

## Scenic and aesthetic

The park's permanent freshwater lagoon is close to major tourist routes and intensive agricultural areas. Its unique freshwater vegetation and abundant birdlife can provide an unforgettable experience for bird enthusiasts.

## Scientific and educational

Study of the wetland's ecological and hydrological characteristics and processes is essential for an increased understanding of the fragile freshwater wetland systems.

## Recreation and tourism

The area offers an important opportunity for bird watching and related recreational activities and these are expected to increase as access and bird watching facilities are improved.

## Summary

This management plan provides the framework and guidelines on how Horseshoe Lagoon Conservation Park will be managed. It sets out the considerations, outcomes and strategies that are proposed to form the basis on which day-to-day management decisions are made.

This plan was prepared in October 1999 and, in accordance with s 125 of the *Nature Conservation Act 1992*, will be reviewed not later than 10 years after its approval. For further information on this plan or the planning process, please contact the Queensland Parks and Wildlife Service Northern Regional Centre in Townsville on (07) 4722 5296.

This management plan was prepared by Queensland Parks and Wildlife Service staff. The principal author was Grame Bulley. Thanks are due to those groups and individuals who made submissions in response to the draft plan.



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# Horseshoe Lagoon Conservation Park

## Management plan



Brigalow North Biogeographic Region

August 2000



## 1. Management directions and purposes

### 1.1 Management directions

Horseshoe Lagoon Conservation Park has an area of 76.3ha and is located 29km west of Ayr and approximately 50km south-east of Townsville. The park will be managed to enable natural species and ecological processes to continue free from undue disturbance. The park's primary value lies in the conservation of wetland habitat for waterfowl.

The park will be managed to protect and maintain wildlife diversity and habitat values, control and where possible eradicate introduced species in the park, maintain the hydrological system of the lagoon, and maintain the park's scenic values.

Visitor management will be based on limited public pedestrian access with opportunities for bird watching for recreational, tourist and educational purposes.

Research will focus on the area's natural resources and their management. Study of the wetland area's ecological and hydrological processes will be encouraged.

### 1.2 Purposes

The major purposes of management will be to ensure:

- the discrete, rare and threatened wetland ecosystem and its flora and fauna are conserved;
- water extraction from the system is managed to maintain the area's overall hydrological integrity and to ensure that natural hydrological processes are not altered by inappropriate visitor, neighbour, licensee, permittee or management activities;
- research and monitoring of the park's flora, fauna and natural communities is undertaken and encouraged;
- visitor information on the park's unique natural values is available; and
- public access enables quiet enjoyment by visitors.

## 2 Basis for management

Horseshoe Lagoon Conservation Park is gazetted under the *Nature Conservation Act 1992* and must be managed under s 20 of the Act to:

- conserve and present the area's cultural and natural resources and their values;
- provide for the permanent conservation of the area's natural condition to the greatest possible extent; and
- ensure that any commercial use of the area's natural resources, including fishing and grazing is ecologically sustainable.

### 2.1 Regional and management context

Horseshoe Lagoon Conservation Park features a permanent freshwater lagoon situated in the alluvial soils of the Burdekin delta. It is subject to periodic flushing during the wet season. The lagoon covers the park and it is the only wetland of its type in the Northern Region to have conservation tenure. This permanent lagoon is an important north Queensland refuge for waders and water fowl particularly during the dry season.

Horseshoe Lagoon was proclaimed as Reserve for the Protection of Native Birds in 1902 and was reserved as an environmental park in 1980 under the control of the Ayr Shire Council as trustee. In 1992 its status was changed to conservation park under the *Nature Conservation Act 1992*. There is currently no trustee.

Water flows into and out of the park are no longer natural.

### 2.2 Native Title

The Bindal people have lodged a native title claim application over an area that includes the park. The *Commonwealth Native Title Act 1993* provides for the recognition and protection of native title. This plan does not intend to affect, diminish or extinguish any native title rights.

## 2.3 Values of Horseshoe Lagoon Conservation Park

### Geology and landform

The 76ha park is comprised entirely of a permanent freshwater lagoon situated in Quaternary superficial deposits of sand, silt, gravel and soil. These deposits form the alluvial and deltaic floodplains of the Houghton River Delta.

### Plants

The park's vegetation comprises aquatic species dominated by pink lotus lily *Nelumbo nucifera*, blue water lily *Nymphaea gigantea*, water lily *Nymphaea nouchali* and bulkuru *Eleocharis dulcis*. Lagoons containing pink lotus lilies are poorly represented in the protected area estate.

### Animals

No detailed surveys of the park have been conducted to date. The area's birds, particularly waterfowl, are known for their diversity and abundance. The park is of major significance as it provides a secure refuge for birds and has water available in all but the driest of years.

The lagoon is important to the breeding of native fish.

### Cultural heritage

No information is available regarding the traditional use of the area by Aboriginal people. Diverse and abundant birdlife and aquatic vegetation would have provided a rich food source. No places of Aboriginal or European significance are known to occur within the park. Mention of a particularly large freshwater lagoon with a great many crocodiles ("alligators") is made in the publication *The Story of James Morrill*. Morrill was a nineteenth century shipwreck survivor who lived with local Aborigines for 17 years.



### 3 Management strategies

Current situation	Desired outcomes	Policies, guidelines and actions
<p><b>Native plants</b></p> <p>The area has been largely undisturbed since it was reserved in 1902. Complex freshwater plant communities are being threatened by more aggressive introduced plant species along the lagoon's fringe.</p>	<p>The composition and extent of the vegetation types are maintained subject to natural change.</p> <p>Threatened local ecosystems and species are protected.</p> <p>Habitat values are considered when managing vegetation.</p>	<p>Vegetation mapping, community assessment and monitoring will be commenced.</p> <p>A park herbarium will be developed to assist in plant identification and monitoring.</p> <p>Monitoring plots may be established for communities where visitor or management activities may have significant impact.</p> <p>Refuge habitat communities will be protected from catastrophic fire.</p> <p>The requirements of animal, such as breeding, nesting and feeding will be considered in conjunction with the management of plant communities.</p>
<p><b>Native animals</b></p> <p>Limited fauna survey work has been carried out.</p> <p>Plant communities provide important refuge sites in dry seasons for waders, water fowl and other aquatic-reliant species.</p>	<p>Animal health, diversity and general patterns of distribution continue.</p> <p>Improved knowledge of the park's aquatic life is available.</p> <p>Threatened species are protected.</p> <p>Habitat corridors are protected.</p>	<p>A fauna survey will be undertaken to provide a benchmark for future fauna monitoring.</p> <p>The park's fauna, in particular aquatic species, will be monitored.</p> <p>Protection of threatened animals will focus on habitat management.</p> <p>Liaise with neighbours, Landcare groups and government agencies to assist in the protection of critical habitat corridors.</p>
<p><b>Introduced plants and animals</b></p> <p>Little is known of the extent of introduced plants and animals. Para grass and hymenachne grass have the potential to overrun the native vegetation on the lagoon's margins if left unchecked. Feral pigs cause problems in similar areas and should be considered.</p> <p>Cattle are grazing most of the lagoon's banks which are outside the park. This is probably beneficial in keeping para grass and hymenachne under control.</p>	<p>Weeds and feral animals have no significant effects on the natural resources of the park.</p>	<p>Prepare an action plan to detail known weed and feral animal threats, map distributions and develop strategic control and monitoring programs.</p> <p>Particular attention will be given to preventing the establishment of the introduced grass <i>Hymenachne</i>.</p>
<p><b>Fire management</b></p> <p>The fire history is not well documented, but it is possible the park may burn in some very dry years.</p>	<p>Fire is used as a management tool if relevant.</p>	<p>A fire action plan will be developed if relevant.</p>
<p><b>Landscape, soil and catchment protection</b></p> <p>The park conserves an extensive but discreet wetland area that is subject to seasonal inundation. The area is surrounded by extensive agricultural development and this could provide siltation problems.</p>	<p>Water flows are not significantly modified by non-natural factors.</p> <p>The condition of the wetland, the landscape and the area's natural drainage are maintained subject to natural change.</p>	<p>Vehicle access will be limited to essential management requirements. Any soil disturbance in the area will be rehabilitated.</p>

<p><b>Native title and cultural heritage</b></p> <p>The Bindal people have lodged a native title claim application over an area that includes the park.</p> <p>Diverse and abundant birdlife and aquatic vegetation would have provided a rich food source. No places of Aboriginal or European significance are known to occur within the park.</p>	<p>Aboriginal people with traditional links to the area are involved in the management of park cultural heritage issues.</p> <p>Any native title rights are not compromised by management actions.</p>	<p>Consult with relevant Aboriginal people to establish principles and guidelines for co-operative management of native title, cultural heritage and other issues.</p> <p>Work programs and management activities will consider the requirements of native title legislation to ensure native title rights are not compromised.</p> <p>Seek advice from and provide field support to Regional archaeologist concerning cultural heritage issues.</p>
<p><b>Recreation and tourism</b></p> <p>Due to a lack of facilities and access to the water's edge, recreation and tourism are limited. Visitors currently have to cross private property to view waterbirds. There is no safe parking area close to the park's small road frontage.</p>	<p>The feasibility of developing public access is assessed.</p>	<p>Assess access problems and prepare a feasibility plan for the possible future development of a car park and bird hide.</p>
<p><b>Education and interpretation</b></p> <p>Current educational use is minimal due to access problems.</p>	<p>Visitors are provided with appropriate information to understand the wetland ecosystems.</p>	<p>A park brochure is developed when needed and as resources are available.</p>
<p><b>Resource use</b></p> <p>Water is pumped from the lagoon to irrigate adjacent agricultural land. It is likely that the water is pumped from a part of the lagoon outside the park boundary.</p> <p>All removal of water from a conservation park must be under a permit issued under the <i>Nature Conservation Act 1992</i>.</p> <p>Water, additional to normal flows, is entering the lagoon from adjacent agricultural land and down the channel. Water flows in the area are no longer natural.</p> <p>Irrigation may assist in the regulation of additional inflows from adjacent agricultural land.</p>	<p>All water harvesting is occurring subject to a permit under the <i>Nature Conservation Act 1992</i>, where appropriate.</p> <p>Continued irrigation does not diminish the ability of the wetland to offer a refuge for waders and waterfowl.</p> <p>Water flows into and out of the park are regulated to replicate the natural situation as far as possible.</p>	<p>The effects of continued irrigation will be monitored and correlated to the cyclical changes of the wetland. Changes to the quantity of water extracted or fed into the system will be made if necessary.</p>
<p><b>Liaison with neighbours and other stakeholders</b></p> <p>There is little liaison between key stakeholders in regard to active management of the wetland area.</p> <p>Liaison with State Water Projects (SWP) of DNR has commenced.</p>	<p>A co-operative management strategy for the wetland areas is developed by QPWS and SWP.</p> <p>Communication is also occurring with neighbours and other stakeholders interested in the park's management.</p>	<p>Communicate with neighbours and other key stakeholders once the management and concept plans are adopted.</p> <p>Negotiations with SWP are held to ensure that flows into and out of the lagoon replicate the likely natural flows as far as possible, and that there is an integrated approach to management of water use in the area.</p>

**References**

**Morrill, J. (1964)** *The Story of James Morrill*. Compiled by the Bowen Independent on behalf of the Bowen Historical Society