

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:

1998

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DD	MM	YY

Designation date

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Site Reference Number

2. Country:

Australia

3. Name of wetland:

Vasse-Wonnerup System, Western Australia

4. Geographical coordinates:

Latitude: (approx.) 33° 35'S to 33° 39'S; Longitude: (approx.) 115° 22'E to 115° 28'E

5. Altitude:

6. Area:

Approximately 740 ha.

7. Overview:

An estuarine system with artificially manipulated water levels that supports very high numbers of waterbirds; up to 33 000 birds have been counted there.

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:

Department of Conservation and Land Management
Locked Bag 104
Bentley Delivery Centre WA 6983

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

13. General location:

Busselton, southwestern Australia

14. Physical features:

The Wonnerup and Vasse Estuaries are no longer true estuaries because inflow of seawater is prevented by weirs across the two arms of Wonnerup Inlet. The Estuaries now act as compensating basins for water discharging from the Ludlow, Sabina, Abba and Vasse Rivers. When the water level in the Estuaries rises above sea level, hydrostatic pressure opens valves in the weirs and allows water to flow out to Wonnerup Inlet and the sea. When the level drops the valves close, thereby preventing ingress of seawater. Water in the Estuaries is fresh in winter and becomes brackish in summer. Wonnerup Estuary was mined in the 1950s for mineral sands.

The Vasse-Wonnerup system is shallow; almost all the wetland area has a maximum water depth of less than 1 metre and dries out in late summer. Small sections of the Estuaries near Wonnerup Inlet retain water because a limited amount of seawater seeps around the weirs.

The system consists of broad expanses of open water (except when dry) with fringing samphire and rushes. In some areas *Melaleuca* woodlands occur behind the samphire and eucalypt woodlands are found on higher ground. However all the area has been severely disturbed at various times in the past 50 years and much of it is currently cleared for agriculture.

The natural vegetation of the system is fairly uniform. The samphire belt is dominated by *Sarcocornia blackiana* and *Halosarcia pergranulata*. The rush and sedge zone is dominated by *Juncus kraussii* but *Lepidosperma* cf. *leptostachyum* and *Carex divisa* are also common. The tree zone behind the rushes comprises *Melaleuca raphiophylla*, *M. hamulosa* and *M. cuticularis* in either single-species or mixed stands. *Gahnia trifida* and *Juncus pallidus* occur in the understorey. *Melaleuca* woodlands often give way to an open woodland of *Eucalyptus rudis*.

15. Hydrological values:

The wetland is an estuary but has gates near the outlet to the ocean to prevent ingress of seawater during summer when the discharge rate from rivers is insufficient to do so. Most of the system dries out during summer.

16. Ecological features:

The Vasse-Wonnerup system provides an important coastal habitat for waterbirds: 33 000 were counted there in January 1986. The wetlands supported 10 056 ducks and swans in 1984-85 and over 12 000 in 1985-86. The following species are particularly abundant:

Black Swan	<i>Cygnus atratus</i>	3 460 Nov 1976
Australian Shelduck	<i>Tadorna tadornoides</i>	1 873 Feb 1985
Pacific Black Duck	<i>Anas superciliosa</i>	2 768 Feb 1985
Grey Teal	<i>A. gibberifrons</i>	7 000 Jan 1986

Other species occurring in significant numbers include:

Australian Pelican	<i>Pelecanus conspicillatus</i>	750 Feb 1986
Great Egret	<i>Egretta alba</i>	237 Feb 1985
Yellow-billed Spoonbill	<i>Platalea flavipes</i>	120 Jan 1986
Eurasian Coot	<i>Fulica atra</i>	4 000 Jan 1986
Black-winged Stilt	<i>Himantopus himantopus</i>	5 000 Jan 1986
Red-necked Avocet	<i>Recurvirostra novaehollandiae</i>	4 000 Jan 1986
Wood Sandpiper	<i>Tringa glareola</i>	61 Jan 1986
Sharp-tailed Sandpiper	<i>Calidris acuminata</i>	2 300 Jan 1986
Long-toed Stint	<i>C. subminuta</i>	44 Jan 1986
Curlew Sandpiper	<i>C. ferruginea</i>	1 200 Jan 1986

Sixty-eight species of waterbird have been recorded in the Vasse-Wonnerup system with numbers of six of them being higher than elsewhere in south-western Australia.

The system is important for breeding of Black Swans, particularly as an open-water refuge for their cygnets, and frequently supports >1% of the regional (and Australian) population of Red-necked Avocets and Blackwinged Stilts.

The principal conservation value of the Vasse-Wonnerup system is as habitat for waterbirds.

17. Noteworthy flora:

See ECOLOGICAL FEATURES

18. Noteworthy fauna:

See ECOLOGICAL FEATURES

19. Social and cultural values:

The major social value is that parts of the wetland are used for summer grazing by cattle; this is compatible with maintaining the ecological character of the wetland. A major residential canal development is proposed adjacent to the wetland.

20. Land tenure/ownership:

The Ramsar site consists of all non-freehold land within the boundaries of the two estuaries; dryland parts of Nature Reserve 31188, Tuart Forest National Park and the 23 blocks of vacant Crown Land that extend into the Estuaries are not included.

21. Current land use:

There is urban development along the southeastern end of Vasse Estuary. The remainder of Vasse Estuary and Wonnerup Estuary are surrounded by farmland used principally for cattle grazing. There is little recreational use of the wetlands.

At present there is a mineral sands mining operation west of Layman Road, part of the purpose of which is removing a radiation hazard left by earlier mining operations. However, the entire operation is occurring outside the Ramsar site.

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

There is continual pressure to allow land developments that may impact on the Vasse/Wonnerup wetlands. The production of a management plan for the area was recommended in the System 1 Red Book to prevent degradation due to uncoordinated development.

Existing management of water levels in the system has proved satisfactory for waterbirds but the potential for altering the water regime slightly to enhance waterbird usage of the area has not been explored fully.

23. Conservation measures taken:

Part of the wetland is included in Nature Reserve 31188.

24. Conservation measures proposed but not yet implemented:

If a major residential development proceeds adjacent to the wetland (see SOCIAL AND CULTURAL VALUES), then the developers will provide 120 ha for a reserve on the northern side of Vasse Estuary. It will be outside the Ramsar site but within the seasonal boundaries of Vasse Estuary. A management strategy for the wetland is currently being prepared by the Department of Conservation and Land Management.

25. Current scientific research and facilities:

Current research consists of monitoring waterbird numbers. There are no research facilities.

26. Current conservation education:

None

27. Current recreation and tourism:

None

28. Jurisdiction:

Government of Western Australia

29. Management authority:

Department of Land Administration, Central Government Building,
Cathedral Avenue, Perth WA 6000

Department of Conservation and Land Management, PO Box 104, Como WA 6152.

30. Bibliographical references:

Halse, S.A., Jaensch, R.P., Munro, D.R. and Pearson, G.B. (1990). Annual waterfowl counts in south-western Australia - 1988/89. Western Australian Department of Conservation and Land Management Technical Report 25, 1-43.

Jaensch, R.P. (1986). Vasse Estuary survey - 24 and 25 January 1986. Western Australian Bird Notes 37, 3-4.

McAlpine, K.W., Spice, J.F. and Humphries, R. (1989). The environmental condition of the Vasse-Wonnerup wetland system and a discussion of management options. Western Australian Environmental Protection Authority Technical Series 31, 1-35.

Tingay, A. and Tingay, S.R. (1980). The vegetation and flora of wetlands near Busselton. Unpublished report to Department of Fisheries and Wildlife, Perth.
