



Lake Macquarie
Landcare

Case Study

Riparian Site

Central Rankin Park



From the footbridge at Central Rankin Park

Project Partners:

- Lake Macquarie Landcare Resource Centre
- Lake Macquarie City Council
- Newcastle City Council

Background

Central Rankin Park is located in Rankin Park, NSW in the Lake Macquarie Local Government Area, but bordering the Newcastle Local Government Area. The Landcare group works across both LGAs.

Site Information

The site consists of a riparian corridor on the upper reaches of Ironbark Creek, known as Blue Wren Creek. The LMCC owned reserve has various management zones:

1. an open parkland zone which has a children's playground area and mown grass with widely scattered canopy trees.
2. a riparian zone which has remnant *Eucalyptus saligna*, *Syncarpia glomulifera*, *Eucalyptus piperita* and *Corymbia maculata* canopy with a weed-invaded mesic understorey.
3. a narrow *Corymbia maculata* Open Forest zone back from the creek and near the road which in parts has maintained its structure.
4. a number of paths (formal and informal) intersect the site also, and a pedestrian bridge crosses the creek.

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.

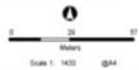
Aboriginal Heritage

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.



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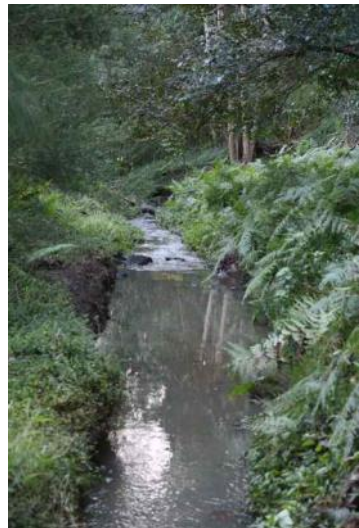


Above: Site locality map

Vegetation

The LMCC Vegetation Community Mapping 2011 includes the following communities for this site:

- MU5 Alluvial Tall Moist Forest - along the riparian corridor
- MU12 Hunter Valley Moist Forest - on the northern slopes of the site



Right: the riparian corridor contains Alluvial Tall Moist Forest

These communities are characterised by the following species (which may or may not be present at all sites of these communities):

MU5 Alluvial Tall Moist Forest

Canopy

Eucalyptus saligna - Sydney Blue Gum

Syncarpia glomulifera - Turpentine

Angophora floribunda - Rough-barked Apple

Eucalyptus robusta - Swamp Mahogany

Eucalyptus pilularis - Blackbutt

Eucalyptus grandis - Flooded Gum

Corymbia maculata - Spotted Gum

Midstorey

Glochidion ferdinandi - Cheesetree

Acmena smithii - Creek Lillipilly

Melaleuca styphelioides - Prickly-leaved Paperbark

Ficus coronata - Sandpaper Fig

Melaleuca linariifolia - Snow-in-summer

Right:
*Melaleuca
linariifolia*
- Snow-in-
summer



Callistemon salignus - Willow Bottle-brush

Backhousia myrtifolia - Grey Myrtle

Breynia oblongifolia - Coffee Bush

Gahnia clarkei - Saw Sedge

Lower storey

Adiantum aethiopicum - Common Maidenhair Fern

Pseuderanthemum variabile - Pastel Flower

Lomandra longifolia - Mat Rush

Oplismenus imbecillis - Basket Grass

Pratia purpurascens - White Root

MU12 Hunter Valley Moist Forest

Canopy

Corymbia maculata - Spotted Gum

Eucalyptus punctata - Grey Gum

Eucalyptus paniculata - Grey Iron-bark

Clerodendrum tomentosum - Hairy Clerodendrum

Lower storey

Gymnostachys anceps - Settlers Flax

Fauna

The Central Rankin Park Landcare group have seen a range of wildlife including insectivorous bats, flying foxes, reptiles including black snakes and white lipped snakes, eels and turtles in the creek and possibly Antechinus in riparian zones. Brush-tailed possums and ring-tailed possums are also common.

The group have recorded the following bird species:

Blue Wren (Superb Fairy Wren)
Cattle Egret -visits to hunt in wet weather
Crested Hawk - seasonal
Crested Pigeon
Crimson Rosella
Crows/ Australian Raven
Cuckoo Shrike- seasonal
Currawong- seasonal
Eastern Rosella
Eastern Whipbird
Galah
Greater Egret - visits to hunt in wet weather
Grey Butcher Bird
Ibis - visits to hunt in wet weather
King Parrot
Kookaburra
Little Corella
Magpie
Musk Lorikeet
Noisy Miner
Pacific Black Duck - visits and stays in wet weather
Peaceful Dove
Powerful Owl – visits to hunt
Rainbow Lorikeet
Satin Bower Bird
Scaly-Breasted Lorikeet
Southern Boobook Owl

Sulphur Crested Cockatoo
Tawny Frogmouth
Wattle Birds – rarely seen but seen as visitors
White-bellied Sea Eagles and Falcons drift overhead sometimes but not seen on ground
White-faced heron - visits to hunt in wet weather
White-headed pigeon
Wood duck
Yellow-tailed Black Cockatoo



Above: Musk Lorikeet (Photo: John Fitter)

Landcare group

Central Rankin Park Landcare Group (CRPLG) formed in August 1995 with a small meeting of residents. The group adopted the Blue Wren as the symbol of the group with the idea that if we got the rehabilitation work right the Blue Wrens (Superb Fairy Wrens) would return to live in the area. The objectives of CRPLG are the rehabilitation of a reserve area in Rankin Park consisting of remnant bushland areas, two mown areas and Blue Wren Creek, a stream forming part of the upper Ironbark Creek catchment.

We aim to:

- rehabilitate the remnant bushland areas,
- contribute to increased diversity of habitats for birds and other native fauna
- enhance the utility of the mown/play areas,
- restore/stabilise the stream areas and the riparian zone to control run-off and erosion,
- improve water quality, and
- to educate local residents on our activities and those of Landcare in the wider sense.

It is our philosophy that only plants believed to be native to the area should be used wherever possible. Accordingly, a species list prepared for the area guides selection of plants to be brought in from nurseries or raised from local seed-stock.

As the CRPLG area straddles two councils (NCC and LMCC) we have gained support from each and also a number of grants have been obtained from various sources including the National Heritage Trust / Envirofund program, BHP, NSW Government via the Hunter Central Rivers Catchment Management Authority (now LLS), Hunter Water Corporation.

A number of members meet weekly on Wednesdays to work and weekend work days are scheduled to suit events.



Above: Members of Central Rankin Park Landcare group with their site 'mascot' the Blue Wren

Below: Volunteers assisting on National Tree Day

Photos: John Fitter



Projects and achievements

Hasluck Embankment project

Work commenced, soon after the group formed, along Hasluck Drive with the group obtaining support from LMCC, then a grant from the Rivercare 2000 program, for which they subsequently achieved a prestigious Rivercare 2000 Accreditation award (one of only 22 in the state of NSW). Since then CRPLG have won 12 major environmental awards including the Newcastle City Council's Group of the Year.

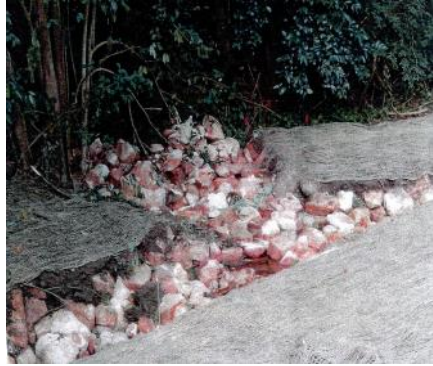
The Hasluck embankment project involved weeding, mulching and replacement of native vegetation on a steeply sloped embankment that was devoid of growth except for weeds. Parts of this area had been used as a bike course and were seriously eroding each time it rained. It now has a cover of shrubs, grasses and young trees that are growing well. Traffic on the slope has ceased and natural regeneration is occurring.

Natural Heritage Trust Envirofund grant, 2004-2007

The Streambed project was initially funded by an Envirofund Project grant as 'Restoration of the Streambed of an Upper Ironbark Creek Tributary' in 2004. The grant involved structural works with rocks and geofabric as well as planting to help stabilise the bank and reduce erosion. Contributions were also received from the Hunter Central Rivers Catchment Management Authority and Lake Macquarie City Council for this project.

Some work was completed in 2004 with four bed control structures and some riparian planting done. The largest portion of work was completed in 2005/06 with the fifth and largest bed control structure installed and about 250 metres of riparian zone being completed along one bank of the stream averaging 4 metres in width. This work has been a staged process with more than 1200 plants put in the ground in 2005. These works have stabilised the streambed/bank preventing

'nick-points' from travelling upstream, and have provided a riparian zone that aimed to ensure the stream structure remains stable as well as maintains water quality, prevents run-off and increases diversity and amount of habitat. Subsequent plantings have included eucalypts being placed between the earlier grasses and shrubs (once these were established to avoid them being shaded out).



Above and below: Examples of the structural works installed to reduce erosion

Photos: John Fitter

In May 2007 a major celebration was held to recognize the completion of the Natural Heritage grant works and the naming of the creek as Blue Wren Creek. This event was attended by about 100 people and a giant Blue Wren was paraded as well as a performance by an Aboriginal dancer with a story about wrens.



The area also contains two public open spaces where children play. The integration of bushland with such spaces is challenging but has been achievable in this project.



Planted and sign-posted area completed as part of the Natural Heritage Trust project (Photo: John Fitter)

Rosedale Crescent Project

The Rosedale Crescent project has restored vegetation to a sloping site that was almost bare of any native growth aside from a few mature trees, many of which were sick or suffering die back. In 2005 we planted 1625 trees, shrubs and grasses. Initial plantings of grasses along the edges of the mulched area have helped subsequent shrub and tree plantings to establish. The area now has a good cover of shrubs, grasses and young trees that are growing well. The mature trees are also recovering and have provided a renewed seed source and habitat value for the area. Traffic on the slope has almost ceased and a large amount of natural regeneration of Eucalypt species is occurring.

Current projects

In 2007 the floods that were widespread across the Hunter region had a significant impact on our area and new weeds were found afterwards. Some erosion also occurred and a crossing on the creek became less effective, creating

problems above and below the crossing. In 2015 we hope to see this addressed with a project in planning between Lake Macquarie City Council and Newcastle City Council, Soil Conservation and the Hunter Central Rivers Catchment Management Authority.

Ongoing weed control and riparian revegetation is being conducted throughout the zones which include rainforest remnants, riparian zone, eucalypt woodland.

The Blue Wren is our symbol of hope that the return of these little birds to the area will signal our success. Although we have seen Blue Wrens on several occasions, so far no breeding pairs have decided to call our area home. Bird diversity has increased slightly though with Satin Bower Birds being observed to have set up residence and Whip Birds frequently being heard. We have observed improved water quality through the last few years' water-bug surveys. There is increased vegetation abundance and diversity due to growth of natural regenerating seedlings as well as tubestock plantings.

The group will hold celebrations of 20 years of Landcare on the 15th August 2015 at the Hasluck Drive space.

CRPLG is also currently embarking on an Arts for the Environment project and hopes to have six sandstone blocks located just near the bridge and on the Hasluck Drive section of the reserve that will be sculpted with images of native fauna by Mr Gary Boote and his colony of artists.

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

Bell and Driscoll, 2014, *Vegetation mapping of Lake Macquarie LGA: Stages 1 – 5*, available at www.lakemac.com.au

Buchanan, R, 2009, *Restoring Natural Areas in Australia*, available at www.dpi.nsw.gov.au

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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