



Lake Macquarie
Landcare

Case Study

Wetland Site

Belmont Wetlands State Park



Third Creek area within the Belmont Wetlands State Park

Project Partners:

- Belmont Wetlands State Park Trust
- Friends of Belmont Wetlands Landcare
- Landcare Australia and Mobile Muster
- Hunter Wetlands Centre
- Hunter Institute of Tafe
- Conservation Volunteers Australia
- Department of Primary Industries
- Bahtabah Local Aboriginal Land Council
- Hunter Central Rivers Catchment Management Authority



Background

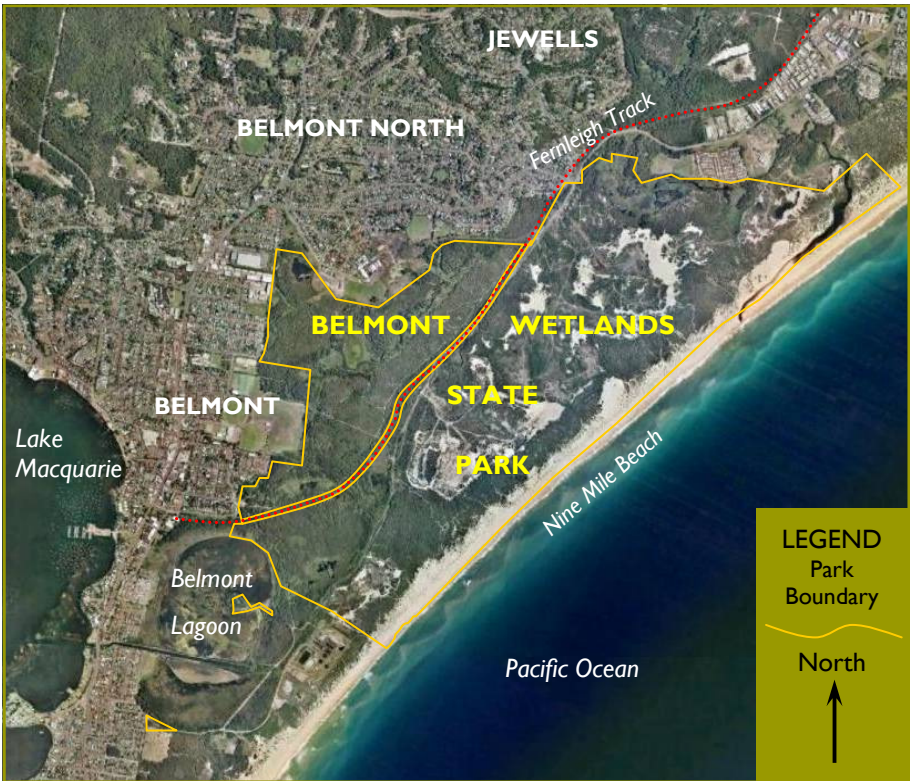
The Belmont Wetlands lie on the east coast of Australia, in the city of Lake Macquarie in NSW. They are bound by the Pacific Ocean and Nine Mile Beach to the east, and the suburb of Belmont and Lake Macquarie itself to the west.

Until the late 1900's the Belmont Wetlands site was not generally recognised as a valuable natural site as the area had suffered from the effects of coal mining, sand mining and extraction, indiscriminate off-road vehicle use, and urban encroachment.

In the 1990's the Lake Macquarie Coastal & Wetlands Alliance galvanised the community and its like-minded affiliated groups in a nine-year campaign. Community interest and support grew, and in 1999 a well attended public meeting was held with keynote speaker and supporter Peter Garrett, at the time president of the Australian Conservation Foundation (ACF). From this point forward vigorous petitions, rallies and community actions led to a mutual agreement and understanding between BHP and the State Government that no development was to occur in the Belmont Wetlands region and ultimately that the site be handed over to the State Government.

Lake Macquarie

Lake Macquarie has mountains, forests, waterfalls, extensive beaches, and a spectacular lake. The lake is a large 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.



Above: Belmont Wetlands Site locality map

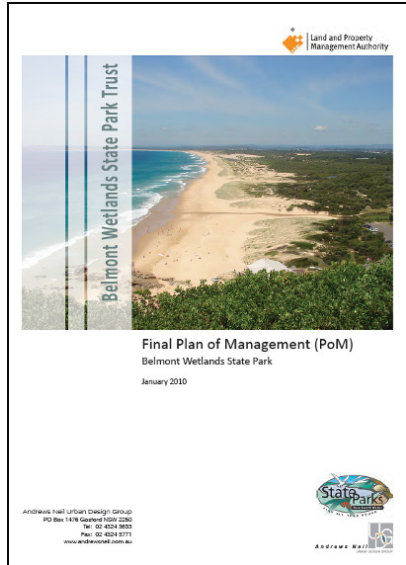
Belmont Wetlands State Park Trust and Plan of Management

In 2006 the Belmont Wetlands area was established as the 10th State Park in New South Wales and was placed under management of the Belmont Wetlands State Park Trust to direct the remediation and improvement of the reserve, ensure coastal environmental protection is sustained, and provide improved public access management and recreational and tourist facilities and services.

The NSW Government's Public Reserves Management Fund supplied initial seed funding for the voluntary community-based

Trust to act as caretakers of the park and to commence revegetation. The funds of over \$250,000 also provided a Project Officer to oversee the contract for the preparation of a Plan of Management (PoM) for the park and help provide Landcarers and community volunteers with project management, bush regeneration, and supervision.

This was followed up recently in 2012 with a further \$250,000 funding grant to carry out the implementation of priority actions from this PoM. Two development stages are proposed for the life of this Plan of Management. During the current Stage 1 (1 to 5 years) the focus is on activating spaces, raising awareness of the reserve, providing basic infrastructure, and developing an income to support the reserves activities.



Above: Further information about the BWSP can be found in the Plan of Management



Above: Site Office Mural by A .Fussell showing the diversity of the Landcare site

Stage 2 (6 to 10 years) will continue to strengthen the reserve's key values through the provision of further recreational facilities, environmental enhancement and infrastructure development.

The Belmont Wetlands State Park Trust currently strives to gain funding and support to continue relevant land and conservation management, education, recreational and ecotourism activities within the Park.



Above: International and local volunteers at BWSP



Above: Fernleigh Track is popular with cyclists and walkers and its surrounds are a focus for bush regeneration

Site Information

Belmont Wetlands State Park is an area of Crown Land that stretches 4.5 kms along the coast from Redhead to Belmont South. The 549 hectare site contains diverse ecology and large areas of unspoilt or only partly-damaged ecosystems recognised as regionally significant. Green corridors link the site with Lake Macquarie and are part of a total system reaching as far as the Watagan Mountains.

The Park comprises seven recognised coastal wetlands and features the largest single open water wetland in Lake Macquarie, the Belmont Lagoon complex, that



Above: Jewells Wetland from the track looking across to Fernleigh Track



Left: Jewells Wetland walking trail area

Right: On the Wildflower walk



is fed by an extensive wetland system from the north and north east. Environments within the area range from coastal wetlands to rare examples of coastal woodlands and include extensive sand dunes fringed by forest.

The reserve is situated within the boundaries of the Bahtabah Local Aboriginal Land Council. The wetlands and coastal areas have links to Aboriginal culture and mythology. The adjacent Belmont Lagoon area is the subject of a Dreamtime creation legend about *The Night the Moon Cried*. Bahtabah Local Aboriginal Land Council (LALC) is a valuable source of knowledge about Aboriginal cultural heritage and archaeological sites in the locality. They have expressed an interest in being involved in the management, conservation, and interpretation of Aboriginal cultural heritage within the park.

Since European settlement in the region the area has been subject to land degradation from the coal industry, mineral and construction sands mining, changes to the water regime, erosion of the sand dune barrier system and pressures such as weed infestations, rubbish dumping, unauthorised off-road vehicle use and the influx of urban run-off.

The Fernleigh Track is a key pedestrian/cycleway linkage through the park which has recently been completed. A further Wildflower Walk, Jewells Wetland Walking trail, and Central Dune Walking Trail are planned for 2013. All three trails will be easily accessible from the Fernleigh Track, providing an exciting range of new experiences for visitors.

Vegetation

According to mapping by the Lower Hunter and Central Coast Regional Environmental Management Strategy (LHCCREMS) There are twelve vegetation communities occurring within the Belmont Wetlands State Park. The three most dominant communities are Coastal Sand Scrub, Swamp Mahogany – Paperbark Forest and Coastal Sand Apple – Blackbutt Forest. The site contains 13 threatened flora species, including Black-eyed

Susan *Tetratheca juncea* and Sand Spurge *Chamaesyce psammogeton*, as well as the potential for four Endangered Ecological Communities.

Fauna

Over 113 bird species make the area home. The Park also provides potential habitat for:

- 36 threatened fauna species - including Squirrel Glider *Petaurus norfolcensis*, Grey-headed Flying Fox *Pteropus poliocephalus* and Wallum Froglet *Crinia tinnula*.
- A number of migratory bird species - protected under JAMBA, CAMBA and ROKAMBA international agreements.



Right:

(Top) Typical vegetation community in BWSP, with *Melaleuca quinquenervia* in foreground and *Eucalyptus robusta* in background

(Middle) *Tetratheca juncea* in flower

(Bottom) Flannel Flowers on the Central Dune Walk



It is hoped that, as regional biodiversity and system integrity is steadily improved by measures including the PoM Landcare works, the numbers and diversity of visiting species will increase.

Friends of Belmont Wetlands Landcare Group

There have been several Landcare groups working in the area of the Belmont Wetlands State Park over the last 20 years on various projects. The site has also been a focal area for Green Corps training teams.

The Friends of Belmont Wetlands Landcare group is continuing the important rehabilitation work these previous groups have undertaken on the site and is commencing new projects in areas of need with the following aims:

- to increase biodiversity on the degraded dunes and sand plains through vegetation corridors while creating a buffer or 'green fence' to protect the sensitive SEPP 14 wetlands adjacent;
- to provide a seed bank for following phases of dune work, supporting regeneration with locally endemic species; and
- to engage the community in the long-term stewardship of the BWSP.



Above: Fernleigh Track cuts through BWSP and is supported by Landcare work

With the regular assistance of the Trust's executive and government advisors, the volunteers receive training in various aspects of bush regeneration, provide data to indicate fauna species and numbers, provide data to show improved habitats and increased biodiversity, provide evidence of a strong seed bank, and report on address feral species and vandalism

The Landcare group targets the protection and regeneration of native vegetation, treatment of weeds, protection and enhancement of wetlands, erosion and sediment controls, and the revegetation of highly erodible soils within the Park boundaries.

To date the group has achieved the planting of approx. 30,000 native plants with another 5000 to be planted in 2013, the continual removal of waste from the site, and significant weed treatment including Bitou Bush, Lantana, Pampas Grass, Blackberry and grass weeds, among others, as well as establishing a Site Office and Depot compound for whole-of-park management activities.

Community education programs remain a focus area for the group with assistance from the Trust and government agencies. The programs provided so far include plant identification, seed collection, vegetation community identification, monitoring skills, and project development and implementation skills. Through their regular working activities, they have demonstrated the effectiveness of different bush regeneration preparation and planting methods. A progressive curbing of past anti-social



Left:
The Friends of Belmont Wetlands Landcare group planting as part of a Hunter Central Rivers Catchment Management Authority project

activities within the park is also high on the agenda.

The Friends of Belmont Wetlands have become an integral part of setting up and establishing activity in the Belmont Wetlands State Park.

So far a core of some 30 volunteers have worked over 3000 hours in efforts to

rejuvenate this land, with further assistance from, in particular, CVA, TAFE and the Lake Macquarie Landcare Green Team.

The Landcare group with assistance from the community will continue the process of recovering forests, wetlands and dunes in nine different project sites over the next 12 months. Together with the Trust they will complete improvements to the fire trail system and commence more effective management of access



Above: Local (Belmont Christian college) school students helping to protect Belmont North wetlands



Above: View to the Melaleuca Forest N. of Belmont Lagoon-a long-term Landcare area

into and throughout the site. Interpretative and informative signage will be provided at various points throughout the site, especially along the Fernleigh Track.

The Landcare group have conducted a number of projects at different areas within the BWSP. Some recent projects are described here.

Kalaroo Road Entrance Project 2009

The 5 hectare Kalaroo Road Entrance Project site adjoins the Fernleigh Track and the Coastal Wetland Park off Kalaroo Road. Most of the reserve is a wetland community of canopy *Eucalyptus robusta* Swamp Mahogany with a mid-storey of Melaleuca species. The site is being transformed by the Friends of Belmont Wetlands Landcare group with assistance from school, scout and community supporters. A site depot compound has been developed in this area utilising an old concrete pad left over from the days of sand mining in the region. With guidance from an Action Plan developed by the Lake Macquarie Landcare Resource Centre the group has conducted works in two areas:

- **Area 1** (the dunal side of the entrance under the powerlines) - Reconstruction of low-growing native plants similar to the locally growing coastal heath communities in this area.
- **Area 2** (the Fernleigh Track side of the entrance). This area was a mixture of Coastal Wattle, Bitou Bush, and weed grasses and a weedy remnant Sydney Red Gum/Red Bloodwood dunal forest. The degraded edge required weed treatment followed by planting with local native species, while the remnant forest is expected to have sufficient site resilience for the native species to self-regenerate.



Left: Before work commenced on Entrance Project Area, looking back towards the Kalaroo Road entrance (March 2009)

Right: Kallaroo Road entrance project site planting. (April 2010)



Left: Looking from the Power Easement to the Entrance of Kalaroo Rd, Belmont North (January 2010)

Right: After works (Sept 2012)



Left: Regenerating Entrance area (2013)

Weeds of National Significance removal project 2010-2011

With funding from the Commonwealth Government Caring For Our Country Coastal Projects grant, sourced through the Hunter Central Rivers Catchment Authority (HCRCMA), Belmont Wetlands State Park Trust embarked on a Weeds of National Significance (WoNS) removal project on two sites within the State Park.

A three hectare area on the North East Dune and a 6 hectare area on the Central Dune was revegetated and stabilised during the project. These sites were introduced on the Field Day held on Sunday 4th July 2010. Since then, in 2011, considerable areas of seeding and planting have been added to site improvements, including the Jewells to Dunes rehabilitation zone connected to the North East Dune.

Landcare Mobile Muster project 2011-12

The Landcare Australia-supported Mobile Muster project added 5000 canopy plants to the corridor between the Fernleigh Track and The Eastern margins of the Park close to the Kalaroo Fire Trail. The project used locally endemic and seed-sourced plants to replace weeds, creating a corridor 100-200m wide and 700m long. As well as improving the aesthetics of a popular track edge the project increased local diversity, reinforcing existing native vegetation communities and EECs.

FOBWL acknowledge the assistance of Conservation Volunteers Australia and their local and international volunteers in continuing this work. Tafe students and GIO Corporate volunteers were also involved in site preparation and planting.



Above: Conservation Volunteers working on the Mobile Muster project site

Interested in volunteering?

Friends of Belmont Wetlands meet every Tuesday morning from 8.30 am-9am (dependant on season) to 12pm at the park entry on Kalaroo Road to help with a variety of projects and programs to regenerate Belmont Wetlands. If you would like to assist the group with this valuable and diverse range of work contact the Lake Macquarie Landcare Resource Centre on 4921 0392 or meet with the group on site. Group contact Number 0428 101 667 and gregwrig@hotmail.com

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

LPMA, 2010, *Belmont Wetlands State Park Plan of Management*, available at www.lpma.nsw.gov.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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