

Ecologically Sustainable Development Assessment

West Culburra Beach Expansion Area
Revised Concept Plan

Prepared for
Sealark Pty Ltd

SSD Application No: 3846

Site address
Part Lot 5 & Part Lot 6 of DP 1065111

allen price & scarratts pty ltd
land and development consultants

Surveying



Town Planning



Civil Engineering



Project Management



Table of Revisions

Initials	Rev	Date	Details
JH	P0	18 September 2020	Draft for review
JH	1	24 September 2020	Document finalise for DPIE Review

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Appendices

1. Concept Plan

1. Introduction

1.1 Purpose of this Report

Allen Price & Scarratts (APS) has been commissioned by Sealark Pty Ltd to prepare an Ecologically Sustainable Development (ESD) assessment to accompany a revised Concept Plan for West Culburra Beach Expansion Area.

The Concept Plan (Proposal) is for a staged mixed-use development. The Proposal is deemed to be State Significant Development after it was transitioned from Part 3A to Part 4 Division 4.7 of the EP&A Act in 2015.

The primary purpose of this ESD Assessment is to outline environmentally sustainable design and benchmark considerations for future development within the West Culburra Beach Expansion Area.

This assessment builds on the requirements of the:

- Shoalhaven Development Control Plan (SDCP) 2014;
- Section J performance requirements of the Building Code of Australia; and
- BASIX for residential development.

1.2 Site context - location

The Concept Plan area (site) relates to land owned by Sealark Pty Ltd. The Site is located on the south coast of NSW and the northern side of Culburra Road, immediately adjacent to the western edge of the Culburra Beach township, approximately 15km south-east of Nowra (Figure 1).

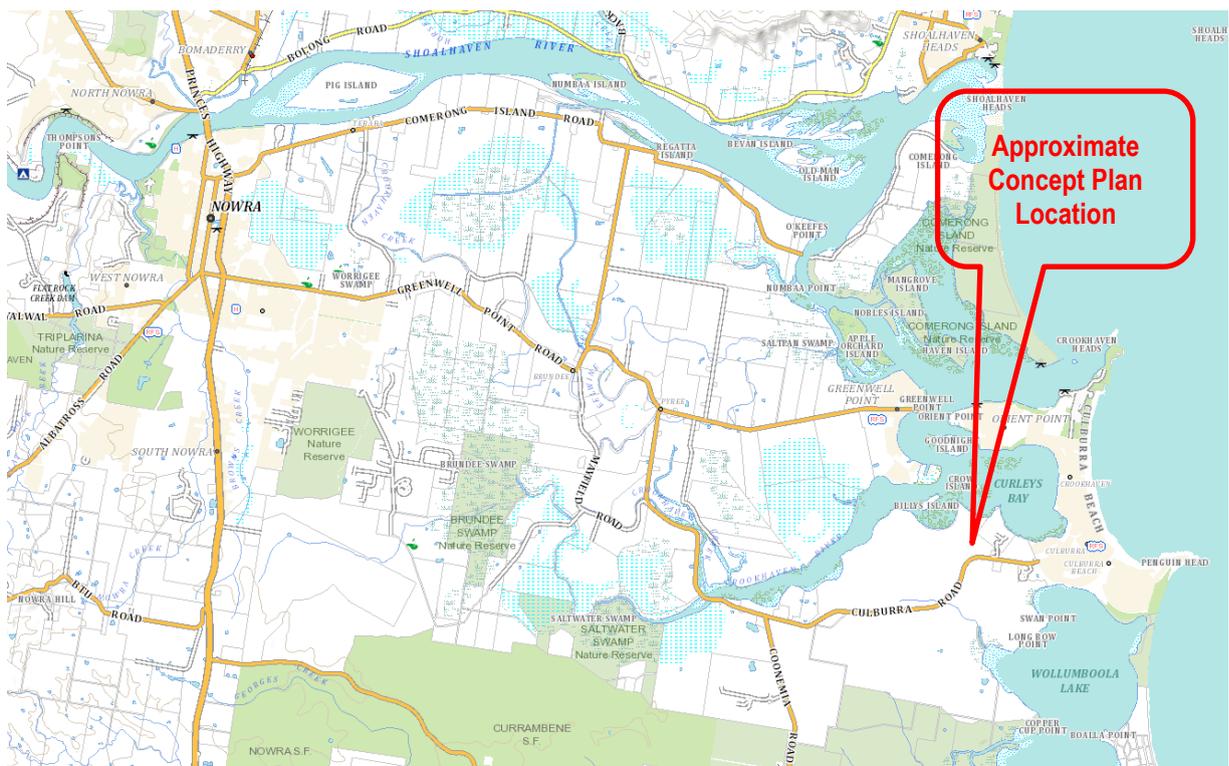


Figure 1 – Site Location Image (Source, SIXmaps)

1.3 Land description

The Site, as shown in **Figure 2** consists of:

- Part Lot 5 DP 1065111; and
- Part Lot 6 DP 1065111.

The Site is north facing, predominantly undeveloped and mostly covered in native bushland. The Site is within the Crookhaven River catchment and it borders this watercourse to the north which includes Curleys Bay.



Figure 2 – Aerial Image of the Site showing Lots 5 & 6 (Source, SIXmaps)

The relevant statutory instrument which the Proposal was submitted under on 29 April 2010 is the Shoalhaven Local Environmental Plan (SLEP) 1985. The following land zonings from this Plan apply to the site and are shown in **Figure 3**.

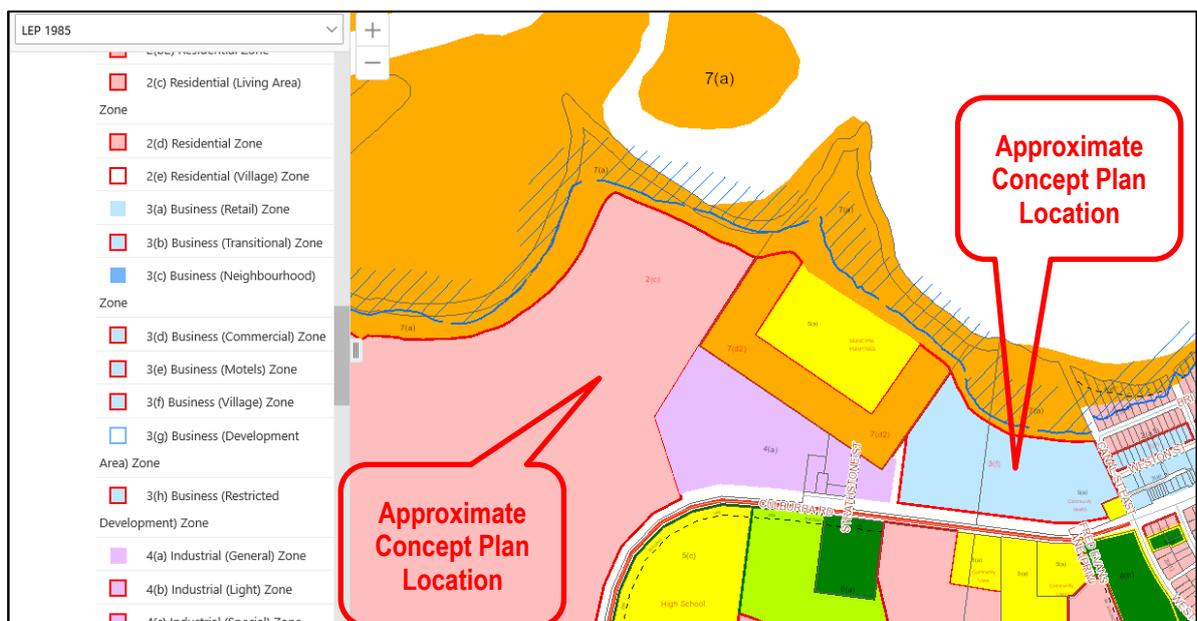


Figure 3 – SLEP 1985 Land Use Zonings (Source, SLEP 2014)

2. Project Description

1.1 Project Summary

The Proposal seeks Concept Plan approval to allow expansion of the Culburra Beach township to the west of the existing established urban area onto land which is largely zoned for this land use purpose (**Figure 3**).

The Concept Plan (as revised - **Appendix 1**) has considered feedback from the original proposal lodged in 2010 and the Proposal reviewed at the Section 34 Conciliation Conference, under the Land & Environment Court Act, in November 2019.

In summary, the Proposal incorporates a raised benchmark for stormwater quality management and ESD which are significantly greater than current methods applied to development in this area and generally the Shoalhaven as a whole. Further, the Proposal has the ability to include various measures aimed at minimising energy and water consumption and is considered to be consistent with the objectives of ESD. The Proposal is on a north facing slope and will harvest and reuse most stormwater over the Site.



Figure 4 – Indicative aerial image of likely development related to Concept Plan area (within dotted yellow circle).

3. ESD Assessment

3.1 Land & Environment Contention

Through the Concept Plan being reviewed as part of Section 34 Conciliation Conference, under the Land & Environment Court Act, the following contention and particulars have been raised.

CONTENTION 10: The Proposal does not incorporate sustainability measures

10 The Proposal does not incorporate sustainability measures such as solar power generation, solar heating, water sensitive urban design or appropriate shade tree locations to reduce heat effects of sun on paved areas and therefore the Application must be refused.

Particulars

- a) Clause 11 of SEPP SRD excludes the Application of Council Development Control Plans, consequently, the Proposal should reasonably provide for best practice sustainability measures in the form of a design benchmarking strategy to articulate suitable sustainability measures for the proposed development in the future stages.*
- b) Having regard to the quickly rising price of electricity and gas, provision should be made for on-site power generation for electricity production or for water heating.*
- c) The area of proposed impermeable surfaces is excessive and consideration should be given to adoption of water sensitive urban design principles, not only for the proposed infrastructure but also to guide future development.*

Through clarification of the above information, it is also noted that:

- No sustainability measures have been identified, the amended proposal relies on later development applications and the SDCP 2014.
- However, when considering the aims and objectives of SLEP 1985 it is considered desirable for the amended proposal to articulate best practice sustainability measures in the form of a design benchmarking strategy. This should articulate suitable sustainability measures for the proposed development in the future stages which may include on-site power generation for electricity production or for water heating and water sensitive design principles to guide future development in the subsequent stages.

This assessment is primarily provided to address that above contention and particulars.

3.2 Incorporation of best practice

As outlined above, the Proposal incorporates an ESD benchmark which is significantly greater than current methods applied to development in this area. This assessment also responds to Clause 11 of State Environmental Planning Policy (State and Regional Development) 2011 that excludes the application of Development Control Plans to the Proposal.

When assessing and considering best practice sustainability measures, it is recognised that the SDCP 2014 is a relevant and prescriptive guideline applicable to most surrounding and upstream development. Therefore, SDCP 2014 has been considered as a valuable baseline standard for consideration in future development approvals.

Therefore, this assessment aims to consider additional measures to SDCP 2014 which are aimed at minimising energy and water consumption and based on best practice sustainability measures to inform future development on the Site.

3.3 Future landowner considerations

Whilst recognising the value of incorporating best practice sustainability measures into the proposal, this assessment considers the ability of future landowners to both afford, action and maintain such requirements. Therefore, this assessment has considered the reasonableness of new benchmarks and moving away from traditional practices such as energy supplies from electricity, wood and gas for consideration of more carbon neutral sources such as onsite power generation for electricity production.

In addition to energy consumption, the assessment considers water consumption and the ability of future building developments to harvest water onsite which is in addition to BASIX and/or building code requirements. This harvesting is aimed at rainwater capture and storage for varying uses both within and external to buildings. This harvesting will alleviate some of the load on the potable water supply (reticulated) system and dedicated water supply catchment.

The opportunity for onsite wastewater treatment and disposal is considered not appropriate due to the size of proposed urban lots, proximity to the Crookhaven River waterway and in recognising the larger Recycled Effluent Management Scheme that is applied to surrounding farmlands by the adjacent Culburra Sewer Treatment Plant.

3.4 Water sensitive urban design principles

Due to the Proposal's proximity to the Crookhaven River waterway, a central and key requirement for the site and future development is to achieve a new benchmark in water sensitive urban design. The outcome of this new benchmark is to be consistent with the final Integrated Water Cycle Management Strategy which is approved for this Proposal and due to the significance of this matter informs overarching design principles.

In summary, water sensitive urban design principles are aimed at achieving stormwater / drainage water re-use onsite from impermeable surfaces (i.e. roofs, driveways, roads) and with no significant impact on the Crookhaven River waterway.

3.5 ESD design considerations

Based on review of the Concept Plan, the following ESD design elements will be required for future development within the West Culburra Beach Expansion Area. However, when understanding this approval is for Concept Plan only, it is possible that some of these considerations may not be relevant at the detailed approval stages (i.e. subdivision and construction certificate) if the design consideration is not practical and/or a better ESD could be applied.

ESD site principles are based on working towards achieving development design outcomes which primarily focus on residential development which consists much of the Proposal for both now and in the future, and in a way that maintains the ecological processes on which life depends. Where appropriate, ESD outcomes are identified for potential future users of the commercial and industrial land however, this assessment allows for flexibility as the final land use is not known at this time.

It is important to note that these design outcomes are in addition to requirements of the SDCP 2014 and which is based on long-term local development knowledge and experience, as well as considering appropriate ESD requirements. Table 1 details ESD design outcomes and treatments.

Table 1 - ESD design outcomes and treatments

ESD Design Outcome	ESD Treatment
Water sensitive urban design	
<p>No detrimental harm to the existing groundwater system or receiving environments.</p> <p>No detrimental harm to the groundwater regime and no resultant long-term changes to dependent or susceptible ecological systems.</p>	<p>Rainwater tanks attached to individual dwelling houses commercial or industrial buildings with capacity requirements as identified in the final accompanying Integrated Water Cycle Management Strategy.</p>
	<p>Irrigation water for parks and reserves supplied by stormwater harvested from urban land runoff.</p>
	<p>No outlet pipes from the stormwater channelling stormwater directly into the Crookhaven River watercourse.</p>
Built form design	
<p>Minimise energy and resource use in built form.</p>	<p>Residential buildings to be built to a 7 star rating as per Nationwide House Energy Rating Scheme (NatHERS)</p>
	<p>Residential buildings to have north facing living areas where possible.</p>
	<p>All roof areas to be plumbed to rainwater tanks.</p>
	<p>All sealed (impermeable) surfaces to drain into a dedicated stormwater management system for re-use.</p>
	<p>Public building/assets (unless restricted by operational requirements) be cooled by natural ventilation.</p>
	<p>All public building/assets fitted with water efficient devices.</p>
Landscape Design	
<p>Minimise energy and resource to maintained landscaped areas.</p>	<p>Low water use and preferably native plant species to be selected in order to reduce the amount of water used for irrigation.</p>
	<p>In public parks and reserves, minimise ongoing reliance on the potable water supply system.</p>
	<p>Minimise the use of sealed (impermeable) surfaces in public parks and reserves.</p>
	<p>Where possible, use recycled products in landscape infrastructure (i.e. boardwalk, paths, park furniture, etc)</p>
Fossil Fuel Energy reduction	
<p>Design and build infrastructure to reduce reliance on fossil fuel usage.</p>	<p>Unless direct sunlight is prevented to a building roof, all residential, commercial and industrial buildings will have a minimum 2 kW solar power system.</p>

ESD Design Outcome	ESD Treatment
	Unless direct sunlight is prevented to a building roof, all residential, commercial and industrial buildings will have solar hot water heating systems.
	Street and public assets fitted with LED lighting and where possible be solar powered.
	Unless direct sunlight is prevented or restricted by operational requirements, pumps which form part of the water urban stormwater reuse system will incorporate assisted solar power for its operation.
	Road networks will be designed to allow public bus servicing of the residential areas.
	Provision of shared pathways along spine roads and within the foreshore reserve be designed to connect to the town centre area and encourage active transport opportunities.

4. Conclusion

In recognition of the ESD opportunities that this Proposal presents, it is relevant that design outcomes and treatments as outlined in this report be incorporated into future development on the site which will contribute overall to a raised benchmark for development within the Shoalhaven and broader state of NSW as a whole.

