

# Padaminka Nature Reserve

The Great Barrier Reef Coastal Wetlands Protection Program Pilot Program was commissioned by the Australian Government to deliver on-ground actions for the sustainable management of 22 priority wetlands in the Great Barrier Reef catchment. The \$2 million program was delivered over two years by a consortium led by Conservation Volunteers Australia and involved partnerships between government, community and landowners to identify and protect these wetlands.

## Project summary

'Padaminka' may have been the smallest project in the Pilot Program, but it was an exceptional illustration of the significant achievements and progress that can be made with the commitment of the landowner and local community. This site, with continuing funding and maintenance, has the potential to become an outstanding example of a restored wetland, a haven for fauna and a valuable wetland educational facility. The project is a credit to the volunteers and the landholder, who are thoroughly dedicated to the rehabilitation of the Padaminka Nature Reserve.

## About the site

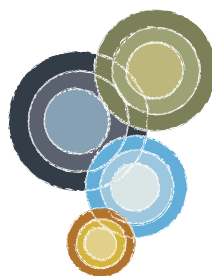
'Padaminka' is a 72-hectare holding containing small seasonal wetlands that have previously been used for agriculture (including dairying, beef cattle, goats and sugar-cane). In 2001–02, before the Pilot Program funding, the wetland had been partly restored by the excavation of infilled areas (to create deeper waterholes and rocky riffles to slow down the force of water flow). Conservation Volunteers Australia (CVA) teams helped with native tree planting and weed removal.



Photo 1: Prior rehabilitation works involved reclaiming an infilled lagoon (photo: Maureen Cooper)

'Padaminka' is listed as a Nature Refuge as well as a Land for Wildlife site and has a large proportion of Endangered Regional Ecosystem 8.11.4 woodland, dominated by *Eucalyptus platyphylla*, *Corymbia clarksoniana*, and *Eucalyptus drepanophylla*, often with *Lophostemon suaveolens*.

Although no formal surveys have been conducted at the site, Padaminka is known to be home to many species of reptiles, mammals, insects and butterflies. There are 180 species of native birds and over 10 species of native frogs. A specimen of yellow-footed antichinus (a small marsupial mouse, and only the third found in the Mackay district) was also found and photographed. The site contains a large squirrel glider colony, which has been the subject of intensive research by the Environmental Protection Authority (EPA). Rare birds of the region include the grey goshawk, black falcon and little eagle. The property acts as a refuge in times of drought, and many birds come from further west, for example the little eagle and plum-headed finch.



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The property owner carries out mosaic controlled burns during winter to help decrease the fuel load in case of a wildfire. The burning reduces exotic grasses and helps the natural regeneration of native grasses such as blady grass, native couch and spear grass. Agile wallabies benefit from the fresh grass shoots that follow the burn. Raptors also have a larger area in which to seek their prey, where previously they have been unable to hunt because of the dense exotic grasses.

### Nature Refuges

A Nature Refuge is the product of a voluntary agreement between a landholder and the Queensland Government, acknowledging a commitment to preserve land with significant natural and/or cultural heritage values in perpetuity. Each Nature Refuge agreement is negotiated directly with the landholder and tailored to suit management needs.

Nature Refuge is a class of protected area under the *Nature Conservation Act 1992*.

For more information, contact:

**Department of Environment and Resource Management (formerly EPA)**

Phone: 1800 603 604

Email: [naturerefuge@epa.qld.gov.au](mailto:naturerefuge@epa.qld.gov.au)

Website: [www.epa.qld.gov.au/naturerefuge](http://www.epa.qld.gov.au/naturerefuge)

### Land for Wildlife

Land for Wildlife is a voluntary, non-binding program that encourages and supports landholders in providing habitat for native plants and animals on their property. The program offers landholders a variety of benefits including:

- free advice and assistance on managing wildlife habitat in conjunction with other land uses
- recognition and support for landholders' contributions to nature conservation in Queensland
- opportunities to share ideas and experiences through the Land for Wildlife network and publications.

The program is designed for any landholder who has natural areas of vegetation such as rangelands, vegetation along watercourses, or shelter belts. All types of small and large properties are eligible for Land for Wildlife status, such as farms, bush blocks, parks, school grounds, and even golf courses and cemeteries. Land can be government-owned or owned by individuals, organisations and community groups.

For more information, contact:

**Land for Wildlife Coordinator (Queensland)**

Phone: (07) 4923 7543

<http://live.greeningaustralia.org.au/GA/QLD/OnGroundAction/our+projects/landforwildlife/>



Photo 2: Entrance to Padaminka, World Wetlands Day (photo: Maureen Cooper)

## Challenges

Past clearing at the Padaminka site has caused a **loss of biodiversity**. **Exotic weeds** have exacerbated the situation by competitive exclusion of native species. Weed species include leucaena, guava, guinea grass, noogoora burr, sensitive weed, lantana and para grass. The exotic grass species, in particular, generate dangerous fuel loads for hot fires. Their presence at the site, along with proximity to overgrown road reserves and cane farms, presents a severe **fire risk** to sensitive wetland vegetation in the seasonally dry tropical environment.

The site has a modified hydrology and receives runoff from an adjoining cane farm, both of which are detrimental to water quality.

## Rehabilitation actions

The Padaminka project aimed to promote **biodiversity and weed suppression**. One hectare of weed species was brush cut along the creek bank and replaced with 600 seedlings sourced from local riparian native species.

The western boundary of the site was fenced and brush cut to create a **fire break** 8 metres wide; fire breaks were installed in existing wildlife corridors through the remainder of the property; and cold burns (low-intensity fires) were carried out as an extra wildfire prevention measure.



Photo 3: Western boundary fence after clearing of weeds and replanting with native species (photo: Maureen Cooper)

To further the educational goals at 'Padaminka', interpretive trails were created throughout the Nature Refuge as part of the project and mapped with GIS. Sixty-three species of trees were identified and marked with tags. Visitors can follow a trail by referring to a map and guide showing the location of the various tree species along the trail. Over 600 visitors now come to 'Padaminka' each year.



Photo 4: Interpretive trail markers (photo: Maureen Cooper)

## Lessons learnt

The project involved replacement of seedlings that had been lost during earlier revegetation efforts as a result of frosts. CVA team members removed weeds and cleared under existing established native vegetation, then inter-planted 300 native riparian species. Planting under existing vegetation can protect seedlings from frosts, but careful timing of revegetation plantings is also an important aspect of planning rehabilitation projects.

After this project most of the marker tags and stakes were washed away by heavy flooding (see Photo 5). The flooding washed much of the para grass out of the wetlands, but did not cause any erosion because the banks were planted with specifically chosen species that had been well maintained. Considering the individual wetland and the characteristics of the plant species when revegetating a site can improve the survival rate of the plants and the longer-term success of the revegetation.



Photo 5: Flooding at Padaminka nature reserve after the project (photo: Maureen Cooper)

## Contacts

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### **Conservation Volunteers Australia**

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Photos courtesy of WetlandCare Australia



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