

SHOALHAVEN CITY COUNCIL

SUBMISSION TO THE NSW DEPARTMENT OF PLANNING PART 3A, ENVIRONMENTAL PLANNING & ASSESSMENT ACT, 1979

ENVIRONMENTAL ASSESSMENT REPORT SUBMISSION MAJOR PROJECT APPLICATION - CONCEPT PLAN MP09_0088

PROPERTY: Land within the Shoalhaven local government area.
Part Lot 5, Part Lot 6 and Part Lot 7 in DP 1065111 and Portion
61 DP 755971

APPLICANT: John Toon Pty Ltd for Realty Realizations Pty Ltd
OWNER: Realty Realizations Pty Ltd

DEPARTMENT OF PLANNING REFERENCE: MP09_0088

COUNCIL REFERENCE: 3A10/1003

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1. Introduction

The application seeks Concept Approval and the Environmental Assessment Report (EAR) refers to a mixed use development comprising the following:

1. 47 small lot dwellings aimed at the 55+ age cohort;
2. 500 standard residential lots ranging in size from 500-900m²;
3. 48 x 1, 2 and 3 bedroom apartments;
4. 60 medium density town houses;
5. 30 mixed-use dwellings;
6. 28 industrial lots of various sizes;
7. Waterfront sites for tourist-oriented developments;
8. 3.75km long foreshore park.
9. Recreation oval
10. A vista park

The development will be undertaken in stages and includes some areas designated for "future development" without described proposals.

The Council supports an orderly expansion of the Culburra urban area as has been foreshadowed under Development Control Plan (DCP) No.67 since its adoption on 23 July 1996. Councils Shoalhaven Local Environmental Plan 1985 (SLEP 1895) and the exhibited Draft SLEP 2013 provide strategic direction and controls that should be considered in the assessment of the application. The EAR has not addressed draft SLEP 2013 and there are a number of key issues such as zoning and development objectives that should be addressed.

However, Council considers that initially, the underlying strategic principles for the development site and the wider locality require further discussion with the proponent and the Department. Discussions are requested before determination is considered.

Both Development Control Plan (DCP) 67 – Culburra Expansion Area and DCP 100 – Subdivisions, apply and the application has not addressed a number of matters in each DCP. DCP 67 sets a strategic direction that needs updating. A new strategic overlay is required to establish the key planning framework for this substantial urban expansion area. Further, a number of matters in DCP 100 which relate to detail should also be addressed.

Council has a number of over-arching concerns that need to be addressed and resolved at the strategic level; these include:

- likely impacts on the existing Culburra commercial area, including future commercial floor space and associated parking.
- potential fragmenting of town centre commercial areas with the proposed commercial uses in The Circus.
- the waterfront tourist accommodation precinct relying on development within the environmental protection zone and support from waterfront structures (jetty and boat ramp) when these are not included in the application and;
- uncertainty of future expansion of the development site continuing to join Culburra Road at a second location.

In particular, the extent of future additional development potential on zoned land will guide the need for additional facilities under a Contribution Plan or Voluntary Planning Agreement that may include the road network and community facilities within the Culburra locality and beyond.

A strategic overlay or updated DCP is required to articulate the key principles for development of this urban expansion area. Such a plan should be discussed and negotiated with the applicant.

It is recognised that some comments in Council's submission may relate to matters of detail for subsequent project applications; however these are included to assist the applicant in the concept assessment and later applications.

2. Statutory Planning Matters

Councils Shoalhaven Local Environmental Plan 1985 (SLEP 1895), the exhibited Draft SLEP 2013, DCP 67 and DCP 100 are relevant.

The development provides for four storey apartments on land along Culburra Road and the height will exceed the exhibited SLEP2013 Height Map 11m limit. The application proposes a number of uses and development within the environmental protection adjacent to the tourist sites that are contrary to the intention of the proposed (SLEP2013) zone and also requests an adjustment to the zone boundary in that location.

It is noted there are a number of design controls proposed by the application in Appendix V and proposals for site specific housing controls including front and side setbacks and vehicle manoeuvring. Council requests the Department consider the mechanisms to achieve these given that future housing development may be assessed under NSW Housing Codes and any site specific standards may require Restrictions as to User provisions to ensure they are realised.

The proposals to clear vegetation to establish "Vista Parks" with grass and low shrubs is inconsistent with objectives that apply to the E2 zoned land along the foreshore area.

3. Open Space proposals

Council's DCP 100 states the provisions and criteria for useable open space. The proposed open space in the subdivision does not meet the Council's adopted DCP 100 which does not support small disconnected parks or narrow strips, both of which can have safety issues and maintenance constraints. Open Space within the recreational oval should also be consistent with Council's active sports field plan in relation to area, dimensions and facilities as shown in Appendix 3.

Open space provided within the proposal should address the following issues:

- (a) Areas that are primarily used as drainage lines should not be classed as open space reserves.
- (b) Narrow lots in Stages 2, 3 and 4 that are presented as "open space" that are primarily for drainage or are less than 10m wide are unacceptable as these create issues of surveillance, safety and on-going maintenance.

(c) Small pockets or semi circles shown in The Circus and Stage 4 are separated from residents by roads and become unreasonable maintenance liabilities and do not comply with relevant criteria within DCP 100. The proposed children's playground in Stage 4 that is separated from the residential lots and adjacent to the busiest collector road is undesirable from a safety perspective (refer to EAR Appendix, Figure 6 – landscape plan).

The EAR does not detail embellishments of open space and parks, nor provided details of a cycleway management strategy, tree and environment management plans for the open space areas.

There are a number of contradictions in the plans with "open space" also identified as drainage swales/fire trails etc. Any small areas should always be hard scaped. Service easements should not be located within an open space or considered as part of open space land (sewer pumps, substations etc)

In considering the urban design approach for the built form and the type of accepted open space the following requests are provided for consideration:

- (i) The plan lacks provision of a principal public place as the focus of the community social/public life that fosters a strong sense of community.
- (ii) A north-south green link between the proposed Oval and the foreshore park with safe and direct access as part of open space network.
- (iii) Need for urban design Master Plan for the foreshore park: The proposed foreshore park is a crucial element of the development to ensure high amenity outcomes for the community. The foreshore urban design master plan is required to include sustainability principles and implementation strategy for quality pedestrian/cyclist linkages, 'leisure hub,' interpretation of cultural artefacts, etc, and its implementation should be included in the staging plan of the development.

The foreshore park area creates potential conflicts with the requirements to protect threatened species and biodiversity and more detail is provided in the section relating to Flora and Fauna on how this potential conflict is to be resolved.

4. Integration with the existing Culburra commercial area.

The EAR refers to making the existing town centre more accessible (from this development) and proposes a road and shared pathway network. The application proposes a number of commercial/retail uses in The Circus and at the tourist related uses at the western end.

The EAR does not include any economic justification for these uses nor address the impacts on the existing Culburra commercial area, including needs for additional car parking or growth within the Culburra commercial precinct to provide for residents from the new development.

The Circus appears to provide for a mixed-use precinct that may be compatible with the commercial centre; however, appropriate land-use guidelines need to be articulated so this location does not undermine the viability of the existing town

centre. DCP 67 provides for an indicative floor area of about 200m² as suitable to provide for a "local village focal point" while the proposal indicates potential floor areas up to 3000 m².

5. Community and Health facilities

The EAR has not addressed the needs for community and health related facilities suitable for an ageing population in the Culburra area. The application proposes a number of residential styles for the 55+ aged group but has not addressed or provided for uses such as aged care facilities. Given the demographic features of coastal villages like Culburra Beach, transition to appropriate aged care facilities needs to be addressed.

6. The industrial land use

Issues concerning the design for the industrial land are contained in section 8(c) of the submission, below. This includes the impacts likely from the proximity to the residential lots at The Circus and creation of an irregular shaped lot for "future development" adjacent to the roundabout. The relationship of The Circus, which the proponent identifies as a key feature, and the proximity of the industrial uses create potential amenity conflicts. Detail on how such conflicts are to be addressed should be provided.

7. Flora and Fauna and Biodiversity

The Director General's Requirements (DGR's) - Flora and Fauna state the proponent must undertake particular assessments. The proposed development does not meet the DGR's and further information should be submitted for assessment. The lack of information suggests that the extent of impacts would be unknown if the proposal was to proceed in its current form.

In particular, the environmental assessment:

- does not provide for any wildlife corridor north-south link
- does not provide adequate buffers to the foreshore and SEPP 14 wetlands, or justification for their reduction
- there is insufficient survey and assessment of threatened species, populations and endangered ecological communities
- does not provide details of offsets in accordance with an approved methodology
- the offsets have not been prepared in consideration of the EEC's present at the site or the number of threatened species that are likely to be impacted due to insufficient survey and assessment of impacts

8. Issues by development area segments

This section is described in development areas based on the plan and is listed from east to west. The Department is requested to consider these matters.

(a) Area 1 – south of Culburra Road (Stage 1)

This area includes 4 storey apartments and an area for low scale housing for "55+ age group". Infrastructure design and lot layout for Stage 1 should consider orderly development of the adjacent 2(c) zoned land. The current layout is concentrated in the north part of this zone and it is unclear if it is suitable to allow the balance of the land to be developed (EAR page 31, including plan 25405-13-00 between pages 31 and 32 and plan 25405-30-04).

Issues:

- (i) The height of the apartments exceeds the exhibited height map (11m) in draft SLEP 2013.
- (ii) The EAR contains conflicting information about the extent of the development area southward. Later project applications should minimise the number of access points to Culburra Road.

(b) Area 2 – north of Culburra Road between existing town boundary and industrial area. (Part Stage 5)

Issues:

- (i) The legal access to a public road from the proposed electricity sub-station should be identified.
- (ii) The areas marked “future development zone” are to be subject of a further application.
- (iii) The proposed clearing for the Open Reserve visual corridor should be assessed against the objectives of the E2 foreshore land. This issue also applies to other proposed visual corridors through the foreshore E2 land.
- (iv) The connectivity of the development is not established in shared pathway networks.

(c) Area 3 – The Sewage Treatment Plant (STP) land

The STP is on operational land owned by Council and is infrastructure operated by Shoalhaven Water, a Group of Council. The land use has an “odour buffer” to mitigate potential nuisance to adjoining development.

Issues:

- (i) It is understood the proponent has requested advice from Shoalhaven Water about an access for a shared pathway to enable connectivity. The arrangements will be subject to further negotiation and agreement on the detail.
- (ii) The proponent states (EAR-Appendix T – 7.2) they are negotiating with the Council for a fire trail and Asset Protection Zone (APZ) to be located within the STP land. This is not supported by Council and the APZ should be located outside the STP boundary and within the industrial land.

(d) Area 4 - Industrial area (Part Stage 5)

The industrial lots are east and west of the existing industrial uses with access to Culburra Road from Strathstone Street and Regmoore Close. This existing road network should be used for all new industrial lots to access Culburra Road.

Issues:

- (i) The road design and layout is to be designed to cater for 19m semi-trailers (DCP 18).
- (ii) The proposed lot 113 does not have an acceptable separation from the adjoining residential /mixed use area of The Circus resulting in unacceptable amenity impacts and potential conflicts.

(e) Area 5 –

(a) The roundabout and Culburra Road

The new roundabout at Culburra Road is described as creating a gateway to Culburra and the new development. A site distance assessment will confirm the suitability of the proposed roundabout location on Culburra Road and this section of road should be designed as a 100kph rural standard as currently applies. A

process through the local traffic committee and Roads and Maritime Services (RMS) may determine the acceptability for a change to an urban road standard and lower speed limit as part of a later project application. It is understood that RMS has made a submission to DPI on this matter and does not support a reduction in the current 100kph speed limit.

Issues:

- (i) An area west of the industrial lots and between the new Collector Road is marked as "future development zone". Additional detail should be provided including how an appropriate "gateway" statement: and compatible land uses will be provided.
- (ii) The EAR and plan indicates that new roundabout may serve as a connection for a proposed golf course development south of Culburra Road. Council supports this in principle subject to assessment at Project application stage. A Part 4 development application (DA11/1728) has been submitted to Council but has not been determined at the time of drafting the submission. The redirection of the internal access road for the golf course to meet the proposed roundabout will require an amendment to DA11/1728 and assessment.

(b) The collector road

Issues:

The collector road is located along the boundary of the catchments north and south. It is unknown if there will be further residential development south of the collector road or an extension of the road to meet Culburra Road west of the development.

There are many residential lots that are shown to have direct access and the EAR describes increased setbacks that enable vehicles to exit the site in a forward direction. This creates an issue in house lot development by future landowners and can lead to less safety surveillance of the street as owners use the increased setback as an opportunity for front yard parking for caravans, boats etc.

Council considers an option may be to provide a centre median with roundabouts at main intersections, enabling a left in – left out from the residential lots.

(f) Area 6 – south of new collector road, medium density and active recreation

There is a 3.4 ha area for medium density development. This contains a feature tower that is described elsewhere in the EAR as a specific visual feature at a high point on the land. Council requests that the medium density area be subject to a separate assessment based on a design that coordinates the land use and features identifies by the proponent.

The issues relating to the active recreation oval are contained in Section 3, above.

(g) Area 7 – The Foreshore Park

The development proposes that the land zoned as E2 be utilised to form a passive open space corridor between the residential lots and the waterfront

crown reserve and includes increased uses adjacent to the tourist sites and these uses have conflicting objectives to the zone.

The proposed clearing for a view to Curleys Bay and Coolangatta Mountain within the Open Reserve visual corridor should be assessed against the objectives of the E2 foreshore land.

A staged proposal is requested for each stage of the foreshore park and be included with subsequent staged project applications.

(h) Area 8 – Stage 2 and The Circus

- (i) The residential layout has a number of design issues that include:
 - (a) The poor residential amenity associated with the proximity of the 55+ small lots on the eastern side and the industrial uses where no buffer is provided, especially in the vicinity of industry lot 113.
 - (b) The narrow strip of land west of the STP is designated as drainage but also provides the 25m APZ. The potential nature of those uses and Councils DCP 100 question the suitability of this land as open space.
 - (c) The perimeter road is 20m while a 25m APZ is required. The impacts on either the foreshore land or the lots should be clarified. The location of APZs in other stages has similar impacts.
 - (d) The road serving the 5 lots adjacent to the “future development zone” is to be designed in accordance with DCP 100, including turning for a waste collection vehicle.
- (j) The proposals for The Circus include a circular pattern of three storeys building with mixed use on the ground floor and a two storey apartment above. The EAR The statement in Appendix V – Design Controls states:

5. The Circus

It is anticipated that The Circus will be constructed in stages. Stage 1 is likely to comprise 3 or 4 units designed to accommodate a sales office, a coffee shop and a convenience store. The carriageway, footpath and central green will be completed when the roads are formed. The site will be levelled.

The lots have a depth of 20m with a 7.5m frontage to the Circus. The form envisaged is a two-storey residence over a ground floor business use; the ground floor includes a double garage and courtyard facing the First Circuit.

The residence will have a maximum depth of 14m. The roof of the garage may be used as a terrace which may have a pergola roof.

Issues include:

- (a) The apparent lack of delivery vehicle parking for the mixed use / residential uses.
- (b) The potential congestion for car parking described in Appendix V - Figure 3 when combined with a through road system at the centre and two small landscaped parks that are disconnected from the commercial mixed use lots. Further detail is requested for The Circus to confirm sufficient parking is available for the proposed commercial development, including for delivery vehicles, and the extent of public road dedication.

(k) Area 9 – Stage 3 and 4 Residential

The western end of the collector road and the adjacent lot pattern does not allow for the continuation of a bus route should the expected extension of the collector road to Culburra Road not be approved before the development of Stage 4. The provision of an acceptable alternate design that provides for the bus route is requested, including connection with the waterfront tourist related precinct.

Issues are similar to other stages in respect of the following:

- (i) The design of the western fire trail / road system and treatment of the undeveloped parts should be integrated in the relevant project application.
- (ii) Two irregular triangular shaped lots on the western end (in the group of 19 lots) are less than desirable and the shape constrains future development on those lots.

(l) Area 10 – Waterfront tourist related sites

The proposed waterfront sites for tourist-oriented apartments included in Stage 4 appears to rely on associated proposals on the zoned 7(a) (under SLEP 1985) / E2 (under SLEP 2013) for car and trailer parking and water recreational structures (jetty and boat ramp). It is noted that the associated proposals are not included in the Concept Application.

It is also noted that the proponent seeks a variation to the zone boundary between R1 and E2 in this location based on the location of a rising sewer main. (EAR 1.3).

9. Bus Route

Appendix R includes reference to a bus route through the development with three bus stops on the collector road (Figure 5.1). The route relies on the collector road being extended to Culburra Road via other land not part of this application. The bus route requires a minimum 9m wide carriageway under DCP 100.

The continuation of the collector road and further residential development may be the subject of future discussions between the department and proponent. Council requests consideration be given identifying an alternate layout that addresses the potential termination of the development as now proposed. This may provide for a bus route to serve the waterfront tourist accommodation T1 and T2 area more directly.

10. Other Matters for consideration

(a) Design Guide – Appendix V

Council's submission in section 2, above refers to the applicant's desire for an appropriate design style for building structures and some concerns for implementation.

Should the Department consider this matter, Council requests the following:

- (i) the provision of a design code to ensure proposals of a high quality 'seaside' 'character, holiday town' atmosphere: The Design Control report (Appendix V) lacks inclusion of urban design guide, building design and sustainability principles to build the overall 'seaside atmosphere' of the development. A Design Code can be used to define the key physical form elements to encourage 'seaside character'. The

proponent is requested to work with Council to ensure quality design outcome (encouraging variety but ensuring the harmony required to give seaside character) of building and public domain for the whole development area.

- (ii) the need for CPTED strategy in early stage of the development: to provide safe pedestrian movements including mid-block footpaths, and to create safe places by linking a Green and public space with clear routes.

(b) Landscaping – The EAR and Appendix S.

There are a number of matters that Council requests the Department consider, including:

(i) The EA states that Council does not have an identified planting scheme. This is incorrect. The Department is referred to Council's policy POL08/282 – Tree Planting Strategy – Streets. The required species for the Culburra Road entrance (extract in Appendix 4) does not include the species described in EAR Appendix S clause 2.1. *(Note: Council's policy document contains 167 pages and is not attached to this submission)*

(ii) The "Vista Walk through the SLEP 1985 Business Zone" 3(f) and 7(a): suggests *Modify 7(a) zone to allow views to bay*. It is unclear if this means by rezoning to a recreational or business zone. The suggestion to modify the zone will need justification and the integrity of maintaining the existing biodiversity will be a critical consideration.

(iii) The Water Cycle Management Report denotes the "Vista Walk" area as a drainage swale but the Transport and Access Report notes it is to include a section of a proposed cycleway (see figure 3.4). The cycleway proposal is also raised in the Landscape Plan. There are issues with the feasibility of building the proposed cycleway through the SEPP 14 wetland and EEC (Swamp Oak Floodplain Forest), particularly through lands that are owned or managed by Council.

(iv) Figure 5 (landscape plan) provides bio swale detail clearly showing bio-swales are to be vegetated. As stated earlier, the areas that have a primary use for drainage are not considered as open space provision.

(c) Drainage, Water Cycle Management, flooding, wetlands

Detention and sediment basins in the Water Cycle Management Report are not consistent with the Landscape Report which is not consistent with the Transport and Access Report.

The Water Cycle Management Report (Sheet 7) shows sediment and/or bio-retention basins in the foreshore reserve area with no management access provisions. The SEPP14 Wetlands shown on the Plans in the Water Cycle Management Report do not include southern extent boundaries.

In accordance with the flood certificate, subdivision of land should consider the 2100 flood information. The assessment completed has been based on the 2050 flood planning level and further review should be undertaken against the longer term impact of climate change. Water quality basins and similar infrastructure are susceptible to damage by flood waters and should be designed to be above the 2100 1% flood.

Sheet 3 in the Water Cycle Management Report shows a "Proposed Tourist Facility with perimeter road in the foreshore EEC area adjacent the urban/STP area in the north east. It appears to be approx 40m x 60m however little detail is provided and it not possible to provide further comment as to the appropriateness or feasibility of a 'tourist facility' in this location.

Wetlands cl 3.4.5 - Typical wetland sections are provided in Attachment F with wetland input parameters in Attachment E. Two different wetlands are proposed as part of the proposed development. These are discussed in the following sections:

(i)Foreshore Wetlands 3.4.5 - A continuous wetland is required downslope of the development in the vicinity of the inlet between Billys Island and the site to achieve water quality outcomes. Catchment runoff will discharge into the foreshore wetland which will detain and treat runoff through biological uptake of nutrients, evapo-transpiration and detention. Wetland shall spill evenly along its length to promote even dispersal of flow and controlled discharge during major events.

(ii)Vegetated Buffer 3.4.9 - An open reserve and forest area (C15a and C15b) is proposed in the site's east to provide vistas of the Crookhaven River for surrounding development and to maintain some of the existing forest vegetation. A portion of the forest area has been utilised as a 'buffer' area to treat discharge from the proposed electrical substation (C12). In reality, the 2.8 ha open reserve area as well as the 4.52 ha of forest area will act as a buffer (and hence provide treatment) to all upslope catchments. However due to the nature of MUSIC software (only source nodes can drain to buffers) this could not be modelled.

(iii)It is considered the extent of the SEPP14 wetland is not clearly identified in the Water Cycle Management Report. The SEPP 14 wetland extends to the east of the area shown on the report's maps (appendix A) and includes foreshore areas.

(iv)The report hasn't assessed the potential impacts of the proposal on the full extent of the existing SEPP 14 wetland. The report also does not give consideration to the need to maintain appropriate buffer to the wetland in order to minimise the impacts of the proposed development now and into the future.

(d) Impacts for the Oyster Industry

The waterway north of the development has an extensive oyster growing industry. The report does not give appropriate consideration to the potential impact on the Oyster leases areas located in the vicinity of the proposed

development. There is no reference to consideration of State Environmental Planning Policy (SEPP) 62.

(e) Other comments on the subdivision plan 25405-30 Rev 4 dated 10/4/13) for consideration.

• Subdivision Layout

Some plans in the document show a proposed layout but this is different to the proposed subdivision plan.

Lot splays should be provided on all corner lots.

• Stormwater Drainage

The proposed swale drains are supported. Detailed design of this infrastructure should consider solutions (e.g. bollards, landscaping) for preventing vehicle access to the swales. Swale crossings to access properties should be provided at subdivision stage to ensure consistent and appropriately design infrastructure and to prevent damage to the swale during the house building phase.

Wetlands and bio retention basins should be designed with consideration to maintenance and safety. Steep side batters are difficult to mow and may hinder egress.

• Geotechnical

The geotechnical report recommends further investigated of soft soils to determine the development potential of the area. Further investigations will be necessary to confirm the extent of the proposed development.

11. Road Network and Access

The EAR has not considered the wider impacts to the road network between the development and the Princes Highway. It is understood that RMS has advised of a significant impact for the intersection of Princes Highway and Kalandar Street and requested additional traffic modelling along the road network. Council's crash statistics indicates that a sustainable plan to ensure external roads are brought up to satisfactory condition to safely to accommodate a development of this scale is desirable.

No assessment has been made of road and car parking requirements in the Culburra town centre to accommodate the increased demands likely as consequence of the development.

Consistent with Council's integrated transport strategy a network of footpaths and cycle ways should be provided within the sub-division and must link to the proposed main pathway (linking the development to Culburra) and link to the sports fields and public transport facilities (bus stops/shelters which must be provided at satisfactory locations and satisfactory intervals).

12. Contributions Plan - S94

The contribution projects identified to occur on the subject land (see Appendix 2 - attached pages related to 02AREC0002, 02CFAC0004 & 02OREC0005 project pages) are specifically dependent on the rate of development / lot yield on this

land and the land immediately across the road which has been identified to have a number of constraints. The appropriate contributions based on projected populations has been difficult for Council to accurately foresee and estimate the facilities needed on this land because of the changes to zonings between the SLEP1985 zones and reductions in potential land use under the draft SLEP2013 .

The charging of contribution rates for 02AREC0002, 02CFAC0004 & 02OREC0005 after this needs analysis should then be charged as identified in the Plan, as amended to the Plan or via a Voluntary Planning Agreement process.

13. Infrastructure – water and sewer

Shoalhaven Water has provided the following information relating to the provision of water and sewer infrastructure.

This has been forwarded also under separate letter dated 3 May 2013 to the Department:—

“General issues

In accordance with the requirements under the Water Management Act 2000, Shoalhaven Water require the following statements to be included within the development consent/approval -

Prior to Commencement of Any Works.

Upon receipt of an operational consent/approval the applicant/developer is to apply under Section 305 of Division 5 of Part 2 of Chapter 6 of the Water Management Act 2000 for a Certificate of Compliance from Shoalhaven Water.

Relevant conditions/requirements, including monetary contributions (where applicable) under the Water Management Act 2000, can be provided under Section 306 of Division 5 of Part 2 of Chapter 6 of the Water Management Act 2000. A Development Application Notice (pursuant to Section 306) issued by Shoalhaven Water will outline all conditions/requirements to be adhered to.

A Certificate of Compliance shall be obtained from Shoalhaven Water after satisfactory compliance with all conditions as listed on the Development Application Notice and prior to the issue of an Occupation Certificate, Subdivision Certificate, as the case may be.

In the event that development is to be completed in approved stages or application is subsequently made for staging of the development, separate Compliance Certificates shall be obtained for each stage of the development.

Where a Construction Certificate is required all conditions listed on the Shoalhaven Water Development Application Notice under the heading “PRIOR TO THE ISSUE OF A CONSTRUCTION CERTIFICATE” must be complied with and accepted by Shoalhaven Water. The authority issuing the Construction Certificate for the development shall obtain written approval from Shoalhaven Water prior to a Construction Certificate being issued.

In addition to the requirements above we provide the following comments in relation to the Environmental Assessment, The Infrastructure report.

Section 64 (Developer) charges in relation to the proposal are applicable. Quantum of developer charges (Water Supply & Sewer) are those applicable at the time of payment (generally prior to the release of subdivision/linen plan). Section 64 charges are -

Water - \$ 6,578.00 per lot /(ET) (12/13)

Sewer - \$ 8,339.00 per lot /(ET) (12/13)

Sewer Servicing:

The current Sewerage Services DSP Nov 2005 outlines the need for sewage pumping stations (SPS) and rising mains to service proposed stages 2, 3 & 4 the applicant shall consult with Shoalhaven Water regarding the proposed timing of these works.

- Council is currently reviewing its Sewerage Development Servicing Plan (DSP) which will replace the 2005 DSP noted within the EA report and the infrastructure report. This Plan will list all works to be undertaken by Shoalhaven Water and identify the timing and funding sources for those works.
- The proposed Future Development Zones, south east of the treatment plant, & stages 2 & 5 will impact on a 400 metre buffer zone required around the existing sewage treatment works, located in lot 1 DP 631825,. Whilst it is noted that a theoretical odour assessment has been undertaken Shoalhaven Water again reiterate that no residential allotment should be permitted within the 400m buffer zone as detailed on the attached plan. Any modification to this requirement will require full consultation/approval from Shoalhaven Water.
- The developer shall submit a sewerage reticulation design report on the provision of sewerage services to the development and take into consideration all other lands which it may drain through to the SPS or upstream lands which will drain into it. The report shall be submitted to Shoalhaven Water for assessment and approval.
- Developer shall extend the sewerage reticulation throughout the subdivision to all lots created and provide a junction to each lot in accordance with the approved design.
- An existing 225mm DICL & 375mm DICL sewer rising main (SRM) is located within an easement within lot 6 DP 1065111, Shoalhaven Water will not permit the construction of any structure within the boundary of the easement or within the zone of influence of the existing pipe. The applicant shall consider the location of the existing 225mm SRM and easement during design. Any proposed relocation of this main shall be determined after detailed consultation with Shoalhaven Water.
- An existing 375mm DICL sewer rising main (SRM) is located within an easement within lot 5 DP 1065111, Shoalhaven Water will not permit the construction of any structure within the boundary of the easement or within the zone of influence of the existing pipe. The applicant shall consider the location of the existing 375mm SRM and easement during design. Any proposed relocation of this main shall be determined after detailed consultation with Shoalhaven Water.

- *The applicant/developer may wish to consider the use of reclaimed/recycled water within the proposed development. Any proposed reclaimed/recycled water strategy shall be submitted to Shoalhaven Water for assessment and approval.*

Water Supply

- *Shoalhaven Water has sufficient capacity available to support the proposed development (plan refer 25405-03) the applicant/developer will be required to undertake hydraulic analysis to determine the requirements for the proposed development. The applicant shall submit a design report for approved by Shoalhaven Water.*

This report shall:

- i) outline the sizing of water mains to service all proposed lots within this subdivision proposal,*
 - ii) outline the timing for the overall project,*
 - iii) outline the water pressures under Peak Instantaneous Demand (PID) and shall ensure minimum water pressure under PID conditions are above 15m to all lots*
 - iv) submit a working hydraulic model using the WATSYS or InfoWorks WS programs for review and approval.*
- *Connection for the proposed subdivision will be permitted from the existing trunkmain located within Culburra Rd. The applicant/developer shall consult with Shoalhaven Water regarding the location for any proposed interconnection.*
 - *Detailed subdivision layout showing (including but not limited to) dimensions, street and lot layouts, existing and proposed infrastructure, easements, staging of proposal, obstructions, etc for assessment,*
 - *Developer shall extend the water reticulation throughout the subdivision to all lots created and pay towards a metered service to each lot. Developer shall prepare detailed design plans for the water supply and submit to Shoalhaven Water for approval.*
 - *The developer shall pay a contribution towards a metered water service to each lot created. The developer payment for a 20mm metered service is \$692/lot (12/13).*

Other Matters

It is requested that the applicant/developer be made aware of other Council policies which need to be taken into consideration during the detailed design phase:

- Building Over Sewer Policy*
- Cross Connection Control & Backflow Prevention policy*
- Liquid Trade Waste Discharge to the Sewerage System policy*
- Water Availability & Connection Policy"*

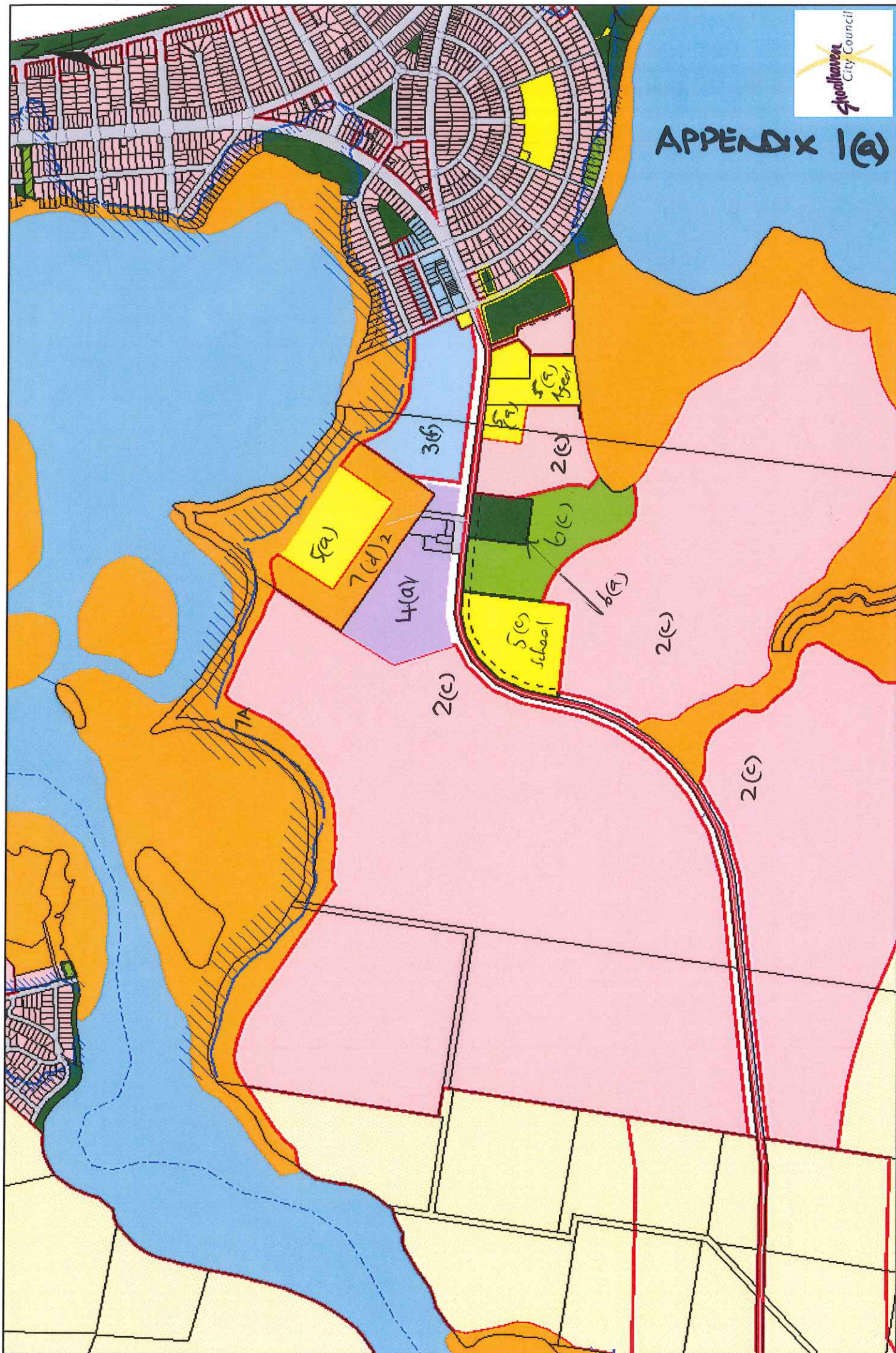
14. Conclusion

Council supports the development and requests the above matters be considered by the Department during the application assessment.

For further information it is requested that you contact Council's Part 3A Coordinator, John Britton on 4429 3432 or email to britton@shoalhaven.nsw.gov.au.

A handwritten signature in blue ink, appearing to read 'Tim Fletcher', with a long horizontal flourish extending to the right.

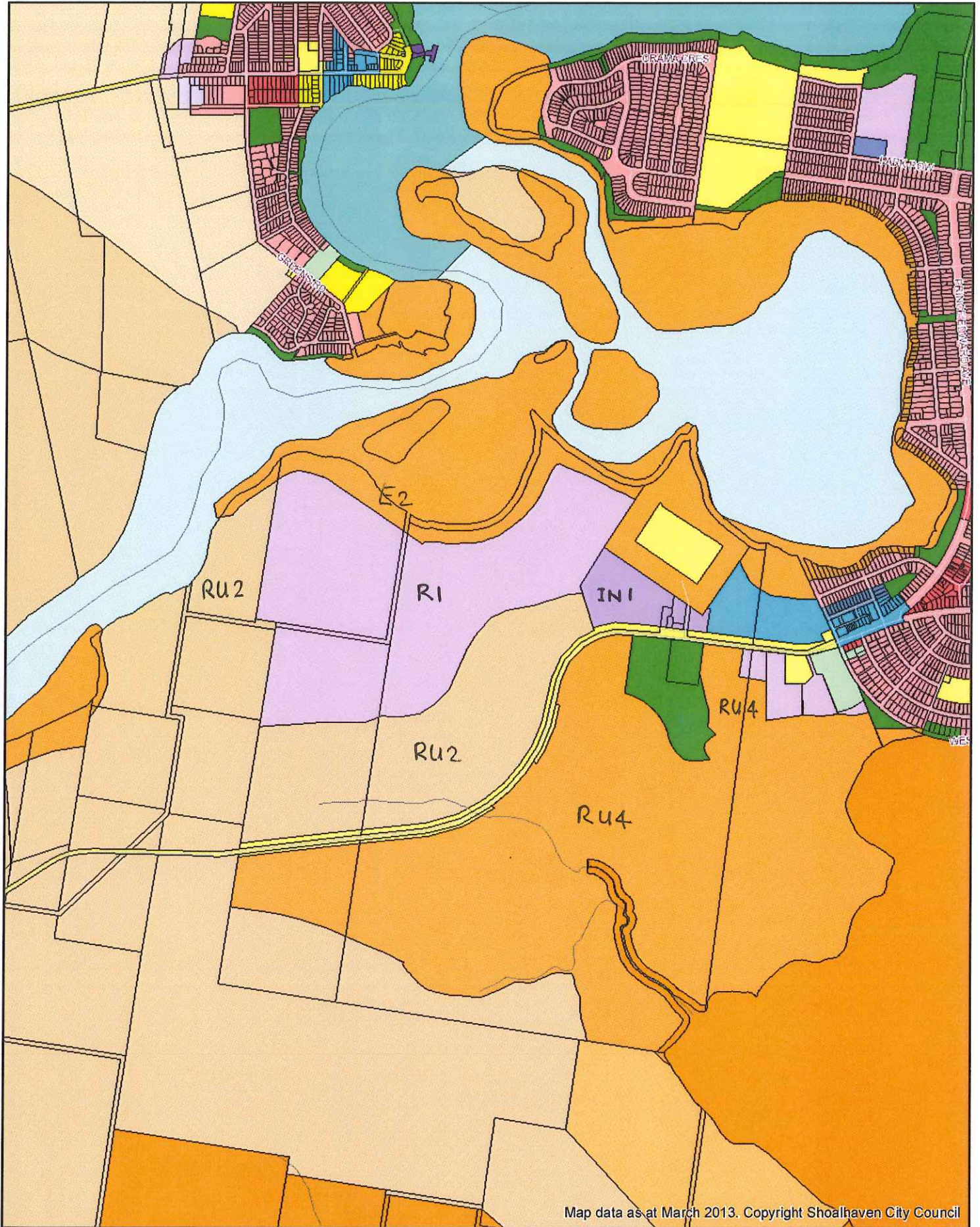
Tim Fletcher
Director,
Development & Environmental Services Group.
21 June 2013



APPENDIX 1(a)



61 4024394



Map data as at March 2013. Copyright Shoalhaven City Council

B1 Neighbourhood Centre	IN1 General Industrial	RU2 Rural Landscape
B2 Local Centre	IN2 Light Industrial	RU3 Forestry
B3 Commercial Core	IN4 Working Waterfront	RU4 Primary Production Small Lots
B4 Mixed Use	R1 General Residential	RU5 Village
B5 Business Development	R2 Low Density Residential	SP1 Special Activities
B7 Business Park	R3 Medium Density Residential	SP2 Infrastructure
E1 National Parks and Nature Reserves	R5 Large Lot Residential	SP3 Tourist
E2 Environmental Conservation	RE1 Public Recreation	W1 Natural Waterways
E3 Environmental Management	RE2 Private Recreation	W2 Recreational Waterways
E4 Environmental Ledges	RU11 Primary Production	W3 Marine Waterways

**Shoalhaven City Council
Draft SLEP 2013**

Land Zones (LZN)

Create Date: 12/06/2013

Appendix 1(b)

shoalhaven contributions plan 2010

Code: 02AREC0002

Category/Planning Area: Local / Area 2

Location: Culburra Beach

Description: Culburra Sporting Complex (Proposed Long Bow Point Subdivision)

Strategy: To provide active recreation facilities to meet anticipated demand from development. The value of the project to be determined at development application stage when the future lot yield is known.

Financial Year	Contribution Area	Contribution Rate Type	Contribution Rate	Existing ET/M2/SP	Future ET/M2/SP	Total ET/M2/SP
2012	01	Equivalent Tenement	\$ 0.00	0	0	0

Contribution map shaded areas indicate the Contribution Area(s). Red indicates Contribution Infrastructure.

Project Estimate: \$0.00

Indexed Estimate:

Apportionment: The apportionment to future development is 100%.

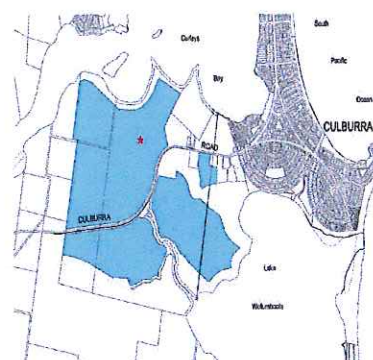
Nexus: The population accommodated in the Contribution Area in future development up to 2026 will generate the demand for this project. The contribution rate calculation therefore reflects this planning philosophy.

Supporting Information: [Supporting information is detailed in the Sportsground Strategic Plan 2008 – 2036](#)

Proposed Works:

Land Acquisition Estimate: \$0.00

Timing: Development dependent



[View Larger Map \(PDF\)](#)

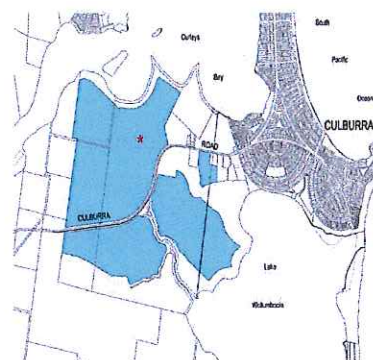
Plan Effective: 23 Mar 2011 - Amendment 1 (November 2012)

APPENDIX 5 (a)

contributions plan 2010

Contribution Rate:	Financial Year	Contribution Area	Contribution Rate Type	Contribution Rate	Existing ET/M2/SP	Future ET/M2/SP	Total ET/M2/SP
	2012	01	Equivalent Tenement	\$ 914.36	0	800	800

Timing: Development dependent



Plan Effective: 23 Mar 2011 - Amendment 1 (November 2012)

APPENDIX 5 (P)

shoalhaven contributions plan 2010

Code: 02OREC0005

Category/Planning Area: Local / Area 2

Location: Culburra Expansion Area

Description: Land acquisition for passive open space (Proposed Long Bow Point Subdivision - no specific area within development site / contribution area determined)

Strategy: To provide new and embellished passive open space to meet user needs associated with future development demand.

Contribution Rate:	Financial Year	Contribution Area	Contribution Rate Type	Contribution Rate	Existing ET/M2/SP	Future ET/M2/SP	Total ET/M2/SP
	2012	01	Equivalent Tenement	\$ 557.35	0	3200	3200

Contribution map shaded areas indicate the Contribution Area(s). Red indicates Contribution Infrastructure.

Project Estimate: \$1,278,080.00 in Nov 2004

Indexed Estimate: \$1,783,520.00

Apportionment: The apportionment to future development is 100%.

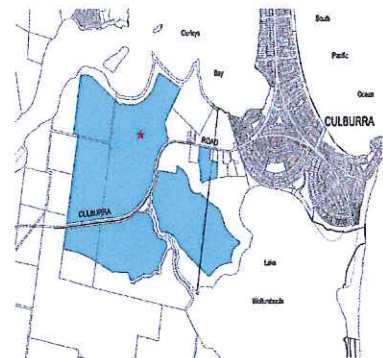
Nexus: The project is critical to provide public open space that meets current and future user requirements for outdoor recreational and social activity.

Supporting Information: [Supporting Information can be found here.](#)

Proposed Works:

Land Acquisition Estimate: \$478,080.00 in Nov 2004

Timing: Development dependent

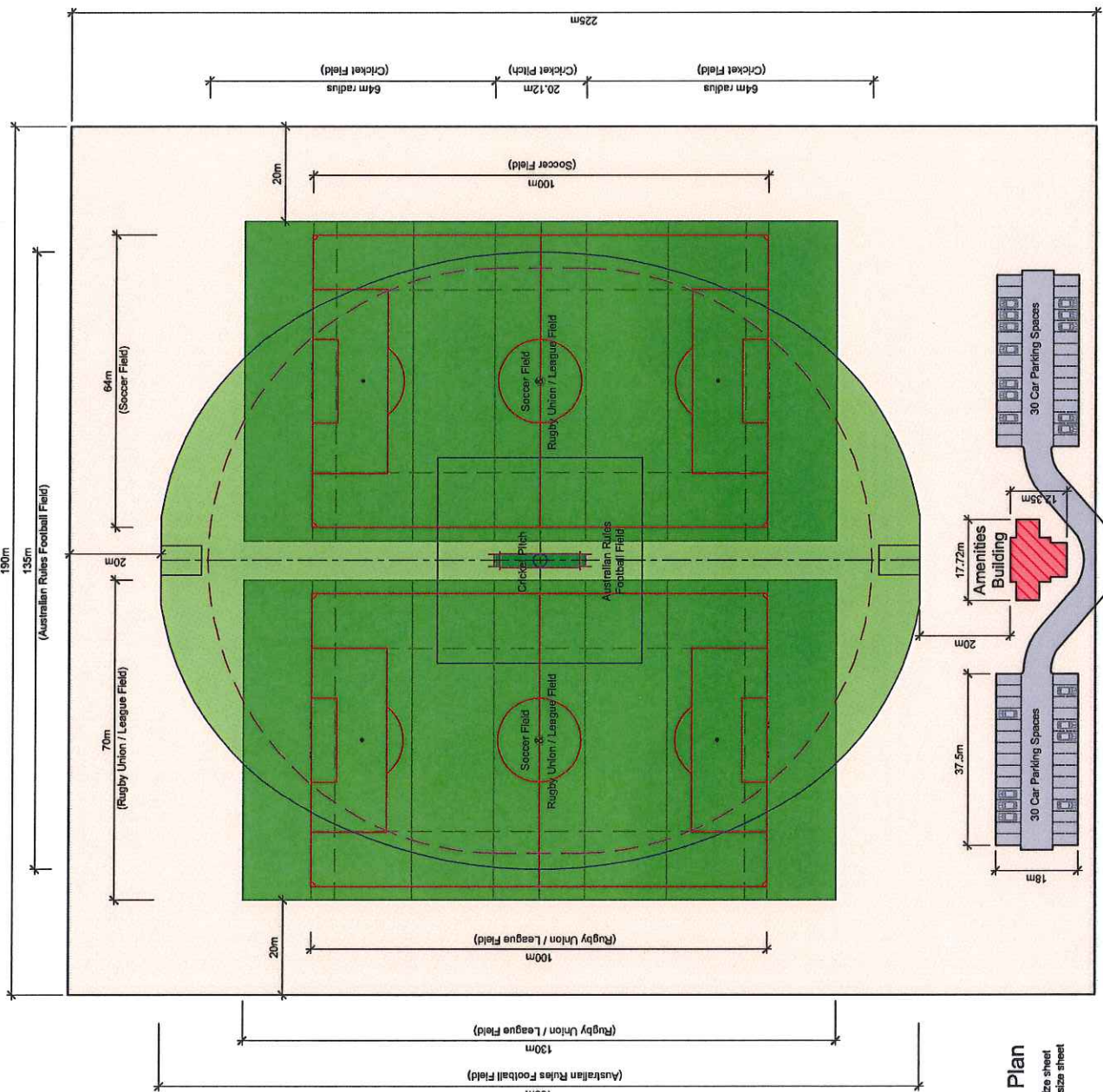


[View Larger Map \(PDF\)](#)

Plan Effective: 23 Mar 2011 - Amendment 1 (November 2012)

ASSNOR 567

APPENDIX 3



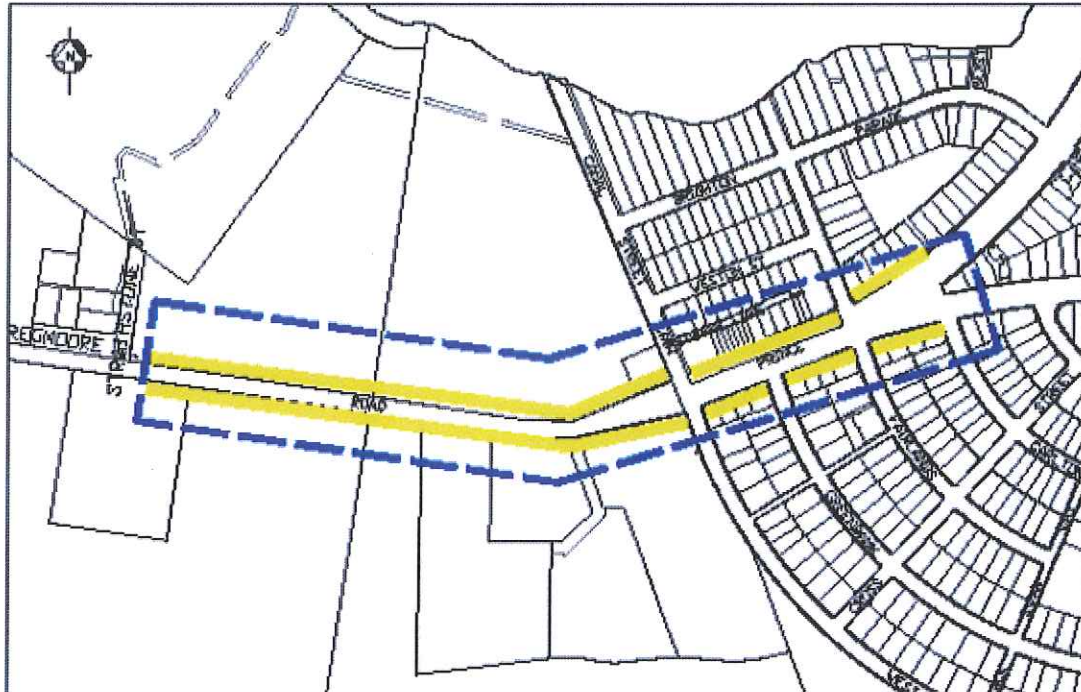
Layout Plan
 Scale:
 1:500 for A1 size sheet
 1:1000 for A3 size sheet

DESIGNED: JAWORS		SURVEYED:		CITY OF SHOALHAVEN		REDUCTION RATIO		DIRECTOR CITY SERVICES & OPERATIONS: DATE:	
DRAWN: P. JENNINGS		FIELD BOOK: 1411707		STANDARD PLAYING FIELDS		1:500			
CHECKED:		LEVEL BOOK:		LAYOUT PLAN		1:1000 for A3 size sheet			
DRAWING FILE: 4699_01.DWG		ORIGIN OF LEVELS:						PLAN REFERENCE: 4699.01	
CIVILCAD FILE:		DATUM:							

APPENDIX 3


Appendix 4

Culburra Beach Entrance



Entry Point from Strathstone Street to Intersection of Edward Ave/Prince Lake Cct

Description:

 *Melaleuca linearifolia* - *Coastal Sumner*. Plant at 7m centres.
Trees to be maintained to single straight trunk to 1.5m before branching.

Alternatives:

Melaleuca stypheloides - *Prickly Leaf Paperbark*. To be planted at 7m centres.
Tristania laurina - *Water Gum*. To be planted at 7m centres.
Angophora floribunda - *Rough Barked Apple*, plant at 7m centres.
Hakea laurina - *Pincushion Hakea*, plant at 7m centres.

10-10-10

10-10-10

APPENDIX 5 – Supporting information. Assessment of Flora and fauna, Threatened Species and Biodiversity

General Comments

Council's Threatened Species Officer (TSO) review of the submitted information against the DGR's relating to Flora and Fauna is as follows:

The proposed development does not meet the DGR's for Flora and Fauna due to:

- It does not provide for any wildlife corridor north-south link
- It does not provide adequate buffers to the Foreshore and SEPP 14 wetlands
- Insufficient survey and assessment of threatened species, populations and endangered ecological communities
- It does not provide offsets in accordance with an approved methodology
- The offsets have not been prepared in consideration of the EEC's present at the site or the number of threatened species that are likely to be impacted due to insufficient survey and assessment of impacts

DGR	Summary of the Environmental Assessment's performance against the DGR
<p>9.1 Assess the potential direct and indirect impacts of the development on flora and fauna (including aquatic) taking into consideration impacts on any threatened species, populations, ecological communities and/or critical habitat and any relevant recovery plan in accordance with DECC's <i>Guidelines for Threatened Species Assessment (2005)</i>. Identify whether the proposal meets each of the key thresholds set out in Step 5 of the draft <i>Part 3A Threatened Species Assessment Guidelines</i> and describe the actions that will be taken to firstly avoid or, if necessary, mitigate or compensate unavoidable impacts, where relevant. Provide details of any offset strategy or other suitable mitigation measures to ensure that there is no net loss of native vegetation values</p>	<p>Insufficient information provided to evaluate the extent of impacts on the threatened species and EEC's known to occur at the site</p> <p>Recovery plans for threatened species not addressed</p> <p>Step 5 of the <i>Part 3A Threatened Species Assessment Guidelines (2005)</i></p> <ul style="list-style-type: none"> • <i>whether or not the proposal, including actions to avoid or mitigate impacts or compensate to prevent unavoidable impacts will maintain or improve biodiversity values.</i> • <i>whether or not the proposal is likely to reduce the long-term viability of a local population of the species, population or ecological community.</i> • <i>whether or not the proposal is likely to accelerate the extinction of the species, population or ecological community or place it at risk of extinction.</i> <p>Insufficient information has been submitted to determine the above.</p> <p>Offset strategy does not demonstrate there is no net loss of biodiversity values</p>
<p>9.2 The assessment should at a minimum:</p> <ol style="list-style-type: none"> map the extent of the Endangered Ecological Communities on site (and show adequate buffers) 	<p>The extent of EEC's has not been adequately assessed or mapped</p> <p>Insufficient targeted surveys for threatened flora</p>

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<ul style="list-style-type: none"> ii. map the distribution of hollows on and adjacent the site iii. include targeted surveys for threatened Flora (refer to list in DECCW response attached) iv. include targeted surveys for threatened fauna (refer to list in DECCW response attached) v. address (and identify in relation to the 7(a) zoning) riparian zone buffering to adjoining wetlands and waterways demonstrating how the wetlands, the Crookhaven River and Curleys Bay will be protected 	<p>Insufficient targeted survey for some threatened fauna</p> <p>Protection of 7a foreshore, SEPP 14 wetlands, Crookhaven River and Curleys Bay not sufficiently demonstrated</p>
<p>9.3 Outline measures for the in – perpetuity management of EEC's and other conservation areas including riparian areas buffers and any proposed offsets</p>	<p>Conservation of these areas is compromised by proposed clearing for view lines, public access ways and recreation facilities. In perpetuity management of Offset areas not demonstrated</p>
<p>9.4 Outline measures for the conservation of existing wildlife corridor values (particularly the north-south linkage) and /or connective importance of any vegetation on the subject land</p>	<p>Not adequately addressed by assessment of impacts</p> <p>No wildlife corridor north-south</p>
<p>9.5 Address impacts on migratory species listed under Section 20 and 20A and species listed under Section 18 and 18A of the EPBC Act</p>	<p>Not adequately addressed by survey or assessment of impacts</p>

TSO response:

The submitted Environmental Assessment, (hereafter referred to as 'the EA') incorporating the *Culburra West Urban Development Project Ecological & Riparian Issues & Assessment Report* by SLR Global Environmental Solutions, dated March 2013 (hereafter referred to as 'the SLR Assessment') is not considered to have met the DGR's for Flora and Fauna.

The SLR Assessment does not address the maintain or improve biodiversity principle for threatened species or sufficiently demonstrate there would be no net impact on threatened species or native vegetation.

The EA and SLR Assessment does not demonstrate that the 'Conserve biological diversity and promote ecologically sustainable development' outcome has been addressed.

The SLR Assessment does not demonstrate that the proposal meets the key thresholds as set out in Step 5 of the Part 3A *Threatened Species Assessment Guidelines*.

The proposed impact amelioration measures (Chapter 17) do not, as required by the DECC and Department of Planning Threatened Species assessment Guidelines, 2005, address whether the development, including actions to avoid or mitigate impacts or compensate to prevent unavoidable impacts, will maintain or improve biodiversity values.

As submitted, there is insufficient information to determine the extent of impacts to the threatened species known to occur at the site.

The SLR Assessment does not provide sufficient information to determine whether the proposal is likely to reduce the long-term viability of local populations of the threatened species, or endangered ecological communities known to occur within areas impacted by the proposed development. This is due to an insufficient level of survey and assessment for the threatened species and Endangered ecological communities known or considered likely to occur within the subject site and likely to be directly impacted by the proposal.

The SLR Assessment has not defined the extent of threatened species populations and endangered ecological communities at the site and therefore has not quantified the impacts to these populations that will occur as a result of the development.

This lack of information suggests that the extent of impacts would be unknown if the proposal was to proceed in its current form.

Recommendations

In order to meet DECC's *Guidelines for Threatened Species Assessment (2005)*, each of the key thresholds set out in Step 5 of the draft *Part 3A Threatened Species Assessment Guidelines*, and the DGR's 9.1-9.4 the following is required:

- 1) Further information on the proposed public access and recreation facilities (including boat launching) within the foreshore (7a) zone and proposed offset area to enable evaluation of the full extent of impacts that will occur within the foreshore zone.
- 2) Further survey to discount the presence of the following species within areas of suitable habitat impacted by the proposal
 - *Cryptostylis hunteriana*
 - *Genoplesium bauera*
 - *Pterostylis ventricosa*
 - *Pterostylis gibbosa*
 - *Rhizanthella slateri*
 - Green and Golden Bell Frog
 - Small terrestrial mammals (Eastern Pygmy Possum and White-footed Dunnart)
- Survey must be timed appropriately for the detection of the species as required by DECC's *Guidelines for Threatened Species Assessment (2005)*, and recommended survey guidelines for threatened species assessments and must be undertaken within all areas of suitable habitats within the development site, extending as far as necessary to encompass all areas of likely impacts
- 3) Further assessment of species recorded on the subject site and determined as unlikely to be present or present as 'unviable local populations' is required. Alternatively further justification in accordance with the threatened Species Assessment Guidelines DECC, 2007 to demonstrate that such populations are unviable must be provided.

These species include the following:

- Sooty Owl
- Gang-gang Cockatoo
- Glossy black cockatoo
- Varied sittella

- Scarlet robin
 - Grey headed flying fox
 - Square-tailed kite
 - Little eagle
 - Large-footed Myotis
 - Yellow-bellied sheath-tail bat
 - Green and Golden Bell Frog
 - Osprey
- 4) Further information to enable evaluation of the significance of the habitat loss to the threatened species known to occur at the site including:
- The extent of loss of hollow bearing trees utilised for breeding, roosting or denning by hollow dependant threatened fauna known to occur on the site including: the Powerful Owl, Sooty Owl, Gang-gang Cockatoo, Glossy Black-cockatoo, Yellow-bellied Glider, and microchiropteran bats
 - the extent of loss of foraging resources and impact this may have on the above species
 - Further assessment of indirect impacts on the threatened species and EEC's within all areas impacted including
 - Fragmentation, isolation of local populations-increased distances required for movement between habitat
 - Change in vegetation floristics and structure from edge effects
 - Altered hydrology regimes including increased run-off, Soil erosion and pollution-potential impacts on EEC
 - Disturbance to feeding, nesting or breeding of species including the Powerful Owl
 - Trampling and other impacts due to increased use by humans
 - Habitat fragmentation and disruption of wildlife movement corridors
 - altered light and noise regimes
 - likely contribution of the action proposed to the threatening processes already acting on populations of threatened species or populations in the locality
- 5) Reclassification of the vegetation communities present at the site using a recognised system of vegetation classification. It is recommended that the NSW Biometric system of vegetation classification is used for the site. Given that the Assessment describes offsets that have been designed utilising a 'BioBanking approach', it is necessary to utilise this vegetation classification system to determine the adequacy of offsets.
- 6) The extent of Endangered Ecological Communities at the site requires further clarification and may have been underestimated. Amendments to EEC mapping and re-assessment of impacts on the Endangered Ecological Communities present at the site is to occur following the reclassification of vegetation in accordance with the NSW biometric classification system and approved methodology for Biometric Assessment
- 7) Further information to justify the conclusion of 'no significant impact' on threatened biota which should include
- an assessment of the extent and importance of the threatened species habitat to be lost against the specific habitat requirements of each threatened species on the subject site incorporating the results from further surveys and

- an assessment of the distribution and condition of similar habitats in the region and the extent of this habitat within conserved areas outside the subject site
- 8) Further information on the mitigation measures proposed that demonstrates their proven effectiveness and successful implementation elsewhere in mitigating impacts on the threatened species that will be impacted by the proposal
- 9) Redesign of the proposal to enable/allow north-south Wildlife corridor linkages
- 10) Provision of offsets that comply with approved methodology of biodiversity assessment. , Offsets must be calculated in consideration of the precautionary principle, as there is insufficient information provided to discount the potential for a number of threatened species and endangered ecological communities to be significantly impacted by the proposal
- 11) Without all of the above and Without further survey and assessment offsets may not be achievable for the development.

Further justification for the above recommendations is provided in the paragraphs below.

1. Guidelines for Threatened Species Assessment not adequately addressed

The Assessment does not demonstrate that the proposal meets the key thresholds as set out in Step 5 of the Part 3A *Threatened Species Assessment Guidelines*.

Step 5. Key thresholds (DECC 2005):

The development application needs to contain a justification of the preferred option based on:

- *whether or not the proposal, including actions to avoid or mitigate impacts or compensate to prevent unavoidable impacts will maintain or improve biodiversity values.*
- *whether or not the proposal is likely to reduce the long-term viability of a local population of the species, population or ecological community.*
- *whether or not the proposal is likely to accelerate the extinction of the species, population or ecological community or place it at risk of extinction.*
- *whether or not the proposal will adversely affect critical habitat.*

The impact amelioration measures (Chapter 17) of the assessment do not, as required by the DECC and Department of Planning Threatened Species assessment Guidelines, 2005, address whether the development, including actions to avoid or mitigate impacts or compensate to prevent unavoidable impacts, will maintain or improve biodiversity values.

The Assessment does not attempt to address the maintain or improve biodiversity principle for threatened species, sufficiently demonstrate there would be no net impact on threatened species or native vegetation, or demonstrate adequate measures to conserve biological diversity and promote ecologically sustainable development as required by the guiding principles for threatened species assessment (DECC and DoP Guidelines for Threatened Species Assessment, 2005)

The Assessment does not provide sufficient information to determine whether the proposal is likely to reduce the long-term viability of a local population of the species, population or ecological community

2. Insufficient offsets/compensation and mitigation of impacts

Without the ability to quantify the extent of impacts on the threatened species, their populations or the endangered ecological communities known and likely to occur at the site due to the lack of information provided, it is difficult to determine whether appropriate offsets will be achieved for the development.

The assessment proposes that an offset ratio of 2:1 is provided however the offsets comprise areas that will be subject to ongoing impacts associated with clearing for view lines, public access to and along the river frontage and recreation facilities including a bicycle path, and boat launching facilities. Such offsets are considered unlikely to provide sufficient compensation for the loss of threatened species habitats on the site including the removal of 92 hollow bearing trees and direct impacts to 73 hectares of native vegetation, including ongoing impacts to 2 hectares of foreshore vegetation and EEC. The proposed salvaging of tree hollows from the development area for re-use in the offset area is not an accepted practice of impact mitigation for hollow dependant threatened fauna. In the absence of adequate survey (see below) offsets must be developed in consideration of the precautionary principle and the number of threatened species known to occur in the locality and likely to utilise habitats present within the development area.

The assessment states that a "bio-banking approach" has been undertaken in consideration of offsets. If this is the case then further information needs to be provided to demonstrate this claim. The assessment has not utilised the recognised method of vegetation classification to undertake a Biometric assessment of the site and consequently derive appropriate offsets. The assessments and methodology undertaken to determine the lands suitable to offset this development should be provided to demonstrate this can be achieved.

3. Insufficient assessment of Impacts to Native Vegetation:

The proposal requires the removal of approximately 73 ha of native vegetation. The property was cleared prior to 1949. As this is greater than 20 years ago the vegetation on the property cannot be deemed "regrowth" pursuant to the NSW Native Vegetation Act 2003 and Regulations (2005).

The vegetation types present on the site as described mapped by SLR include:

- Mangrove forest
- Blackbutt open forest
- Hard-leaved scribbly gum woodland
- Forest red gum open forest (potential - Illawarra Lowlands Grassy Woodland EEC)
- Bangalay/woolybutt/rough-barked apple forest (potential - Illawarra Lowlands Grassy Woodland EEC)
- Cleared and disturbed
- Grey ironbark/rough-barked apple open forest
- Bangalay woodland open forest (potential Bangalay Sand Forest EEC)
- Swamp oak/bangalay forest- (potential Bangalay Sand Forest EEC)
- Black she-oak closed forest/tall shrubland
- Woollybutt/black she-oak open forest
- Swamp oak/bangalay/woolybutt forest – (potential Swamp Sclerophyll Forest on Coastal Floodplains EEC)
- Coastal saltmarsh - EEC
- Swamp oak/paperbark forest – (potential Swamp Sclerophyll Forest on Coastal Floodplains EEC)
- Swamp oak forest - (Swamp Oak Floodplain Forest EEC)

4. Insufficient mapping and protection of EEC's

The method of vegetation classification across the site by SLR does not conform to recognised vegetation classification systems. This makes it difficult to evaluate in the context of the vegetation communities known to occur in the region. Four of these vegetation communities present appear consistent with the floristic criteria for three corresponding Endangered Ecological Communities (EEC's):

- Swamp sclerophyll forest on coastal floodplains of the NSW coast, Sydney basin and the South East Corner Bioregions
- Swamp Oak Floodplain Forest on coastal floodplains of the NSW coast, Sydney basin and the South East Corner Bioregions
- Coastal Saltmarsh of the NSW coast, Sydney basin and the South East Corner Bioregions

The vegetation types mapped by SLR as Forest red gum and Bangalay Woollybutt/Rough-barked Apple Open Forest also appear similar in floristic composition to Illawarra Grassy Woodlands EEC. Swamp Oak Bangalay Forest and Bangalay Open Woodland mapped by SLR appear similar in floristic composition to Bangalay Sand Forest EEC. However without use of a recognised system of vegetation classification it is difficult to ascertain the extent of the potential EEC's on the subject property. It is recommended that the NSW Biometric system of vegetation classification is used for the site. Given that the Assessment describes offsets that have been designed utilising a 'BioBanking approach', it is necessary to utilise this vegetation classification system to determine the adequacy of offsets.

The extent of Endangered Ecological Communities at the site requires further clarification and may have been underestimated. Council's GIS identifies the presence of Swamp Sclerophyll Forest on Coastal Floodplains and Swamp oak Floodplain Forest on Lot 5 and Illawarra lowlands Grassy Woodland on Lot 6. On lot 6 Swamp oak Floodplain forest is identified in the development area.

The SLR Assessment states that no "floodplain" is present where these communities are located and therefore they do not constitute EEC. SLR make several contradictions throughout the report in regards to this matter:

- SLR state that the water table is very close to the soil surface and that the water flow is highly ephemeral. "areas of "standing water" are few and highly ephemeral".
- SLR make reference to the GDE (ground water dependant ecosystem) report by Martens & Associates (2013) and their conclusion that there are no GDE's present on the site. From this, SLR state that the Swamp Oak Forest and Swamp Forest Communities present in the northern fringe of the subject land (direct reference to the EEC's on the site) are "reliant almost substantially (if not entirely) on incipient rainfall, overland flows and soil moisture" – p.85. This statement clearly indicates that these vegetation communities are subject to periodic inundation.

SLR's assessment on the location and the extent of the Endangered Ecological Communities (EEC's) known to occur on the site is disputed. SLR's description of the vegetation communities MF, SF and SOF present within areas impacted by the proposal align with the vegetation assemblages listed under Scientific Determinations for the EEC's Swamp sclerophyll Forest on Coastal Floodplains of the NSW coast, Sydney basin and the South East Corner Bioregions and Swamp Oak Floodplain Forest on coastal floodplains of the NSW coast, Sydney basin and the South East Corner Bioregions (DECC 2008). SLR's assessment of these communities is based on claims that the site does not constitute a

floodplain. SLR has not adequately demonstrated that the site is not a floodplain and that the vegetation communities present are not EEC's as listed under the TSC Act.

DGR 9.2 i) is has not been adequately addressed as the assessment does not adequately map the extent of the EEC's on the site or show adequate buffering to these EEC's.

5. Insufficient Survey Effort

Survey is insufficient to discount the presence of a number of threatened species considered likely to occur within the impact areas.

- **Threatened orchids:** the Flora survey data demonstrates insufficient survey effort and timing to discount the potential for threatened orchids to be present within areas impacted by the development. Survey data demonstrates that threatened orchid survey was conducted outside the known flowering periods of several species (when they are detectable). Flowering fluctuates depending on seasonal conditions and may vary year to year. Due to the variability within flowering periods, confirmation of flowering must be undertaken at known reference points prior to survey. Surveys were not undertaken in all the potential areas of impacts including the proposed cycle way/walkway.
 - *C. hunteriana*: in 2013 a short flowering period was exhibited by *C. hunteriana* at known reference sites and the species was only detectable from late December to late January. Surveys undertaken by SLR (Figure A3) in early December, mid February and March at the beginning and end of the known flowering period may not have detected the species. Given the size of the development area (70 hectares) and extent of potential habitat for this species, the survey effort of 3 hours (19 December) is considered insufficient to discount the potential presence of the species within areas impacted by the proposal.
 - *Genoplesium baueri* : Survey 19 December 2012 would not have detected the species as they were not visible at that time. The flowering period for *G. baueri* is from mid-February to late March. Subsequent searches 21-2-2013 and 6-3-2013 were limited to two hours. Survey of a total of 4 hours duration is considered grossly insufficient to discount the species presence over a 70 hectare area.
 - *Specularantha ventricosa* (*Pterostylis ventricosa*): Survey on 19-3-2013 was three to four weeks too early to ensure this species would be located, as the vast bulk of plants flower from this date until mid-May.
 - *Pterostylis gibbosa*-Illawarra Greenhood) and *Calochilus pulchellus* (Pretty Beard Orchid): Survey conducted on 17-10-2012 was at the latter end of the flowering period decreasing the likelihood of detection and quality of the survey. Only deceased flowers and rosettes would have been detectable at this time making it difficult to distinguish the target species from other non-threatened orchids.
 - *Rhizanthella slateri*: No surveys were undertaken for this species despite suitable habitats being present within the subject site, and proximity of known records located at 10 mts and 15 mts above sea level in the area of Woollamia and Vincentia (Council's GIS database)
- **Green and Golden Bell Frog:** Previous targeted GGBF surveys were conducted in 2002 and individuals were recorded within the study area. The survey data demonstrates that there has been no recent survey for this species despite the presence of suitable habitat and potential for the species to occur within the development area. In particular, surveys for the GGBF were conducted during the

night and only conducted for an hour each night. This is not considered sufficient effort given that suitable habitat is known to occur within the development area.

- Hollow dependant Fauna

Two nights of stagwatching (total of 2.5 hrs) conducted in August and September 2012 is not considered adequate for the detection of hollow dependant fauna over a 70 hectare area. Figure 7 indicated 9 locations for stagwatching. Given that 92 hollow bearing trees were recorded within the development area, and the number of hollow dependant fauna considered likely to be present within the site, this is considered a grossly inadequate survey effort and at an inappropriate time of year to detect microbat species that may be in torpor in cooler months.

- Small mammals

Figure A provides the detail of Fauna survey at the subject site. The survey effort of 2 pitfall trap lines in 2010 indicates there has been insufficient survey for threatened terrestrial fauna across the potential habitats within the site pursuant to the DECC guidelines and recommendations for small mammal survey. The SLR assessment has not considered the potential for the Eastern Pygmy Possum to occur within the site however hair tubes were deployed in December 2010 and May and September 2012 and failed to detect any threatened fauna. Tree Elliot traps were utilised on the long Bow Point site, not the subject site.

- Anabat surveys were not conducted at an appropriate time of year.
- Reptile surveys were not conducted at an appropriate time of year.
- Spotlighting was not conducted at an appropriate time of year.
- No summer avifauna surveys were conducted and very little surveys were conducted in spring.
- No details of timings, weather conditions, moon phases etc were provided for all survey dates (night and day).
- SLR make reference to the survey conducted at Long Bow Point and provide all survey details for this. The surveys conducted at this site cannot be used as justification for the lack of survey in the subject site. Survey results can be used as a guide for species recorded in the area, however, the presence/absence of species in the Long Bow Point site cannot be used to justify the presence/absence of species at the Culburra West Project Site.

6. Insufficient assessment of impacts

The Assessment concludes that no threatened species will be impacted due to the fact that all the threatened fauna located on the site are “relatively, extremely abundant”. This is not considered adequate justification given that the development will result in key threatening processes to threatened species that are protected under state and federal legislation due to their declining population trend and low population numbers.

P.90 of the Assessment states– “it is not considered likely that any “local population” of any of the relevant threatened species would be restricted to or depend solely on the Culburra West project Site, *Per se*”. *Per se* implies that further information must be provided in order to clarify this statement.

The survey and assessment has not elucidated the extent of any threatened species populations at the site. This lack of information suggests that the extent of impacts would be unknown if the proposal was to proceed in its current form.

The assessment assumes habitat features exist in surrounding areas. Habitats are considered likely to exist outside the site, however the quality, condition and conservation of these habitats and land tenure is uncertain and not guaranteed. The extent and importance of the threatened species habitat impacted by the development and the extent of this habitat within conserved areas has not been quantified. The assessment has not qualified the loss of habitat resources for any of the threatened species likely to be present on the site. The assessment has not taken into consideration the approved recovery plan for large forest owls (DEC 2006).

The distribution and condition of similar habitats in the region has not been discussed or assessed against the specific habitat requirements of the threatened species on the subject site that will be impacted by the development.

The SLR assessment claims that the vegetation on the site is unlikely to provide a significant portion of habitat within the home range of the threatened species likely to occur on the site however, no reference is made to the size of each species home range, or what proportions of their home range are used for foraging, roosting etc.

SLR claim that although threatened species have been recorded on site the site is not likely to provide significant or special value for any fauna species. This statement has not been adequately justified by the survey effort or assessment of impacts.

The Assessment has determined from the survey results that despite being previously recorded on the site there is no evidence of a "local viable population" for the Sooty Owl, Scarlet Robin or Varied Sitella". These populations are to be assumed viable as demonstrating that a population is not viable would require considerable effort and study. Any known or presumed local population should be assumed viable unless the contrary can be conclusively demonstrated through analysis of local ecological information, records, references and knowledge of species' behaviour and habitat or through a comprehensive on-site ecological study (DECC 2007). In the absence of such an analysis, species previously recorded on the site must be assumed to be present and subject to an assessment of impacts.

Those species that were deemed "present on the site" included:

- Square-tailed kite
- Glossy black cockatoo
- Powerful owl
- East coast free tail bat
- Common bentwing bat
- Eastern false pipistrelle
- Greater broad-nosed bat
- Yellow-bellied sheath-tailed bat
- Grey headed flying fox

*all these species were recorded on site.

Species deemed to have "potential" to occur on the site:

- Yellow bellied glider*
- Masked owl
- Osprey*
- White-footed dunnart

- Squirrel glider
- Tiger quoll
- Southern brown bandicoot
- Bush stone curlew
- Swift parrot
- Turquoise parrot
- Gang gang cockatoo*
- Scarlet robin*
- Varied sittella*
- Little eagle*
- Sooty owl*

*species that have been previously recorded on the site (SLR Appendix L)

Species deemed “unlikely” to occur on the site:

- Green and golden bell frog*
- Large footed myotis*
- Australasian bittern

*species that have been recorded on the site (SLR Appendix L)

Species deemed “not relevant”

- Large footed myotis*
- A number of marine mammals, shore birds, marine migratory birds etc that would not occur on the site as there is not habitat.

*recorded on the site (SLR Appendix L).

All species that have been recorded on the site previously should be assumed “present on the site” and subject to the assessment of impacts.

Species recorded on the subject site requiring further assessment include:

- Powerful owl
- Sooty Owl
- Gang-gang Cockatoo
- Glossy black cockatoo
- Varied sittella
- Scarlet robin
- Grey headed flying fox
- Square-tailed kite
- Little eagle
- Large-footed Myotis
- Green and Golden Bell Frog
- East coast freetail bat
- Common Bent-wing bat
- Eastern false pipistrelle
- Greater broad-nosed bat
- Yellow-bellied sheath-tail bat
- Yellow-bellied Glider

Inadequate assessment of Impacts to threatened Microbats

Figure 7 within the assessment states: “note: *microchiropteran* bat records have not been included because these species are wide ranging and occur in every forested area in the region”. (not exact quote).

The Large-footed Myotis has been recorded on the site, however, SLR state that this species is unlikely to occur on the site as there is unsuitable habitat. If the species has been recorded on the site then that justifies the presence of suitable habitat for this species on the site. When trapping small bat species, Law and Anderson (2000) found that bats were captured no further than 500 m from their roost site, but they were more commonly found within 100 m. Dead trees were very significant for mating roosts and relatively significant for maternity roosts. Mature trees with a large d.b.h. are a significant roost site for many species of bats. Maternity roosts were generally closer to creeks than other roosts. This suggests it is more likely than not that roosting habitat for this species is present on the site

The assessment does not provide data relevant to the utilisation and value of the hollow-bearing trees to the threatened microbat species on the site meaning the nature of the habitat to be removed is unknown. It is highly likely that there are threatened microbat roosts on the property and there is potential for maternity roosts of some species to occur on the site as these are usually located close to streams (Law and Anderson, 2000).

Disturbance of temporary roosts such as bachelor roosts and wintering roosts or disturbance of maternity colonies during spring and summer breeding and raising of young can result in a significant impact on regional populations (DEC 2004).

The study area is known to be suitable habitat for a number of threatened species of microbats and many of these species roost in hollow bearing trees. By not assessing all of the individual trees and hollows on the property the nature of the habitat to be removed is unknown for all species of threatened microbats on the property. No hollows have been identified as roost trees or eliminated the possibilities of maternity roosts for all of the threatened microbat species known to occur on the property. It is considered highly likely the proposal will impact the maternity roosts of these species.

Inadequate assessment of Impacts to the Powerful Owl and Sooty Owl: The assessment has not qualified the loss of habitat resources for these species. The assessment has not taken into consideration the approved recovery plan for large forest owls. The development will directly impact known Powerful Owl and Sooty Owl habitat including known foraging and potential nesting resources. The SLR survey failed to detect the species and as a result the assessment has not adequately considered the potential loss of foraging and potential breeding habitat on this species. Threatened fauna records provided by Wildlife Rescue to Shoalhaven City Council, May 2013 included a Powerful Owl record from the industrial area, Penguin Head Road Culburra, 8th April 2013 (less than one month after the SLR survey in the same location). This information illustrates the limitations of survey in detecting species presence and utilisation of habitat. SLR state that the record of the sooty owl on the site as a response to call playback was a miss identification. However, given the uniqueness of a sooty owl's call, and distinct differentiation from other large forest owl calls this is considered unlikely and the species should be assumed present.

Inadequate assessment of Impacts to the Green and Golden Bell Frog: SLR claim that detention basins and artificial wetlands to be created as a result of the proposal will provide future habitat for the Green and Golden Bell frog. If this is anticipated then a buffer zone should be provided to these areas and adequate measures should be put in place in order to protect this species once it colonises the area.

There is a lack of information to determine the extent of impacts to the threatened species known to occur at the site. The assessment does not provide sufficient information to determine whether the proposal is likely to reduce the long-term viability of a local population of the threatened species, or endangered ecological communities known to occur within areas impacted by the proposed development. This is due to an insufficient level of survey and assessment for the threatened species known or considered likely to occur

within the habitats present on the subject site and likely to be directly impacted by the proposal. The survey and assessment has not defined the extent of threatened species populations and endangered ecological communities at the site and therefore has not quantified the impacts to these populations that will occur as a result of the development.

7. Inappropriate impacts within SEPP 14 and 7a zone

The Environmental Assessment notes that the proposal aims to provide the following within the foreshore 7a zone:

- An offset for the development
- 100 m buffer to the SEPP 14 wetlands
- Revegetation area
- Protection of aboriginal artefacts
- Protection of EEC
- View lines
- Path for bicycles and pedestrians
- Bench seats and picnic benches
- BBQ areas
- Exercise equipment along the path
- Educational signage
- Observation points and viewing platforms
- Protect the scenic qualities of the NSW coast as required by the zoning.

Many of the above uses are conflicting and are not considered to provide riparian zone buffering or demonstrate how the wetlands, the Crookhaven River and Curleys Bay will be protected as required by the DGR's. View lines that are proposed to provide access to the Crookhaven River will require removal of vegetation directly adjacent to the SEPP 14 wetlands and therefore will directly impact this ecosystem.

The concept plan of the development shows a road traversing through the foreshore park to the wetlands.

The proposal suggests a reshuffling of the 7(a) zone along the foreshore in order to better accommodate the development. SLR claim that the 7(a) zone "does not reflect the environmental parameters", claiming that it is irrelevant.

The foreshore park has also been allocated to offset the impacts of the development through the retention and rehabilitation and protection of the foreshore vegetation. More details are required to ensure the protection of this vegetation and plan for management-given the disturbances proposed in this zone. The Assessment proposes an offset ratio of 2:1 based on an assessment of no EEC's present within the development area.

The Assessment proposes that a "bio-banking approach" has been taken for this offset. Further information on this methodology is required to determine whether the lands referred to are suitable to offset the impacts of this development.

SLR state it is through the protection of the foreshore park that protection of areas of high conservation value will occur. However ongoing impacts associated with view lines, public access and recreation that are proposed within this zone comprise key threatening processes not appropriate for high conservation areas. Further information is required to determine the extent of these impacts.

As a 100m buffer is proposed to buffer the wetlands that occur adjacent to the site. The DPI mapping of the wetland has been "corrected" by SLR. SLR state that this mapping has not

been ground truthed and state that the mapping is incorrect as it is not located in the area mapped by DPI. Without the correction of the location of the wetland the proposed buffer does not comply with the 100m buffer requirement.

8. Impacts within Lake Wollumboola Catchment

Part of the development falls within the Lake Wollumboola Catchment Area where development activities are prohibited. In relation to this, SLR state that '*in most instances*' the proposal will drain stormwater back into Crookhaven River". This needs clarification because "in most instances" implies there are some instances where the Lake Wollumboola catchment may be compromised by the development. Land that falls within the catchment area cannot be used as an offset as it is already undevelopable.

9. Inappropriate Landscaping

A landscape plan is proposed for the site. The Landscape Report (Phillips 2012) indicates that introduced species will be used for landscaping including Canary Island Palms which are listed on www.weeds.org.au. Species with invasive potential are considered inappropriate for sensitive environmental areas.

References:

Churchill, S 2008, Australian Bats, Jacana Books, Crows Nest, NSW

DEC 2004 Natural Resource Management Advisory Series Note 7, Bat roosts

DEC, DPI 2005 Draft Guidelines for Threatened Species Assessment

Law, B and Anderson, J 2000, "roost preferences and foraging ranges of the eastern forest bat Vespadelus pumilus under two disturbance histories in northern New South Wales, Australia", Austral Ecology, vol. 25, pp. 352-367

Appendix 1

Recent Survey within subject land

Spotlighting:

- 8 hrs between 7-11 may 2012
- 7hrs between 29-31 Aug 2012
- 5.5 hrs between 19-20 Sept 2012
- 4 hrs 18-20 Mar 18-20 mar 2013

Call playback:

- 2 hrs 7-11 may 2012
- 1 hr 30 Aug 2012
- 1 hr 19-20 Sept 2012
- 1 hr 18-20 mar 2013

Anabat:

- 2 nights, 2 units 7-11 may 2012
- 2 night, 2 units 29-31 Aug 2012
- 24 hrs, 2 units 14-21 sept 2012
- 1 night, 3 units – 18-20 March 2013

Infrared cameras:

- 4 nights, 2 units 7-11 may 2012
- 2 nights, 2 units 29-31 Aug 2012
- 37 hrs, 2 unities 17-19 sept 2012
- 36 hrs, 2 units 19-21 sept 2012
- 4 nights, 4 units 13-17 mar 2013
- 3 nights, 4 units 18-20 mar 2013

Hairtubes:

- 19 nights 40 units 28 Aug – 17 sept 2012
- 18 nights 40 units 19 sept-6 oct 2012

Stagwatching:

- 1 hr 29-31 aug 2012
- 1.5 hrs 19-20 sept 2012

Avifauna:

- 7hrs 30-31 aug 2012
- 8.5 hrs 18-21 hrs sept 2012
- 16 hrs 13-17 mar 2013
- 9 hrs 18-20 mar 2013

Reptile surveys

- 2 hrs 30 aug 2012
- 3 hrs 18-20 mar 2013

Glider traps:

- 100 trap nights 13-17 mar 2013
- 20 trap nights 18-20 mar 2013

Amphibian:

- 1 hr 4/1/12
- 1 he 15/1/12
- 1 hr 16/2/12
- All amphibian surveys were nocturnal

Pitfall traps:

- 2 trap nights 14-19/1/13.

