Reinstating natural flow

Darawakh Creek / Frogalla Swamp wetland rehabilitation

The site

The 929 hectare Darawakh Creek/Frogalla Swamp Wetland complex is located on the mid north coast approximately 6 kilometres north of the townships of Forster/Tuncurry. The wetland forms part of the larger Wallamba River catchment, a major tributary of Wallis Lake. The entire wetland complex is underlain with highly reactive acid sulfate soils, from as little as 0.5 m below the surface. Flood mitigation works in the 1950s extensively drained the wetland and significantly altered the biodiversity and hydrology of the site. Constructed drains were up to 20 m wide and 2 m deep in places. This drainage system in conjunction with overgrazing from livestock, loss of native plants and burning of the site led to acid mobilisation and export into the catchment.

Proponent: Great Lakes Council

Land use: conservation reserve (former private)

Habitat grant: $29,433 (3 drains)

In-kind support: over $450,000

An iron plume from the wetland complex, pre-remediation. Photo: GLC

The project

In the late 1990s the effects of acid discharge such as oyster mortality in the Wallamba River and a severe iron plume led to Great Lakes Council conducting water quality monitoring and formerly identifying the severity of the issue. A wetland management plan was developed and with funding and support from project partners and a range of stakeholders the Council initiated an extensive wetland remediation project to reduce acid outflows.

To reinstate the wetland's natural hydrology Council purchased many of the privately owned wetland properties and began actively managing the area which included infilling and decommissioning the excavated drainage network and removing levees.

Before and after drain infilling. Photo: GLC

The outcomes

This large-scale wetland rehabilitation partnership project has successfully:

- infilled or decommissioned 80 % of the artificial drainage network
- reintroduced natural hydrology through the removal of 2 of the 5 major levees and floodgates
- removed grazing cattle, controlled invasive weeds and planted native vegetation
- improved water quality, pH is now approximately 6.0 (previously fluctuated as low as 2.77).

The thriving wetland now provides nursery habitat for fish and prawns. Photo: GLC