



Lake Macquarie  
Landcare

# Case Study

## Riparian Site

### Dora Creek weed removal and Saltmarsh regeneration



Above: Mangroves along the lake edge at Dora Creek

#### Project Partners:

- Department of Primary Industries (Crown Lands)
- NSW Recreational Fishing Trusts
- Dora Creek Climate Ready Landcare group
- Landcare Resource Centre



Primary  
Industries



Recreational  
Fishing Trusts



Lake Macquarie  
City Council

## Background

Dora Creek is a township located on the Western side of Lake Macquarie just north of Morisset in Lake Macquarie Local Government Area (LGA). The area that is the focus of this Case Study is the strip of land on the Northern side of where Dora Creek runs into the Lake.

## Site Information

There are two adjoining Landcare sites accessed from Dora Street, Dora Creek.

**Site 1** (shown in orange on the map on adjacent page) is The Point Reserve. The site is a small area of Council reserve, zoned 6 (1) Open Space and 7 (1) Conservation (primary).

**Site 2** (shown in green) is a long strip of Crown Reserve running between Dora Street and Lake Eraring to the outlet of Dora Creek into Lake Macquarie. The reserve is zoned 7(2) Conservation (Secondary) and consists of two Endangered Ecological Communities –

## Lake Macquarie

Lake Macquarie is located on the NSW east coast, It contains mountains, forests, waterfalls, extensive beaches, and a large coastal estuarine lake with an area of approximately 110 square km, and a catchment area of 605 square km.

These areas support a wide range of habitats and uses including nature conservation, recreation, residential and commercial development and rural activities. As a result, the natural environment has suffered a high degree of modification and degradation.

## Aboriginal Heritage

Lake Macquarie is rich in Aboriginal cultural heritage dating back tens of thousands of years. The people who lived around Lake Macquarie and Newcastle were known as the Awabakal which means “*the people of the flat surface*” presumably referring to the Lake and its flat surrounds.



**Above: Site locality map**

Saltmarsh and Swamp Oak Floodplain Forest. This site is being threatened by Weeds of National Significance (WONS) Prickly Pear, Asparagus Fern, Lantana and Blackberry as well as Camphor Laurel. An additional threat to the integrity of the site is the various man-made access points to the lake foreshore.

## Vegetation

Both sites contain flora from the Saltmarsh and Swamp Oak Floodplain Forest communities including:

Saltmarsh - *Baumea juncea* (Twig rush), *Juncus kraussii* (Sea Rush), *Sarcocornia quinqueflora* (Samphire) *Sporobolus virginicus* (Sand Couch), *Triglochin striata* (Streaked Arrowgrass), *Isolepis nodosa* (Knobby Clubrush), *Samolus repens* (Creeping Brookweed), *Selliera radicans* (Swampweed), *Suaeda australis* (Seablite) and *Zoysia macrantha* (Prickly Couch).

Swamp Oak Floodplain - *Casuarina glauca* (Swamp Oak), *Acmena smithii* (Lilly Pilly), *Glochidion* spp. (Cheese Trees) and *Melaleuca* spp. (Paperbarks), *Parsonsia straminea* (Common Silkpod), *Stephania japonica* var. *discolour* (Snake Vine), a sparse cover of shrubs, and a continuous groundcover of forbs, sedges, grasses and leaf litter.

Further information on Saltmarsh and Swamp Oak Floodplain Communities can be found at

[www.threatenedspecies.environment.nsw.gov.au](http://www.threatenedspecies.environment.nsw.gov.au) under Threatened Ecological Communities



Above: *Juncus kraussii*

Below: *Parsonsia straminea*



## Fauna

According to the Atlas of Living Australia (<http://www.ala.org.au/>), the area is home to a variety of fauna including, bats, possums, skinks, echidnas, frogs, and many water and bushland birds. The Saltmarsh and mangrove estuarine areas also provide valuable habitat for juvenile fish species and helps the health of Lake Macquarie.



Above: Egrets in *Casuarina glauca*

## Healthy estuaries equals healthy fish



Photo: James Sakker

Flathead use the seagrass and dips and hollows in the sand and mud to camouflage and ambush their prey. They rely on the seagrass areas of Lake Macquarie.



Bream use the estuarine areas at Dora Creek for their habitat. They eat small fish, crabs, prawns and worms that depend on healthy estuaries to flourish.

Source: NSW Industry & Investment Factsheets available at <http://www.fishhabitatnetwork.com.au/fish-habitat-facts/>

## Target weeds

Target weeds for removal include Weeds of National Significance (WONS) Prickly Pear, Asparagus Fern, Lantana and Blackberry as well as Camphor Laurel. A number of garden escapes also exist on the site.



Above: Asparagus fern (left), Dumped garden waste creates weed problems at the site (right)

## Landcare group

The Dora Creek Landcare Group is affiliated with the Dora Creek Climate Ready Sustainable Neighbourhood Group. They are a new and enthusiastic group wishing to increase community participation; educate neighbours about the protection of the reserve; decrease the severity and impact of weeds and reduce their potential to spread into the ecologically significant reserve. Dora Creek Landcare Group meet weekly on Tuesdays from 10:30am for approximately two hours of group work.



Above: Landcare group members



Above: Lyn from the Landcare group, showing a large *Asparagus* weed crowned out

## Projects and achievements

In 2012 the Lake Macquarie City Council funded five days professional bush regeneration work and the Landcare group indicated an interest in continuing the weeding of this zone.

In 2013 the Landcare group, with support from the Landcare Resource Centre (LRC), was successful in receiving a grant from the NSW Department of Trade and Investment (Crown Lands). This grant focused on the area shown in green on the map on page 3. The project aimed to involve the community and remove high priority weeds in order to restore two Endangered Ecological Communities, Saltmarsh and Swamp oak floodplain forest in NSW. Bush regeneration was undertaken by professional bush regenerators working alongside the Landcare group. The dual team approach allowed bush regenerators to clear the weeds that were beyond the capacity of volunteers, while working with the community to build their capacity in methods of weed eradication in Endangered Ecological Communities, so that the group are able to maintain the reserve in the future.



**Above: Before primary weeding along roadside, showing Lantana and Kikuyu**

**Below: Same area, after primary weeding, with Lantana removed and breaking down.**





To supplement native regeneration in weeded zones, edge plantings, with native species, occurred as part of a National Tree Day event in July 2013. This event attracted over 15 volunteers and community members to plant 700 locally native species.



**Above: Participants at the July 2013 National Tree Planting Day  
Below: Landcarers planting amongst natives in areas where Asparagus Fern and Kikuyu have been removed**





**Above: Before primary weeding, in area along edge of Lake, covered with Asparagus Fern**

**Below: Same area, after weeding and during National Tree Planting day in 2013**



In 2014 Dora Creek Landcare group were successful in obtaining a Fish Habitat Grant, funded by the NSW Recreational Fishing Trusts. This grant will extend weeding works conducted by the group, with further professional bush regeneration assistance. The project will also fund a planting day to improve linkages in saltmarsh vegetation (which supports estuarine habitat of fish and other marine life). Signage will be installed near the boat ramp at the reserve at the end of Dora Road to raise awareness about the importance of the Landcare works and the value to fish habitat.



The community of Dora Creek can assist the protection of local fish habitat by:

- Avoiding damage to saltmarsh vegetation that is caused by making tracks or dumping of any waste (including plant materials which can lead to weed growth)
- Remembering our stormwater drains are just for rain
- Helping out your local Landcare group with weed removal and planting activities

### **Landcare in Lake Macquarie**

Lake Macquarie Landcare is a partnership between Lake Macquarie Landcare Network Incorporated (LMLN inc), thousands of dedicated and committed community volunteers, and the Lake Macquarie City Council (LMCC) which provides project support through the Landcare Resource Centre (LRC).

If you would like to get involved in Landcare in Lake Macquarie or would like more information please contact the LRC on 4921 0392.

## References and Further Information

Australian National Botanic Garden - [www.anbg.com.au](http://www.anbg.com.au)

Buchanan, R, 2009, *Restoring Natural Areas in Australia*

LMCC, 2004, *Lake Macquarie Coastal Planting Guide*, available at [www.lakemac.com.au](http://www.lakemac.com.au)

Weeds Australia - [www.weeds.org.au](http://www.weeds.org.au)

Department of Environment and Climate Change, 2007, [www.threatenedspecies.environment.nsw.gov.au](http://www.threatenedspecies.environment.nsw.gov.au)

The Lake Macquarie Landcare website [www.lakemacquarielandcare.org](http://www.lakemacquarielandcare.org) provides links to newsletters, environmental programs, grants, Landcare, weeds and trees.

If you wish to know more about this and other projects in Lake Macquarie please contact the Landcare Resource Centre.

Produced at the Landcare Resource Centre April 2014



### Landcare Resource Centre

Cnr Toronto and Five Islands Rds, Teralba, NSW  
2284

Postal Address: Box 1906 HRMC NSW 2310

Phone: (02) 4921 0392

Email: [lro@lakemac.nsw.gov.au](mailto:lro@lakemac.nsw.gov.au)

[www.lakemacquarielandcare.org](http://www.lakemacquarielandcare.org)

