



Lake Macquarie
Landcare

Case Study

Bushland Site

Ivy Street Landcare Site



Above: The bushland and wetland ecosystems of Ivy Street Landcare site

Project Partners:

- Ivy Street Landcare group
- NSW Government (Environmental Trust)
- Bahtabah Local Aboriginal Land Council
- Landcare Resource Centre



Background

Ivy Street Landcare site is located in Dudley on the East coast of NSW in the Lake Macquarie Local Government Area.

Site information

The site is a parcel of Council owned Community Land (DL-009) between Awabakal Nature Reserve and suburban Dudley. It is mapped as Natural Area-Bushland and Natural Area-Wetland. The site is zoned for environmental protection Conservation (Primary) 7(1) on the Local Environment Plan. The reserve contains a Hunter Water pump station and a sewage easement in the asset protection zone. The site and surrounding area contains Aboriginal Cultural Heritage items. The site is particularly important as an extension of the environmental and cultural heritage values that are conserved in the adjacent Nature Reserve and it contains a component of the perched Redhead Lagoon.

Lake Macquarie

Lake Macquarie has mountains, forests, waterfalls, extensive beaches, and a spectacular coastal estuarine lake with an area of approximately 110 square km, and a catchment area of 605 square km. It contains 12 major, and many more minor, estuarine creek zones where freshwater tributaries interface with the saline body of the lake. 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.

Lake Macquarie is rich in Aboriginal cultural heritage dating back tens of thousands of years, although the oldest dated Aboriginal site (a midden at Swansea) was carbon-dated at almost 8,000 years old. 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

Landcare group

The Ivy Street Landcare group began work in 2011, following Team Leader Training with the Landcare Resource Centre. The group usually consists of 2-5 members who work on a twice-weekly basis on weeding and regeneration activities.

The main aims of the group for the site are:

- Rehabilitation of degraded native vegetation communities on the site
- Increased biodiversity of native species
- Erosion control on Wetland and foreshore zones
- Maintenance of pedestrian access to the site for Landcare activities



Above: Landcare group members (left to right): Dave, Chris, Maggie the dog, Don and Sue, (absent- Kaelene - 5th group member)

The group is currently focusing on two areas on the East side of the wetland, commencing below Sherrian Close and working towards Ivy Street:

Area 1 is immediately adjacent to the wetland where work will concentrate on Lantana, Easter Cassia, Crofton Weed, Bitou, and Morning Glory.

Area 2 work should commence adjacent to the mown access strip and sweep towards Ivy street in consecutive lines, moving up-slope in the direction of Sherrian Close. The focus species here will be Morning Glory, Asparagus Fern, Lantana, Honey Suckle, Bitou, and Easter Cassia.

The focus activities for both these areas are:

- Re-establishment of sections of weed free wetland and bushland zones
- Regeneration of native plant communities and revegetation where resilience is poor

- Enhancement of the corridor in the reserve

As well as weeds, the site is impacted by other issues such as illegal dumping (e.g. of Cocos palms and garden clippings - which create more weeds) and illegal clearing and collection of firewood.

Vegetation

The eastern section of the site has *Angophora costata* Smooth-barked Apple, but also *Eucalyptus pilularis* Blackbutt, *Eucalyptus piperita* Sydney Peppermint, *Eucalyptus punctata* Grey Gum, *Corymbia maculata* Spotted Gum, and *Syncarpia glomulifera* Turpentine.

This southerly aspected section of the reserve is indicative of a moist forest type, and this is further indicated by the developing mid-storey with species such as: *Glochidion*

ferdinandi
Cheesetree, *Guioa semiglauca* Guioa, *Synoum glandulosum* False Rosewood, *Rapanea variabilis* Muttonwood, *Rapanea howittiana* Brush

Muttonwood, *Scolopia braunii* Flintwood, *Notelaea* sp. Native Olive, *Trema tomentosum* Poison Peach, and *Omalanthus nutans* Bleeding Heart.

Within this vegetation community, there is also a diversity of native fern, groundcover, and vine species along with environmental weeds.

The western section of the site resembles LHCCREMS Map Unit



Above: The site contains large, older Blackbutts, Sydney Peppermints and Smooth-barked Apples, as well as younger, regrowth examples of these species

15 Coastal Foothills Spotted Gum- Ironbark Forest with large canopy *Corymbia maculata* Spotted Gum, and a mesic mid-storey including *Backhousia myrtifolia* Grey Myrtle and *Rapanea variabilis* Muttonwood.



Above: Hibbertia is a spring-flowering ground-cover found at the site

The wetland section of the site is characterised by large and regrowth *Melaleuca quinquenervia* Broad-leaved Paperbark with a diversity of reeds and sedges growing around the open water and in shallow water zones. Below the stormwater discharge point, there was a dense weed infestation of Japanese Honeysuckle, Crofton Weed, Lantana, Cassia, and Philodendron, which has been removed, with follow-up weeding and planting now underway in this zone.



Above: Can you spot the two Tawny Frogmouths in this picture?

Fauna

The site provides habitat to a range of wildlife, particularly bird species. The Landcare group has sighted Powerful Owls, Variegated Fairy Wrens, Tawny-Frogmouths (in their regular tree) as well as water fowl in the wetland area.

Recent Projects and Achievements

The Landcare group has been working solidly since 2011 and have removed much of the weeds (particularly Lantana, Asparagus Fern and Morning Glory) of the Eastern slope of the site.

During 2012 Lake Macquarie City Council provided extra support for the restoration of this freshwater wetland ecosystem. This project utilised professional bush regenerators to work alongside Landcare volunteers and involved:



Above: The Landcare group, clearing Lantana on the Eastern slope during 2011

- Target weeding of environmental weed species from the wetland-edge native vegetation out to the fire-trail on the LMCC reserve
- Planting wetland-edge canopy species consistent with species already on site and the Endangered Ecological Community profile, e.g. *Acacia longifolia*- Sydney Golden Wattle, *Breynia oblongifolia*- Coffee Bush, *Glochidion ferdinandi*- Cheese Tree, *Melaleuca quinquenervia*- Broad-leaved Paperbark, *Omalanthus nutans*- Bleeding Heart
- Monitoring ecosystem recovery following weed removal
- After removal of weed species dense site plantings close to the edge will grow to restore canopy, and hence discourage colonisation of weed species.



Above: Before shot - Eastern slope in 2011, top half dense with Lantana

Below: After shot - Eastern slope in 2012, cleared of weeds, new natives regenerating



Environmental Trust grant 2012-15

In 2012 Council was successful in obtaining a NSW Environmental Trust Grant for the delivery of “Connecting Dudley Bluff” a project targeting various Council parcels in the Dudley Bluff area, including the area worked by Ivy Street Landcare Group. The project aims to assess and work to rehabilitate priority areas of degraded bushland and to engage with the local community to improve local knowledge and value of the natural environment.

As part of this project a professional bush regeneration team is working with the Landcare group, targeting transformer weed species by hand removal, cut and paint, scrape and paint, backpack spray, and splatter gun. This will extend the zone, in which the Landcare group is working, south to the edge of the degraded zone below the Knoll. Target Weed Species for this work are Bitou, Asparagus Fern, Lantana, Cassia, Mickey Mouse Plant, Indian Hawthorn, Japanese Honeysuckle, Indian Morning Glory and Coastal Morning Glory.

The bush regeneration team will also conduct a maintenance sweep through the Lagoon and surrounds targeting weed regrowth since the wetland project funded works on this site in 2012.

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.



Above: Removing Crofton Weed from around native Carex

Below: Planting along the creek line





Above: Before removal of Crofton Weed

Below: After removal of Crofton Weed around native grasses



References and Further Information

Australian National Botanic Garden - 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

Weeds Australia - www.weeds.org.au

The Lake Macquarie Landcare website 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.

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