



Lake Macquarie
Landcare

Case Study

Foreshore Sites

Coal Point Progress Association Landcare Sites



The foreshore along Gurrumba Reserve, Coal Point

Project Partners:

- Lake Macquarie Landcare
- Coal Point Progress Association
- Hunter Water Corporation
- NSW Environmental Trust

Background

Coal Point peninsula extends into Lake Macquarie on the Western side of the Lake Macquarie Local Government Area. It includes the townships of Carey Bay and Coal Point. Many reserves exist on the peninsula due to past efforts to preserve areas of access to the Lake from development.

Site Information

Coal Point Progress Association Landcare work on a number of Council owned sites along the Coal Point peninsula:

Foreshore sites

Eight foreshore sites exist, with Spotted Gum-Ironbark Open Forest on the slopes and *Casuarina glauca* zones fringing the lake:

1. Ambrose Street
2. Yarul North
3. Gurramba Reserve
4. Birriban Reserve
5. Threlkeld Reserve
6. Wippi Reserve
7. Kilara Close
8. Laycock Street

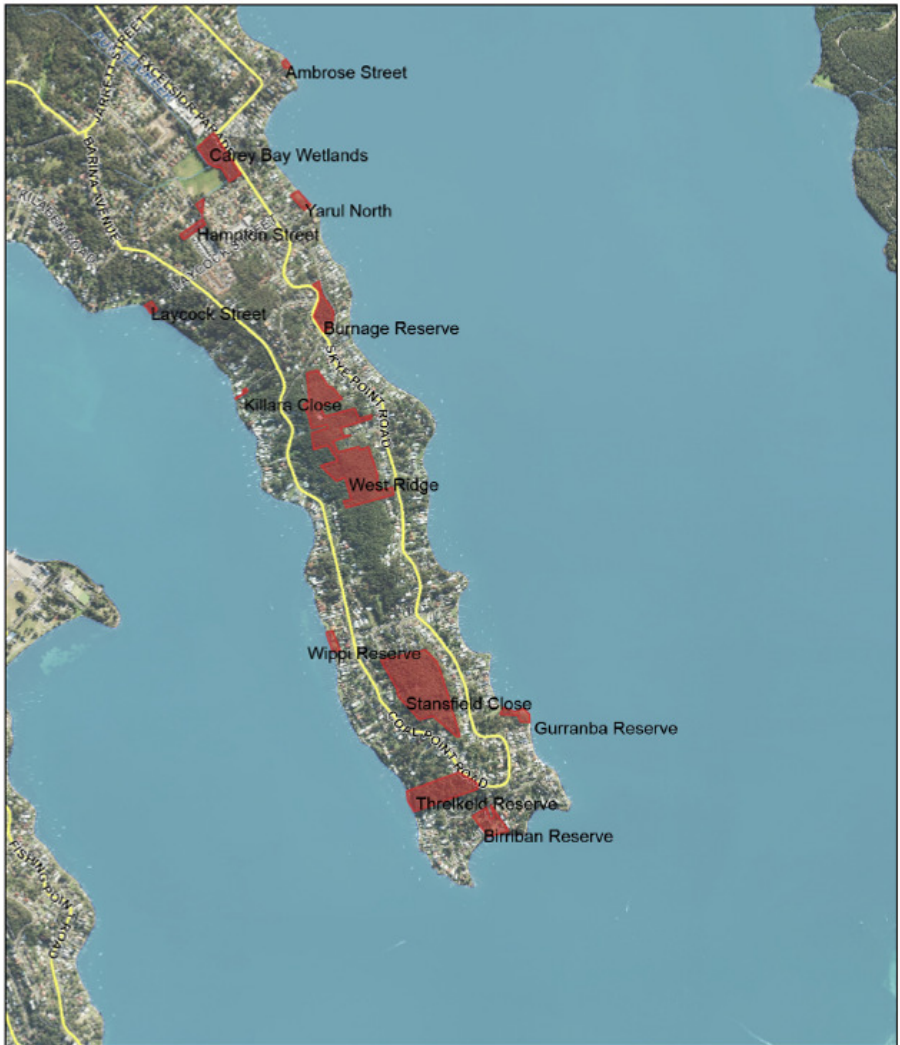
Lake Macquarie

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.

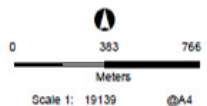
Aboriginal Heritage

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: Coal Point Landcare sites (shown in red)

Bushland sites

Four bushland sites exist away from the lakeshore with remnant rainforest elements and endangered species of flora and fauna:

1. Burnage Reserve
2. West Ridge
3. Stansfield Close
4. Hampton Street Link

Wetland Site

The Carey Bay Wetland is a remnant of the original wetland reduced in size by urban development. It is currently bound by Excelsior Parade, residential housing, a commercial estate, and parkland that was home to the Carey Bay Pony Club.

Wetlands are important because they act as a natural filter system trapping sediment, nutrients and pollutants, and preventing them from entering major waterways such as Lake Macquarie.

Wetland systems control flooding and erosion, protect foreshores, provide refuge for fauna, are breeding grounds for fish, crustaceans and birds, provide habitat for many threatened and protected species and communities, and have intrinsic natural beauty.

The Carey Bay Wetland is an estuarine – freshwater wetland supporting the EEC Swamp Oak Floodplain Forest, which is found in close proximity to rivers and estuaries and on soils with a saline influence. Swamp Oak Floodplain Forest is listed as facing a very high risk of extinction in NSW under the Threatened Species Conservation Act 1995.



Above: Puntei Creek's headwaters are in Kilaben Bay. It flows through the rapidly developing Carey Bay catchment.



Carey Bay Wetlands: View looking across the Pony Club sports ground to the remnant of the original wetland.

Many of the Coal Point reserves are a combination of site types and all support significant native flora and fauna as well as forming an important wildlife corridor within the region.

Landcare group

The Coal Point Landcare Group formed in 1995 as part of the Coal Point Progress Association (established 1946).



Coal Point
Progress Association
Landcare

The Landcare group works on 13 sites at present and has eight active members, some of whom care for specific reserves, while others range over the remaining sites working for several hours each week.

As a starting point for Landcaring in Coal Point, funding was obtained for a community survey. A wide-ranging study of ten reserves resulted in the Coal Point Reserves Management Plan. A list of the issues needing attention and management recommendations were provided for the reserves.

Robyn Gill, Landcare Coordinator of Coal Point Landcare Group explained, “many projects arose from the Management Plan and several other grants have since assisted us to bring about significant change by reducing weeds and assisting the regeneration of native plants.

Additional planting has taken place when required to enhance biodiversity, especially in several previously mown reserves. The reserves have a bright future because of greater community awareness of bushland assets by local residents. They are now well used by the community and a plan exists to provide a walking route linking them in an easily accessible way.”

Projects and achievements

Gurramba Reserve Project

Gurramba Reserve was the site of the first Landcare project for Coal Point Landcare group. Commencing in 1995, the project aimed to replace weeds with local native plants, slow the flow of stormwater into the lake, stabilise the watercourses and prevent erosion on the headland and slopes. The long-term goal is to have a weed free remnant Open Spotted Gum-Ironbark forest and Casuarina foreshore zone.

Gurramba Reserve has mature remnant vegetation that provides nesting hollows for parrots, marsupials, bees, and owls. Additional planting of native plants in Gurramba Reserve has provided germination zones for older vegetation, created habitat for native wildlife, reduced the amount of soil runoff into the lake, reduced the need for mowing, and improved the aesthetics of the parkland.

Gurramba Reserve is impacted on by the surrounding urban environment, as well as by natural forces. The natural resource management issues in the reserve are stormwater management, nutrient runoff, soil and foreshore erosion, weed invasion, feral

animals, limitations for wildlife habitat, and associated issues of human use such as litter, erosion and damage to plants.

In 1995 the first Landcare working bee removed *Lantana camara* from the banks of the foreshore at Gurramba Reserve. In 1996 Lake Macquarie City Council planted along the banks of the creekline to prevent erosion. The following year Bitou Bush was removed from the foreshore areas and vehicle barriers installed by the Coal Point Progress Association.

In 1998 the Landcare Group had assistance from a Green Corps team who planted native grasses along the creekline, and in 1999 the roadside slopes of the reserve were planted with native plants. In 2001 steps were installed on the headland to reduce erosion, and in 2003 work commenced on the eradication of the weed Mother of Millions.

In 2006 the Office of the Lake Macquarie and Catchment Coordinator assisted the Landcare group with stormwater management and revegetation of banks within the reserve. Since then the Coal Point Landcare Group have been planting low growing native plants in the reserve and have had assistance from Lake Macquarie City Council with channel stabilization, mulching, planting, and a bridge.



October 2009, Creek line after restoration work completed.



**Gurramba Reserve
- 1999**



- 2009



- 2012

Carey Bay Wetland Restoration

Carey Bay Wetland has suffered greatly in the past from the various degrading and unsustainable practices on neighbouring sites and within the catchment. The impacts of these practices have been mitigated considerably by the efforts of the local Landcare group who have spent considerable time and resources to rehabilitate the wetland.

Coal Point Landcare group is working in the Carey Bay Wetland to remove weed species and plant native plants to improve the wetland ecosystem and restore the ecological communities surrounding the EEC. Weed infestation is a major threat to the Carey Bay Wetland and weeds are particularly prevalent on the outskirts of the wetland as a result of dumping of garden waste and in areas where nutrient rich stormwater flows in from the catchment.



2001 An extensive Blackberry patch



2015 The established planting protects the EEC and requires maintenance weeding for Campsis (Trumpet creeper) and Morning Glory



2005 The first of 3 National Tree Day plantings in a stage removal of the Blackberry

Weed species include Morning Glory, Cape Ivy, Wild Rose, Camphor Laurel, Turkey Rhubarb, Asparagus Fern, and Broad-leaf Privet. Community plantings of Lomandra and Dianella have been undertaken to provide a biodiverse physical buffer to the wetland, raise awareness of the impacts of garden waste and deter further dumping.

Burnage Reserve project

The Burnage Reserve Landcare project is boosting the biodiversity for birds by gradually replacing weeds with local native plants. Burnage Reserve is threatened by stormwater that flows into it from the urban environment and dumped garden waste that brings weeds into the reserve.

The long-term goal of the Coal Point Landcare group is to restore the plant community at Burnage Reserve to an Open Spotted Gum-Ironbark Forest with a rainforest understorey.



Burnage Reserve: Giant Reed and Lantana has been cleared from the watercourse that runs through the site (Image: D. Hilder).

In the year 2000 local residents participated in Clean-Up Australia Day in Burnage Reserve and shortly after a community meeting was held to discuss the values of the reserve and the threats to the reserve. In 2001, state funds were gained to stabilise erosion from stormwater scouring a gully in the reserve by rock placement and planting. The project successfully reduced the sediment runoff into Carey Bay. A community event, '2001: A planting odyssey', created a biodiverse habitat buffer zone for wildlife by planting 2001 local natives. Once this grew it allowed for further weed removal without comprising habitat in the core of the small reserve. Target weeds are Turkey Rhubarb, Fishbone Fern, Bamboo, Madeira Vine, Crofton Weed, Spider Plant and Asparagus Fern.

Subsequent plantings further improved the habitat buffer and regular working bees were undertaken to control Bamboo, Lantana, and Madeira Vine.

Threatened Species Last Stand project

In 2012 the Coal Point Progress Association Landcare group was awarded a grant of \$250,000 from the NSW Environmental



Trust for the Threatened Species Last Stand Project.

This six year project aims to reduce the weeds and improve the wildlife corridor along The Point for fauna: Squirrel Gliders, Powerful Owl, Osprey, White-bellied Sea Eagle and flora: *Tetratheca juncea*, *Macrozamia flexuosa* and three Endangered Ecological Communities: Swamp Oak Floodplain Forest, Swamp Sclerophyll Forest on Coastal Floodplain and Coastal Salt Marsh.

So far the project has:

- Increased the local knowledge of the flora of the area by:
 - * Setting up monitoring quadrats and transects and undertaking annual flora surveys:

- ⇒ To better understand the changes that are happening as a result of Landcare efforts
 - ⇒ To have floristic details of a weed free reference community which we aspire to restore the bushland to
 - * Surveying the West Ridge for *Tetratheca juncea*, and GPS locating hundreds of clumps
 - * Undertaking local seed collection sessions
- Trained landcare volunteers to improve their skills and knowledge by:
 - * Having a professional bush regenerator work with the local landcare group every week
 - * Providing opportunities to attend workshops on eucalypt and grass identification and forums on bush regeneration
 - Increased awareness of the local fauna by conducting surveys and monitoring such as:
 - * Conducting seasonal bird surveys, with the reports available online
 - * Installing 30 nest boxes on public and private land to support the Squirrel Glider population, a threatened species



**Left: installing a Nest Box for Gliders
Above: Monitoring in 2012**

(Photos courtesy of Suzanne Pritchard)



National Tree Day in 2013 involved making a buffer zone for the EEC

- * Conducting workshops on nestbox installation.
- * Hosting community nest box monitoring events and conducting spotlighting surveys
- * Developing partnerships with the Toronto Men's Shed and Toronto High School to build the nest boxes
- * Developing a nestbox monitoring program for landholders using a remote camera
- Encouraged community participation by
 - * Providing private landholders who live adjacent to public bushland with a Backyard Habitat Health Assessments that offers advice and a report on the treasures and threats to the bushland in their backyard
 - * Hosting annual National Tree Day planting events
 - * Hosting annual Biodiversity Month –Bioblitz events
 - * Assisting Coal Point Public School to develop a Squirrel Glider Garden
 - * Developing local resources on the plants and animals and making them available online
<http://coalpointprogress.blogspot.com.au>
 - * Hosting an annual celebratory event
 - * Producing videos to explain bush regeneration and Landcaring techniques

- * Partnering with Toronto High School's LEAP students to undertake surveying and Landcaring activities
- * Delivering presentations to the local preschool.
- * Partnering with the Toronto Area Sustainable Neighbourhood Group
- Celebrated the beauty of the bush by:
 - * Sharing the project findings and events through articles in the monthly newsletter,
 - * Applying for awards, and receiving:
 - ⇒ LMCC Australia Day Community Group of the Year 2015
 - ⇒ Regional Achievement & community Awards- Peabody Energy Environment & Landcare Award Winner 2015



2013 Bioblitz

Twenty Year milestone for Landcare Group

Coal Point Landcare celebrated the milestone of 20 years of Landcare in 2015.

Thursday 12th November was the 20th anniversary of the very first Landcaring event held by the Progress Association at Gurramba reserve in 1995.

CPPA President Suzanne Pritchard says "It was the beginning of an amazing community effort that continues to shape the natural landscape of our peninsula and bring neighbours together in a common cause."

In 2015 Coal Point Progress Association also won the Peabody Energy Environment and Landcare category of the NSW Regional Achievement & Community Awards for its 20-year history of local environmental contributions and the Threatened Species Last Stand project.

Suzanne says, “It is a fitting reminder that the efforts of amazing dedicated locals accompanied by a great support system in LMCC Landcare as well as enthusiastic volunteers from Trees In Newcastle is making a huge difference to the long-term viability of the flora and fauna on the Coal Point-Carey Bay peninsula”.



Above: Coal Point Landcare group celebrated their milestone at a BBQ on 19 November 2015

Below: John Gill and Suzanne Pritchard with the group's Peabody Environment and Landcare Award



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*

Coal Point Progress Association Blogspot <http://coalpointprogress.blogspot.com.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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