APPENDIX 6. WETLAND MANAGEMENT STORIES

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RICK & JOANNE HISKINS

Where	**4km north-east of Rutherglen (NE Victoria)**
Enterprise	**Hobby farm**
Size	**27.5 hectares**
Wetland area	**4.5 hectares**

What they did

- Erected 900m of fencing to provide control of stock access to the wetland
- Installed an off-dam stock watering system (to remove the reliance on dams within the wetland)
- Conducted a programme of fox baiting in conjunction with their neighbours
- Revegetation works to be carried out during 2008.

Why they did it

- To improve the chances of having brolgas successfully breed at the wetland
- To generally improve the condition of the wetland in the hope that this will further enhance its value for waterbirds.

Cost

- Less than $10,000

Assistance

- Funding assistance was provided through the Commonwealth Government's Envirofund programme.

Benefits

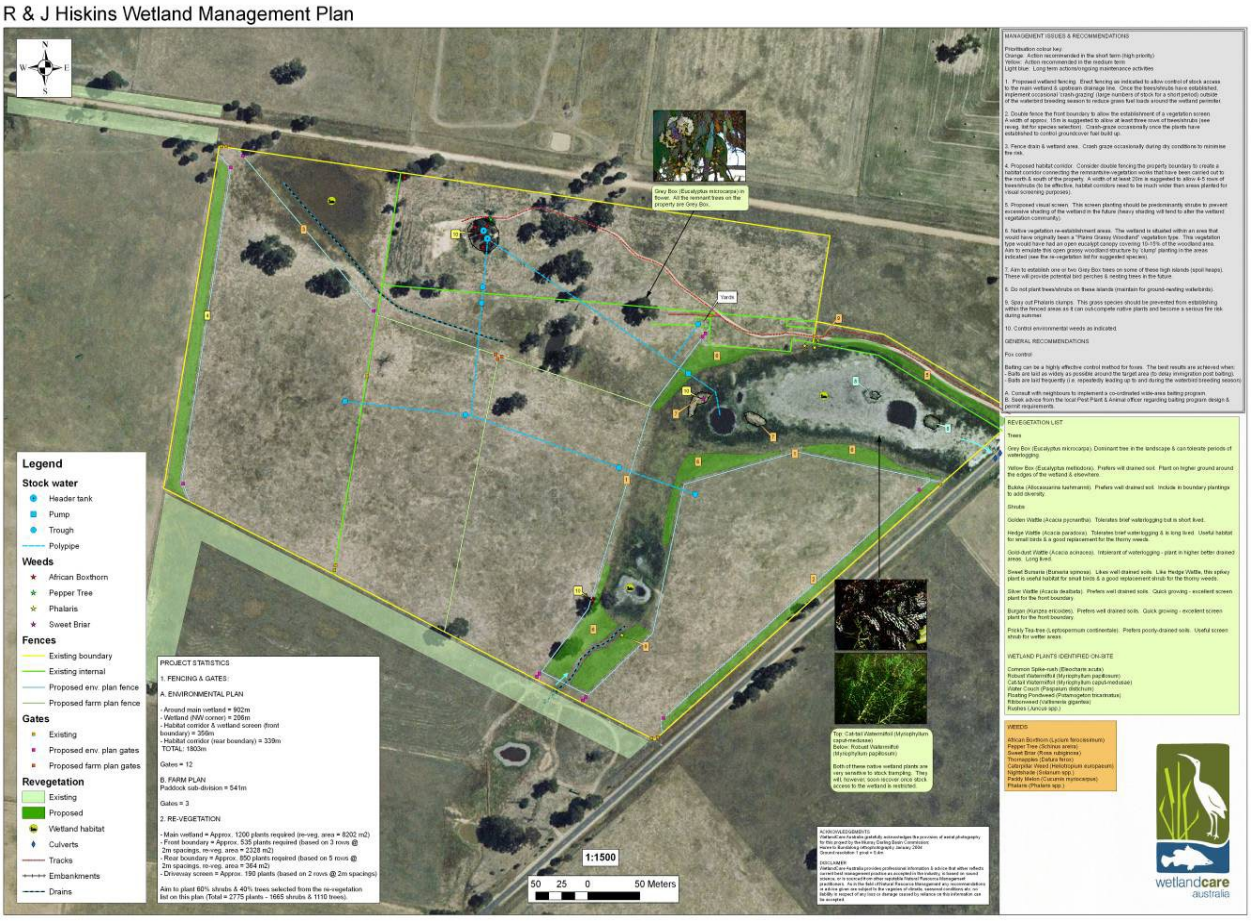
- Stock health benefits are expected from the clean water that is now supplied through the trough watering system
- The wetland re-filled after the '06-'07 drought in July 2007. With stock restricted to the fenced paddocks the water has remained noticeably clearer than has been the case in the past. Stock were previously able to wander throughout this shallow meadow wetland.

Monitoring & evaluation

- With this project nearing completion, brolga breeding will be closely monitored at the wetland in the future.

Their story

Situated about 4km north east of Rutherglen, the Hiskins's wetland forms part of a drainage system that eventually flows to the Murray River. Set within the flat Riverina Plains country of north east Victoria, this drainage system is characteristic of many found within this landscape setting. A meandering shallow channel is interspersed with wetlands that form within shallow depressions. These occasional streams flow briefly after high rainfall, while the wetlands may hold water for a month or two but often dry out over summer. Both river red gum *(Eucalyptus camaldulensis)* and grey box *(Eucalyptus microcarpa)* are common in these wetlands, with the latter dominating at the Hiskins's property. Although only a little over 4.5 hectares in size, the shallow wetland provides abundant waterbird habitat and brolgas have been regularly recorded at the site.



Map 5: Rick & Joanne Hiskins engaged WetlandCare Australia to develop a wetland management plan for their property near Rutherglen.

The property has only recently come into the Hiskins's ownership. Prior to this the wetland was fenced into a set-stocked paddock. It is likely that the wetland paddock would have been the most heavily grazed on the property as it was the only one containing water and has three dams excavated within the bed of the wetland.

One of the first things Rick and Joanne noticed about their newly acquired property was the birdlife in the wetland. At the time an extended period of good rainfall had seen the wetland topped up regularly and the prolific growth of native wetland plants had attracted the wildlife. Of particular interest was the arrival of Brolgas as these charismatic birds are not common in the area and it was particularly pleasing when these large native cranes started to build a nest. Unfortunately, although chicks were subsequently produced, none survived to maturity with fox predation suspected as being the primary problem. This led to the question; 'what do we need to do to help the brolgas successfully raise a brood of chicks?'

Image 13: Brolgas are large charismatic native cranes that are becoming increasingly uncommon in southern NSW and Victoria. Brolgas have tried unsuccessfully to raise young at Rick & Joanne Hiskins's wetland with fox predation of the chicks being the most likely cause. The initial impetus to start rehabilitation of the wetland came from the presence of these birds. (Photo copyright © Wendy Opie, Viridans Biological Databases. Not for reproduction.)

A rehabilitation plan for the wetlands was completed in early 2006 and included detail on proposed fencing locations, alternative watering points, weed control and re-vegetation works. This information was then used to prepare an application for funding assistance under the Commonwealth Government's Envirofund scheme which was successful. While one of the primary aims of the plan and subsequent works has been to enhance the wetland for nesting Brolgas, other considerations have also been taken into account.

Some of the key results expected from this project include:

- brolgas raising chicks successfully
- wetland vegetation in better health and improved water quality
- improved aesthetics through thoughtful revegetation of the wetland surrounds.

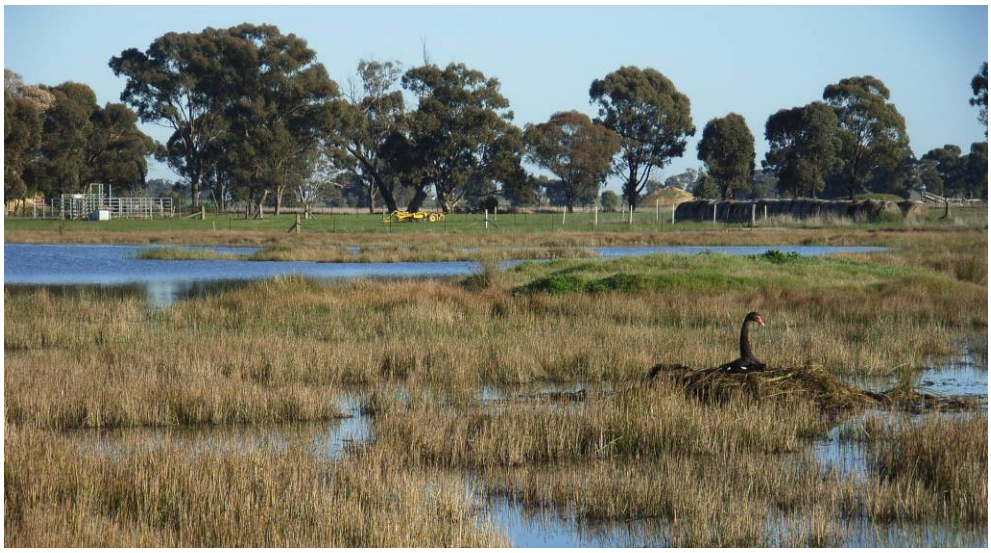


Image 14: A black swan nesting at Rick & Joanne Hiskins's wetland in August 2005. Although only about 4.5 hectares in size this wetland can attract a diverse population of waterbirds. The abundant areas of shallow water support many native wetland plants.

Image 15: The Hiskins's wetland supports a diverse community of native wetland plants including those pictured here: cat-tail watermilfoil (*Myriophyllum caput-medusae*), robust watermilfoil *(Myriophylum papillosum*) and floating pondweed (*Potamogeton tricarinatus*).

The works identified on the plan are being implemented in stages over a period of about 18 months and, as of July 2007, are more than half completed. It is always good practice to integrate any environmental rehabilitation plans with the overall vision for the property and this was particularly true in this case as the property is only 27.5 hectares in size. Consequently, the wetland rehabilitation plan involved a review of the entire property, and included consideration of the present and future paddock layout, stock watering points and other desired revegetation works.

Although only partially completed, the project has already achieved some good results with respect to fox control. Not only has a method been established to co-ordinate an ongoing regional baiting programme but as Joanne recalled *'the first baiting was done about twelve months ago and on our property all the baits were taken'.* While detailed surveying has not been conducted, anecdotal evidence suggests a noticeable decline in fox numbers.

1. Fencing

The fencing layout was designed to provide a good buffer width around the wetland. As the wetland would have originally been set in an open grassy woodland landscape, the wide buffer allows for some revegetation of native trees and shrubs while maintaining the nutrient and sediment trapping qualities of the grasses. The wide buffers were also considered particularly important as the surrounding paddocks will on occasions be ploughed and re-sown.

While the fencing around the wetland will give control over stock access, other fencing was required to minimise disturbance, both from curious birdwatchers and the traffic on the adjacent road. Brolgas can attain up to 1.3m in height and are very obvious to passing traffic. As the wetland is small, people stopping to look at these birds were causing significant disturbance, especially when they drove up the un-gated driveway. Driveway gates and double fencing the front boundary of the property to allow for the establishment of a visual screen of closely planted trees and shrubs was considered necessary.

2. Revegetation

A number of design considerations were taken into account when developing the revegetation portion of the wetland plan.

- As the original vegetation community in the area would have been open grassy woodland the proposed revegetation around the wetland reflects this with widely spaced trees and small clumps of shrubs planned

- Dense stands of trees will be avoided so that shading of the wetland is minimised (to maintain the current diversity of wetland plants). Particularly wide tree spacing is proposed for the northern side of the wetland for the same reason
- In contrast, the plantings along the boundary facing the road will be tightly packed to form an effective visual screen to minimise the disturbance to waterbirds.

3. Alternative stock water

A system of concrete troughs fed from the available town water supply was installed to remove the dependence on the dams within the wetland.

4. Fox control

NSW DPI provides detailed fox control information in the brochure 'Code of Practice for the Humane Control of Foxes'. See Resources section for link.

A fox control baiting programme was organised through the local Landcare group and implemented in 2006. It is intended that this will be repeated at regular intervals in the future, especially during the brolga breeding season. This was viewed as being the most effective control measure. The following key considerations were taken into account:

- the immigration of new foxes from surrounding territories into a recently baited area is widely recognised problem. In some cases where the surrounding area has high fox densities, the numbers of foxes in the baited area may actually increase post-baiting as foxes move into the newly available territory. To overcome this, the baited area should be as wide as possible and baiting should be repeated regularly (to account for immigration)
- given the previous point, the baiting program co-ordinated over several surrounding properties by the Landcare group provides the best chance of minimising fox predation in the wetland
- avoiding non-target species also has to be taken into consideration. Domestic dogs are a particular problem as they readily take fox baits. Native quolls are also known to have taken baits and need to be considered if they are found in the area.

Image 16: Troughs installed and fence under construction, July 2007.

Challenges

Between family commitments and running an engineering business in town, finding the time to implement a wetland rehabilitation project has been one of the biggest challenges for Rick and Joanne.

Controlling foxes can be difficult at the best of times, but on a small block this is particularly challenging as success depends almost entirely on the full participation of the surrounding neighbours.

Summary

Although small in size, this productive meadow wetland attracts a surprisingly large number of waterbirds. This is a common feature of this wetland type (which are sometimes referred to as 'Shallow Freshwater Marshes') as the shallow water warms quickly producing prolific plant and invertebrate growth. The limited water depth is also ideally suited to wading waterbirds that can forage over almost the entire wetland surface in search of food. Because these shallow 'paddock' wetlands are often small and easy to drain they are among the most seriously degraded wetland types which makes the value of the Hiskins's project greater than the physical area may suggest.