



# Powlett River Estuary Management Plan – Values

The environmental values associated with the Powlett River estuary include a diverse range of bird, plant and fish communities. They are dependent on the variability of the typical estuarine characteristics such as river flow, flooding, variable salinities and salt wedge movement.

## Significant Bird Species

Twenty significant bird species have been found during studies within the estuary, wetlands and coastal zone, as listed below. Of these, the Orange-bellied Parrot (OBP) is the only species considered critically endangered. The OBP uses the coastal saltmarsh at the Powlett estuary for feeding. Significant bird species of the Powlett estuary are profiled below.

Species	Conservation Status Victoria		Conservation status Australia	Conservation status International
	<i>Flora and Fauna Guarantee Act 1988</i>	Advisory List of Threatened Fauna	<i>Environment Protection and Biodiversity Conservation Act 1999</i>	International agreements*
Australasian Shoveler		Vulnerable		
Black-faced Cormorant		Near threatened		
Caspian Tern	Listed	Near threatened		CAMBA, JAMBA
Clamorous Reed Warbler				Bonn Convention
Common Sandpiper		Vulnerable		Bonn Convention, CAMBA, JAMBA
Common Greenshank		Vulnerable		Bonn Convention, CAMBA, JAMBA
Double-banded Plover				Bonn Convention
Eastern Great Egret	Listed	Vulnerable		CAMBA, JAMBA
Emu		Near threatened		
Gull-billed Tern	Listed	Endangered		
Hardhead		Vulnerable		
Hooded Plover	Listed	Vulnerable		



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	<i>Flora and Fauna Guarantee Act 1988</i>	Advisory List of Threatened Fauna	<i>Environment Protection and Biodiversity Conservation Act 1999</i>	International agreements*
Intermediate Egret	Listed	Endangered		
Latham's Snipe		Near threatened		Bonn Convention, CAMBA, JAMBA
Little Egret	Listed	Endangered		
Magpie Goose	Listed	Near threatened		
Musk Duck		Vulnerable		
Orange-bellied Parrot	Listed	Critically endangered		
Pacific Golden Plover		Vulnerable		Bonn Convention, CAMBA, JAMBA
Pacific Gull		Near threatened		
Pied Cormorant		Near threatened		
Red-necked Stint				Bonn Convention, CAMBA, JAMBA
Royal Spoonbill		Near threatened		
Ruddy Turnstone		Vulnerable		Bonn Convention, CAMBA, JAMBA
Sanderling		Near threatened		Bonn Convention, CAMBA, JAMBA
Sharp-tailed Sandpiper				Bonn Convention, CAMBA, JAMBA
Short-tailed Shearwater				JAMBA, ROKAMBA
Sooty Albatross	Listed		Vulnerable	Bonn Convention
Sooty Oystercatcher		Near threatened		
White-fronted Tern		Near threatened		
White-bellied Sea-Eagle	Listed	Vulnerable		CAMBA

\**Japan-Australia Migratory Bird Agreement (JAMBA); China-Australia Migratory Bird Agreement (CAMBA); Republic of Korea-Australia Migratory Bird Agreement (ROKAMBA); Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention)*



### Royal Spoonbill

*Royal Spoonbill (Dowd's Morass).*

The Royal Spoonbill is a large white waterbird with black, spoon-shaped bill, facial skin, legs and feet. The Royal Spoonbill is found in shallow freshwater and saltwater wetlands, intertidal mud flats and wet grasslands. It feeds mainly on fish in freshwater, and on shrimps in tidal flats. It will also eat other crustaceans and aquatic insects.



*Orange-bellied Parrot.  
Photo by Birdlife Australia.*

### Orange-bellied Parrot

The Orange-bellied Parrot is a small 'grass parrot' and as its name suggests, has an orange patch on its belly. They migrate between the Australian mainland and Tasmania, spending summer breeding in Tasmania and winter in coastal Victoria and South Australia.



*Hooded Plover.  
Photo by Morris 2015.*

### Hooded Plover

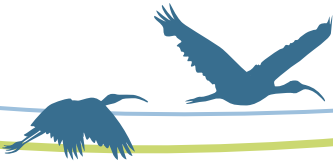
In eastern Australia, the Hooded Plover inhabits sandy ocean beaches that are exposed to the constant might of the swell. There they pick tiny invertebrates from the sand near the water's edge, and they lay their eggs in shallow scrapes in the sand, either on the upper beach or in adjacent backing sand dunes.



*Intermediate Egret.  
Photo by EST news 2015.*

### Intermediate Egret

The Intermediate Egret is a medium sized heron with striking white plumage. It is a rather quiet bird but it emits a deep rasping "kroa-kr" on take-off whilst disturbed. The Intermediate Egret occupies a variety of habitats. It is mainly found around shallow inland freshwater areas with abundant emergent aquatic vegetation. This includes seasonally flooded marshes, ponds and swamp forests.

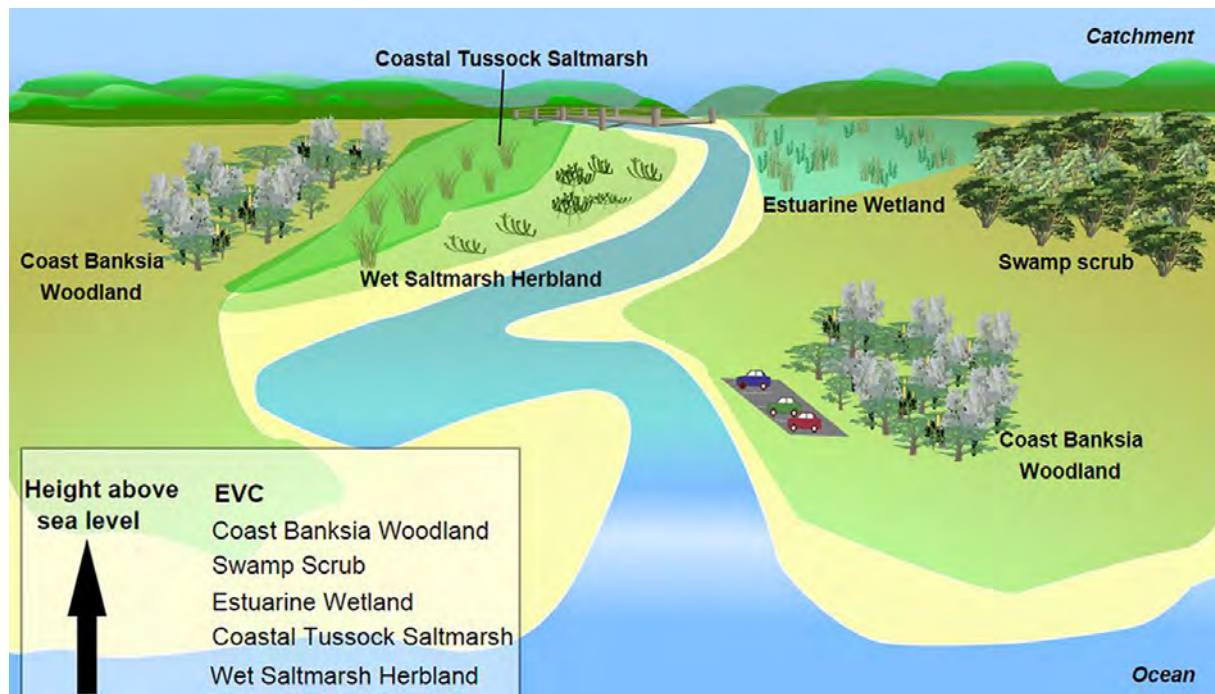


## Significant Plant Communities and Species

Vegetation communities are described in Victoria through mapping units called Ecological Vegetation Classes (EVCs). The EVCs occurring along the Powlett River estuary are shown in the table and conceptual diagram below. Coastal Saltmarsh vegetation has recently been protected under the Commonwealth government's *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Ecological Vegetation Classes – Powlett River Estuary	
83 Swampy Riparian Woodland	Endangered
53 Swamp Scrub	Endangered
9 Coastal Saltmarsh	Least Concern
- Coastal Tussock Saltmarsh	Vulnerable
- <i>Wet Saltmarsh Herbland</i>	Depleted
10 Estuarine Wetland	Depleted
2 Coast Banksia Woodland	Vulnerable

### Ecological Vegetation Classes at the Powlett River Estuary



A conceptualisation of the EVCs within the Powlett River estuary. Each vegetation class is located at different levels on the floodplain, based on the water requirements and tolerances to factors such as salinity. *Wet Saltmarsh Herbland* is the most frequently inundated and salt tolerant vegetation class, whilst *Coast Banksia Woodland* is located higher up the sand dunes off the floodplain. The health of the vegetation is reliant on an appropriate salinity and water regime.

Pictured top from left: Coastal Saltmarsh. Centre: Swamp Scrub. Right: Coast Banksia Woodland.



## Significant Fish Species

Twenty-two species of fish have been recorded in the Powlett River estuary. Of these, the Australian Grayling is the only native fish species with conservation significance. Australian Grayling spawn in the freshwater reaches of coastal rivers. The juveniles return to the freshwater reaches of rivers after roughly six months at sea and spend the rest of their lives in river habitats. The Australian Grayling is listed as threatened under the *Flora and Fauna Guarantee Act 1988*.



Australian Grayling.  
Photo by Tarmo A. Raadik.

### Fish Species – Powlett River Estuary

Short-finned Eel
Spotted Galaxias
Common Galaxias
Eastern Fortesque
Estuary Perch
Silver Trevally
Eastern Australian Salmon
Black Bream
Luderick
Old Wife
Yellow-Eye Mullet
Tupong
Tamar River Goby
Bridled Goby
Southern Blue-spotted Goby
Lagoon Goby
Flat-headed Gudgeon
Long snouted Flounder
Greenback Flounder
Smooth Toadfish
Eastern Blue-spot Goby
Australian Grayling

## Functional Fish Groups in the Powlett River Estuary



### Estuarine opportunists

Complete their lifecycle at sea, but may enter estuaries to exploit available habitats.

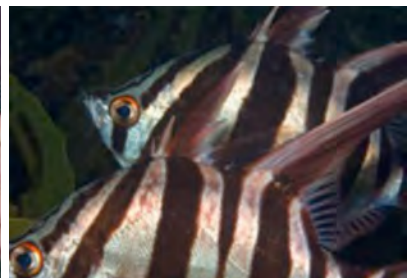
Example: Tamar River Goby, Long-snouted Flounder and Bridled Goby (shown above).  
Photo by Matt Khoury.



### Estuarine residents

Spend their entire lifecycle in the estuary.

Example: Black Bream, Lagoon Goby and Estuary Perch (shown above).  
Photo by Matt Khoury.



### Estuarine dependents

Rely on estuaries for part of their lifecycle.

Example: Old Wife (shown above).  
Photo by Julian Finn 2015.



## Other Significant fauna

There are three other listed fauna species that have been found near the Powlett River estuary as shown in the table below.

Species	<i>Flora and Fauna Guarantee Act 1988</i>	Advisory List of Threatened Fauna	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
Southern Brown Bandicoot	Listed	Near Threatened	Endangered
Swamp Antechinus	Listed	Near Threatened	
Swamp Skink	Listed	Vulnerable	

## Significant Social Values

The Powlett River estuary has significant social values, particularly from the Mouth of Powlett Road Bridge to the estuary mouth, this area has high scenic value. The area is commonly used for non-motor boating (kayak, canoe, etc.), picnics, BBQs, recreational fishing, sightseeing, swimming, walking and bird watching.

The coastal dunes near the mouth of the Powlett River estuary have Aboriginal cultural heritage significance with a number of coastal midden sites recorded.



*Black Bream is a popular species targeted by recreational anglers. Photo by David Stork, WGCMA.*

## Economic Values

The economic values of the estuary are mostly placed with the landholders along the river, with grazing common along the entire river length upstream of the Mouth of Powlett Road.

The Powlett River catchment is identified as a rural water source for irrigation and stock and domestic supply. Water is pumped directly from the stream in the upper catchment for this purpose.

The Lance Creek Reservoir is located on Lance Creek in the upper catchment. It is 4200 ML in size. The reservoir only harvests water during the winter period. Flows in other seasons are passed. Lance Creek Reservoir supplies water to the townships of Wonthaggi, Cape Paterson and Inverloch.

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