



BACKGROUND PAPER 3: THE JERVIS BAY TERRESTRIAL ENVIRONMENT

What we know

1. National Parks and Reserves

Jervis Bay is home to Jervis Bay National Park and Booderee National Park.

Jervis Bay National Park and Woollamia Nature Reserve – The document [Jervis Bay National Park and Woollamia Nature Reserve Plan of Management \(nsw.gov.au\)](#) provides a detailed overview of various flora and fauna ecological communities and their locations. Woollamia Nature Reserve is located immediately west of Jervis Bay National Park. The national park covers an area of 5,247 hectares while the nature reserve is 452 hectares in size. The National Park contains forests, woodlands, heathlands and wetland communities as well as beaches and estuaries. Eight endangered ecological communities, 14 rare or threatened plant species and 34 species of threatened fauna have been recorded in the park, including breeding sites for the little tern and significant populations of the endangered eastern bristlebird.

Booderee National Park - Booderee National Park stretches across 6,379 hectares on the southern side of Jervis Bay. The park includes 875 hectares of marine environment. Parks Australia works hand in hand with the Wreck Bay Aboriginal Community to manage Booderee, using a mix of traditional knowledge and modern science. In the Jervis Bay Territory over 460 native plants have been recorded. A number of plant species in the park have significant conservation status and warrant special protection because of their rarity. These species are protected under various inventories and schedules. Booderee is home to over 200 species of birds and over 30 species of native mammals as well as 10 species of bats, 37 reptiles, 17 amphibians and at least 180 species of fish. The great diversity of species is due to the vast range of habitats found in the area - coastal cliffs and heaths, sandy beaches and rock platforms, mangroves and ocean, swamps, lakes and forests. Booderee is protecting threatened species such as the Eastern Bristlebird and Magenta Lillypilly. Reintroductions to Booderee have occurred of previously locally extinct species - the Long-nosed Potoroo (*Potorous tridactylus*), Southern Brown Bandicoot (*Isoodon obesulus*), and Eastern Quoll (*Dasyurus viverrinus*).

2. State Forests

The Jervis Bay catchment area contains a number of State Forests managed by NSW Forestry Corporation: Currumbene State Forest gross area 1,167 hectares (Harvest Plan - including vegetation and species Maps: [HP_BB_1038_39_40_41_42_12_public.pdf \(forestrycorporation.com.au\)](#)), Nowra

State Forest, and Tomerong State Forest, gross area 212.6 hectares (Harvest Plan - including vegetation and species Maps: [Tomerong State Forest Compartment 1199 Locality Map \(forestrycorporation.com.au\)](https://www.forestrycorporation.com.au)). Apart from commercial logging, areas of State Forests are also used for recreational purposes.

3. Bioregions, Biodiversity Corridors and Conservation Zones

BioRegions

A biogeographic region is defined as "a complex land area composed of a cluster of interacting ecosystems that are repeated in similar form throughout". Region descriptions seek to describe the dominant landscape scale attributes of climate, lithology, geology, landforms and vegetation. The Shoalhaven has 3 Bioregions – The Sydney Basin (SB), South East Highlands (SEH) and South East Corner (SEC). Jervis Bay and surrounds lie in the Sydney Basin Bioregion and is defined by Mesozoic sandstones and shales; dissected plateaus; forests, woodlands and heaths; skeletal soils, sands and podzolics. Information on managing biodiversity in the Shoalhaven - area and types of ecological communities protected in public and private lands in each biogeographic subregion – is available for the years 2004 - 2009 and can be viewed at: [Managing biodiversity - Area & Type of Community Home \(nsw.gov.au\)](https://www.nsw.gov.au).

Biodiversity Corridors

Biodiversity / Habitat Corridors in the Shoalhaven have been identified in the Illawarra REP and the Jervis Bay REP. Existing larger corridors link National Parks, Nature Reserves and other large areas of natural vegetation, including State Forests. Land identified in council's LEP as Land of Ecological Sensitivity has also been recognised as providing habitat linkages e.g. between Moyean Hill and Coomonderry Swamp. After the recent Regional Forestry Agreements process, a major east-west link has been added linking Morton National Park to the coast: For more information see: [Managing biodiversity Wildlife Corridors 2005 \(nsw.gov.au\)](https://www.nsw.gov.au). See more about biodiversity conservation in the Shoalhaven here: [Conserving biodiversity home \(nsw.gov.au\)](https://www.nsw.gov.au).

The updating of Council's digital coverage of vegetation communities and threatened species database across the Shoalhaven is seen as crucial to the proactive management of biodiversity within the Region, however, much of the data available appears to predate 2009.

Conservation Zones

For planning purposes, areas considered to have environmental significance are classified into zones. The purpose is to conserve the environmental values and natural qualities in areas where this land use zoning is applied. In 2021 the NSW State Government renamed environmental zones to

conservation zones, to reflect this 'conservation' objective. A reference to an Environment Protection zone E1, E2, E3 or E4 within a Land Zoning Map should now be taken to be a reference to a Conservation zone C1, C2, C3 or C4. This is just a change in technical terminology and makes no change to land usage. See Shoalhaven LEPS for more details: Shoalhaven Local Environment Plan 2014 <https://slep2014.shoalhaven.nsw.gov.au/> and Shoalhaven Local Environmental Plan (Jerberra Estate) [Shoalhaven Local Environmental Plan \(Jerberra Estate\) 2014 - NSW Legislation](#).

4. The Beecroft Peninsula

The Beecroft Peninsula encompasses an area of about 5,250 hectares. The vegetation on the Beecroft Peninsula is a complex mosaic of heathland, eucalypt forest, and rainforest, mangroves, saltmarsh and swamps. The Beecroft Peninsula was listed on the Commonwealth Heritage List in 2004, giving it protection by Federation environmental legislation.

There are 573 plant species occurring in eight major and 27 minor vegetation types. The most widespread vegetation community is heath and this area of heath is the largest remaining on the south coast of New South Wales. The Beecroft Peninsula supports two plant species that are listed as vulnerable both nationally and in New South Wales, the coastal mint bush (*Prostanthera densa*) and the magenta lilly pilly (*Syzygium paniculatum*). Littoral rainforest is a nationally critically endangered ecological community.

23 native mammal species have been recorded on the Beecroft Peninsula. These include 8 species of bat, including the vulnerable large footed myotis (*Myotis macropus*).

126 bird species have been recorded, including 12 species of honeyeater, the endangered eastern bristlebird (*Dasyornis brachypterus*), the vulnerable ground parrot (*Pezoporus wallicus*), 2 pairs of the vulnerable powerful owl (*Ninox strenua*), and the vulnerable masked owl (*Tyto novaehollandiae*). 35 bird species are protected by international bird treaties (JAMBA, CAMBA, and the Bonn Convention) including the endangered pied oystercatcher (*Haematopus longirostris*) and the vulnerable sooty oystercatcher (*Haematopus fuliginosus*).

19 species of terrestrial reptile have been recorded, including 6 species of skink and 6 snake species, including the death adder (*Acathophis antarcticus*), which may be declining in southern NSW.

5. Urban Settlement

A number of urban settlements are located in the Bay or nearby. These include Jervis Bay Village (includes HMAS Creswell), Hyams Beach, Vincentia (including Bayswood Estate), Huskisson, Myola, Callala Beach, Callala Bay, and Villages around St Georges Basin. Controversially, a further 40 hectares of urban development (approximately 380 dwellings) is planned on land that is currently owned by The Halloran Trust in the Callala Bay, Wollumboola and Kinghorne localities.

Threats and challenges

1. Urban areas have an important role to play in linking areas of environmental conservation. Urban gardens and treescapes provide valuable habitat and food sources for wildlife. However, the inappropriate siting of developments and overdevelopment arguably threaten Jervis Bay's natural ecosystems and environment:

- Large scale urban developments are often preceded by blanket clearing of native vegetation resulting in fragmentation of the natural landscape and wildlife habitat. Many larger existing blocks of land are being redeveloped for higher density tourism accommodation resulting in further clearing of trees and shrubs. Treeless urban streets have been shown to be typically 10 deg C hotter in summer than streets with tree lined streets.
- Adding to the loss of biodiversity within urban environments is Shoalhaven Council's controversial 45 Degree Rule which permits the removal of trees on private land without Council approval if a tree is within 45 degrees of an approved building (this can be a neighbouring building).
- Planning for urban development should avoid clearing of remnant native vegetation. The use of Biodiversity Offsets to compensate for clearing is commonly used as a tool by developers. However, Biodiversity Offset Schemes (BOS) have been demonstrated to be inadequate and not halt or reverse the loss of biodiversity values. A NSW State Upper House Enquiry has heard that in some cases BOS are not working and often, did more harm than good. [Biodiversity offsets policies too often failing, inquiry hears - ABC News](#). Rezoning of already cleared, marginal agricultural land, avoiding clearing of native vegetation, could be investigated as an alternative.
- Re-development or infill development often triggers new fire risk management conditions. In some areas surrounding Jervis Bay, Fire Risk Assessment Guidelines preclude the re-planting of trees and shrubs within the Inner Protection Area of a development. 'Soft' landscapes are then replaced by hard surfaces or shallow rooted vegetation such as lawns, resulting in urban heat banks and increased surface runoff (increased flood risk) and/or increased infiltration and water seepage issues.
- Other impacts on the natural environment include killing of native wildlife by poorly managed domestic animals as well as invasive pest (weeds, feral animals) incursions.

2. Climate Change Impacts, particularly fire frequency and intensity, has a huge impact on the region's terrestrial ecosystems, landscapes and biodiversity. [Climate change impacts on our biodiversity | AdaptNSW](#)

- Intensity and frequency of hazard reduction burnings requires more research, this includes implementation of First Nations knowledge and use of cultural fire management regimes. Fire Risk Management regimes should consider impacts on native vegetation and wildlife. Locating urban environments well away from areas of environmental conservation can mitigate the impacts on both.

- Climate change leads to a loss of species. Increased research and monitoring will be required to track and help mitigate these impacts.

3. Increased tourism can damage terrestrial ecosystems.

- Access to areas of high conservation need to be carefully managed for safety reasons and in order to prevent the spread of pests and diseases. Pathways need to be clearly defined to avoid inappropriate off-track use. Tracks in National Parks are appropriately located and designed to minimise environmental impacts, so generally, only pedestrians are allowed on walking tracks unless a track has been designated as suitable for other users (such as bikes) through a park's plan of management and the installation of signs.
- Dumping of waste can be detrimental to wildlife and the environment
- Lighting of illegal fires can result in removal of protected native vegetation, littering and injury from broken glass and, if left unattended, wildfires

Regulations / Controls / Plans

- **Australian Government Biodiversity Legislation:** <https://www.legislation.gov.au/Search/Biodiversity>
- **NSW State Government Legislation:** <https://www.environment.nsw.gov.au/policy-and-law/legislation>
- **Local Environment Plans**

All Councils within NSW are required by law to have a Local Environmental Plan (LEP).

In the Shoalhaven the relevant LEPs include: Shoalhaven Local Environment Plan 2014 <https://slep2014.shoalhaven.nsw.gov.au/> and Shoalhaven Local Environmental Plan (Jerberra Estate) [Shoalhaven Local Environmental Plan \(Jerberra Estate\) 2014 - NSW Legislation](#)

Shoalhaven Council is currently reviewing the Shoalhaven Coastal Management Plan 2018 (to be updated 2023). There are “Get Involved” opportunities for community input at: [Open Coast and Jervis Bay Coastal Management Program | Get Involved Shoalhaven \(nsw.gov.au\)](#) and the St Georges Basin, Sussex Inlets Swan lake [Sussex Inlet, St Georges Basin, Swan Lake and Berrara Creek Coastal Management Program | Get Involved Shoalhaven \(nsw.gov.au\)](#)

This paper was researched and compiled by Robyn Neeson, July 2022.