

Information Sheet on Ramsar Wetlands

Categories approved by Recommendation 4.7 of the Conference of the Contracting Parties.

1. Date this sheet was completed/updated:

1 June 1998

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Designation date

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Site Reference Number

2. Country:

Australia

3. Name of wetland:

Corner Inlet, Victoria

4. Geographical coordinates:

Latitude: 38° 36' to 38° 55'S ; Longitude: 146° 11' to 146° 53'E

5. Altitude:

less than 20 metres

6. Area:

67,186 hectares

Note: This is a revised area figure based on GIS Mapping (1995) and does not represent any change to the Ramsar Site boundary.

7. Overview:

The Corner Inlet Ramsar site is the most southerly marine embayment and tidal mudflat system of mainland Australia. The site is of international zoological significance as habitat for migratory wading birds. The barrier islands are of national botanical significance due to their biogeographic importance, and national geomorphological significance as an example of barrier island formation.

8. Wetland Type:

marine-coastal: (A) B C D E F (G) (H) (I) J K

inland: L M N O P Q R Sp Ss Tp Ts

U Va Vt W Xf Xp Y Zg Zk

man-made: 1 2 3 4 5 6 7 8 9

9. Ramsar Criteria:

(1a) (1b) (1c) 1d | 2a (2b) 2c 2d | 3a 3b (3c) | 4a 4b

Please specify the most significant criterion applicable to the site:

10. Map of site included? Please tick *yes* -or- *no*

11. Name and address of the compiler of this form:

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12. Justification of the criteria selected under point 9, on previous page.

1(a)(b) Corner Inlet is Victoria's best example of a wetland enclosed by barrier islands and it contains the most extensive intertidal flats in Victoria.

1(c) Corner Inlet plays a substantial hydrological role in the natural functioning of a major coastal system.

2(b) Corner Inlet contains the most southerly occurrence of White Mangrove (*Avicenna marina*) in the world (Frood 1986).

3(c) Corner Inlet regularly supports over 20% of the total known Victorian wader population and an estimated 50% of the overwintering Victorian population of migratory wader species (Martindale 1982).

Corner Inlet supports more than 1% of the national wader population and may contain 15% of the world population of Eastern Curlew (*Numenius madagascariensis*) (Mansergh & Norris 1982).

Corner Inlet supports a high percentage of the Victorian populations of the following species:

Pied Oystercatcher (*Haematopus ostralegus*) 68%
Sooty Oystercatcher (*Haematopus fuliginosus*) 44%
Grey Plover (*Pluvialis squatarola*) 95%
Mongolian Plover (*Charadrius mongolus*) 65%
Eastern Curlew 46%
Bar-tailed Godwit (*Limosa lapponica*) 89%
Red Knot (*Calidris canutus*) 65%
Great Knot (*Calidris tenuirostris*) 26%
Red-necked Stint (*Calidris ruficollis*) 17%
Curlew Sandpiper (*Calidris ferruginea*) 17%
Sandeling (*Calidris alba*) 11% (Mansergh and Norris 1982).

Corner Inlet supports at least 5% of the States population of Chestnut Teal (*Anas castanea*) (Corrick pers. comm.).

Corner Inlet contains 10% of the State's breeding population of Little Tern (*Sterna albifrons*) (Corrick pers. comm.) and Pied Oystercatcher (*Haematopus ostralegus*) (Dann pers. comm.). The area is used by Black Swans (*Cygnus atracus*) as a feeding and moulting area after breeding. Up to 10,000 Swans occur in the inlet at these times. This is over 5% of the State population and over 10% of the regional population (Norman pers. comm., Hewish 1988, Peter 1989, Peter 1990, Peter 1991).

13. General location:

South eastern coast of Victoria, Australia, north east of Wilsons Promontory.

14. Physical features:

Corner Inlet is bounded to the west and north by the South Gippsland coastline, in the south-east by a series of barrier islands and sandy spits lying end to end and separated by narrow entrances and to the south by the hills of Wilsons Promontory.

The chain of barrier islands are a westward extension of the Ninety Mile Beach and are of complex form and origin. They provide an outstanding example of the processes involved in barrier island formation including the development of multiple beach ridges, lagoons and swamps, tidal creeks, tidal deltas, and tidal washovers. As well as providing localities for the monitoring of sediment dynamics associated with marine and aeolian processes, they are of critical importance in the analysis of the evolution of the entire coastal barrier system between Wilsons Promontory and Lakes Entrance.

The main channels of the Inlet are continuous with the Franklin, Albert and Tarra Rivers which drain the catchment area of some 2300 km² into the embayment and out into Bass Strait through the Main, Port Albert, Kate Kearney, Shoal and McLoughlins Beach Entrances.

15. Hydrological values:

Seven secondary treated effluents licensed by the Environmental Protection Agency are discharged into the embayment.

16. Ecological features:

The mainland coast and several sandy islands are covered with mangroves, saltmarshes, sandy beaches and very extensive intertidal mudflats. The area contains the only extensive bed of the broad-leafed seagrass *Posidonia australis* in Victoria. The fine-leafed seagrasses, *Zostera muelleri* and *Heterzostera tasmanica*, occur in shallow water throughout the whole of the embayment.

Organisms living on the sea floor and within the sediment of the mudflats and sand flats are typical of unpolluted, non-estuarine soft sediments. There is a wide variety of species of polychaetes and amphipods, and large numbers of several species of bivalve molluscs, crabs, and burrowing sea anemones.

17. Noteworthy flora:

The islands of Corner Inlet are of national botanical significance. Although not floristically rich, the islands are of high biogeographical significance as a result of their past submergences. The islands also contain significant areas of saltmarsh and mangroves, both of which are communities of very limited distribution. It is thought that the five main vegetation communities on Sunday and Clonmel Islands represent stages in primary plant succession on coastal islands.

Threatened Flora

Adrian quadripartit s.s (globulous form) (Rare Bitter-bush) - endangered in Victoria

Asplenium obtusatum (Shore Spleenwort) - vulnerable in Victoria

Austrofestuca littoralis (Coast Fescue) - vulnerable in Victoria

Cyathodes juniperinum (Crimson Berry) - vulnerable in Victoria

Eucalyptus kitsoniana (Bog Gum) - vulnerable in Australia, rare in Victoria

Exocarpus syrticola (Coast Ballart) - rare in Victoria

Lepidium desvauxi (Bushy Pepper-cress) - rare in Victoria

Prasophyllum parviflorum (Slender Leek-orchid) - vulnerable in Victoria

Pterostylis aciculifloris (Slender Ruddyhood) - insufficiently known in Victoria

Pterostylis grandiflora (Cobra Greenhood) - rare in Victoria

Senecio diagchides (Erect Groundsel) - rare in Victoria

Thelymitra epipactoides (Metallic Sun-orchid) - endangered in Australia and Victoria

Triglochin minutissima (Tiny Arrow-grass) - rare in Victoria

Helichrysum dealbatum (Silver Everlasting) - rare in Victoria.

The most southerly occurrence of *Avicennia marina* (White Mangrove) is at Corner Inlet.

18. Noteworthy fauna:

Corner Inlet is of international zoological significance for its migratory wader population. Thirty-two wader species have been recorded. The area regularly supports an estimated 29000 waders (migratory and non-migratory) which represents 21.5% of the total known Victorian wader population and includes the majority of Victoria's population of less abundant wader species. It is estimated that nearly 50% of the overwintering migratory waders in Victoria occur in Corner Inlet. The overwintering birds are predominantly juveniles.

While in Australia these waders have two major habitat requirements - feeding and roosting sites. Corner Inlet provides extensive tidal flats that are exposed at low tide, which are important feeding areas for waders. When the tide covers the feeding areas the waders congregate at specific roosting sites, which are located above high-water mark on the numerous islands and the extensive coastal strip around the inlet. Over forty roosting sites have been located around here.

Corner Inlet supports more than 10% of the Victorian population of the following waders: Pied Oystercatcher (68%), Sooty Oystercatcher (44%), Grey Plover (95%), Mongolian Plover (65%), Eastern Curlew (46%), Bar-tailed Godwit (89%), Red Knot (65%), Great Knot (26%), Red-necked Stint (17%), Curlew Sandpiper (19%), Sanderling (11%).

The threatened species Little Tern (endangered in Victoria) and Fairy Tern (vulnerable in Victoria) breed at Corner Inlet.

The Inlet supports large numbers of waterfowl particularly Black Swan and is used by up to 20% of Victorian Populations of Chestnut Teal during summer and autumn. During drought numbers of other ducks e.g. Black Duck and Grey Teal are greatest.

It is thought that the area may contain over 15% of the world population of the Eastern Curlew.

Threatened Species

Birds

Great Egret (*Ardea alba*) - restricted colonial breeding in Victoria
Cape Barron Goose (*Cereopsis nonvaehollandiae*) - rare in Victoria
Spot-tailed Quoll (*Dasyurus maculatus*) - vulnerable in Victoria
Caspian Tern (*Hydroprogne caspia*) - restricted colonial breeding in Victoria (this species breeds at Corner Inlet)
White-bellied Sea-Eagle (*Haliaeetus leucogaster*) - rare in Victoria
Pacific Gull (*Larus pacificus*) - restricted colonial breeding in Victoria
Swift Parrot (*Lathamus discolor*) - endangered in Victoria and vulnerable nationally
Orange-bellied Parrot (*Neophema chrysogaster*) - endangered in Victoria and nationally
Eastern Curlew (*Numenius madagascariensis*) - rare in Victoria
Australian Pelican (*Pelecanus conspicillatus*) - restricted colonial breeding in Victoria
Ground Parrot (*Pezoporus wallicus*) - rare in Victoria
Black-faced Cormorant (*Phalacrocorax fuscescens*) - restricted colonial breeding in Victoria
Lewin's Rail (*Rallus pectoralis*) - rare in Victoria
Little Tern (*Sterna albifrons*) - endangered in Victoria and nationally
Crested Tern (*Sterna bergii*) - restricted colonial breeding in Victoria
Fairy Tern (*Sterna nereis*) - vulnerable in Victoria
Hooded Plover (*Thinornis rubricollis*) - vulnerable in Victoria
Tasmanian Pademelon (*Thylagale billardierii*) - presumed extinct

Mammals

Southern Right Whale (*Eubalaena australis*) - endangered in Victoria and nationally
Glossy Grass Skink (*Pseudemoia rawlinsoni*) - insufficiently known
New Holland Mouse (*Pseudomys novaehollandiae*) - endangered in Victoria
Swamp Antechinus (*Antechinus minimus*) - rare in Victoria

The islands also support a major proportion of the Victorian Hog Deer population. The Victorian population is apparently the only wild population extant outside the native range of the species. Within its native range the species has declined, in India it is largely confined to sanctuaries and in Ceylon it is perhaps extinct.

19. Social and cultural values:

There are numerous shipwreck sites in Corner Inlet and around the barrier islands.

20. Land tenure/ownership:

- 58,889 hectares - parks and reserves including Corner Inlet and Nooramunga Marine and Coastal Parks
 - 6,473 hectares - other public land
 - 1,824 hectares - freehold
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21. Current land use:

(a) **the site:** Reserve for biological conservation; ports with servicing facilities for off-shore oil and natural gas exploration, licensed waste discharges, commercial fishing, recreational fishing, intertidal collecting (for bait), recreation.

(b) **the surroundings/catchment:** Forestry, grazing, dairying.

22. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land use and development projects:

No significant ecological change has occurred since the last update of the Ramsar information sheet in 1992. Factors affecting the ecological character at selected areas within the site include:

- The potential for oil spillages from either offshore drilling, accident or disposal of ship's waste.
- Spread of introduced *Spartina* sp.
- Dieback of *Posidonia* beds (approximately 20-25% of *Posidonia* present in 1976 had disappeared by 1984).

In the late 1980s *Codium fragile ssp tomentosoides*, an introduced algal subspecies, was detected and the infested area is continuing to expand. The ecological impact of *Codium fragile ssp tomentosoides* is unknown and, other than physical removal, there is no known control method.

23. Conservation measures taken:

The Draft Corner Inlet and Nooramunga Marine and Coastal Parks Management Plan (1996) outlines strategies for protection of the natural values of the parks. It is due to be finalised by the end of 1998.

A cord grass (*Spartina* sp.) control program has been implemented which has resulted in a significant reduction of the weed since 1996 in the treated area. However, some areas still require treatment.

A fox control program on selected barrier islands to protect nesting shore birds such as terns and hooded plovers has been implemented.

A ongoing nesting shore birds monitoring program has been implemented.

Action Statements under the Flora and Fauna Guarantee Act 1988 have been produced for the following fauna species which occur in the Ramsar site. They outline measures to conserve these species.

- White-bellied Sea-eagle (1994)
 - Orange-bellied Parrot (1993)
 - Little Tern (1994)
 - Hooded Plover (1992)
 - Tasmanian Pademelon (presumed extinct) (1997)
 - New Holland Mouse (1996)
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24. Conservation measures proposed but not yet implemented:

Seagrass in Corner Inlet has been mapped and a report is currently being finalised. The mapping provides a baseline for future seagrass monitoring.

A literature review of the ecological impacts of *Codium fragile ssp tomentosoides* and possible control techniques has been initiated and will be completed by 1 August 1998.

A fisheries habitat assessment report is being prepared.

In an integrated approach to planning at Ramsar sites, management strategies are being prepared for all Ramsar sites in Victoria, including Corner Inlet, to provide general strategic direction and site specific strategies. The strategies will be completed by June 1999.

25. Current scientific research and facilities:

Long term monitoring of Chestnut Teal numbers.

26. Current conservation education:

Snake Island is used annually as a field site to study floristic composition and fire ecology by Melbourne University.

27. Current recreation and tourism:

Recreational fishing, swimming, surfing, boating, sightseeing, yachting, canoeing, hunting.

28. Jurisdiction:

Government of Victoria.

29. Management authority:

Managed under the Department of Natural Resources and Environment Parks Program by Parks Victoria - 58,910 Ha (88%)

Private Freehold - 1,824 Ha (2.7%)

Victorian Channels Authority - 6,452 Ha (9.27%)

30. Bibliographical references:

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