

Lake Wendouree Renewal Project and its effect on habitat value

Summary.

Works planned for Lake Wendouree must conform to relevant Commonwealth and State legislation, and should be designed to enhance fauna values rather than diminish them. Under current plans there will be a net loss of fauna habitat. Guidance is presented to assist in achieving positive outcomes.

The current collapse of S-E Australian waterbird populations requires determined effort to conserve surviving remnants.

Suggestions are made as to how the habitat value of some important sites (Willow Island, Convent Corner, Centre Reed Bed) could be enhanced.

Submission prepared by the Ballarat Branch of Bird Observation and Conservation Australia

The Ballarat Branch of Bird Observation and Conservation Australia has become aware that some of the works proposed and underway as part of the Lake Wendouree Renewal Project are having an adverse effect on the habitats of birds that use Lake Wendouree. We make this submission to the City of Ballarat for consideration when undertaking future works at Lake Wendouree.

Guidelines from Policy Documents

The importance of the wetland environment of Lake Wendouree is recognised at local, state and international level in the following documents:

- City of Ballarat Environmental Sustainability Strategy (May 2006 draft section 5.2.2) one strategy is to rehabilitate and protect waterways and wetlands.
- Victorian Flora and Fauna Guarantee: wetland loss and degradation is listed as a threatening process.
- A Directory of Important Wetlands in Australia (Third edition, 2001) includes Lake Wendouree as an important wetland, where it is listed because it provides a refuge when adverse conditions such as drought prevail, and is an important habitat for wildlife.
- Victorian Biodiversity Strategy (1997) indicates that there is less than 40% of the pre European area of Freshwater Marsh (Lake Wendouree comes under this category) left in Victoria. One of the desired principal outcomes from management is the maximum retention and restoration of existing wetlands.
- Victorian Biodiversity Strategy includes Lake Wendouree as an important wetland.
- JAMBA and CAMBA (international migratory bird agreements) Six species of migratory wading birds listed in this agreement are now present at Lake Wendouree. These are Red-necked Stint, Sharp-tailed Sandpiper, Curlew Sandpiper, Marsh Sandpiper, Greenshank, Latham's Snipe.

Should works for fauna enhancement be carried out?

There is a point of view that Lake Wendouree is for people, that works there should concentrate on enhancement of the environment for people, and that fauna habitat work should be confined to outside the Ballarat urban area.

However:

- A very large part of the appeal of Lake Wendouree to people is the relatively abundant bird life there, whatever the water level. Bird life has been particularly abundant and varied while the water level has been low, compensating (in terms of tourist value) in part for the current lack of other aquatic recreational opportunities.
- Since 1987 South-East Australian waterbird populations have dropped to less than 20%.

- The drought refuge value of Lake Wendouree cannot be overstated. The importance of Lake Wendouree as a drought refuge for wildlife is becoming increasingly important as the present dry period suggests that climate change is occurring. During 2006, six new bird species were observed at the Lake and a further 2 species have been added to the Bird List for Lake Wendouree in 2007.
- Council is not doing or planning any fauna habitat work within or outside the urban area. The opposite is true; Council proposes to divest itself of the management of Lake Burrumbeet, and to divert away some 30% of North Sewerage Plant water that currently supplies Lake Burrumbeet.
- Council has relegated the environment to a very low level of importance. The fourth 5 year Sustainability (formerly Conservation) Strategy is still in draft form three years and four months after it was to have been implemented.

What fauna enhancement works can be carried out?

- Almost any work planned can benefit fauna if it is well designed and implemented.
- Islands No. 4 (off the Swan Pool) and No. 5 (west of the Ballarat High School boatshed) can be enhanced for breeding of colonial waterbirds by increasing their isolation from the lake edge; excavate moats and add the excavated material to the islands (into the willows) to increase their height and provide more nesting space. Good moat design is critical.
- The lake lacks shallows for waterbird use when at high water levels.
- Spoil dumps and new islands need to have sides with gradients so flat that they provide shallows at all water levels, and will not erode under wave action (rushes, etc are the best and cheapest protection). The bank constructed close to the rowing course (south side) in 2006 should be removed further south to provide a gradient of one in ten or flatter, so that material does not erode back into the rowing course. The toe of the bank should be at least ten metres from the rowing course excavation, to minimize spoil movement back into the excavation.
- Existing shallows (such as the "Silt Trap" and adjacent shallows to the north) should not be filled under any circumstances.
- Eradicate willow suckers which threaten to take over large areas of shallows. Thin mature willows that have been allowed to establish too far into shallows such as in the area south of Windmill Drive to the peninsula at the end of the rowing course. The trees to be removed must be agreed upon and marked in advance by representatives of Council and fauna conservation bodies working together.
- Retain existing water rat habitat and bird nest sites in the form of old hollow willow trunks. Minimise burrow destruction during work on the willow island.
- Remove rubble (rocks, bricks and concrete) from the lake bed close to the shore. The rubble has all arrived there through human activity. Much of it has been spread by later users, such as anglers turning rocks over while harvesting bait (mud eyes). The rubble reduces the area of soil available for feeding by birds and all other species present. It is also unsightly.
- Basalt rocks which look original (unsplit and usually rounded) should be retained and arranged naturally at or close to high water mark.
- Erect nest boxes of durable construction and suitable design. Boxes erected in the last year off Fairyland have small entrance holes. If they are intended for ducks the holes should be at least 125 mm in diameter and located at the top of the side of the box.
- Retain standing dead trees and exclude the public from any area of potential danger. Waterbirds in the cormorant family and several other species habitually perch on dead trees. Dead trees often have or develop hollows that are used by nesting birds including ducks and Sacred Kingfisher. Removal of all dead trees will eliminate the opportunity for visitors to observe these birds at close hand.

- Lake Wendouree is used by various groups of birds that each have specific habitat requirements. The diving ducks require open water areas, dabbling ducks and swans shallower water with submerged vegetation, migratory waders prefer shallow areas with muddy edges, smaller bush birds inhabit dense shrubby vegetation. Birds also have specific requirements for breeding. It is necessary to retain and enhance all types of suitable habitat.
- The most important areas presently providing excellent habitat for birds include: Convent Corner Precinct including the silt trap, shoreline south of Windmill Drive to the peninsula at the end of rowing course and the shallow marsh extending east of the shore; Fairyland, and the Centre Reed Bed. Enhancement works should focus on these areas.
- An Environment or Biodiversity Management Plan should be developed for the lake. This would provide guidelines to ensure that future works will maintain the Lake ecosystem in a healthy state.

What work would permanently damage fauna habitat?

- Filling any part of the bed to a level above full water level. The term “foreshore extension” is an unworthy euphemism for “filling” and would result in further loss of wetland area.
- The “foreshore extension” done at the start of the rowing course in about 2003 resulted in a NET LOSS of lake area of about 5000 square metres. Current “foreshore extensions” planned there and also between St Patrick’s Point and Convent Corner would result in another NET LOSS of three hectares (30,000 square metres) of lake area. Supporters of filling should ask themselves would they be in favour of eliminating a high quality 3.5 hectare wetland anywhere else.
- Construction of artificial retaining walls, either vertical or sloped, on the edges of the lake or islands.
- Removal of onshore dense vegetation as has occurred in the fairyland, swan pool, hatchery drain, and small areas in convent corner have destroyed many areas of habitat for small bush birds. This gradual loss of habitat is a creeping degradation of Lake Wendouree.

How does bed erosion work in wetlands on basalt soils?

Wetland beds are very flat. When a hole is excavated in a wetland bed it tends to backfill by natural means. This process is very fast in wetlands with little or no aquatic vegetation and fine basalt soils, where wave action lifts bed material into the water column and redistributes it across the wetland bed. The moats beside the islands at Winter Swamp were dug in 1983, and almost fully backfilled by 1990. Up to 1983 Winter Swamp had been grazed by stock for more than 100 years. There was little vegetation on the bed to protect it from wave action.

Lake Wendouree has good bed vegetation. However, lateral movement of bed material will occur where the bed has been disturbed by excavation and filling.

Constructed banks or islands will be subject to lateral erosion unless the sides have very flat gradients, and they are well compacted and vegetated before inundation. This was done successfully at Nerrina Wetlands.

Comments on specific habitat sites

1. Willow Island off Windmill Drive

We are object to the clearing of the island as the willows do provide habitat for birds and White Ibis, Black Duck, Black Swan and Clamorous Reed Warbler use it for nesting. Sacred

Kingfisher, which previously inhabited the Fairyland area, was seen on the island at the beginning of November.

If the final decision is to clear the island we ask that the following points be considered when establishing the plan for works:

- Leave some willows for habitat while the planted vegetation develops.
- Presence of people would deter birds from using the island for roosting and nesting, but people will still be able to view birds at relatively close range from the shore. An alternative treatment may be a shore-based raised platform to allow views over the island and Lake.
- Dense planting on island with indigenous species of trees, shrubs and ground layer as have been used in the North Gardens Wetland. Suitable species include Blackwood, Prickly Moses, teatree, bottlebrush, Goodenia, Bursaria and Poa.
- A shallow area on the east side of the island with a gentle slope of 1 in 10 would provide habitat for wading birds. This shallow area should be planted with wetland plants to stabilise the soil and improve habitat.
- Leave some dead and any hollow trees as nesting and perching sites for birds.
- Prevent invasion of the island by Silver Gulls.

2. Convent Corner Precinct

This is an important bird habitat area particularly suited to small bush birds and waders. Willow invasion is threatened to destroy the habitat for birds and the amenity for people. Works need to be planned carefully to ensure that the outcome meets the needs of fauna and people. We submit the following points for consideration when developing work plans for the precinct:

- Leave old trees including fallen trees along the lake edge as perches and nest sites for birds and habitat for fish.
- Dense planting of *Poa* and other appropriate low, herbaceous vegetation between granite sand path and shore (some planting has already taken place and the *Poa* plants are doing well but closer spacing would give better weed suppression).
- Plant clumps of native trees and shrubs (using species planted in North Gardens Wetland) along lake edge.
- Provide designated paths to give access to the lake edge for viewing over the lake to prevent people making numerous tracks.
- Areas for quiet contemplation could be developed with seating and screen planting where there is sufficient distance between the path and shore.
- No major removal of willows until new plantings become dense enough to provide alternative habitat for small birds (the willows are a favoured nest site for Clamorous Reed Warbler).
- Retain shallow marsh areas (these areas are used by migratory waders including Latham's Snipe and Sharp-tailed Sandpiper).
- Removal of young willows that have spread while water level has been low.
- Any work done should proceed in stages so that there is always habitat for birds.
- Erection of interpretive signage highlighting the birds that are found at Lake Wendouree. Include information on identification, feeding, nesting, and migration.

3. Centre Reed Bed

We accept that dredging of the rowing course is necessary for the sport though it will not be an environmental benefit. The spoil material should ideally be dewatered and removed for use in other areas. However if this is not logistically or economically feasible then it is imperative that the spoil does no harm to the lake ecology.

If it is to be left in the lake the following issued should be considered:

- The existing habitat of the Centre Reed Bed should not be destroyed or water quality degraded by turbidity.
- The Centre Reed Bed could be extended to the south-west.
- The upper level should not exceed the full water level of the lake, as this would encourage invasion by willows, fairy grass and Silver Gulls.
- The slope should be 1 in 10 and be planted with suitable wetland plants (similar species as used in the marsh areas of North Gardens Wetland) to provide habitat and prevent erosion of the soil. There must be a buffer between the spoil and dredged area to prevent slumping back into the deepened rowing course.

Conclusion

The Ballarat Branch of Bird Observation and Conservation Australia submits our thoughts to be considered to provide the best possible outcomes for Lake Wendouree to continue to serve the community in a wide variety of ways and retain the habitat values that encourage a wide variety of flora and fauna.

We accept that the human uses of the Lake require works that do not benefit biodiversity and do not object to proposals such as dredging the rowing course and maintaining a high water level. We oppose works that have potential to damage the habitat, ecology and biodiversity. We are willing to discuss these proposals so that the lake continues to be suitable for a multitude of community uses and a sustainable biological resource.

BOCA subcommittee members: Amanda Ashton, Gavin Cerini, John Gregurke, Roger Thomas.