

Thuringowa

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

The aim of the Pilot Program project at Thuringowa was to equip the shire's environmental managers with current information on the status and management needs of its wetlands. The ultimate goal was to improve the status of Thuringowa's significant wetland resources, using information from this project and from similar ones in other coastal shires to develop protective management tools.

Outcomes of the project included:

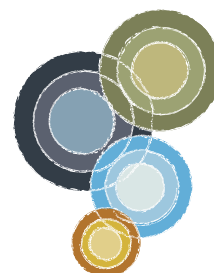
- a review of the status, protection and management needs of the shire's wetlands to provide a basis for management well into the future
- a **review of the shire's planning scheme**, which is currently considering new provisions to improve protective management of wetlands
- formation of a **wetland expert panel**, involving government agencies and other stakeholders
- **recommendations** prioritising wetland sites and management actions
- engagement in **on-ground management works** of the landholder of a wetland site considered to have extremely high biodiversity values (Mutarnee Swamp, a lowland billabong).

About the site

Thuringowa City is located immediately to the west of Townsville City and is experiencing one of the highest growth rates in Queensland, especially within beachside settlements that are extending northwards along the coast. Despite the rate of development, relatively large areas of high-integrity coastal wetland complexes remain, many of them within relatively undeveloped coastal stream catchments.

Thuringowa contains a diverse and valuable array of wetland sites, the most extensive of which is an almost continuous wetland complex comprising estuaries, swales and seasonal swamps along the shire's coastal margin. These wetlands contribute water quality protection for the Great Barrier Reef, as well as supplying water to urban areas.

Thuringowa's wetlands provide important habitat for waterbirds, including migratory wader birds listed under international JAMBA and CAMBA agreements. They are also valued for recreational and commercial fisheries and include nursery, feeding and breeding habitats for EPBC and state-listed threatened species including frogs, turtles, crocodiles, palms, aquatic macrophytes and dugong.



Queensland
Wetlands Programme



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Photo 1: The nationally recognised, near-pristine Leichhardt Creek estuary is typical of Thuringowa's relatively undeveloped coastal wetland areas (photo: Jim Tait).



Photo 3: Development and urban expansion threatens many of Thuringowa's wetlands (photo: Jim Tait)

Challenges

Rapidly expanding urban and rural residential **development** and associated infrastructure involves clearing, filling and draining of wetlands. Increases in catchment runoff associated with this development have raised inputs of sediments, nutrients and contaminants, thus reducing the **water quality** of the wetlands. This degradation is a consequence of a **lack of knowledge** of the extent and status of the wetlands in Thuringowa, combined with a **lack of statutory and planning protection**. The wetlands within the shire are also being affected by aquatic weeds, invasive grasses and woody weeds, hot fire regimes, as well as uncontrolled stock and vehicle access.



Photo 2: Clearing associated with coastal agricultural development can be detrimental to coastal wetlands (photo: Jim Tait)

Rehabilitation actions

To fill the knowledge gap, a comprehensive report on the status and protection needs of the Thuringowa wetlands was produced (Tait 2007, see 'Further reading' below). The report reviewed the current status of the wetlands, the current planning scheme, and the tools available for protection or rehabilitation.

The review process included:

- compiling a portfolio of available **data layers** (Regional Ecosystem Mapping, latest EPA wetland mapping, air photos, satellite imagery)
- conducting a **desktop review** of current status, management and protection needs for each major wetland (31 listed)
- convening an **expert panel** to review the findings and add local knowledge
- compiling a list of **priority sites** for on-ground action and protection.

This review found the current status of Thuringowa's wetlands to be relatively good, with a large number of sites still in an almost natural condition. However, four key threats were affecting wetland condition within the shire: **land development, terrestrial weeds, aquatic weeds** and the **fire regime**. All of these threats operate interactively, and act as drivers for a range of secondary threats.

Investigations showed that there are various ways in which these threats could be mitigated:

- more explicit provision for the protection of wetlands in the shire planning scheme
- performance criteria for development near wetlands
- site-specific wetland management plans, including recommendations for weed control and appropriate fire regimes
- increased 'protection area status' of high-value wetlands.

Within the review, five broad areas and four specific sites were prioritised for investment in wetland management and protection. The fourth phase of the project was to supervise work on the ground at key priority sites. Due to delays with the timing of the project, only one landholder has so far been engaged, at the Mutarnee Swamp. The wetland management plan for this site included clearing lantana and guinea grass, using a contractor, and then revegetating with local native vegetation. Feral pig control will also be conducted over the whole site (approximately 20 hectares), with traps provided to the landholders.



Photo 4: The high-biodiversity Mutarnee Swamp, a lowland billabong (photo: Jim Tait)

Further detail on the review of Thuringowa's wetlands is contained in a WetlandCare Australia information bulletin and in the report itself (see 'Further reading' below).

Further reading

Tait, J 2006, *Thuringowa's wetlands: review of status, protection and management needs*, report by Econcern.

WetlandCare Australia 2007, *Delivering wetland management and protection within local government*, Information Bulletin no. 4, Pilot Program Case Study, Thuringowa City Council 14 May 2007, Great Barrier Reef Coastal Wetland Protection Programme.

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Photos courtesy of WetlandCare Australia



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