Mackay coasts and communities

Project update June 2011

Vision | *the natural environment values of the Mackay coast are protected and restored, whilst allowing for appropriate recreational access and use.*

The Mackay region's coastal zone is characterised by a diverse range of natural features including sandy beaches, rocky headlands, extensive intertidal flats, and substantial areas of coastal wetlands. These areas are under increasing pressure from development, climate change, population growth, and recreational use.

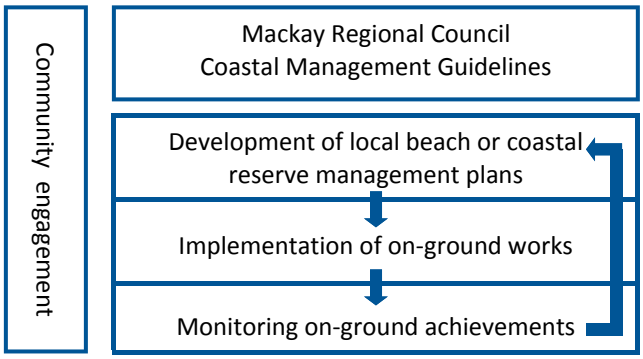
The *coasts and communities* project was initiated to set a vision for the future of the Mackay coast and engage local communities in coastal management activities. The project provides a strategic and coordinated approach to managing our coast; developing local management plans to enable all organisations, community groups, and local residents to work together to better use and attract resources, and achieve the best outcome for our coastal environments.

Sixteen beach management plans have now been developed in consultation with coastal communities for public coastal land under Mackay Regional Council jurisdiction. Implementation of priority activities in many of these areas is now underway, including coastal fencing, weed control, and revegetation.

Coastal community activities are being held across the region to provide local residents an opportunity to get involved in coastal management initiatives at their beach.

Visit www.mackay.qld.gov.au/environment/coastal_management to download the current list of coastal community activities, or find out more about the project.

Mackay Coasts and Communities Project implementation model



Mackay Regional Council Residential beaches

Midge Point

Cyclone Ului caused significant damage to coastal vegetation along the Midge Point residential beach front in March 2009, making this area a priority for rehabilitation works. Over 40 volunteers planted 300 native seedlings along the foreshore in an effort to stabilise the foredune which has been supplemented through the sand replenishment program. A Shoreline Erosion Management Plan (SEMP) is currently being developed for the residential beach front, the outcomes of which will determine future coastal management activities along this beach.

What next? Awaiting outcomes of the SEMP. Address weed control and vehicle access issues on Midge Point headland to protect significant environmental values.

Ball Bay

Works have been initiated in the southern area of Ball Bay (zone C) first, as this area is largely in natural condition. Key issues identified in this area are inappropriate vehicle access and invasive weeds, which are being addressed through the installation of a gated pedestrian access to the creek from the end of Buoro Street, and weed control activities. Work has also been initiated in the central section of Ball Bay (zone B), owing to the width of the Esplanade which provides large potential to rehabilitate a functioning dune system. Fencing has been installed and approximately 300 native plants established to formalise the foredune rehabilitation area, and pedestrian access points.

What next? Maintenance of revegetation and further weed control in zones B and C.

Haliday Bay

Haliday Bay beach (zone B) is one of the most important turtle nesting beaches in the Mackay region. Erosion, weeds, vegetation thinning and associated light pollution pose a threat to marine turtle populations at this beach. With the help of local volunteers, 300 native plants have been established to replace weed species and thicken vegetation at the back of the dune. Two unused access tracks have been removed to encourage a continuous tract of coastal vegetation and reduce light pollution for marine turtle populations. Fencing has been installed at the northern end of the beach to formalise pedestrian access points and reduce vehicle impacts.

What next? Maintenance of revegetation and weed control along Haliday Bay beach.

Seaforth

Finlaysons Point and surrounds (zone A) provides the highest natural environment values in the Seaforth beach unit, and has been the priority for on-ground activities. This zone has a large area of remnant vegetation, cultural heritage values, an identified migratory shorebird roost, and critically endangered beach scrub vegetation communities. Fencing has been installed to direct pedestrian access, and restrict vehicle access from the foreshore and headland to protect wildlife, vegetation, and cultural heritage sites. Approximately 600 native seedlings have been planted in the area to stabilise the coastal dune, and eventually replace weed species.

What next? Maintenance of revegetation, weed control, and fencing on Finlaysons Point. Extend weed control areas to include Finlaysons Point headland and along the western margin of Finlaysons Point Road.

Visit **www.mackay.qld.gov.au/environment/coastal_management** to view beach plans (which include zone descripti

onment activities underway on our coast

Shoal Point

Shoal Point and the east-facing dunes contain several hectares of critically endangered beach scrub vegetation and this has been the priority area for on-ground activities in this beach unit. Several revegetation areas have been established, with the aim of replacing lantana (*Lantana camara*) and rejoining patches of beach scrub vegetation. With the rain easing off and the marine turtle nesting season finishing up in April, a major weed control project has recently been initiated and is targeting the environmental weeds which compete with native vegetation.

What next? Continuation of weed control efforts along the east-facing Shoal Point dunes and maintenance of revegetation areas. Fencing to reduce vehicle damage to coastal dunes from Belangason Way.

Bucasia

With a buffer zone free of residential development along much of its length, Bucasia Beach provides one of the best opportunities in the region to build a resilient dune system. Northern Bucasia (zone A) retains a large intact tract of native vegetation, including critically endangered beach scrub. A major weed control project has recently been initiated to maintain and improve the condition of the vegetation in this area. In the southern and central part of the beach (zones B and C), continuous coastal fencing is already in place from Eimeo Creek to just north of the swimming enclosure. For this reason, a dedicated group of community volunteers are working to consolidate coastal vegetation behind the current fence line by removing weeds and planting native species.

What next? Continue weed control project in northern Bucasia (zone A). Maintain and continue weed control and revegetation activities behind the current fenceline in central Bucasia (zone B).

Blacks Beach

Blacks Beach Reserve south of Anglers Parade (zone D) retains much of its remnant vegetation and has been the priority for on-ground activities in this beach unit. Approximately 700 native plants were established in the recent wet season to replace weed species, support coastal dunes, and thicken coastal vegetation to reduce the impacts of residential lights on marine turtle populations. Community volunteers and local schools have contributed to this work. Fencing to delineate the Reserve boundary from residential properties is also being completed in this area.

What next? Maintain and continue weed control and revegetation activities in Blacks Beach Reserve south of Anglers Parade (zone D).

Sandfly Creek Environmental Reserve

Since the adoption of the Reserve management plan in 2009, much has been achieved to ensure the protection of the Sandfly Creek Environmental Reserve. Fencing has been installed along the north western margin to restrict vehicle access, and over 500 native plants have been established to replace weed species and enhance habitat values at the site. Interpretive signage has also been installed, with financial support from Ergon Energy, to highlight the Reserve's environmental values to visitors. Volunteers from Conservation Volunteers Australia, funded through the Rio Tinto Hail Creek Mine Community Development Fund, have been participating in the ongoing maintenance of the site.

What next? On-going maintenance of weed control and revegetation areas.

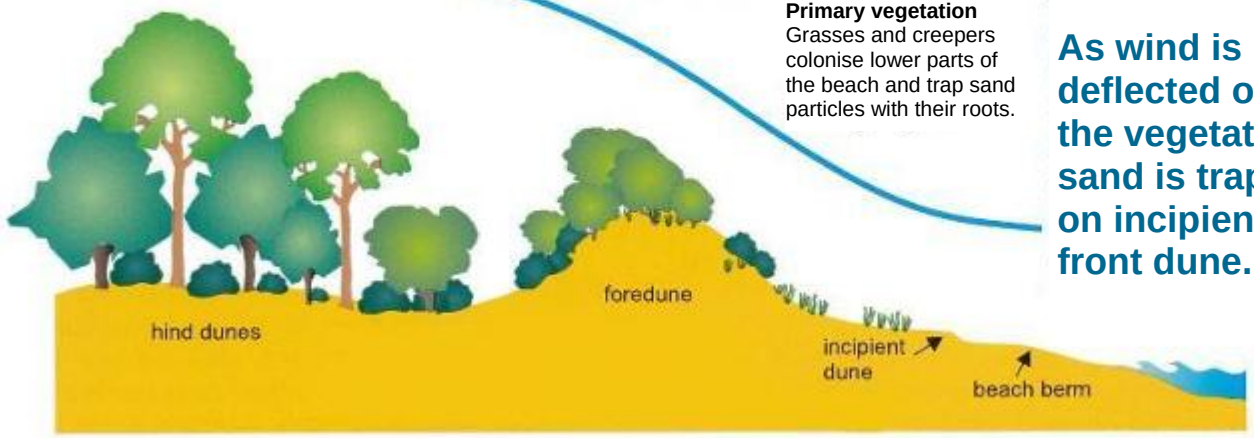
ons). This update only includes on-ground activities for coastal projects with recently adopted Beach Plans (2009/2010).

Role of dune vegetation

Tertiary vegetation
Taller shrubs and trees further elevate the wind and provide protection for inland plants, animals, and property.

Secondary vegetation
Shrubs and small trees help to stabilise the foredune and deflect the wind up and over the foredune.

Primary vegetation
Grasses and creepers colonise lower parts of the beach and trap sand particles with their roots.



As wind is deflected over the vegetation, sand is trapped on incipient or front dune.

(Adapted from NSW Department of Land and Water Conservation 2001, *Coastal Dune Management: A Manual of Coastal Dune Management and Rehabilitation Techniques*, Coastal Unit, DLWC, Newcastle.)

NORTH

Mackay Regional Council beach or reserve	Status of beach or reserve management plan
Midge Point	Adopted 2010
St Helens Beach	Development in 2012
Seaforth	Adopted 2010
Haliday Bay	Adopted 2010
Ball Bay	Adopted 2010
Shoal Point	Adopted 2010
Bucasia Beach	Adopted 2010
Eimeo Beach	Adopted 2010
Blacks Beach	Adopted 2010
Slade Point	Development in 2012
Slade Point Reserve	Adopted 2008
Harbour Beach	Development in 2012
Sandfly Creek Environmental Reserve	Adopted 2009
Town Beach	Development in 2012
Far Beach	Development in 2012
McEwens Beach	Development in 2012
Dunrock	Development in 2012
Louisa Creek	Adopted 2007
Half Tide Beach	Adopted 2007
Salonika Beach	Adopted 2007
Grasstree Beach	Adopted 2007
Campwin Beach	Adopted 2007
Sarina Beach	Adopted 2007
Armstrong Beach	Adopted 2007

SOUTH

DUNE VEGETATION CAN

- PREVENT WIND EROSION by decreasing wind speed at ground level
- BUILD UP SAND DUNES and thus reduce the extent of recession produced by a storm
- REDUCE WAVE EROSION CAUSED BY OVERWASH where dense vegetation exists
- REGENERATE NATURALLY AFTER STORM DAMAGE where dune management allows
- TOLERATE A HOSTILE ENVIRONMENT of high winds, salt spray, sand blast, covering by sand, sandy soil and little water
- ACCEPT MASSIVE MOVEMENTS OF THE DUNES both vertically and horizontally
- FUNCTION AS A SELF SUPPORTING COMMUNITY where plants are mutually dependent for protection and nutrient supply

(Text extract from *Coastal Sand Dunes; Their Vegetation and Management.* Queensland Department of Environment and Resource Management Leaflet No. III-0l)

(Image courtesy of the Integration and Application Network ian.umces.edu/symbols/).

The coasts and communities project is delivered in partnership by Mackay Regional Council and Reef Catchments, supported by the Natural Environment Levy and the Australian Government's Caring for our Country Program. Visit www.mackay.qld.gov.au/environment/coastal_management or contact Mackay Regional Council (1300 622 529) or Reef Catchments (07 4968 4207) for more information.

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