the aim of defining the benefits of current dredging operations in relation to the above objectives.

#### 3.1 Tidal exchange, water quality and aquatic ecology

Previous environmental and ecological studies as referenced below have found merit for continuing dredging activities in relation to tidal flushing, however these benefits have not been quantified. In particular, it was stated that negative impacts associated with elevated levels of nutrients and associated growth of aquatic vegetation would be minimised with maintenance dredging (Worley Parsons 2009). Similar studies also concluded that it is likely that tidal flushing has prevented the eutrophic state that the Tuggerah Lakes experience during the 1980's and 1990's (Bio-Analysis, 2006). It is important to note that symptoms of localised eutrophication still occur, especially around developed foreshores after heavy rain events.

Similarly, previous studies noted that an open connection typically improves ecological values of the system by allowing the exchange of propagules, larvae and adult marine fauna between the estuary and the sea (Cardno 2009). It was also found that macrobenthos and meiobenthic communities are able to recover rapidly after dredging campaigns, which minimizes the possible deleterious effects of dredging.

The Bio-Analysis, Cardno and Worley Parsons reports do not provide any quantitative assessments of the ecological benefits from an open connection in regards to flushing. A more recent Morphodynamic Investigation of the area completed by Cardno in 2013 found that maintaining an open connection through training walls would not impact upon the flushing of the lake system, and thus would not be expected to affect water quality within the lake (Cardno 2013). Therefore, maintaining an open connection through either maintenance dredging or via training walls would not be expected to significantly affect water quality in the lake.

#### 3.2 Impacts to flooding

The low-lying areas around Tuggerah Lakes Estuary are prone to flooding as it receives over 90% of the runoff from the Wyong catchment (Cardno 2009). The most recent major flood events occurred in February 1990 and in June 2007, with peak flood levels of 1.6 mAHD and 1.65 mAHD, respectively. With The Entrance channel being the only drainage point of the system, it is Council's intent to reduce the risk of future floods by maintaining a continually opened channel through dredging.

Whilst dredging to mitigate flooding has been undertaken since 1993, there is little quantitative assessment of the benefits to dredging, against flooding events. Documents such as the 2009, Review of Environmental Factors Assessment by Worley Parsons, although primarily commissioned to enable compliant delivery of the program, also support the maintenance dredging works as necessary to “reduce flood risks to life and property in low lying areas of the estuary.” Similarly, an Ecological Impact Study by Cardno in 2009, states that “residents and business in low-lying areas enjoy some protection from floods when the mouth is open.” However neither document provides a quantitative assessment of the flood mitigation benefits associated with dredging activities. Conversely, the 2009 Worley Parsons assessment also states that maintenance of an opening at The Entrance Channel by dredging “would be expected to facilitate initial flood scour, though it is not likely to significantly impact peak flood levels in the lake”.

WMA Water reviewed the Mike-11 hydrodynamic computer model created in 1994 as part of their Floodplain Risk Management Study and Plan in 2014 (WMA Water, pg44, 2014). The results from this study found that dredging works do not adversely affect flooding. Additional outcomes of the study are summarised below:

- Dredging may only exacerbate flooding during an elevated ocean event with large waves entering the estuary more than in a non-dredge scenario leading to ‘pumping up’ of the lake or wave damage downstream of the bridge.
- It is difficult to obtain a quantitative estimate of the benefits of dredging, in terms of reduction in flood level, a reduced duration of inundation or a reduced likelihood of entrance closure.
- Since 1993, it is possible that dredging has prevented minor flood, but this has not been documented.
- Benefits provided by dredging in reducing flood levels will diminish in the period following dredging.
- In the absence of any technical study it is considered that the dredging regime will have no negative impacts on flooding but only minor positive benefits (an indicative assessment is less than a 30 millimetre reduction in peak level and possibly six hours reduction in duration of inundation).
- The minor positive benefit from dredging is associated only with those works undertaken near the beach berm. Dredging further upstream of the bridge will be of limited value for flooding purposes.

### 3.3 Beach nourishment

As shown in Figure 2-1, the bulk of the sand dredged from The Entrance is typically placed on North Entrance Beach, with other sand placed on the Karagi Park foreshore or over the rock base at The Entrance Beach.

Following initial dewatering of the sand slurry, the material is reworked using earthmoving equipment to reflect the desired beach profile which replicates the beach in a natural accreted state. Council aims to match the crest level of the placed material with the existing dune crest level and to achieve a stable slope on the seaward side of the foredune and berm (Umwelt, 2011).

The 2011 Coastal Zone Management Plan noted that the dredging activities have secondary benefits such as restoring eroded foreshore and improving recreational amenity. However the document goes on to state that the dredging operations do not prevent ongoing recession. This is because beach nourishment volumes do not balance the amount of sand lost from the beach

## 4.7 Dredging on the Central Coast

and dunes where a single major storm bite has the potential to temporarily remove approximately 625,000 cubic metres of sand from the beach and dune.

### 3.4 Entrance navigation

Given the presence of a shallow rock bar and highly dynamic nature of sediment transport in the vicinity of The Entrance bar, navigation has been historically undertaken on an opportunistic basis and has been considered a high risk activity. An assessment was undertaken by Captain Charles Weston in April 2013, which concluded that the depth of water over the existing rock bar is the primary constraint to vessel navigation and that a widened entrance channel would have limited use by boaters unless the depth over the rock bar was increased (Weston 2013).

### 3.5 Summary of benefits

A summary of the benefits of dredging at The Entrance channel are provided below in Table 3-1.

**Table 3-1 Summary of benefits**

Objective	Benefits
Tidal exchange, water quality and aquatic ecology	<p>Historical studies have concluded that it is likely that tidal flushing has prevented Tuggerah Lakes from entering a eutrophic state like that experienced during the 1980's and 1990's. Similarly, previous studies noted that an open connection typically improves ecological values of the system by allowing exchange between the estuary and the sea.</p> <p>A more recent Morphodynamic Investigation of the area completed by Cardno in 2013 found that maintaining an open connection through training walls would not impact upon the flushing of the lake system, and thus would not be expected to affect water quality within the lake (Cardno 2013).</p> <p>Therefore, maintaining an open connection through either maintenance dredging or via training walls would not be expected to significantly affect water quality in the lake.</p>
Impacts to flooding	<p>The Entrance channel is the only drainage point of the Tuggerah Lakes system. The results of the most recent WMA Water study found that it is difficult to obtain a quantitative estimate of the benefits of dredging, in terms of reduction in flood level, a reduced duration of inundation or a reduced likelihood of entrance closure. The study noted that minor positive benefits would be associated with dredging works undertaken near the beach berm (an indicative assessment is less than a 30 millimetre reduction in peak level and maybe 6 hours reduction in duration of inundation).</p>
Beach nourishment	<p>The sand dredged from The Entrance is typically placed on North Entrance Beach and reworked to reflect the desired beach profile to replicate the beach in a natural accreted state. Secondary dredging benefits include restoring eroded foreshore and improving recreational amenity. However previous studies note that the dredging operations do not prevent ongoing recession. This is because beach nourishment volumes do not balance the amount of sand lost from the beach and dunes where a single major storm bite has the potential to temporarily remove approximately 625,000 cubic metres of sand from the beach and dune.</p>
Entrance navigation	<p>Previous specialist studies have concluded that dredging activities would be expected to provide only negligible benefits to vessel navigation due to the presence of the shallow rock bar and highly dynamic nature of sediment transport in the vicinity of The Entrance bar.</p>



## 4. Challenges associated with current dredging operations

### 4.1 Reliability and costs of aging equipment

#### 4.1.1 Description of Council's dredge and capacity

Council has owned, operated and maintained a purpose built 22.5 metre cutter suction dredge since 1992/1993. The dredge was built by Birdon Sands Pty Ltd and is depicted on the original as built drawing shown in Figure 4-1. The dredge is non-propelled and comprises a standard arrangement of pontoons surrounding the central ladder and cutterhead, and rear spud carriageway. Given the intended dredge location, the maximum dredge depth is limited to around 2.5 m. Additional reach could be achieved however this would require the replacement or extension of the ladder.

The dredge pump is understood to have had an original maximum production capacity of around 95 l/s pumping sands over a distance of 1200m (at close to the settled bed velocity). However more recent studies have estimated the insitu solids production at 105 m<sup>3</sup>/hr (WP, 2009). During the 2018 campaign, approximately 45,000 m<sup>3</sup> was removed from the channels over a period of 102 days or 810 hours. Assuming 60 hours were non pumping hours associated with start up / shutdown, servicing, maintenance, refuelling and clearing of the pipeline etc, the dredge achieved an average production rate of around 60 m<sup>3</sup>/hr. Reduced production rates are likely due to aging equipment and long pumping distances of up to 1200m.



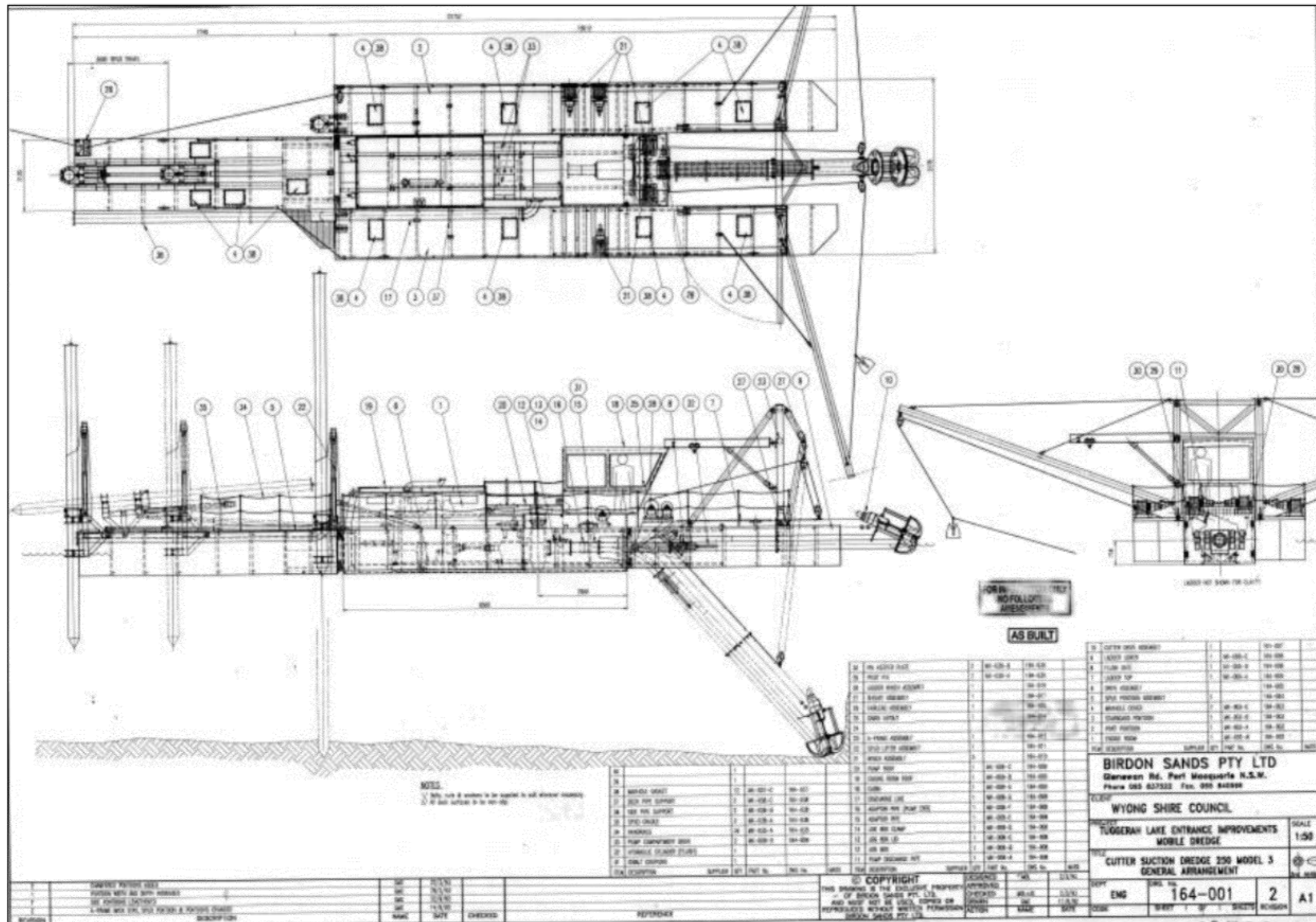


Figure 4-1 As built drawing showing Council's existing dredge



## 4.7 Dredging on the Central Coast

A selection of photos showing the indicative condition of the dredge were taken 16<sup>th</sup> May 2019 and are presented in Figure 4-2. Observation of the photos reveal extensive corrosion within pontoons and operational equipment such as the spud carriageway, pipe network, fittings and connections.



**Figure 4-2 Council's existing dredge photos 16/05/19**

## 4.7 Dredging on the Central Coast

### 4.1.2 Historical usage of Council's dredge

The dredge has been used to undertake regular maintenance dredging of The Entrance sand shoals with material being pumped to nearby shoreline areas.

Dredging campaigns were initially undertaken on an annual basis until the 2009 Review of Environmental Factors (REF) recommended that dredging operations be undertaken less frequently with more material dredged during each campaign. Since that time, dredging operations have been undertaken every two to three years on average, with the most recent campaign removing approximately 45,000 m<sup>3</sup> of material in 2018. It should be noted that maintenance dredging campaigns were more readily undertaken during the period in which discharge pipelines were stored as extended lengths of around 200m and sunken in the Terilbah Channel. Such storage techniques are no longer permitted. A summary of the periods during which dredging activities have been undertaken is provided in below Table 4-1.

**Table 4-1 Summary of dredged periods**

Start Date	Finish Date	Location	Duration of dredging (approx. months)	Frequency of Dredging (months since last completed)
1/04/1993	8/05/1993	The Entrance Channel	1	-
10/09/1993	30/11/1993	The Entrance Channel	3	4
28/01/1994	14/02/1994	South Channel	<1	-
6/06/1994	16/06/1994	Terilbah Channel	<1	-
16/06/1994	20/09/1994	The Entrance Channel	3	6
21/09/1994	5/10/1994	Terilbah Channel	<1	3
15/10/1994	10/11/1994	The Entrance Channel	1	<1
16/08/1995	23/11/1995	The Entrance Channel	3	9
16/04/1996	22/05/1996	The Entrance Channel	1	5
21/10/1996	13/11/1996	The Entrance Channel	1	5
14/04/1997	1/08/1997	The Entrance Channel	4	5
9/03/1998	20/04/1998	The Entrance Channel	1	7
6/08/1999	26/11/1999	The Entrance Channel	4	16
5/07/2000	26/09/2000	The Entrance Channel	3	7
3/09/2001	2/11/2001	The Entrance Channel	2	11
12/08/2002	18/11/2002	The Entrance Channel	3	9
1/05/2004	1/10/2004	The Entrance Channel	5	17
7/12/2005	20/12/2005	The Entrance Channel	<1	14
6/02/2006	16/05/2006	The Entrance Channel	3	2
25/09/2006	29/11/2006	The Entrance Channel	2	4
5/02/2008	18/04/2008	The Entrance Channel	2	14
19/04/2008	13/05/2008	Terilbah Channel	1	164
<i>New REF in 2009</i>				
3/05/2010	29/06/2010	The Entrance Channel	2	24
1/09/2012	5/12/2012	The Entrance Channel	3	27
29/06/2015	5/12/2015	The Entrance Channel	5	31
12/04/2018	5/11/2018	The Entrance Channel	7	29

Dredging typically requires around 800 to 1,000 hours of dredging which is completed over a period of around six months. During the period between campaigns the vessel is typically moored in the Wyong River adjacent to the eastern end of South Tacoma Road.

## 4.7 Dredging on the Central Coast

### 4.1.3 Maintenance requirements and remaining life

The dredge is maintained by Council's plant and fleet division and operated by staff from Council's Waterways Catchment Operations Team.

Engine servicing is undertaken at nominated milestones based on operational hours. Other maintenance is undertaken on an as required basis, typically as required to pass survey or as assessed prior to the commencement of each dredging campaign.

The last major refit was undertaken in 2005 as summarised in Table 4-2 below.

**Table 4-2 Records of 2005 refit of Council's dredge**

Resource Name	Cost (AUD)
Labour	\$136,189
Materials	\$12,017
Building Trade Services	\$2,756
Hardware & Trade Supplies	\$74,782
Internal Expenses	\$11,552
Labour Hire	\$20,616
Office Expenses	\$1,013
Office Furnishings/Appliances	\$6,045
Other Contract Services	\$1,592
Plant & Equipment (engine replacement)	\$392,822
Utilities - Other	\$400
Water & Sewer Supplies	\$6,059
Unclassified	\$1,000
<b>Total</b>	<b>\$666,843</b>

The dredge is in 2C Survey (survey number 22498) meaning it is able to be operated in restricted offshore waters in a commercial capacity. The dredge needs to be surveyed by an accredited marine surveyor when the certificate is renewed every three years. Given that there is no suitable slipway within Tuggerah Lakes, the dredge must be dismantled and the pieces craned onshore for assessment. During discussions with Council's Plant and Fleet representative, it was highlighted that this is an expensive, time consuming and potentially dangerous operation, requiring the use of multiple 50 tonne cranes to operate on the soft banks of the waterway.

At the time of writing, the dredge is currently out of survey and is required to be dismantled for out of water inspection prior to completing future dredging works. Given the age of the dredge and the difficulty of inspecting the vessel whilst afloat, the repair and improvement works necessary to pass survey inspection are uncertain.

Breakdowns or emergency replacements during previous dredge campaigns are typically more time consuming and costly than those completed on land whilst the dredge is disassembled. During the 2018 campaign, the dredge was unavailable for eight weeks in total due to breakdowns/repairs and maintenance requirements. Replacement of at-risk pipe bends within the onboard slurry pipeline was also undertaken during this period and accounted for five weeks of the overall period of downtime.

Based on visual inspection and discussions with Council's Plant and Fleet Manager, it is expected that the following repairs and upgrades will be required as a minimum prior to commissioning another program of maintenance dredging:

- Replacement of hydraulic lines, 6-8 winches, cables
- Replacement of the original gearbox



## 4.7 Dredging on the Central Coast

- Additional repairs to pontoons to address wall thickness issues related to corrosion, including removal of marine growth, welding and paint repair
- Replacement of safety handrails
- Replacement of remaining sections of slurry pipeline not replaced during the 2018 campaign
- Fitting of replacement cutter head and teeth
- Spud carriageway guide
- Ongoing painting and chipping which is not currently being undertaken on a regular basis

According to Council records, the dredge was budgeted for an operational life of 28 years, requiring replacement in the year 2020. However, given that the dredge is designed to be readily dismantled and transported, individual components can be replaced over time, thereby extending the operational life of the asset. Dredgers may be upgraded in this manner for serviceable lives of up to 30 – 40 years. Birdon Sands (manufacturers of the dredge) continue to operate dredges originally built in the 1970's by replacing pontoons and equipment as required.

Whilst this approach may be cost effective for a specialist dredging contractor, it is important to note that maintenance and upgrade costs become increasingly expensive. It is also important to note that fuel, dredging and operating systems can become outdated and result in less efficient dredging operations, which in turn results in higher dredging costs. Outdated equipment may also offer reduced environmental performance and health and safety outcomes in comparison to modern equipment.

Based on discussions with Council's Plant and Fleet Manager, the repairs and upgrades listed above should be viewed as the minimum required to pass survey. The full extent of works required can only be confirmed once the vessel is inspected surveyed by an accredited marine surveyor on land.

### 4.1.4 Operational and maintenance costs

Operational and maintenance costs are heavily influenced by the timing of dredging operations. The bulk of repair and upgrade works are undertaken in preparation for dredging activities, during dredging activities or in response to survey assessment. The most recent operational and internal Council hire costs are presented in Table 4-3 and historical hire costs for the past 10 years are presented in Table 4-4.

**Table 4-3 Recent operational and internal hire costs**

Cost Items	2017/18	2018/19	Total 2017/19
Internal Aquatic Plant Hire	\$ 224,643	\$ 126,618	\$351,261
Plant Pool / External Plant Hire	\$ 12,720	\$ 102,545	\$115,265
Labour	\$ 162,092	\$ 168,645	\$330,737
Corporate Overheads	\$ 37,331	\$ 19,001	\$ 56,332
Contracts, Consultants, Survey etc	\$ 19,000	\$ 13,711	\$ 32,711
Materials	\$ 58,181	\$ 2,969	\$ 61,150
Miscellaneous	\$ 36,382	\$ 3,868	\$ 40,250
TOTAL	\$ 550,349	\$ 437,357	\$987,706

It should be noted that the costs presented above offset the following grants and revenue:

- \$168,750 - Rescuing our Waterways Grant (25% outstanding of a total of \$225,000)
- \$99,000 - Crown Lands contract to nourish The Entrance Beach (revenue realised in 2017/18 and was inclusive of GST)



## 4.7 Dredging on the Central Coast

**Table 4-4 Historical internal hire costs 2008 - 2017**

Period	Dredge Hire Costs	Workboat Hire Costs
2008-09	\$100,000	\$352
2009-10	\$181,334	\$16,670
2010-11	\$170,148	\$16,855
2011-12	\$170,148	\$16,959
2012-13	\$191,124	\$17,061
2013-14	\$170,148	\$16,855
2014-15	\$159,437	\$16,322
2015-16	\$213,558	\$18,876
2016-17	\$139,879	\$1,949

A full record of annual maintenance costs is not available due to changes in accounting systems since the dredge was purchased in the early 1990's. An extract of available historical maintenance costs is presented in Table 4-5 (excluding major refits such as that described by Table 4-2).

**Table 4-5 Available records of historical maintenance costs**

Year	Labour	Material	Plant	Other	Total Cost
2019	--	--	--	--	--
2018	--	--	--	--	--
2017	\$1,248	\$755	--	\$422	\$2,424
2016	\$3,001	\$52,841	--	-\$16	\$55,827
2015	\$49,826	\$42,494	\$194	\$1,868	\$94,383
2014	\$5,105	\$27,308	--	\$3,124	\$35,537
2013	\$19,536	\$41,377	--	\$3,250	\$64,163
2012	\$60,660	\$111,440	\$787	\$14,820	\$187,707
2011	\$3,357	\$2,355	--	\$2,978	\$8,690
2010	\$29,515	\$35,259	\$1,403	\$9,701	\$75,878
2009	\$9,062	\$1,127	\$572	\$4,117	\$14,878
2008	\$10,228	\$17,523	--	\$7,697	\$35,448
2007	\$16,146	\$30,884	--	\$3,185	\$50,215
2006	\$17,432	\$22,160	\$155	\$11,052	\$50,799
2005	\$39,657	\$81,946	\$1,509	\$32,241	\$155,353
2004	\$440	\$150	--	\$44	\$634

Discussions with Council's Plant and Fleet division indicate that maintenance costs are tending to increase over time and are highly variable from one year to the next, depending on inspection findings and the extent of dredging works undertaken.

From examination of the available data, it is apparent that average maintenance costs over the available period equate to an average annual cost of approximately \$60,000. Allowing for the years in which dredging operations were undertaken reveals an average maintenance cost of approximately \$92,000 and \$16,000 for periods in which no dredging was undertaken.

Annual hire fees for 2019/2020 from Council's Plant and Fleet division to Council's Waterways and Coastal Protection Unit have been reported as \$372,000 for the dredge and \$453,644 for combined aquatic plant. It is noted that from the available historical records, fees have been applicable whether the vessel is operational or moored in the Wyong River. However, it is understood that Council's Plant and Fleet Unit is currently reviewing future hire charges.

### 4.2 Limited capacity of dewatering and placement areas

#### 4.2.1 Approved placement areas

Council's EPL (refer Section 4.4) permits the extraction of up to 100,000 m<sup>3</sup> of sand from The Entrance channel per year. However, areas approved for placement of dredged sands as beach nourishment are well defined and limited in extent. In particular, the 2009 REF stipulated that where dredged material is to be placed on North Entrance Beach, it must be placed to the south of the null point<sup>1</sup> (in the vicinity of Hargraves St) to ensure that the sand is reworked back towards The Entrance Channel, and is thereby retaining sand within The Entrance sand system.

Similarly, Council is bound by an upper height limit of filling operations, which is matched to the level of the existing dune crest and a stable slope on the seaward side of the foredune and berm. More specifically, the 2009 REF noted that the beach should be profiled to reflect the natural "beach full" state. Where survey information for such a profile is not available, the 2009 REF stipulated that the profiling should aim to achieve the following objectives:

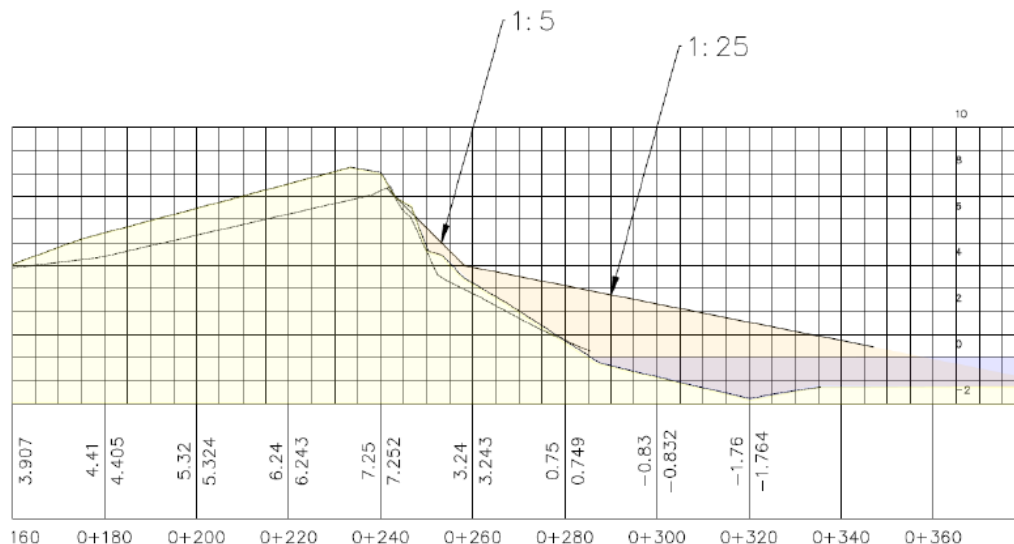
- Match the crest level of the emplaced material with the existing dune crest level
- Achieve a stable seaward gradient of the foredune of not more than 1 in 5 (1 vertical : 5 horizontal)
- Achieve a beach berm gradient of 1 in 20 to 1 in 30

An indicative profile showing a theoretical nourishment profile at the fixed discharge point against the 2018 and 2019 survey data is shown in Figure 4-3. From examination of the figure, it is clear that nourishment in accordance with the REF requirements would result in a significant flattening and widening of the beach profile, whereby the shoreline would extent seaward by around 70 m. Whilst such a profile would provide a theoretical capacity in the order of 180,000 m<sup>3</sup>, localised widening of the beach by such a significant distance would be considered non-compliant with the 2009 REF due to the impacts upon coastal processes and loss of sand to the north of the null point.

Conversely, the placement of material above Mean Sea Level would require profiling to a slope of approximately 1V:7H (vertical : horizontal) which is significantly steeper than the maximum slopes stipulated in the 2009 REF. Such a profile would also significantly reduce the maximum capacity of the placement are to approximately 24,000 m<sup>3</sup>.

<sup>1</sup> The null point represents the point on North Entrance Beach at which the predominant direction of longshore drift of sand (from south to north) is reversed and moves from north to south due to swell waves refracting around a submerged offshore. North of this null point sand is transported northwards, whereas south of this point sand is worked back towards The Entrance (WP, 2009)

## 4.7 Dredging on the Central Coast



**Figure 4-3 Indicative nourishment profile (elevations to AHD)**

These area and height restrictions limit the volume of dredged sands that Council is able to place within approved areas during each campaign. By way of example, the 2018 dredging campaign placed 10,840 m<sup>3</sup> of dredged sands on North Entrance Beach before reaching the northern limit of approved placement areas.

The planning of placement works is made more challenging by the daily changes to the beach profile in response to wave, wind and current conditions on the beach.

Following a major storm event, the beach profile is likely to accommodate the entire volume of material dredged during a typical dredge campaign, provided that material may be placed below low tide. However, it is likely that the conditions which create a build up of sand within The Entrance channel, also lead to accretion on adjacent beaches. During such times Council may struggle to place dredged sediments as beach nourishment material without extending beyond the approved beach profile and footprint.

Placement works are further complicated by the high value of the surrounding beaches for both social and environmental uses. In particular, nourishment works have the potential to impact on nesting sites for the endangered species, the Little Tern, and potential breeding and nesting habitat for the Pied Oystercatcher (WP, 2009).

### 4.2.2 Dewatering requirements

Previous nourishment works on North Entrance Beach have aimed to minimise localised erosion and maximise sand capture at the discharge location by excavating a temporary discharge basin and/or by fitting the end of the discharge pipe with a simple diffuser or bash plate to redirect dredge slurry upwards and outwards in a fan arrangement, thereby dissipating energy.

This is a relatively common approach to placement of dredged sand for beach nourishment purposes and results in a gradually sloping profile to the shoreline. Whilst this approach results in the discharge of dredged slurry and return waters to the ocean, this is generally deemed acceptable where the material being placed is free from excessive quantities of fines or organic matter and where the receiving environment is able to accommodate periods of elevated turbidity levels without significant marine ecology impacts.

## 4.7 Dredging on the Central Coast

As discussed in Section 4.4, it is important to note that restrictions on placement of dredged material into the wet sand or swash zone on North Entrance Beach under the EPL as encountered during the 2018 campaign. It is understood that discussions with the EPA are ongoing, however if Council is not permitted to discharge return waters to the ocean, then beach nourishment operations would be considered unfeasible.

In the event that the EPA accepts the discharge of return waters to North Entrance Beach, consideration should be given to the challenges associated with the dewatering of slurry within a limited area, monitoring naturally variable turbidity levels within the surf zone. Given the limited foreshore area available for dewatering operations, it is unlikely that dewatering and water polishing could be undertaken to a standard that would achieve a maximum Total Suspended Solids (TSS) concentration of 50 mg/l above background levels (as per the monitoring condition in the vicinity of the dredging operations). Achieving low levels of TSS concentrations at the historical rate of discharge would typically require an area of around 15,000 to 25,000 m<sup>2</sup>, which is significantly more than that available at North Entrance Beach.

A more realistic dewatering area would be a trench in the upper portion of the beach profile measuring say four metres in width over say 100 to 200 m of shoreline. Filling of the trench would need to be limited to around 0.5 m in order to manage the risk of sudden failure of bunds and breakouts. Interim weir boxes or discharge pipes could be placed along the bund to provide greater control over dewatering operations. It is important to note that this arrangement could not be relied upon to achieve low levels of TSS concentrations under all conditions. In particular, the dredging of pockets of anaerobic sediments or materials containing high concentrations of fines or organic matter, would result in turbid and potentially dark coloured plumes in the vicinity of the discharge point. Given the highly dynamic nature of coastal processes within The Entrance and the resulting variability of marine sediments within the area, it is considered likely that future dredge campaigns will encounter areas of problematic sediments similar to those dredged during the 2018 campaign (refer Section 4.4).

Consequently it is recommended that Council raise the practicalities of beach discharge operations during discussions with the EPA. The aim of raising these points would be to agree on licence conditions that allow dredging operations to be undertaken in a feasible manner whilst minimising the potential for environmental harm.

### 4.3 Environmental and social impacts of dredging

The Entrance channel represents valuable marine habitat and is a popular area with locals and tourists alike. The area is home to a number of threatened species and is an important breeding ground for migratory birds. Specifically, The Entrance sand spit provides breeding and nesting habitat for the threatened bird species the Little Tern and the Pied Oystercatcher during the spring and summer months. For this reason Council avoids undertaking dredging activities in this area during this period. Works are also required to cease if any Green Turtles are spotted within the dredging area.

Dredging activities have the potential to affect pH when acid sulfate soils are disturbed and exposed to the air. When exposed to the air, these soils can produce acid conditions which can be harmful to plants and animals. For this reason it is stipulated in the EPL that pH levels must be within an acceptable range (refer Section 4.4). It is noted however that there is a low likelihood of impacting pH levels at the dredge site given that dredged sediments are not exposed to air. Impacts to pH are typically greater at the dewatering site however the 2009 REF noted that pH monitoring at the discharge point was not warranted given the high buffering capacity of the sediments. The requirement for pH monitoring at the discharge point was also removed from earlier revisions of the EPL.

## 4.7 Dredging on the Central Coast

As the nature of dredging consists of transporting and depositing silt and sand sediments, turbidity is an expected component of undertaking dredging activities. When water contains a high concentration of Total Suspended Solids (TSS) this can reduce water quality. For this reason it is stipulated in the EPL that TSS levels must be below 50 mg/L at the nominated monitoring location 50 m from the dredge site.

Peak tourist/beach-going season in this area coincides with the summer months. For aesthetic and safety reasons dredging is not undertaken during this period.

Dredging operations also have the potential to cause noise impacts to the community through the use of heavy machinery.

Commercial fishers have previously raised concerns regarding potential impacts on the school prawn fishery.

Therefore it is important that dredging activities accommodate for these environmental and social impacts to mitigate risks to public and threatened fauna. This has been largely achieved during previous dredging campaigns, however the EPA has recorded a number of non-conformances as discussed in Section 4.4.

### 4.4 Compliance with licences and approvals

#### 4.4.1 Overview of EPL3200

The Environmental Protection Licence 3200 authorises Central Coast Council in carrying out scheduled water-based extractive activities in Tuggerah Lakes and the tributaries of Tuggerah Lakes excluding the mouth of Tumbi Creek, Killamey Vale. This licence permits the Council to extract up to 100,000 m<sup>3</sup> of sand from The Entrance channel per year with placement areas (of relevance to The Entrance) shown in Figure 2-1 and Figure 4-4.

A condition of the licence is also to monitor water quality during dredging activities to ensure there is no negative impact on the environment. Water quality sampling is required to be taken at any point 50 metres from the dredge or excavator and between 1 to 1.5 hours of the dredge commencing operations. This sampling is to be undertaken daily when the dredge is operating. The Council is required to monitor pH levels and Total Suspended Solids (TSS) during dredging activities. The water quality tolerance for pH is between 6.5 and 8.5 and below 50 mg/L for TSS levels.

The Council is required to report to the EPA 12 months after the issue of the licence, and each subsequent period of 12 months. The Annual Return reporting comprise:

1. Statement of Compliance
2. Monitoring and Complaints Summary
3. Statement of Compliance – Licence Conditions
4. Statement of Compliance – Load based fee
5. Statement of Compliance – Requirement to prepare Pollution Incident Response Management Plan
6. Statement of Compliance – Requirement to Publish Pollution Monitoring Data
7. Statement of Compliance - Environmental Management Systems and Practices

All activities to which the licence applies are required to be performed in a competent manner that is not likely to cause harm to the environment.



## 4.7 Dredging on the Central Coast

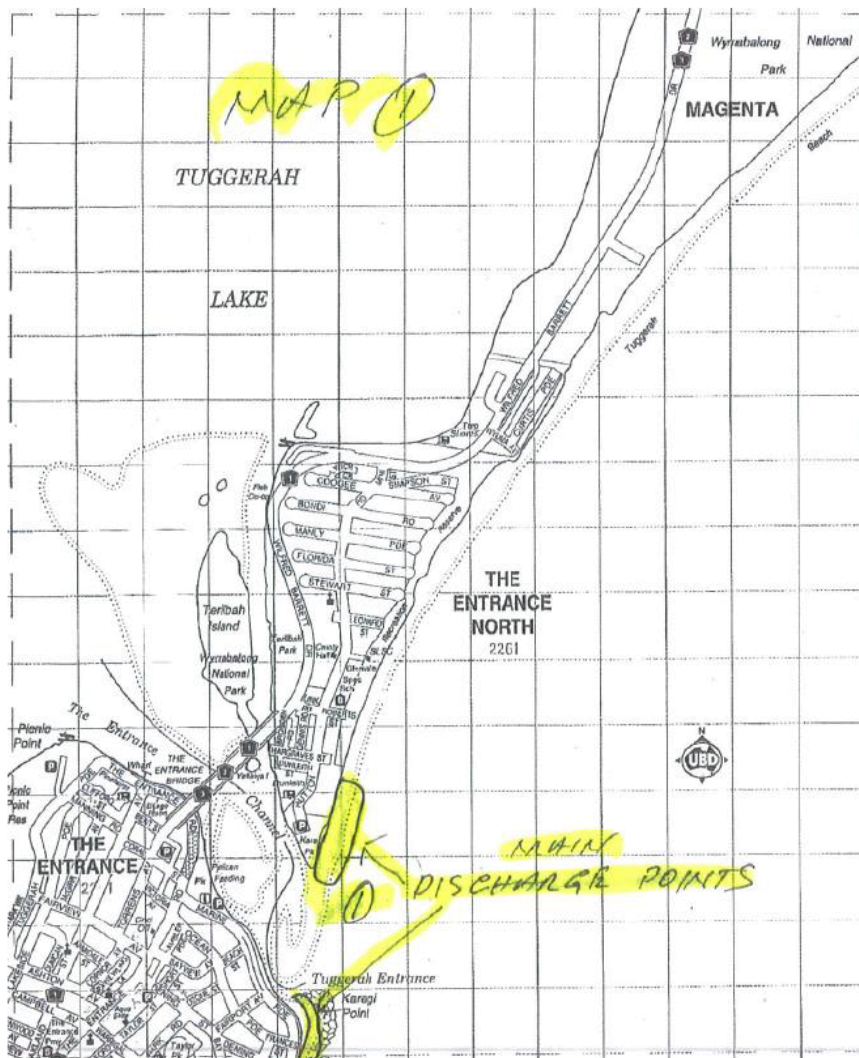


Figure 4-4 Map 1 as submitted with EPL3200 application dated 29/11/99

### 4.4.2 Historical non-conformances

Historical non-conformances listed on the EPA/POEO website are outlined below in Table 4-6. The prevention notice issued to Council by the EPA on 15 November 2018 is discussed in Section 4.4.3.

Table 4-6 Historical non-conformances under EPL3200

Dates	Type of non-compliance	EPA actions	No. of incidents
01 Jan 2000 31 Dec 2000	Monitoring not undertaken. Council previously written to EPA raising concerns over licensing conditions.	N/A	N/A
01 Jan 2001 31 Dec 2001	Monitoring not undertaken. Council previously raised concerns with EPA and Licence Variation Application submitted.	N/A	N/A
01 Jan 2002 31 Dec 2002	Monitoring not undertaken. Council previously raised concerns with EPA and Licence Variation Application submitted.	N/A	N/A

## 4.7 Dredging on the Central Coast

Dates	Type of non-compliance	EPA actions	No. of incidents
01 Jan 2002 31 Dec 2002	Written advice regarding proposed dredging operation not reported to EPA within required timeframe. Council previously raised concerns with EPA and Licence Variation Application submitted.	N/A	N/A
01 Jan 2004 31 Dec 2004	Failure to provide seven days notification of proposed dredge activities on 12 January 2004 at The Entrance North sandpit.	EPA has written to licensee regarding non-compliance and relevant action	1
01 Jan 2005 31 Dec 2005	pH levels were not taken on three days of dredging as the probe malfunctioned and a new one had to be ordered in.	EPA to monitor future compliance with this condition	1
01 Jan 2005 31 Dec 2005	pH level (8.6) exceeded specified range of 7.5 to 8.5	EPA to monitor future compliance with condition	1
01 Jan 2012 31 Dec 2012	pH levels exceeded during dredging. The licensee postulated this was possibly due to baseline data not being recorded prior to dredging & the lake experiencing high pH naturally. Recording baseline data before dredging will now occur.	EPA has written to licensee regarding non-compliance and relevant action	5
01 Jan 2012 31 Dec 2012	One sample exceeded suspended solids limit, east of The Entrance bridge. Reddish-brown mudstone/substrate material disturbed. Dredge ceased until plume dispersed. The licensee recommended baseline readings taken prior to record natural fluctuations.	EPA has written to licensee regarding non-compliance and relevant action	1
01 Jan 2015 31 Dec 2015	pH not sampled on one occasion due to faulty pH meter. TSS not analysed on one occasion due to misplaced sample bottle. Backup pH meter to be available. Chain of custody procedure to be used for transfer to laboratory.	Appropriate Action taken by licensee	2
01 Jan 2015 31 Dec 2015	Sampling not undertaken within correct timeframes on several occasions due to various causes including dredge start-up procedures and issues with electronic form. Review of procedures undertaken.	Appropriate Action taken by licensee	10

### 4.4.3 2018 Prevention Notice

A prevention notice was issued by NSW Environmental Protection Authority to Central Coast Council on 15 November 2018 following an incident report submitted by a member of the community. Concerns were raised regarding dredged sediments being discharged to waters at North Entrance Beach.

On 5 November 2018 the following advice was provided to the EPA by Council's representative:

- Dredging activities undertaken were in accordance with the Licence and The Entrance Dredging Project Review of Environmental Factors (REF)
- Results of all monitoring undertaken in accordance with the Licence were available on the Council's website
- The Pollution Incident Response Management Plan (PIRMP) required by the licence was available on Council's website
- Dredging activities commenced around April 2018 and were scheduled to be completed in early December 2018

## 4.7 Dredging on the Central Coast

On 6 November 2018 EPA conducted an inspection of a dredge discharge point at North Entrance Beach. During this inspection the EPA observed a pipeline on North Entrance Beach discharging grey/black water to the wet sand zone of North Entrance Beach then flowing into the ocean and observed a plume of black/grey water in the ocean heading south east of the discharge pipe.

On 7 November the EPA concluded that the Licence did not include a discharge point as observed and that the discharge of the dredge material to the waters at North Entrance Beach was alleged pollution of waters.

Council was requested to cease discharge to waters while the EPA undertook further investigations.

Following the cessation of dredging activities, the EPA issued a Prevention Notice alleging that the discharge of dredged material to waters at The North Entrance Beach is an offence under Section 64 of the Act for the contravention of licence condition,

- L1.1 and O1.1; and an alleged offence under section 120 of the POEO Act (Prohibition of pollution of waters)
- O1.1 Licensed activities must be carried out in a competent manner

At the time of writing this report, discussions regarding the incident are ongoing between Council and the EPA.

### 4.4.4 Currency of 2009 REF

The potential environmental impacts and mitigation measures associated with the current dredging activities were assessed as part of the 2009 REF (WP, 2009). The REF was required to obtain a licence for the use of Crown Land (issued by the Department of Lands), and a licence to harm marine vegetation (issued by the Department of Primary Industries).

The REF notes that the Environmental Protection Licence (EPL3200) is continuous and independent of any other approvals. The REF also states that the EPL did not require any renewal or modifications for the works proposed in the REF.

It is important to note that there have been a number of variations to the EPL since completion of the REF in 2009. It is also apparent that the issues raised by the EPA in relation to discharge to North Entrance Beach (also known as Tuggerah Beach) and turbidity were not fully assessed at the time of preparing the REF.

With respect to the Prevention Notice and issues described above, the REF notes that turbidity adjacent to beach nourishment areas has not been a significant issue in previous campaigns and would not be expected to be a significant issue in the proposed activities due to the limited proportion of fines in the sediment. The REF goes on to state that turbidity within The Entrance Channel and nearshore beach zone is also a natural consequence of catchment runoff into the lakes system. Issues relating to turbidity and suspended solids were reviewed in Section 6.4 of the 2009 REF which stated that no significant impacts to threatened species, populations or ecological communities listed under the Threatened Species Conservation (TSC) Act were expected from the proposed works. Consequently, a Species Impact Statement and a licence for the harm under Section 91 of the TSC Act were not required.

A review of the past modifications to the EPL reveals that concerns regarding elevated turbidity levels and TSS concentrations have been raised in previous discussions between Council and the EPA as described below:

- Requirement for monitoring of total suspended solids (TSS) and turbidity was removed from the EPL in 2003. However the requirement to monitor pH remained.

## 4.7 Dredging on the Central Coast

- Following a community complaint in February 2008, Council requested the EPL be amended to recognise the likelihood of turbidity associated with the dredging operation.
- Council application to vary the licence to delete monitoring requirements at the discharge point is approved in September 2009 under Notice No: 1106119.

Given the issues which have arisen since the preparation of the REF in 2009, it is recommended that Council update the REF to consider the following issues:

- Variations to the EPL since 2009
- Likelihood of encountering areas of high fines content and organic matter (particularly within the upstream sump area) and associated issues at the discharge point
- Aesthetic, odour and recreational impacts associated with discharge of problematic sediments and likely duration of such impacts
- Potential impacts to marine ecology in the vicinity of the discharge point and appropriate trigger values and management actions
- Available options for water quality monitoring in the vicinity of the discharge point
- Impacts and mitigation measures required to implement a land based emergency entrance berm clearing operation similar to that undertaken by other councils
- Other outcomes of current discussions between Council and the EPA

### 4.4.5 Implications for future dredging campaigns

It is important to note that the feasibility of future dredging and beach nourishment operations is reliant on the ability to discharge dredged slurry onto areas of the beach.

Given the highly dynamic nature of coastal processes within The Entrance and the resulting variability of marine sediments within the area, it is considered likely that future dredge campaigns will intermittently encounter similar areas of anaerobic sediments<sup>2</sup>. The dredging of these sediments and subsequent discharge onto the beach would be expected to result in a layer of darker, grey sediments on the beach which may be accompanied by an unpleasant odour. Likewise, the return waters reaching the shoreline may also appear off-colour, raising similar concerns amongst the community to those encountered during the 2018 campaign. Undertaking similar future campaigns without first agreeing on a revised dredging and monitoring methodology with the EPA would represent a significant risk to Council.

Best practice environmental management guidelines prepared by the Victorian EPA provide guidance on this issue as summarised in the following extract from Section 3.7:

*Odour from anaerobic sediments containing hydrogen sulphide from dredging is rarely more than a temporary problem. Typically, during beach renourishment and when dredging channels at The Entrance to rivers, discharged sand is initially anaerobic. When first discharged, it is grey in colour and may smell, but the smell is lost and the colour of the sand changes to yellow within a few days of its exposure to air. Before discharging grey sediment, proponents should ensure that residents in the immediate vicinity are aware of the proposed dredging and assured that any smell will be lost and sand will become yellow with a few days exposure to air. This should be done by notices placed in the letterboxes of nearby residents, and with sandwich boards placed near the discharge point and at the most public vantage point.*  
(EPA Victoria, 2001)

<sup>2</sup> Sediments lacking oxygen. They usually contain high levels of iron sulphide, causing them to be black in colour. Anaerobic sediments release hydrogen sulphide (rotten-egg gas) when exposed to air (EPA Victoria, 2001).



## 4.7 Dredging on the Central Coast

Additionally, Appendix 7 of the Victorian EPA guidelines provides a checklist of issues requiring consideration for land disposal:

*Establish a Suitable Dewatering Facility*

*For land disposal to be practical using a cutter suction dredge, a dewatering facility must be established that is:*

- *Within approximately 1km of the dredging, or within 3km, if the additional expense of a booster station is justified.*
- *Large enough for containment bunds suitable for dewatering to be constructed.*
- *Able to be secured so that quicksand-like properties of fines present no safety risks.*
- *Sited and operated so that seawater may be discharged back into the sea or an estuary rather than into a freshwater stream dewatering facility*

*Control Water Quality of Discharge*

- *The turbidity of water discharged from a dewatering facility should be controlled by increasing the length of travel of water, to maximise settlement of solids within the discharge area, and by use of silt screens when necessary.*
- *The turbidity of the discharge should be monitored to ensure that excessive sediment is not discharged.*
- *Monitoring should be intensive initially and be reduced if turbidity is effectively controlled by settlement within the bund. (EPA Victoria, 2001)*

Prior to committing to undertake future dredging and beach nourishment operations, it will be critical for Council to reach an agreement with the NSW EPA on the acceptability (or otherwise) of beach discharge operations and any requirements for additional management measures such as establishment of formal settlement ponds, turbidity monitoring, etc.

As noted above, discussions regarding the 2018 incident and future dredging operations are ongoing between Council and the EPA. It is recommended that Council discuss the suitability of the following approaches to future dredging operations with the EPA.

The first approach would involve a trial dredging campaign to assess the potential and actual impacts associated with dredging of problematic sediments. Such a trial would involve the following steps:

- Agree purpose, methodology, timing, outcomes and reporting requirements of the trial with the EPA and other relevant stakeholders.
- Undertake sediment sampling to characterise geochemical properties of the problematic sediments containing within the upstream sump area. Testing should include PSD/hydrometer, organic content, pH, acid generating potential and a suite of potential contaminants of concern.
- Assess geochemical properties of the problematic sediments and agree suitability for trial dredging campaign with the EPA and other relevant stakeholders prior to commencement of dredging works.
- Undertake trial dredging and beach nourishment works with onsite representatives of the EPA and other relevant stakeholders.
- Assess impacts during nourishment activities including aesthetics, odour, nearshore plume behaviour, NTU/TSS concentrations in the vicinity of the discharge point and corresponding NTU/TSS concentrations throughout any resulting nearshore plume.
- Assess impacts following cessation of dredging operations focusing on persistence of any impacts identified during construction.



## 4.7 Dredging on the Central Coast

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- Prepare a report outlining the findings of the trial and providing recommendations regarding the modification or cessation of future dredging works in known areas of problematic sediments.
- Liaise with the EPA, relevant stakeholders and the broader community regarding the outcomes of the trial and implications for future dredging works.

The second approach to progressing the dredging works would be to agree a discharge water quality monitoring regime involving the monitoring of return waters at the downstream end of an initial beach dewatering area or “turkey’s nest”. This approach would avoid many of the traditional challenges of monitoring water quality in the active surf zone and would allow safe continuous monitoring of discharge properties.

However, it is important to note that monitoring at this location would overestimate the NTU and TSS concentrations at the point of entering the surf zone. Similarly, the benefits of rapid dilution and mixing in the surf zone would also not be taken into account. Consequently it would be necessary to understand the correlations between water quality parameters at the point of measurement and those at the shoreline and any nearby sensitive environmental receptors.

Comparison of measured data to background levels would also prove problematic given the challenges associated with monitoring water quality within the surf zone. Subject to agreement with the EPA, it may be possible to establish reference levels for background turbidity under a variety of metocean conditions based on a pre-construction monitoring campaign or desktop review of available literature.

It is recommended that the suitability of either approach should be discussed and agreed as part of ongoing discussions between Council and the EPA, prior to commencement of works.

## 5. Alternative dredging work methods and procurement strategies

### 5.1 Purchase new dredging equipment

A multipurpose dredge (such as a Watermaster dredge) could be purchased to be owned and operated by Council for future dredging campaigns of The Entrance channel. Key considerations associated with this option are outlined in the table below.

Criteria	Summary - Purchase new dredging equipment
Performance	<p>Modern technology allows much smaller cutter suction dredges to achieve similar production rates to those offered by Council's current dredge. For example a Classic V Watermaster offers the following performance in comparison to Council's existing dredge:</p> <ul style="list-style-type: none"> <li>• Able to be operated by two personnel with more sophisticated controls and positioning equipment providing greater accuracy and control over Council's current dredge.</li> <li>• Production capacity of 70 to 150 m<sup>3</sup>/hr (900 m<sup>3</sup>/hr water) without a booster station (Council's existing dredge was originally rated much higher but in 2018 was estimated to produce 60 m<sup>3</sup>/hr of sand product).</li> <li>• Reduced fuel consumption and GHG emissions over Council's current dredge (typically 35 l/hr during suction dredging).</li> <li>• Compatibility with Council's existing pipelines and a maximum effective pumping distance of around 1000 m.</li> <li>• Self propelled, allowing greater flexibility over Council's current dredge.</li> <li>• Approximately 19.5 tonnes and much smaller than Council's existing dredge, making removal from water for survey inspections significantly easier.</li> <li>• Max dredge depth (cutter suction mode) of 6 m which is significantly greater than Council's existing dredge which is limited to 2.5 m.</li> <li>• Operational seastate was not able to be confirmed but is expected to be similar to that of Council's existing dredge. Whilst a Watermaster could be utilised in the dredging of the navigation channel at The Entrance to Brisbane Water, it is not considered to be the most suitable dredging plant.</li> <li>• The effective cut width was not able to be determined (the width of channel able to be efficiently created by the dredge. Being a smaller dredge is it likely that the cut width would be reduced however a second pass could be made if required.</li> <li>• Watermaster V has rake attachments which, subject to approval from Fisheries, could be used to bolster Council's wrack collection capabilities.</li> </ul>
Environment	The use of new dredge equipment would be utilised in the same manner as Council's existing dredge. Consequently, an upgrade of the dredge is not expected to significantly alter the impacts of dredging works on the biodiversity, coastal habitats or morphology in the region.
Legislative requirement	The use of new dredge equipment would be subject to the same licenses and approvals as Council's existing dredge. If proposed to be utilised for wrack collection operations, the approval of Fisheries would be required under the existing conditions, particularly in relation to risks of impacts to Syngnathids.
Health & Safety	The use of new dredge equipment would be largely subject to the same health and safety risks and control measures as current dredging activities. Some improvements could be expected through adoption of more modern equipment designed to current standards.
Cultural & Social	Negligible difference in cultural and social impact as current dredging operations. Some improvements to operational noise levels would be expected.

## 4.7 Dredging on the Central Coast

Criteria	Summary - Purchase new dredging equipment		
Cost	<p>High initial outlay with lower on-going operational and maintenance costs than the existing dredge. Additionally, as the Watermaster dredge is more versatile, the purchase price and ongoing maintenance costs could be offset against the benefits of utilising the machinery for wrack collection works.</p> <p>Purchase, delivery and commissioning of a Watermaster V dredge is expected to be in the order to \$1.1M to \$2M, depending on the additional capabilities required in relation to excavation, wrack collection, piling operations and booster stations. An indicative estimate is provided below for comparison purposes.</p>		
	Item	Description	Costs (ex GST)
Dredging Contract Costs			
1	Purchase of Watermaster Classic V hull, Side pontoons (1 pair), Central pressure greasing system, Watermaster Cutter Pump P250, Backhoe bucket 600 l with teeth and 2.75m Rake attachment		\$1,020,000
2	Spare and wear parts package		\$90,000
3	Delivery costs - freight and insurance		\$40,000
4	Assembly and commissioning		\$100,000
5	Training, 14 days operational, maintenance and service training at customer's work site		\$20,000
Total			\$1,270,000
<p>Based on review of the likely Watermaster maintenance requirements by Council's Plant and Fleet Representatives, it is expected that ongoing operation and maintenance costs would be approximately 2/3 of those associated with Council's current dredge.</p> <p>The NSW Government has developed the Rescuing our Waterways program to grant funding to eligible councils on a dollar-for-dollar basis to help deliver better access to local waterways for recreational and commercial waterway users and safer boating. With the aim to create flow-on benefits for tourism and local communities. Dredging projects, such as the on-going dredging regime at The Entrance channel, may be eligible to be subsidised under this program including their supporting studies (e.g. sediment hydrodynamics). Funding of up to \$1.5 million is available for projects on an annual basis with financing of up to 50% of a project's costs usually offered for successful grant applicants. Previous maintenance dredging campaigns (such as 2018) have secured funding under the Rescuing Our Waterways Program of approximately \$225,000. It is understood that this funding is calculated on a share of the dredging costs but excludes Council's ongoing maintenance, repair and upgrade costs associated with the current dredge.</p> <p>It is expected that Council could continue to secure funding in this manner to cover dredging costs however this would be subject to a successful grant application.</p> <p>It is noted that during the 2018 campaign, Council secured a contract for \$99,000 to nourish and shape 6000 m<sup>3</sup> of sand on The Entrance Beach following the construction of the Groyne by Crown Lands. Similar future contracts for Lands, or nearby Council's would be subject to rates of erosion and accretion, project needs, successful tendering and contractual discussions with potential clients. As such, it is recommended that future contracts with external parties are not relied upon to support business cases.</p>			

## 4.7 Dredging on the Central Coast

Criteria	Summary - Purchase new dredging equipment
Risk Assessment	<p>The risks to Council of purchasing and operating a new dredge would be largely similar to those associated with the current operations, subject to consideration of the issues described below:</p> <ul style="list-style-type: none"> <li>• Without having maintained a dredge of this type, Council's Plant and Fleet representatives are unable to accurately gauge the maintenance effort and expected cost savings. Similarly, dredge manufacturers and advisors are not able to guarantee operational or maintenance costs for future dredging plant given the number of variables involved. Consequently, there exists a risk that expected cost savings may vary.</li> <li>• Changes to environmental protection standards and associated licence conditions may render dredging unfeasible. Were this to occur, Council would be left owning an asset for which there is little to no operational requirements.</li> <li>• As the Licensee, Council would continue to be liable for any potential fines associated with pollution incidents.</li> <li>• Council's ability to adopt new technology (in response to legislative requirements or potential cost savings) would be limited since the dredging equipment would be considered a long term investment by Council.</li> <li>• Required volumes requiring removal will remain unpredictable and dependant on climatic conditions, as will the timing and magnitude of beach nourishment requirements.</li> <li>• Council would be required to consider and manage ongoing issues relating to community perceptions regarding turbidity, dark coloured sediment and odour (as per current operations).</li> <li>• Whilst the risk of breakdown and repairs would be greatly reduced, Council would carry the cost risks associated with ongoing maintenance costs and the risk of major equipment failures.</li> </ul>

### 5.2 External dredging contractor

The majority of NSW coastal Council's undertake dredging operations on an as required basis by contracting the works out to a specialist dredging contractor. There are a number of potentially suitable contractors including Dredging Systems, Birdon Sands, Sandpiper Dredging, National Dredging, Hall Contracting and Neumann Contracting. An example of an external dredging contractor's equipment is presented in Figure 5-1.



**Figure 5-1 Neumann contractors cutter suction dredge**

Key considerations associated with this option are outlined in the table below.



## 4.7 Dredging on the Central Coast

Criteria	Summary - External dredging contractor																																																						
Performance	It is expected that any plant and equipment proposed by prospective contractors in a competitively tendered environment would be capable of completing the works in a timely, cost effective and environmentally sensitive manner.																																																						
Environment	A cutter suction dredge is considered the most suitable equipment for the current operations and would likely be proposed by any prospective contractors. Consequently the outsourcing of dredging operations to a contractor is not expected to significantly alter the impacts of dredging works on the biodiversity, coastal habitats or morphology in the region.																																																						
Legislative requirement	The outsourcing of dredging operations to a contractor would be subject to the same licenses and approvals as Council's existing dredging operations. It is noted however that some licenses such as the EPL may be held by the dredging contractor rather than Council.																																																						
Health & Safety	The outsourcing of dredging operations to a contractor would be largely subject to the same health and safety risks and control measures as current dredging activities. It could be argued that the crewing of the commercial dredging vessel by a full time specialist dredging crew would offer some improvements over the existing operations however this is not able to be quantified.																																																						
Cultural & Social	Negligible difference in cultural and social impact as current dredging operations. Some improvements to operational noise levels would be expected if the dredging equipment is more modern than Council's current dredge. Of the options available, outsourcing of the dredging works is expected to generate the least community concern.																																																						
Cost	<p>Council could expect to incur a higher cost per cubic metre of sediment dredged. Similarly, the successful contractor would seek to recover mobilisation and demobilisation costs which would be a significant proportion of the costs for each campaign. However these costs would be offset by the fact that Council would not be liable for ongoing maintenance costs, equipment failures and downtime which are currently spread over a single small dredging campaign.</p> <p>An indicative estimate has been prepared based on the requirements of the 2018 dredging campaign as described in Section 2.2.</p> <table border="1"> <thead> <tr> <th>Item</th> <th>Description</th> <th>Costs (Ex GST)</th> </tr> </thead> <tbody> <tr> <td colspan="3"><b>Dredging Contract Costs</b></td> </tr> <tr> <td>1</td> <td>All work and obligations under the Contract NOT INCLUDED ELSEWHERE in this Schedule.</td> <td>\$10,000</td> </tr> <tr> <td>2</td> <td>Documentation of Contractor's Management Plans &amp; Details</td> <td>\$17,500</td> </tr> <tr> <td>3</td> <td>Mobilisation of dredging equipment (to three placement areas)</td> <td>\$100,000</td> </tr> <tr> <td>4</td> <td>Site establishment</td> <td>\$25,000</td> </tr> <tr> <td>5</td> <td>Installation/ maintenance/ monitoring of environmental control provisions</td> <td>\$25,000</td> </tr> <tr> <td>6</td> <td>Pre-Dredge Survey (Incl. Set-up, Calibration etc.)</td> <td>\$15,000</td> </tr> <tr> <td>7</td> <td>Dredging of sediments, relocation and beach profiling</td> <td>\$675,000</td> </tr> <tr> <td>8</td> <td>Post Dredge Survey</td> <td>\$10,000</td> </tr> <tr> <td>9</td> <td>De-mobilisation of dredging equipment</td> <td>\$75,000</td> </tr> <tr> <td>10</td> <td>Site disestablishment</td> <td>\$20,000</td> </tr> <tr> <td colspan="2" style="text-align: right;">Sub Total - Items 1 to 10</td> <td>\$972,500</td> </tr> <tr> <td colspan="3"><b>Associated Project Costs</b></td> </tr> <tr> <td>11</td> <td>Council tendering costs</td> <td>\$20,000</td> </tr> <tr> <td>12</td> <td>Construction Supervision</td> <td>\$20,000</td> </tr> <tr> <td colspan="2" style="text-align: right;">Sub Total - Items 11 to 12</td> <td>\$40,000</td> </tr> <tr> <td colspan="2" style="text-align: right;">Total</td> <td>\$1,012,500</td> </tr> </tbody> </table> <p>For comparative purposes, costs associated with revision of the REF and monitoring and reporting under the EPL have been excluded as these will be</p>	Item	Description	Costs (Ex GST)	<b>Dredging Contract Costs</b>			1	All work and obligations under the Contract NOT INCLUDED ELSEWHERE in this Schedule.	\$10,000	2	Documentation of Contractor's Management Plans & Details	\$17,500	3	Mobilisation of dredging equipment (to three placement areas)	\$100,000	4	Site establishment	\$25,000	5	Installation/ maintenance/ monitoring of environmental control provisions	\$25,000	6	Pre-Dredge Survey (Incl. Set-up, Calibration etc.)	\$15,000	7	Dredging of sediments, relocation and beach profiling	\$675,000	8	Post Dredge Survey	\$10,000	9	De-mobilisation of dredging equipment	\$75,000	10	Site disestablishment	\$20,000	Sub Total - Items 1 to 10		\$972,500	<b>Associated Project Costs</b>			11	Council tendering costs	\$20,000	12	Construction Supervision	\$20,000	Sub Total - Items 11 to 12		\$40,000	Total		\$1,012,500
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7	Dredging of sediments, relocation and beach profiling	\$675,000																																																					
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Total		\$1,012,500																																																					



## 4.7 Dredging on the Central Coast

Criteria	Summary - External dredging contractor
	<p>incurred as per Council's existing operations (subject to ongoing discussions with NSW EPA).</p> <p>In the event that Council contracts future dredging work through an external party, it is expected that Council could secure the full 50% contribution under the Rescuing Our Waterways Program as described in Section 5.1 however this would be subject to a successful grant application.</p>
Risk Assessment	<p>Many of the risks to Council of tendering the works to a contractor would be similar to those associated with the current operations. However there are a number of additional risks warranting consideration:</p> <ul style="list-style-type: none"> <li>• Dredging operations are restricted to Autumn and Winter months for environmental and social reasons. If reliant on an external contractor to undertake dredging activities, there is a risk that suitable plant and equipment may not be available during the nominated window, which would prevent dredging works from being undertaken until the following season.</li> <li>• Given the unpredictable nature of entrance dynamics there is a potential that Council may award a dredging contract immediately prior to a major freshwater flushing event. Council would then be liable to the contractor for a portion of the campaign costs even though dredging would no longer be required.</li> <li>• Council has the flexibility to redeploy crew to other Council projects as required. In the event that the Contractor incurs delays beyond their control, they would typically seek to recover these costs from Council.</li> <li>• Given the limited numbers of suitable contractors, dredging costs are highly dependent on market conditions at the time of tender. In the event that other similar projects are required to be completed during the same window, Council could incur significantly higher costs than those expected based on similar campaigns completed in the past.</li> <li>• Council would be required to consider and manage ongoing issues relating to community perceptions regarding turbidity, dark coloured sediment and odour (as per current operations).</li> </ul>

### 5.3 Entrance training walls

Numerous studies have investigated the option of a fully trained entrance at The Entrance channel with the aim of creating a self-scouring channel which would offer improved water quality, navigation and ecosystem health benefits. A drawing outlining the proposed training walls location are presented in Figure 5-1.



**Figure 5-2 Proposed training walls location**

Key considerations associated with this option are outlined in the table below.

Criteria	Summary - Entrance training walls
Performance	Modelling has shown that these break walls do not self-scour except under extreme flood conditions. Council has therefore previously concluded that maintenance dredging, such as the current program, would still be required to maintain an open channel with the ocean.
Environment	Marine environments in the vicinity of the construction footprint would be expected to be heavily disturbed during the construction phase. The introduction of training walls to The Entrance is expected to have minor long term impacts on the biodiversity, coastal habitats and/or morphology in the region, though some would be positive. Given that dredging would still be required, no improvements to dredging related impacts are expected.
Legislative requirement	Extensive approvals would be required from multiple consent authorities. It is expected that the process would be similar to that adopted by Crown Lands in delivering The Entrance groyne to the south.
Health & Safety	Risk to health and safety of personnel and the public would be expected during construction. However given that numerous similar works have been undertaken in the past it is expected that these risks could be managed and mitigated with appropriate controls.

## 4.7 Dredging on the Central Coast

Criteria	Summary - Entrance training walls
Cultural & Social	The introduction of training walls would have some impact on overall aesthetics of The Entrance channel by creating a less natural appearance. Construction timeframes would likely interfere with tourism during peak season (summer) at some point during the works. Construction will also impede on beach recreation.
Cost	Extremely high initial cost. The most recent study estimated a construction of \$43 million in 2013 (Cardno, 2013). Assuming that dredging works would still be required, the costs of construction and maintenance of The Entrance training walls would be in addition to those currently incurred by Council. For comparison purposes, it is estimated that ongoing assessment and maintenance costs would equate to approximately 5% of the construction cost or \$2.15 million every 10 years depending upon the design of the structure and metocean conditions following construction.
Risk Assessment	<ul style="list-style-type: none"> <li>• Availability of suitable size and quality armour rock has proven to be an issue for a number of similar projects undertaken over the last five years. In the event that Council elected to proceed with construction of the training walls, significant cost and program contingencies should be allowed.</li> <li>• Given the unpredictable nature of entrance dynamics there is a potential that Council construct or install the infrastructure in an area which becomes unsuited to tackling problem areas of The Entrance which change over time.</li> <li>• Given that dredging operations would remain part of Council's works program, Council would be required to consider and manage ongoing issues relating to community perceptions regarding turbidity, dark coloured sediment and odour (as per current operations).</li> <li>• Council would be required to own and maintain a significant coastal infrastructure asset and would carry the risk of repair works in the event of a major storm event.</li> </ul>

### 5.4 Alternative dredging technology e.g. Sand shifter

A submarine Sandshifter or permanent bypass system operates on the principle of sand fluidisation and has no moving mechanical components as seen in Figure 5-4. The unit comprises of a supply water header/support frame, fluidising jets and an inverted flume sealed at one end. The fluidising nozzles fluidise the surrounding sand and the difference in the levels of the fluidised sand inside and outside of the flume forces the fluidised sand into the flume where the pressure gradient motivates the sand along the flume to discharge at the central hydrolift pump. The fluidising nozzles are fitted with miniature tideflex valves to minimise the chance of blockage when not in operation. From there, the sand slurry is pumped through buried pipelines to the transfer pump station feed sump which screens out any debris and larger material. The sump underflow is pumped to the centrifugal transfer pump into the transfer pump line to discharge on the down drift beach.



## 4.7 Dredging on the Central Coast



**Figure 5-3 Permanent bypass infrastructure at Noosa (courtesy of SCRC)**



**Figure 5-4 Slurry systems sand shifter**

Criteria	Summary - Alternative dredging technology
Performance	<p>A permanent bypass system could be tailored to suit the required dredge volumes.</p> <p>A mobile Sandshifter could be expected to move around 180 m<sup>3</sup>/hr under similar circumstances. Subject to the height of sand above the Sandshifter unit, previous projects have achieved weekly dredge rates of 4,500 to 7,000 m<sup>3</sup>/week. During periods of very high sediment transport, such systems claim to handle in excess of 20,000 m<sup>3</sup>/week.</p> <p>The presence of wrack and seagrass has proven a hindrance to previous projects in Western Australia, South Australia and Victoria. Careful consideration of the impact of wrack would be required if this option was to be progressed.</p> <p>It is also important to note that a fixed bypass system or sandshifter unit would offer significantly less flexibility and would limit Council's ability to tailor dredging campaigns to suit entrance dynamics at the time of dredging.</p>

## 4.7 Dredging on the Central Coast

Criteria	Summary - Alternative dredging technology	
Environment	The use of fixed or mobile slurry pumps would be completed in the same manner as Council's existing dredge. Consequently, this approach would not be expected to significantly alter the impacts of dredging works on the biodiversity, coastal habitats or morphology in the region.	
Legislative requirement	The use of fixed or mobile slurry pumps would be subject to the same licenses and approvals as Council's existing dredge.	
Health & Safety	The use of fixed or mobile slurry pumps would be largely subject to the same health and safety risks and control measures as current dredging activities. However it is important to note that a cone of depression forms around the intake point which could prove a drowning hazard if appropriate fencing and signage is not erected. In addition, the need to crane in and out the unit from either the foreshore or a barge would be a complex activity requiring careful planning and implementation.	
Cultural & Social	Negligible difference in cultural and social impact as current dredging operations. Some improvements to operational noise levels would be expected.	
Cost	Comparative studies have shown Sandshifter units to be more cost effective than traditional dredging campaigns. However it is noted that in this instance, a significant proportion of the dredging costs are associated with remobilisation to a number of placement sites and the profiling of beach sands following placement.	
	<b>Item</b>	<b>Description</b>
		<b>Costs Ex GST</b>
	<b>Dredging Contract Costs</b>	
	1	All work and obligations NOT INCLUDED ELSEWHERE.
		\$10,000
	2	Documentation of Contractor's Management Plans & Details
		\$17,500
	3	Mobilisation of equipment (to three placement areas)
		\$100,000
	4	Site establishment
		\$25,000
	5	Installation/maintenance/monitoring of environmental controls
		\$25,000
	6	Dredging of sediments, relocation and beach profiling
		\$675,000
	7	De-mobilisation of equipment
		\$75,000
	8	Site disestablishment
		\$20,000
		Sub Total - Items 1 to 8
		\$947,500
	<b>Associated Project Costs</b>	
	9	Council tendering costs
		\$20,000
	10	Construction Supervision
		\$20,000
		Sub Total - Items 9 to 10
		\$40,000
		<b>Total</b>
		<b>\$987,500</b>
	Construction of a fixed sand bypass system such as the Tweed River Entrance Sand Bypass System is expected to be cost prohibitive and has not been developed further.	



## 4.7 Dredging on the Central Coast

Criteria	Summary - Alternative dredging technology
Risk Assessment	<p>Many of the risks to Council of constructing a bypass system or tendering the works to a slurry pump contractor would be similar to those associated with the current operations. However there are a number of additional risks warranting consideration:</p> <ul style="list-style-type: none"><li>• Past experiences with the Tweed River bypass system have highlighted the difficulties of managing differences in the magnitude of sand supply at the intake point and demand at the disposal location.</li><li>• Given the unpredictable nature of entrance dynamics there is a potential that Council construct or install the infrastructure in an area which becomes unsuited to tackling problem areas of The Entrance which change over time.</li><li>• Dredging operations are restricted to Autumn and Winter months for environmental and social reasons. If reliant on an external contractor to undertake dredging activities, there is a risk that suitable plant and equipment may not be available during the nominated window, which would prevent dredging works from being undertaken until the following season.</li><li>• Council would be required to consider and manage ongoing issues relating to community perceptions regarding turbidity, dark coloured sediment and odour (as per current operations).</li></ul>

### 5.5 Entrance adjustment trial

Given the uncertainties regarding the benefits of the current dredging operations, an entrance adjustment trial could be developed under which dredging works would be placed on hold and The Entrance allowed to adopt its natural profile according to climatic conditions. During this period, detailed monitoring of water levels, berm height of the Karagi sand spit, water quality and associated environmental parameters could be undertaken. The objective of the Trial would be to provide evidence of the actual impacts of ceasing dredging works, which would better inform Council's decisions regarding the costs and benefits of ongoing dredging works.

The entrance adjustment trial could also trial and evaluate the feasibility of using land based plant (excavators, trucks and dozers) to undertake entrance opening operations when required as per similar operations undertaken by other Councils such as the works undertaken by Northern Beaches Council and the entrance to Narrabeen Lagoon. Such an approach was previously proposed in the Tuggerah Lakes Floodplain Risk Management Study and Plan (WMA Water 2014).

Northern Beaches Council, has two methods of managing the entrance at Narrabeen Lagoon. When the lagoon has closed, Northern Beaches Council undertake a mechanical break out with the use of excavators to dig a short channel at the entrance when the water level in the lagoon gets above 1.3 metres above sea level.

After a break out, the lagoon can soon close up again, particularly if there is a significant amount of sand near the entrance. To prevent this, Northern Beaches Council's second management method aims to remove sand that has accumulated in front of the Ocean Street Bridge and the Caravan Park. This sand is removed by excavators and placed on Collaroy-Narrabeen Beach and is completed on average every 4 to 5 years.

In conjunction with an entrance adjustment trial, it is recommended that Council also consider alternative management options including:

- Education
- Signage and marker buoys
- Catchment management measures to reduce runoff sediment and nutrient load

## 4.7 Dredging on the Central Coast

Criteria	Summary - Entrance adjustment trial
Performance	If dredging were to cease, the channel would revert to its natural cycles of closing and opening. This may cause changes in the ecology of the estuary and during times of major flood events, the channel will overtop and begin to self-scour as the flood waters drain into the ocean.
Environment	Based on the conclusions of the relevant historical studies, the timelines and intensities for the outcomes mentioned are unknown and difficult to quantify without the completion of detailed studies.  The studies completed to date have been relatively comprehensive yet were not able to accurately quantify the benefits of dredging. Consequently, it is expected that Council does not have sufficient funding available to commission a definitive study which would provide confidence in the potential outcomes of ceasing dredging works.
Legislative requirement	It is recommended that Council seek legal advice regarding Council's responsibilities for dredging The Entrance and any potential liability associated with the impacts of temporary cessation of dredging works.
Health & Safety	Monitoring of water quality parameters within Tuggerah Lakes should be undertaken in order to monitor the development of any potential health or nuisance issues.
Cultural & Social	There are a number of local community groups passionate about the dredging of The Entrance and the improvement of water quality within the Tuggerah Lakes estuary. For example, an online petition was started by Tuggerah Lakes Care Inc approximately two years ago, which aims to keep The Entrance channel "wide and open" and has been signed by 128 people. It is expected that such community groups would be opposed to trials involving the cessation of dredging works.  It is recognised that the impacts of cessation of dredging works would be dependent upon climatic conditions during the period of the trial. Whilst the trial could be continued on the basis of favourable outcomes, it is important to note that Council may be perceived as liable if a major flood event was to occur during the trial period.  If such a trial is to be considered by Council, it is recommended that community consultation is undertaken in order to gain community support and to provide stakeholders with an opportunity to comment on the proposed trial.  Given the high level of community interest, there is also an opportunity to utilise citizen science to supplement the monitoring of observed impacts.
Cost	Undertaking an entrance adjustment trial would be by far the lowest cost option for Council.  Allowances should be made for community consultation, additional monitoring activities, analysis and reporting. It is expected that a one off cost of approximately \$250,000 would be required to implement the trial.  Funding for studies and trials of this nature may be available through the Rescuing our Waterways initiative.
Risk Assessment	The temporary cessation of dredging works for the purposes of an entrance adjustment trial is considered lower impact than any options involving development of major infrastructure. Nevertheless there are a number of risks which should be noted: <ul style="list-style-type: none"> <li>• Council may encounter significant community opposition to the cessation of dredging works (even if temporarily for trial purposes).</li> <li>• Council may be perceived as liable if a major flood event was to occur during the trial period which lead to damage of private and public property.</li> <li>• Cessation of dredging works may lead to a number of negative impacts relating to water quality, ecology, public recreation and tourism. Was Council to undertake the trial without progressing one of the sediment removal based options, the response time to address such issues would be slow.</li> <li>• It is noted that the state government committed \$200,000 in February 2019 to establish an expert committee to determine the best way to improve water quality in Tuggerah Lakes. Proceeding with any major</li> </ul>

## 4.7 Dredging on the Central Coast

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Criteria	Summary - Entrance adjustment trial
	<p>changes to dredging operations before the findings of the expert committee are available is considered a risk.</p> <p>It is noted that none of the previous studies reviewed as part of this assessment attempted to quantify the benefits to aesthetics, recreation and tourism of maintaining a minimum channel width at the southern tip of the sand spit at The Entrance. In conjunction with the consideration of an entrance adjustment trial, it is recommended that a cost-benefit analysis (CBA) be undertaken in accordance with the Guidelines for using cost-benefit analysis to assess coastal management options (OEH, 2018).</p>

## 4.7 Dredging on the Central Coast

### Attachment 4

### The Entrance Channel Dredging Operations Feasibility Review - GHD Final (Aug 2019)

#### 5.6 Options comparison

A comparison of the options presented above is included in Table 5-1. Detailed descriptions presented in Sections 5.1 to 5.5 have been summarised for quick reference and comparison across the agreed criteria, including performance, environment, legislative requirement, health and safety, cultural and social, costs and risks.

**Table 5-1 Comparison of options**

Criteria	Maintenance of Council's existing dredge	Purchase new dredging equipment	External dredging contractor	Entrance training walls	Alternative dredging technology	Entrance adjustment trail
Performance	Existing production rates of 60m <sup>3</sup> /hr could be maintained however fuel burn rates would not meet modern industry standards.	Smaller modern dredges can achieve similar production rates offered by the Council's current dredge.	Expected to complete the work in a timely, cost effective and environmentally sensitive manner.	Likely not to self-scour and maintenance dredging would still be required.	A mobile Sandshifter could be expected to move around 180 m <sup>3</sup> /hr under similar circumstances. Wrack and seagrass could be a hindrance.	With a berm height set it is likely that the entrance will self-scour during flooding events.
Environment	Impacts generally as assessed in the 2009 REF. Few improvement options with the exception of GHG emissions which exceed modern industry standards	An upgrade is not expected to alter the impacts of dredging works on the biodiversity, coastal habitats or morphology in the region.	Not expected to alter the impacts of dredging works on the biodiversity, coastal habitats or morphology in the region.	Expected to have minor long term impacts on the biodiversity, coastal habitats and/or morphology in the region, though some would be positive.	Not expected to alter the impacts of dredging works on the biodiversity, coastal habitats or morphology in the region.	Timelines and intensities for the outcomes are unknown and difficult to quantify without the completion of detailed studies.
Legislative requirement	Differing Council and NSW EPA interpretations of the approval conditions led to stop work notice issued in 2018. EPA discussions are ongoing.	Subject to the same licenses and approvals as the current dredge. Additional approval required for wrack collection.	Subject to the same licenses and approvals as Council's existing dredging operations.	Extensive approvals would be required from multiple consent authorities.	Subject to the same licenses and approvals as Council's existing dredging operations.	The Council should seek legal advice regarding dredging responsibilities and potential liability associated with the impacts of temporary cessation of dredging works.
Health & Safety	Aging equipment can present HSE issues however Council has	Subject to the same health and safety	Largely subject to the same health and safety risks and	Construction expected to produce risks to health and	Fencing and signage required to address	Monitoring water quality parameters

## 4.7 Dredging on the Central Coast

### Attachment 4

### The Entrance Channel Dredging Operations Feasibility Review - GHD Final (Aug 2019)

Criteria	Maintenance of Council's existing dredge	Purchase new dredging equipment	External dredging contractor	Entrance training walls	Alternative dredging technology	Entrance adjustment trail
	comprehensive plans and management measures in place.	risks and control measures.	control measures as current activities.	safety which can be managed.	drowning hazard around intake.	should be undertaken.
Cultural & Social	Differing opinions within the community regarding the need for and scale of dredging works.	Some improvement to operational noise levels.	Negligible difference and expected to generate the least community concern.	Negatively impact on the overall aesthetics of the region. Construction will impede on beach recreation.	Negligible. Some improvement to operational noise levels.	A number of community groups passionate about the dredging of The Entrance and improvement of water quality.
Cost	Recent trends in increasing repair and maintenance costs expected to continue as more components require repair or replacement.	High initial cost and lower on-going operational and maintenance costs than the existing dredge.	Higher cost per cubic metre of sediment and mobilisation and demobilisation costs. Council will not be liable for maintenance costs.	Extremely high initial cost. The most recent study estimated a construction of \$43 million in 2013.	A mobile Sandshifter would be more cost effective than traditional dredging campaigns, though a fixed bypass system would be cost prohibitive.	Lowest cost of the five options.
Risk Assessment	Key risks relate to the costs of major repairs and availability of the dredge during these periods.	Future tightening of environmental controls may render dredging more costly or potentially unfeasible.	Greater risk of standby costs and variations.	Availability of suitable size and quality armour rock has proven to be an issue. Council still require to mitigate current dredging risks.	Similar to those associated with the current operations. Limited flexibility may fail to achieve current benefits of dredging works.	Significant risks to Council regarding community perceptions.



## 6. Summary and recommendations

Council's existing dredge has now reached its originally budgeted serviceable life. Whilst Council is able to continue dredging operations using the existing dredge, there are a number of challenges which must be carefully managed in order to ensure that future dredging campaigns are completed in a cost effective and environmentally sensitive manner.

From examination of the options presented above, it is clear that there are a number of very different management options available to Council, each with various advantages and disadvantages.

The proximity of the area in question to popular retail area and foreshore parklands, means there is a high level of community interest in Council's approach to managing The Entrance and the implications for the broader health of the Tuggerah Lakes estuary. It is recognised that there is also a variety of strongly held and in many cases, opposing views within the community and Council.

Given the differing views on weighting of evaluation criteria and subjective nature of the assessment, selecting a preferred option in isolation would likely encounter significant community opposition which may delay or derail the overall decision making process.

Instead, it is recommended that Council progress the following options prioritised on the basis of current risk and cost:

1. Undertaking an entrance adjustment trial in conjunction with emergency entrance berm clearing operations using land based equipment
2. Engaging an external contractor to undertake trial dredging works
3. Purchasing of new dredging equipment

The above preferential sequencing is subject to Council's requirement to reform to a Coastal Management Program (CMP) which is to be implemented by 1st of January 2022. The CMP will be the key document informing Council future coastal management options. In development of the CMP, Council is required to follow a framework, guidelines and process which will include consideration of future management options for dredging requirements across the LGA. In the interim, if Council decides to continue dredging at the Entrance channel it is recommended that a dredging contractor is engaged to conduct a trial dredging campaign using a Watermaster dredge. This will assist Council to undertake the following:

1. Review the suitability of this plant and confirm that it is fit for purpose
2. Revise the current EPL considering implications listed in Section 4.4.5

The final selection of a preferred option will firstly require additional investigations and consultation with a number of internal and external stakeholders to define an agreeable position in relation to the following issues:

- Stakeholder feedback and community support
- Economic value of The Entrance with respect to tourism etc. which should be defined through a cost-benefit analysis (CBA) in accordance with the Guidelines for using cost-benefit analysis to assess coastal management options (OEH, 2018) and assessed against the costs of alternative dredging work methodologies presented above
- Further comparison by Council's Plant and Fleet Unit of cost benefit of repairing the current dredge to an appropriate operational standard, and acquiring a new dredge
- Council's legal obligations to undertake entrance management works

## 4.7 Dredging on the Central Coast

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- Council's ongoing discussions with the EPA regarding actions in relation to the Prevention Notice issued in November 2018 and the acceptability of future dredge campaigns discharging sediments and return waters to approved nourishment areas and the Pacific Ocean
- Council's ongoing discussions with representatives of State Government and Council's separate investigations into ongoing dredging requirements at the entrance to Brisbane Water
- Outcomes of the state government committed \$200,000 in February 2019 to establish an expert committee to determine the best way to improve water quality in Tuggerah Lakes

In order to ensure the ultimate management outcome is understood and accepted by all parties, it is recommended that Council endeavour to define the position of Council management, the community and regulatory agencies positions in relation to the considerations outlined above prior to selecting a preferred approach.

### 6.1 Licenses and environmental approvals

Regardless of the alternative dredging work methodology ultimately selected, it will be necessary to resolve the issues surrounding the 2018 Prevention Notice and the requirements of the EPA in relation to future entrance clearing and beach nourishment works.

In particular, it is recommended that Council reach an agreement with the EPA on the acceptability (or otherwise) of beach discharge operations and any requirements for additional management measures such as establishment of formal settlement ponds, turbidity monitoring, etc., prior to committing to undertake further dredging and beach nourishment operations.

During these discussions, it is recommended that Council raise the suitability of the potential approaches to future dredging operations as detailed in Section 4.4.5. Namely, a trial dredging campaign for removal of sediments of concern and/or the implementation of a revised monitoring approach at the discharge point.

Given the issues which have arisen since the preparation of the REF in 2009, it is also recommended that Council update the REF to consider issues as previously mentioned in Section 4.4.4.

## 7. References

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- Worley Parsons (2009). The Entrance Dredging Project Review of Environmental Factors. Final Report for Wyong Shire Council. June 2009. Worley Parsons Pty Ltd, Sydney.

## 4.7 Dredging on the Central Coast

Attachment 4

The Entrance Channel Dredging Operations Feasibility Review - GHD Final (Aug 2019)

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3/[https://projects.ghd.com/oc/Newcastle3/cccreviewofaquaticcop/Delivery/Documents/2220096-REP-1\\_Dredging Feasibility Report.docx](https://projects.ghd.com/oc/Newcastle3/cccreviewofaquaticcop/Delivery/Documents/2220096-REP-1_Dredging_Feasibility_Report.docx)

Revision	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
0	C. Dengate	D. Morrison	<i>D. Morrison</i>	C. Dengate	<i>C. Dengate</i>	04/06/2019
1	C. Dengate	D. Morrison	<i>D. Morrison</i>	C. Dengate	<i>C. Dengate</i>	25/06/2019
2	C. Dengate	N. Stitt	<i>N. Stitt</i>	C. Dengate	<i>C. Dengate</i>	28/06/2019
3	C. Dengate	N. Stitt	<i>N. Stitt</i>	C. Dengate	<i>C. Dengate</i>	01/07/2019
4	N. Stitt	C. Dengate	<i>C. Dengate</i>	I. Dixon	I. Dixon	01/08/2019

## 4.7 Dredging on the Central Coast

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Attachment 4

*The Entrance Channel Dredging Operations Feasibility Review - GHD Final (Aug 2019)*

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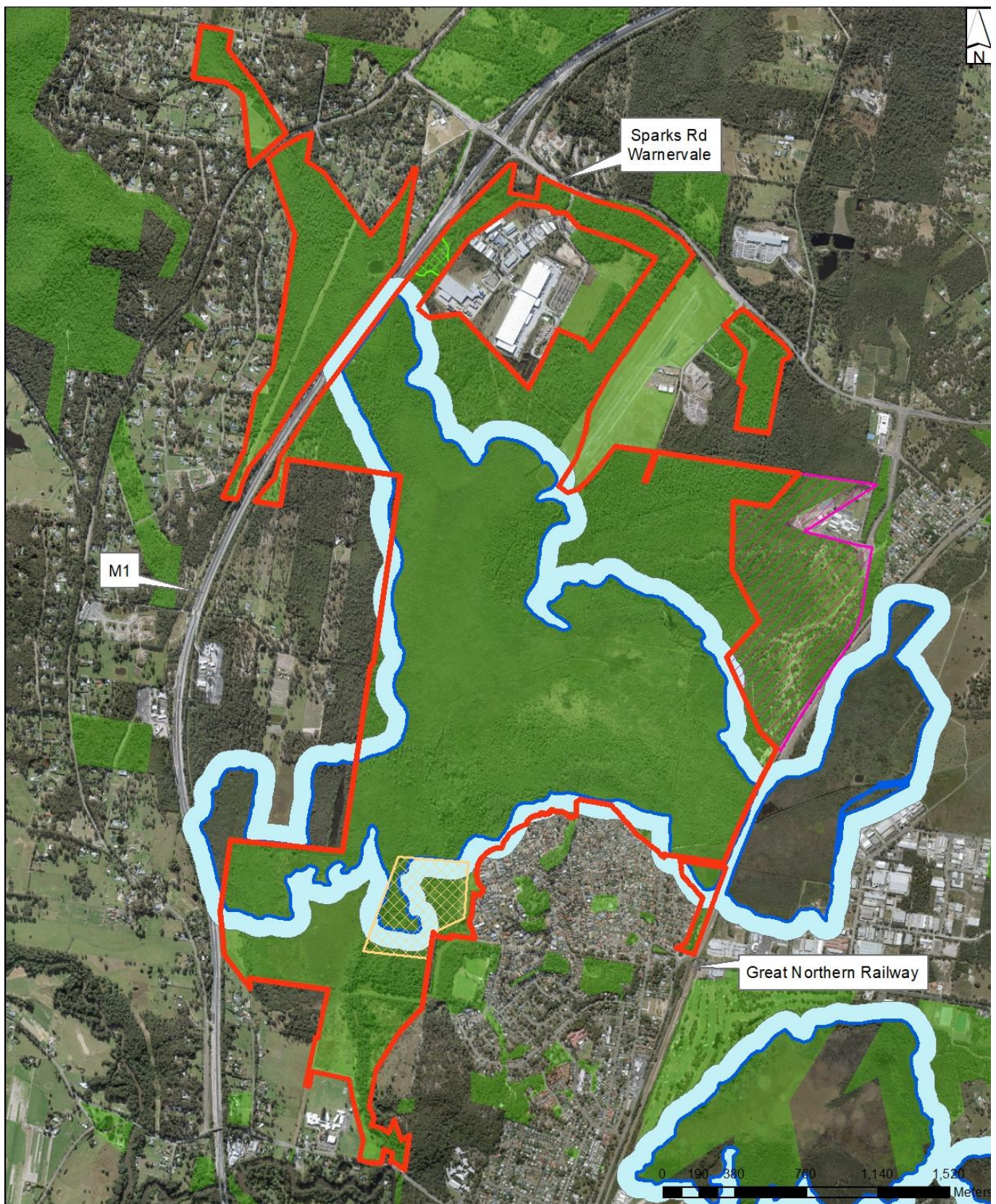




# 5.1 Update on Notice of Motion - Protection of Porters Creek Wetland

Attachment 1

Map 1 CA boundary as per resolution



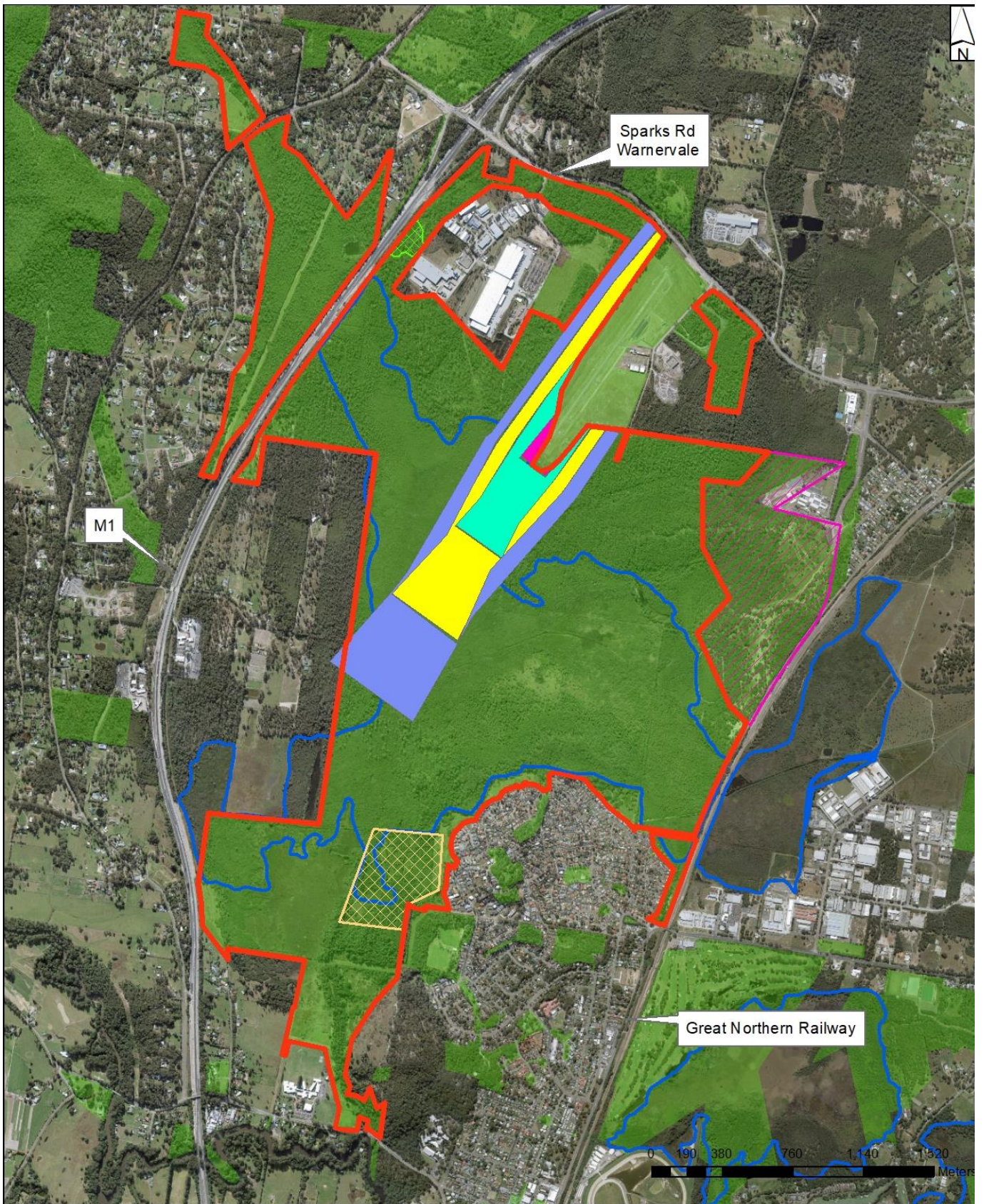
### Legend

- Proposed PCW Conservation Area
- 18 Burnet Rd Offset Area
- Lot 4\_10 Warren Rd Offset Area
- WamervaleBusinessPark
- SEPP - Coastal Wetlands
- SEPP - Coastal Wetlands Proximity Area
- Council Owned Land

Figure 1. Porters Creek Wetland: Proposed Conservation Area Boundary DRAFT 03/03/2020  
 SITE ID: Lot 2 of DP1059616, Lot 2 of DP1234942, Lot 5840 of DP1019002,  
 Lot 3 of DP793403, Lot 4049 of DP810547, Lot 5948 of DP1046614,  
 Lot1 of DP1139230, Lot 47 of DP740438, Lot 26 of DP830153,  
 Lot 26 of DP830153, Lot 20 of DP1006191, Lot 24 of DP1076801,  
 Lot 7 of DP792003, Lot 15 of DP837287, Lot 1 of DP843986, Lot 3 of DP1230740



# 5.1 Update on Notice of Motion - Protection of Porters Creek Wetland



**Legend**

- |   |                                |  |
|---|--------------------------------|--|
|  | Proposed PCW Conservation Area | <b>OLS_elevat</b>  |
|  | 18 Burnet Rd Offset Area       |  10 |
|  | Lot 4_10 Warren Rd Offset Area |  20 |
|  | WamervaleBusinessPark          |  30 |
|  | SEPP - Coastal Wetlands        |  40 |
|  | Council Owned Land             |  |

**Figure 1. Porters Creek Wetland: Proposed Conservation Area Boundary DRAFT 03/03/2020**  
 SITE ID: Lot 2 of DP1059616, Lot 2 of DP1234942, Lot 5840 of DP1019002,  
 Lot 3 of DP793403, Lot 4049 of DP810547, Lot 5948 of DP1046614,  
 Lot1 of DP1139230, Lot 47 of DP740438, Lot 26 of DP830153,  
 Lot 26 of DP830153, Lot 20 of DP1006191, Lot 24 of DP1076801,  
 Lot 7 of DP792003, Lot 15 of DP837287, Lot 1 of DP843986, Lot 3 of DP1230740





## RECORD OF ADVICE

APPLICANT DETAIL					
Name	Rochelle Lawson				
Phone No	[REDACTED]				
MEETING DETAIL					
Date	20 January 2020			Time	1:00pm
Venue	Wyong Administration Building				
PROPERTY DETAIL					
Proposal	Boundary adjustment of Lot 2 DP 1234942 and Lot 3 DP 1230740				
Owner	Central Coast Council				
Lot No	2	DP	1234942	Zonings	IN1 - General Industrial, E2 - Environmental Conservation SP2 – Educational Establishment B7 – Business Park
	3		1230740		
Address	15 and 30 Jack Grant Avenue, Warnervale			Pre-lodgement number: PL/5/2020	
Previous Approvals	DAs		BAs		CAs
ATTENDEES					

**Council attendees:**

Antonia Stuart – Section Manager Pre-Lodgement and Customer Engagement  
 Ross Edwards – Senior Development Planner  
 Luke Drury – Unit Manager Planning and Delivery  
 Peter Stockdale – Section Manager Airport Operations  
 Scott Duncan – Section Manager Local Planning and Policy

**Proponent attendees:**

Rochelle Lawson – Senior Ecologist Natural Assets and Biodiversity  
 Paul Shelley – Environmental Officer Major Construction  
 Jamie Barclay – Unit Manager Economic Development and Project Delivery



## RECORD OF ADVICE

### SUBJECT SITE

The subject site associated with the proposal is legally described as Lot 3 in DP 1230740 and Lot 2 in DP 1234942 which is known as 15 and 30 Jack Grant Avenue, Warnervale. The site is zoned IN1 General Industrial, E2 Environmental Conservation, B7 Business Park and SP2 Educational Establishment. The site contains the Central Coast Airport and scattered vegetation. The site is surrounded by existing semi-rural properties and is partially located within the Wyong Employment Zone urban release area.



Figure 1: 2019 Aerial Photo



# RECORD OF ADVICE

## PROPOSAL

The tabled proposal is for the boundary adjustment of Lot 2 DP 1234942 and Lot 3 DP 1230740. The intent of the subdivision is to separate the IN1, B7 and SP2 zoned area from the E2 zoned land which contains the Porters Creek Wetland Conservation Reserve.

Limited information was tabled, and a concept subdivision plan was not provided.

No details were provided in relation to the following:

- Levelling of the site involving cut and fill or tree removal?
- Estimated cost of the development?
- Stormwater management of the site?
- Servicing of the site with water and sewer?
- Easements for services, fire trails etc.
- Ecological impacts.

The following comments were provided by the applicant regarding the proposal:

- Potential development may include single or multiple lots as part of the subdivision.
- Management of the Obstacle Limitation Surface (OLS) including the OLS clearing requirements may be included as part of the proposal.
- Future Link Road allowance will be considered as part of the proposal.
- Stakeholder consultations are required to determine the area of the land required for the proposal.
- Internal discussions to be held between Rochelle Lawson and Jamie Barclay in regard to potentially setting up a project team for this project.
- Progress update of the preparation in obtaining the relevant documentation and studies will be reported to Council and the Wetland Committee prior to the lodgement of a development application.

However, details of the extent of the proposed development is to be confirmed before a development application is lodged.

The comments provided within the meeting minutes are based on the submitted information.





## RECORD OF ADVICE

### MEETING ISSUES & RESULTS

#### State Environmental Planning Policies (SEPP's)

The following SEPPs are applicable to the proposed development: -

#### SEPP (Coastal Management) 2018

SEPP (Coastal Management) 2018 is applicable to the development. Compliance with this SEPP must be addressed. Particular attention is drawn to Clauses 10 and 11 of the SEPP which are required to be satisfied. The proposed subdivision is defined as development and as outlined within Clause 10 (2) of this SEPP, any development proposed within coastal wetlands is declared to be designated development for the purposes of Clause 4.10 of the *Environmental Planning and Assessment Act 1979* (the Act).

Due to that the proposal constitutes designated development under the Act, it is required that the applicant must make a written application to the Planning Secretary for the environmental assessment requirements (SEARS) before the preparation of an environmental impact statement.

#### State Environmental Planning Policy No 55—Remediation of Land

Clause 7(1) of State Environmental Planning Policy No. 55 – Remediation of Land is relevant to the assessment of this Development Application.

Clause 7(1) of this SEPP requires that consent not be granted until Council has considered whether the land is contaminated. If the land is contaminated, the Council needs to be satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purposes for which the development is proposed to be carried out.

The environmental Impact Statement (EIS) is required to address the provisions of State Environmental Planning Policy (SEPP) No. 55 – Remediation of Land, which requires consideration of whether a site may be contaminated.

#### SEPP 44 – Koala Habitat Protection

The study area is larger than 1 hectare, so SEPP 44 applies is relevant to the assessment of this Development Application.



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### Wyong Local Environmental Plan 2013 (WLEP 2013)

The Wyong LEP 2013 is applicable to the proposed development. The following provisions are applicable to the site:

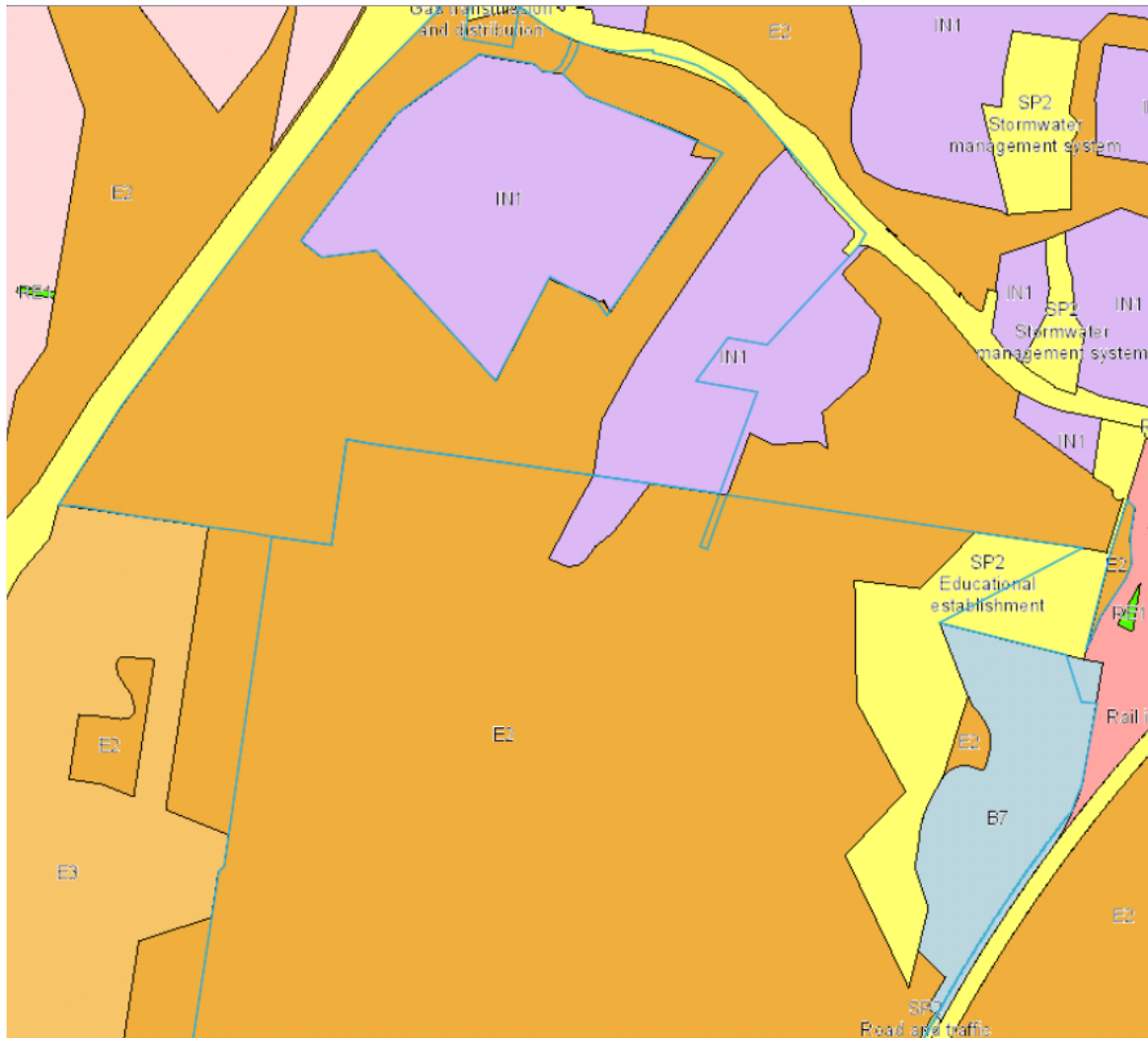


Figure 2: LEP Zoning Map



# RECORD OF ADVICE

### *Clause 2.3 – Zone objectives and Land Use Table*

The subject site is zoned IN1 General Industrial, E2 Environmental Conservation, B7 Business Park and SP2 Educational Establishment under the provisions of WLEP 2013.

### *Permissibility*

The subdivision of land is defined under Section 6.2 of the *Environmental Planning and Assessment Act 1979* as follows:

***Subdivision of land*** means the diversion of land into two or more parts that, after the division, would be obviously adapted for separate occupation, use or disposition.

The development satisfies the above definition, as the development comprises a boundary adjustment which is maintaining a two lot Torrens title subdivision. Subdivision is permissible with consent of Council in the IN1 General Industrial, E2 Environmental Conservation, B7 Business Park and SP2 Educational Establishment zoning (clause 2.6 Subdivision-consent requirements).

### *Relevant Clauses*

#### Clause 4.1 – Minimum Lot Size

The tabled development is proposing subdivision as part of the application therefore the requirements of this clause are applicable in this circumstance. The area of the subject sites zoned IN1 General Industrial, SP2 Educational Establishment and B7 Business park do not have a minimum allotment size requirement however the area of the site zoned E2 is required to be a minimum area of 40ha.

#### Clause 6.1 – Arrangements for Designated State Public Infrastructure

This Clause is required to be addressed as majority of the development site is located within the Wyong Employment zone.

#### Clause 6.2 – Public Utility Infrastructure

This Clause is required to be addressed with any future DA lodged as the site is located within the Wyong Employment zone.

The applicant will need to provide comment on the electricity, communications, water and sewerage infrastructure available to the site and any works required to connect these services to the site.



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## Clause 7.1 - Acid Sulfate Soils

Clause 7.1 requires consideration to be given to certain development on land being subject to actual or potential acid sulphate soils. The site is identified as Class 2, 3 and 5 and works which are likely to lower the watertable in adjacent Class 1,2,3 or 4 land to any point below 1 metre AHD requires the preparation of an acid sulphate soils management plan (ASSMP).

## Clause 7.2 – Flood Planning

The site is identified on Council's mapping system as being affected by flood controls. Please contact Council's Principal Development Engineer Mark Dowdell for advice in relation to flooding impacts within the area.

## Clause 7.9 – Essential services

Separate services will be required to service the development being water, sewer, electricity and telecommunications.

The applicant will need to provide comment on the electricity, communications, water and sewerage infrastructure available to the site and any works required to connect these services to the site.

## **Wyong Development Control Plan 2013 (WDCP 2013)**

### **Chapter 3.3 Floodplain management**

Chapter 3.3 outlines flood development controls for affected properties and land uses. This Chapter of the DCP is to be addressed as part of the development application.

### **Chapter 3.4 Conservation Areas for North Wyong Areas**

The provisions of Chapter 3.4 are applicable to the site. This Chapter of the DCP is to be addressed as part of the development application.

### **Chapter 3.6 Tree and Vegetation Removal**

The provisions of Chapter 3.6 are applicable to the site due to any proposed tree removal. This Chapter of the DCP is to be addressed as part of the development application.



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## Chapter 3.10 Wetlands Management

The provisions of Chapter 3.10 are applicable to the site. This Chapter of the DCP is to be addressed as part of the development application.

### Other:

#### Contributions - Section 7.11

A detailed contributions quote can be obtained from Council's Contributions Officer Sharron Colquhoun on 4350 5409. Please note that fees are required to be paid prior to issue of the Subdivision certificate and that contributions will be adjusted to the amount applicable at the time of payment.

A Special Infrastructure Contributions Plan (SIC), dated August 2008, also applies to land within the Wyong Employment Zone and the contribution rate is per hectare NDA. The SIC Plan states that the infrastructure costs are subject to indexation and that the "Plan will be reviewed by the Department of Planning to account for infrastructure indexation". It is recommended that the Department be contacted to confirm the current rate and process in this regard.

#### Water and Sewer Contributions

Water and sewer contributions are payable for the proposal under the *Water Management Act 2000* and will be included under the Section 306 Notice of Requirements for the proposal.

#### Bushfire

The subject site is identified as bushfire prone land. The proposed development will require the preparation of a bushfire report prepared by a suitably qualified bushfire consultant.

#### Natural Resources Access Regulator (NRAR)

The proposed development involves works within 40 metres of a watercourse and will require a controlled activity approval under the *Water Management Act 2000*. It is strongly recommended that the Natural Resources Access Regulator (NRAR) be contacted to discuss the proposal in regard to riparian zones, offsets and watercourse crossings prior to lodging a development application.





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Draft Master Plan of the rear of the subject site zoned SP2 Educational Establishment and B7 Business Park



Figure 3: Extract of Draft Master Plan

The above diagram was provided by Scott Duncan, Section Manager, Local Planning and Policy regarding the current draft master plan for the area of the site zoned SP2 Educational Establishment and B7 Business Park.

It is recommended that any subdivision of the site have regard to these future zonings.

Further details regarding the above draft master plan, please contact Scott Duncan on 4350 5547.



# RECORD OF ADVICE

## OTHER MATTERS

Ecological constraints include (but are not limited to):

- Areas mapped under the NSW Biodiversity Values Map.
- Mapped waterway.
- Endangered Ecological Communities, indirect impacts will need to be managed.
- Area of E2 Environmental Conservation land.
- The site is covered by Wyong DCP 2013 Chapter 3.10 Wetlands Management.
- Potential habitat for threatened flora and fauna species. Note that targeted survey during relevant flowering periods must be undertaken for locally occurring cryptic threatened flora including orchids where potential habitat exists. Other orchids with local records would be identified by the consultant ecologist through Bionet searches or BAM Calculator.

### Biodiversity Assessment

The proposed development will be assessed in accordance with the *Biodiversity Conservation Act 2016* (BC Act) and associated *Biodiversity Conservation Regulation 2017* (BC Regulation). More detail of the Biodiversity Assessment requirements for DAs can be found on Council's website:

<https://www.centralcoast.nsw.gov.au/plan-and-build/planning-controls-and-guidelines/biodiversity>

The applicant would need to obtain consultant Ecologist advice on the type of Biodiversity Assessment to be submitted with any future DA. Based on what was discussed at the pre-DA meeting, the development may trigger the Biodiversity Offsets Scheme (BOS) and require a Biodiversity Development Assessment Report (BDAR) to be submitted with any Development Application. If a BDAR is required, it is to be prepared by an accredited assessor in accordance with the Biodiversity Assessment Methodology (BAM). If the development does not trigger the BOS, a Flora and Fauna Assessment prepared in accordance with Central Coast Council's Flora and Fauna Survey Guidelines 2019 would be required. It is to include (as a minimum):

- Bionet searches for threatened species records within a 10km radius.
- Relevant Tests of Significance in accordance with Section s.7.3 of the BC Act and the "NSW Threatened Species Test of Significance Guidelines".
- Address potential direct and indirect ecological impacts (e.g. altered flow regimes, weed invasion and soil borne pathogens), including specific mitigation to maintain appropriate hydrological conditions.
- Survey and mapping of any hollow bearing trees, including fauna survey to determine usage.
- The boundaries of vegetation communities at the site are to be mapped and shown on a plan to scale with an overlay of the proposed development.



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- A BOSET report, detailed area of clearing calculations and flora information that demonstrates the BOS thresholds are not triggered. This includes species composition of grassed areas.
- All required seasonal flora and fauna surveys. Field surveys are to be undertaken in accordance with the OEH threatened species survey guidelines or, where relevant published survey guidelines are not available, surveys are to be undertaken using best practice methods that can be replicated for repeat surveys. Council's Flora and Fauna Guidelines (2019) can be used in this regard.

The proposed development must demonstrate that impacts to biodiversity have been avoided and minimised.

The development application should not be lodged until such time as all required ecological surveys and assessments have been completed.

### Study Area

The study area must include all areas likely to be directly impacted by the development but not limited to including lots, roads (including footpath, kerb and gutter), asset protection zones, stormwater infrastructure, water and sewer services to connection point etc. Ecological surveys must cover all impact areas.

The study area must also include areas likely to be indirectly impacted, particularly sensitive environments such as endangered ecological communities. Indirect impacts include altered flow regimes, noise, light, weeds, public access etc.

### SEPP 44 – Koala Habitat Protection

As noted previously, the site is larger than 1 hectare so SEPP 44 applies and an assessment is required with the development application.

### Vegetation Management Plan

A Vegetation Management Plan (VMP) would be required for any areas of native vegetation to be retained to demonstrate mitigation of impacts. Central Coast Council's Flora and Fauna Survey Guidelines (2019) provides further guidance on preparing VMPs.



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### Environment Protection and Biodiversity Conservation Act 1999

Species listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) require consideration of the significant impact criteria to determine if referral to the Commonwealth Department of the Environment is required. This is a separate assessment and approval process to the 'test of significance' required under the *Environmental Planning and Assessment Act 1979* (NSW) (EPA Act) as part of the development assessment process.

If a referral is required, Council encourages applicants to consult with the Commonwealth Department of Environment prior to lodgement of the development application.

### **REQUIREMENTS FOR LODGEMENT**

The following documentation is to be submitted with any Development Application:

- Subdivision plans including details of easements for servicing and access etc.
- Statement of Environmental Effects/ or Environmental Impact Statement addressing:
  - SEPP – Coastal Management 2018, SEPP 55 – Remediation of land, SEPP 44 – Koala Habitat Protection
  - WLEP 2013 (permissibility, zone objectives, Clauses 4.3, 4.4, 6.2, 7.2, 7.3 and 7.9)
  - Relevant sections of Wyong DCP 2013, Chapter 3.3 – Floodplain Management, Chapter 3.4 – Conservation Areas for North Wyong Areas, Chapter 3.6 – Tree and Vegetation Management and Chapter 3.10 – Wetlands Management.
  - Stormwater drainage plans.
  - Services plan.



## RECORD OF ADVICE

### NOTE

- 1 Development Application, Section 4.55 Amendment, Construction Certificate and Complying Development Certificate applications can be lodged through Councils e-Planning online lodgement service for the former Gosford LGA or through ePathway for the former Wyong LGA. Lodging online is the quick, easy and secure way to prepare and lodge your application and is available 24/7.

Alternatively, applications can be lodged in person at Council's Customer Service Centres located at 2 Hely St Wyong 49 Mann Street, Gosford or at or by post to PO Box 20, Wyong, NSW, 2259 or PO Box 21, Gosford.

- 2 This is a pre application meeting only. The details are intended to guide the applicant in the preparation and lodgement of a formal development application. The proposal has undergone preliminary assessment only by those professional staff attending the meeting. Further issues may become apparent, and additional information may be required from the applicant during the formal assessment phase. This meeting in no way infers nor implies that development consent will be granted to this proposal. Applications as indicated above may not reflect the full development history of the property. Should a full development history be required, a search application and fee will apply. It is strongly recommended that early advice be sought from Water and Sewer if appropriate.



Ross Edwards

**Senior Development Planner**

**DEVELOPMENT ASSESSMENT**



Antonia Stuart

**Section Manager**

**DEVELOPMENT ASSESSMENT**