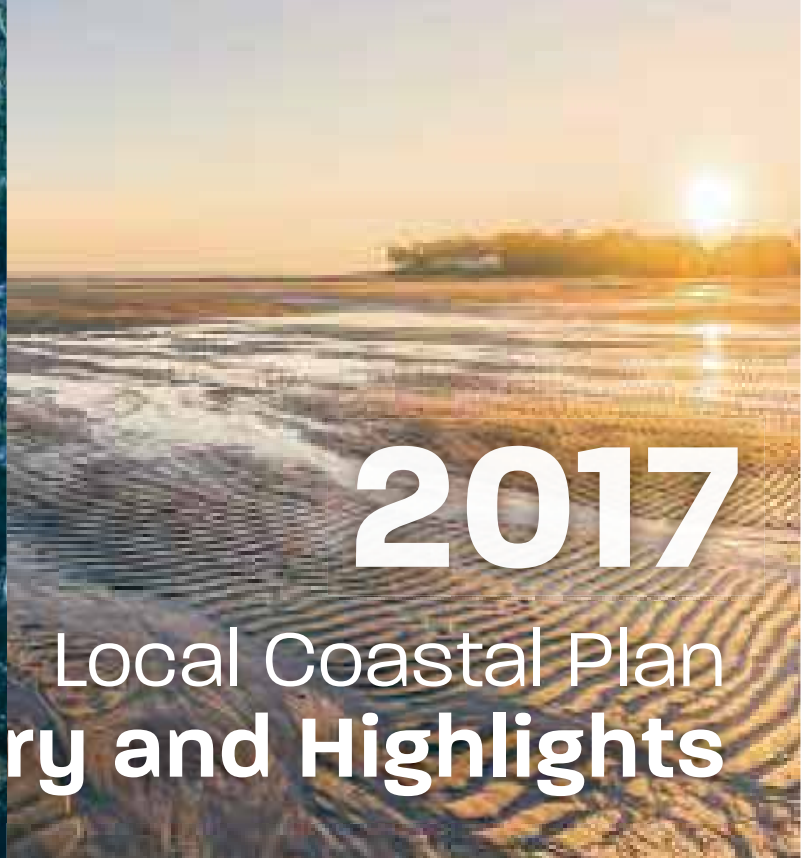


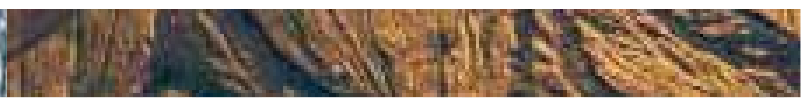


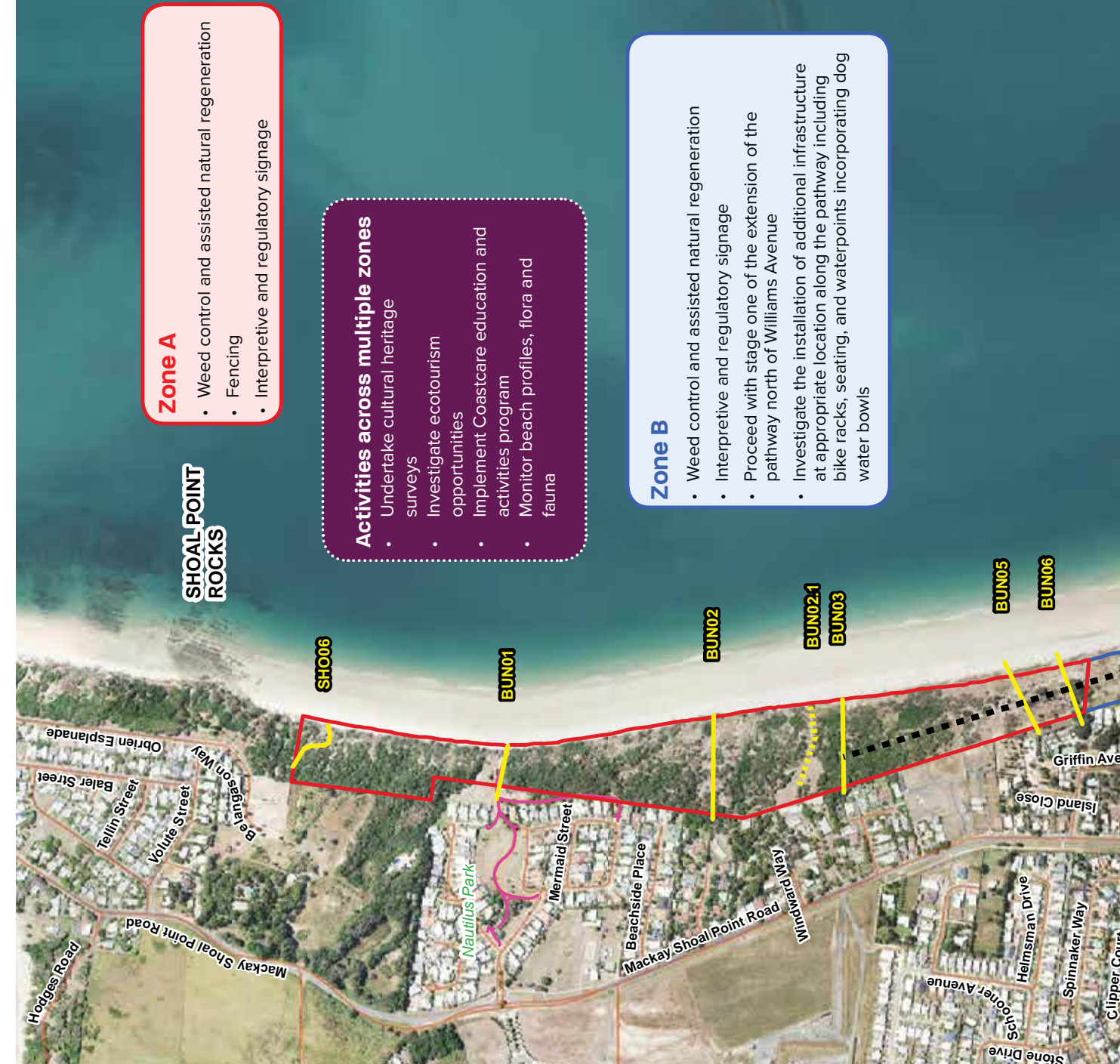
Bucasia Beach



2017

Local Coastal Plan Summary and Highlights





Bucasia Beach Local Coastal Plan

Management Zones

- A
- B
- C
- D

Official access

Access to be formalised

Pathway extension stage 1 (approx. location)

Potential pathway extension future stages (approx. location)

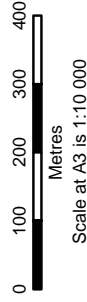
Pathway

Road

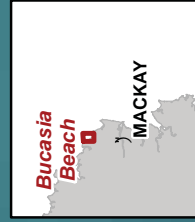
Zone boundaries are based on government tenure data and may not accurately reflect work zones.

Data:

Mackay Regional Council Imagery 10 cm Mosaic 2015,
Mackay Regional Council 2016, State of Queensland
(Department of Natural Resources and Mines) 2015



Scale at A3 is 1:10 000



Zone A

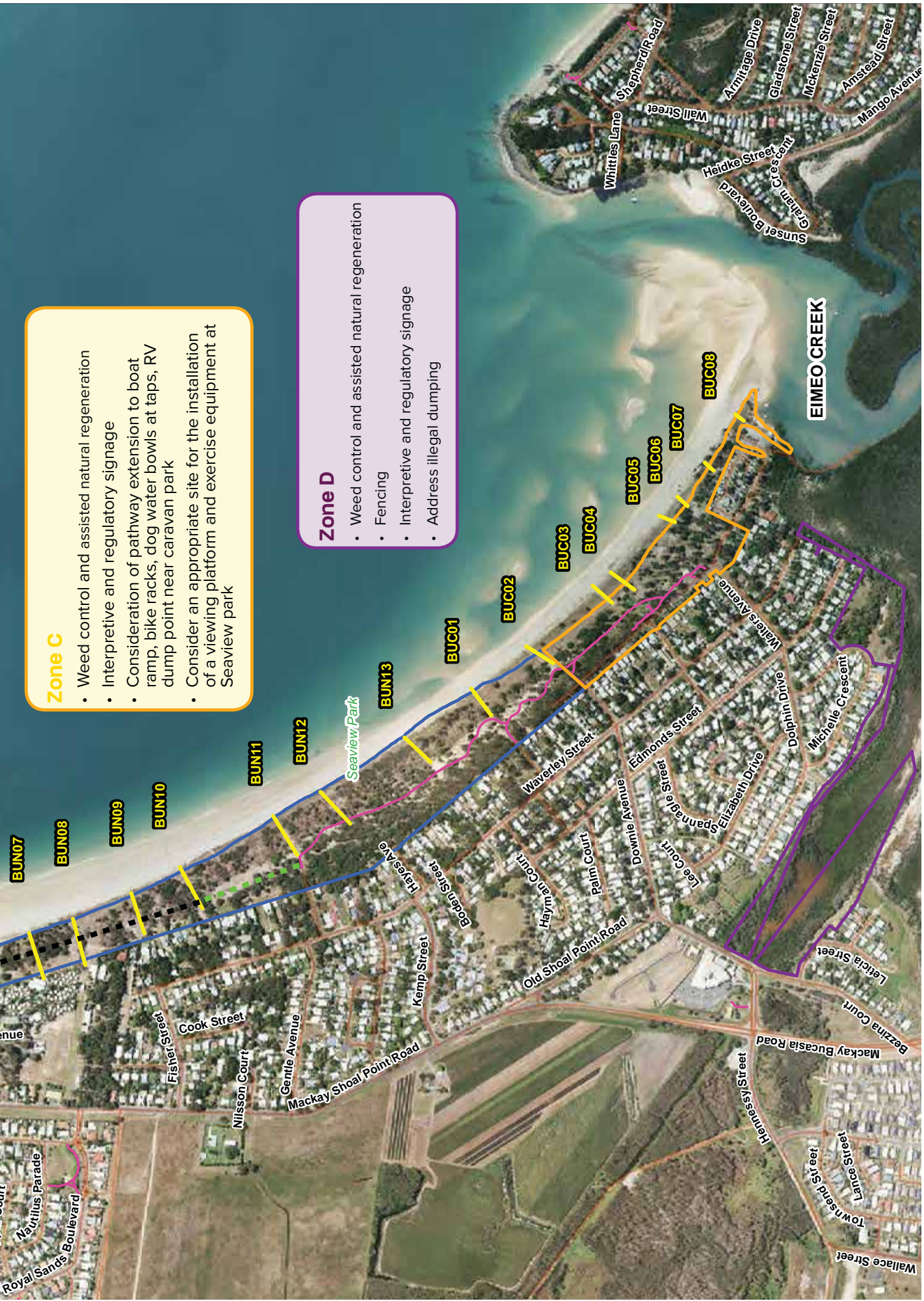
- Weed control and assisted natural regeneration
- Fencing
- Interpretive and regulatory signage

Activities across multiple zones

- Undertake cultural heritage surveys
- Investigate ecotourism opportunities
- Implement Coastcare education and activities program
- Monitor beach profiles, flora and fauna

Zone B

- Weed control and assisted natural regeneration
- Interpretive and regulatory signage
- Proceed with stage one of the extension of the pathway north of Williams Avenue
- Investigate the installation of additional infrastructure at appropriate location along the pathway including bike racks, seating, and waterpoints incorporating dog water bowls



Zone C

- Weed control and assisted natural regeneration
- Interpretive and regulatory signage
- Consideration of pathway extension to boat ramp, bike racks, dog water bowls at taps, RV dump point near caravan park
- Consider an appropriate site for the installation of a viewing platform and exercise equipment at Seaview park

Zone D

- Weed control and assisted natural regeneration
- Fencing
- Interpretive and regulatory signage
- Address illegal dumping

Visual summary of recommendations

About Bucasia Beach

The Bucasia Beach coastal unit supports rare and threatened species including migratory shorebirds, marine turtles and critically endangered beach scrub vegetation. It is also a popular recreational area for locals and visitors to our region.

Council manages its coastal land at Bucasia Beach through an integrated program of planning, on-ground works, monitoring and community engagement known as the *Coasts and Communities Program*. As part of this program, Coastal Management Guidelines have been developed to provide a framework for management decisions and activities for coastal land under Council's jurisdiction. Individual Local Coastal Plans, such as this plan for Bucasia Beach, provide site-specific recommendations for individual beach units.

The *Bucasia Beach Local Coastal Plan* describes the environmental and social values of the coastal unit, as well as the key threats and management issues. Key pressures include the presence of non-native vegetation, the removal

of native vegetation, waste dumping, erosion and climate change. Recommendations to manage these threats include weed control, revegetation, fencing and access management. Social values are also described and opportunities to improve recreational facilities and values have been identified, including additional beach accesses, pathways, interpretive signage and infrastructure such as bike racks. The recommended activities will be implemented on a prioritised basis as resources become available. Community engagement is recognised as a critical part of the success of on-ground works and opportunities for the community to learn about coastal ecosystems and get involved in management activities at Bucasia Beach will be provided through the Coastcare program.

UNDERSTANDING YOUR LOCAL COASTAL PLAN (LCP)

The activities recommended in this Local Coastal Plan will help protect and improve the condition of assets in the coastal unit, ensure best-practice management principles are implemented and on-ground activities are prioritised and undertaken in a coordinated and strategic way. This plan will help attract additional funding to the region (including from State and Federal sources) to protect coastal resources and improve recreational opportunities for our community.



Environmental values and management issues

Vegetation and Wildlife Values

Bucasia Beach stretches from Eimeo Creek to Shoal Point Rocks, encompassing 4km of sandy coastline. Remnant vegetation exists along the length of Bucasia Beach, including critically endangered beach scrub (R.E. 8.2.2). The remnant vegetation communities provide habitat for native fauna including a wide array of reptile, amphibian and mammal species including monitors, frogs and melomys. Bucasia Beach is one of the three most important turtle nesting beaches in the region. The southern end of Bucasia Beach is also an intertidal roosting site for shorebirds including migratory waders, which utilise the habitat at the mouth of Eimeo Creek. Bucasia Beach also contains habitat for the rare northern quoll and the vulnerable coastal sheath-tail bat and mangrove mouse.

Key threats to remnant vegetation at Bucasia Beach include development, weed invasion, mowing and disturbance. These threats interrupt natural vegetation zonation and reduce the resilience of coastal ecosystems. Threats to wildlife include habitat loss and degradation and disturbance to nesting or roosting sites. Climate change is likely to place additional stresses on coastal vegetation and wildlife.

Protecting existing native vegetation, re-establishing vegetation zonation and improving vegetation quality through weed control are key ways this plan seeks to protect and enhance the vegetation and wildlife values in this area. Providing opportunities for the local community to learn about coastal ecosystems and wildlife through Coastcare events and

interpretive signage will raise awareness about coastal values at Bucasia Beach.

Coastal Processes and Erosion

Coastal environments are dynamic, experiencing periods of erosion and accretion. Well-vegetated coastal dunes help protect coastal infrastructure during intense wind, storm and cyclone events. Human induced changes such as coastal development and vegetation loss can reduce the protective capacity of dune systems and coastal recession can occur.

Bucasia Beach was historically supplied with sand from the Pioneer River and Slade Point. Development, river regulation and sand extraction have reduced this sand supply. Sea walls along Blacks Beach have accelerated sand transport to Bucasia Beach in recent years, however the long-term trend for sand supply is expected to be reduced. Bucasia Beach is currently accreting, and has been doing so since the early 60s. Maintaining and enhancing vegetation will be key to minimising future erosion, providing a critical buffer during storm events and providing protection to private property, as well as significant ecological and amenity value.

Climate change and sea level rise is likely to worsen the extent and impact of erosion in coastal areas. Monitoring of beach profiles will provide early indication of changes.

Social Values and Management Issues

Cultural and Recreational Values

Bucasia is a popular beach located within Sand Bay, just 20 minutes from Mackay's CBD. As a popular holiday and recreational location, Bucasia Beach has high visitation and its recreational facilities are in high demand. Seaview Park provides playgrounds, public toilets, picnic tables, barbecues and shelters and a network of pathways suitable for walking or cycling. The off-leash section of beach allows active recreation for dogs between specific times. The recreational facilities provide a range of social benefits including opportunities for active and passive recreation, tourism, education and social interaction, as well as supporting community well-being and providing opportunities for improving general health through outdoor recreation.

The Local Coastal Plan considers the extent and state of built assets, including access points, play equipment, signage, toilet facilities, boat ramps, paths and fencing. Opportunities for

improving built assets to meet community needs and improve recreational opportunities in the area are identified. Additional facilities for dogs such as water bowls, are recommended at the off-leash area. Other recommendations include the installation of an accessible viewing platform, bicycle racks and exercise equipment at Seaview Park. Extension of the path north of Williams Avenue will be accompanied by additional signage, drinking fountains, benches and other facilities as required. The shared path will also be continued south to Eimeo Creek boat ramp. A beach access will be formalised north of Urarii Crescent and additional fencing installed.

Key management issues at Bucasia Beach include weed invasion, unrestrained dogs, 4wds, quad bikes and motorbikes on the beach and removal of coastal vegetation. Community education and enforcement activities will be undertaken as required.



KEY RECOMMENDATIONS FOR IMPLEMENTATION

- ▶ Weed control across all zones, targeting major weeds including Guinea grass and Lantana, and revegetation to replace weeds, stabilise dunes and supplement native vegetation.
- ▶ Installation of regulatory and interpretive signage where appropriate.
- ▶ Continuation of stage one of the northward extension of the shared path from the end of Williams Ave.
- ▶ Continuation of the shared path south to Eimeo Creek boat ramp.
- ▶ Formalisation of a beach access north of Urarii Crescent, fencing to define track and direct pedestrians. Additional fencing to be installed to define extent of mown area, and allow native vegetation to be re-established in cleared area.
- ▶ Additional shade trees, interpretive signage and park assets such as bike racks at the end of Williams Avenue and at Seaview Park.
- ▶ An accessible viewing platform and exercise equipment at Seaview Park.
- ▶ Rehabilitation of frontal dune adjacent to the boat ramp.



STATUTORY OBLIGATIONS

There are a range of statutes at Regional, State and Federal level that are relevant to, and may guide the management of natural resources and recreation within the Mackay area. These are shown below.



FEDERAL GOVERNMENT

- *Biosecurity Act 2015* provides management principles for diseases and pests that may cause harm to human, animal or plant health or the environment, and for other related purposes
- *Environmental Protection and Biodiversity Conservation Act 1999* provides a high level of protection for Matters of National Environmental Significance (MNES). In particular it provides protection for important populations of migratory species.
- *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* provides for the preservation and protection of areas and objects in Australia and in Australian waters that are of particular significance to Aboriginals in accordance with Aboriginal tradition.



INTERNATIONAL AGREEMENTS

- *China and Australia Migratory Bird Agreement (CAMBA)*, the *Japan and Australia Migratory Bird Agreement (JAMBA)*, and the *Republic of Korea-Australia Migratory Bird Agreement (ROKAMBA)* provide for conservation of shorebirds (waders) across the migratory flyway for these species.



STATE GOVERNMENT

- *Land Act 1994* provides for the designation of the reserves and assignment of Trustees for the protection of environmentally and culturally valuable and sensitive areas and features.
- *Recreation Areas Management Act 2006* provides for the establishment, maintenance and use of recreation areas; and aims to coordinate, integrate and improve recreational planning, recreational facilities and recreational management for recreation areas.
- *Vegetation Management Act 1999* provides management principles for vegetation within Queensland.
- *Coastal Protection and Management Act 1995 (Coastal Act)* provides a comprehensive framework for the coordinated management of the Queensland Coast, and establishes the Queensland Coastal Plan 2012 as the primary statutory instrument under the Coastal Act.
- *Nature Conservation Act 1992* provides management principles for wildlife within Queensland.
- *Native Title (Queensland) Act 1993* identifies the presence of Native Title over land.
- *Land Protection (Pest and Stock Route Management) Act 2002* provides the regulatory basis for control of pest species. In particular the Act classifies pest species and provides obligations for landholders.
- *Fisheries Act 1994* provides protection for marine plants including mangroves and saltmarshes, and provides the regulatory environment for control of recreational fishing activities.
- *Sustainable Planning Act 2009* provides the regulatory background for the development of planning schemes.
- *Environmental Protection Act 1994* regulates environmentally relevant activities, including release of emissions on land, air or water and noise.
- *Marine Parks Act 2004* regulates use of Marine Park to protect marine environment.
- *Waste Reduction and Recycling Act 2011* provides regulatory regime for management of litter and illegal dumping.
- *Queensland Coastal Plan 2012* provides policy guidance to coastal land managers including best practice coastal management principles which support the development of local management plans.



LOCAL GOVERNMENT

- *Mackay Regional Council Local Law No. 4 (Local Government Controlled Areas, Facilities and Roads) 2011* provides for the management of Council controlled lands by enabling the prohibition of vehicle access and protection of vegetation and infrastructure.
- *Mackay Regional Council Local Law No. 2 (Animal Management) 2011* provides for the management of animals in the natural environment, including ensuring that they are under effective control and requiring removal of faeces in a public place.
- *Coastal Management Guidelines 2012* provides a framework for management decisions and activities for land under Mackay Regional Council jurisdiction in the coastal zone.
- *Mackay Regional Council Planning Scheme Open Space Strategy No. 12* outlines Mackay Regional Council's commitment to provide a balanced mix of public open space that in turn will provide for a range of active and passive recreational opportunities for the community.
- *Reef Guardian Council program* Recognises Council's commitment to protect, conserve and enhance the values of the Great Barrier Reef for future generations through effective and responsible land-based management practices. *The Coasts and Communities Program* is a key initiative under this project.

Recommended Activities

Recommended Activities for the Bucasia Beach Local Coastal Plan

RECOMMENDED ACTIVITIES

Zone A | Beach access SHO06 to Homestead Bay Avenue access (19.3 ha)

1 Vegetation management

- 1.1 Control major target weed species including lantana, Guinea grass, prickly pear, agave and Singapore daisy.
- 1.2 Monitor spread of beach dune primrose and control as required.
- 1.3 Control weeds on and around pathways and beach access tracks, including highly dispersive weed such as cobbler's peg and Seaforth burr.
- 1.4 Undertake assisted natural regeneration.
- 1.5 Plant native trees and other landscaping in Nautilus Park to provide shade and increase fauna refuge.
- 1.6 Manage encroachment into Reserve tenure between Urarii Crescent and Sunset Beach Court to reduce illegal vegetation clearing and rationalise access tracks across the beach unit. An emphasis on dune restoration is essential in this area.
- 1.7 Monitor and where suitable, manage other problematic weed species including, but not limited to: annual stylo, red natal grass, corky passionflower, common guava, Chinese burr, centro, grader grass, mile a minute, pink periwinkle, red natal grass, snakeweed, Seaforth burr, red alternanthera and tridax daisy.

2 Access management

- 2.1 Investigate formalising the beach access track from Sunset Beach Court.
- 2.2 Formalise beach access track north of Urarii Crescent.
- 2.3 Install post and rail fencing to clearly define areas for conservation and recreational purposes between Sunset Beach Court and south of Urarii Crescent.
- 2.4 Extend post and rail fence adjacent to the Nautilus Park beach access BUN01 to prevent motorbike access and direct pedestrians to the official beach access.

3 Recreational opportunities

- 3.1 Undertake further consultation regarding the potential to continue the shared pathway to Urarii Crescent. Investigate the installation of recreational facilities adjacent to Urarii Crescent beach access, compatible with the pathway - road connection at this point.

4 Waste management and private infrastructure

- 4.1 Remove green waste and personal property encroaching into Esplanade tenure.

5 Stormwater management

- 5.1 Address the structural integrity and functionality of the stormwater system on the Esplanade adjacent to the 'Eden on the Water' subdivision with the asset owner – namely the outlet pipe. Remediate as required.

Zone B | Homestead Bay Avenue to Downie Avenue (23.1 ha)

6 Vegetation management

- 6.1 Control major target weed species including lantana, Guinea grass and prickly pear.
- 6.2 Monitor spread of beach dune primrose and control as required.
- 6.3 Control weeds on and around pathways and beach access tracks, including highly dispersive weed such as cobbler's peg and Seaforth burr.
- 6.4 Undertake assisted natural regeneration.
- 6.5 Monitor and where suitable, manage other problematic weed species including, but not limited to: stinking passionfruit, annual stylo, Brazillian nightshade, corky passionflower, common guava, Chinese burr, centro, grader grass, mile-a -minute, mother-in-laws tongue, pink periwinkle, red natal grass, snakeweed, and tridax daisy.

7 Access management

- 7.1 Proceed with stage one of the extension of the pathway north of Williams Avenue.

8 Recreational opportunities

- 8.1 Investigate the installation of additional infrastructure at appropriate locations along the pathway, such as the Williams Avenue entry point. This could include bike racks, seating and water points incorporating dog water bowls.

ZONE C | South of Downie Avenue to the boat ramp (7.8 ha)

9 Vegetation management

- 9.1 Control major target weed species including lantana and Guinea grass.
- 9.2 Monitor spread of beach dune primrose and control as required.
- 9.3 Control weeds on and around walking beach access tracks including highly dispersive weeds such as cobbler's peg and Seaforth burr.
- 9.4 Undertake assisted natural regeneration.
- 9.5 Reinstate native trees in Seaview Park to replace vegetation, shade and habitat lost in past cyclone and storm events.
- 9.6 Monitor and where suitable, manage other problematic weed species including, but not limited to: annual stylo, Brazillian nightshade, corky passionflower, common guava, Chinese burr, centro, grader grass, mile a minute, pink periwinkle, red natal grass, snakeweed, and tridax daisy.
- 9.7 Rehabilitate frontal dune adjacent to the boatramp.

10 Access management

- 10.1 Investigate options for the southward extension of the pathway to the boat ramp

11 Recreational opportunities

- 11.1 Install bike racks, dog water bowls and interpretive signage at Seaview Park.
- 11.2 Consider an appropriate site for the installation of an accessible viewing platform and exercise equipment at Seaview Park.
- 11.3 Work with the State Government to reduce inappropriate mooring practices occurring at the boat ramp and introduce interpretive signage at the boat ramp to highlight the significance of coastal vegetation including mangrove ecosystems.
- 11.4 Investigate installation of a RV Dump point. Collaborate with the privately owned Caravan Park to determine a suitable site.

ZONE D | Eimeo Creek mouth (8.88 ha) to saltpan and mangrove areas behind southern extent of houses

12 Vegetation management

- 12.1 Control major target weed species include lantana, Guinea grass and Singapore daisy.
- 12.2 Undertake assisted natural regeneration.
- 12.3 Monitor and where suitable, manage other problematic weed species including, but not limited to: annual stylo, Brazilian nightshade, corky passionflower, common guava, Chinese burr, centro, grader grass, mile a minute, periwinkle red natal grass, snakeweed, and tridax daisy.

13 Access Management

- 13.1 Close illegal vehicle tracks while still allowing for pedestrian access.

14 Waste management

- 14.1 Remove waste and regulate hot spot locations with signage. Monitor previous waste dumping locations.

15 Stormwater management

- 15.1 Enhance drains through appropriate revegetation.
- 15.2 Work with Queensland Parks and Wildlife Services to implement multiple stormwater outlet upgrades in areas known as core habitat for mangrove mouse.

OTHER ACTIVITIES ACROSS MULTIPLE ZONES

16 Cultural Heritage

- 16.1 Engage Traditional Owners to undertake cultural heritage surveys of the area to outline clear management objectives for the preservation cultural heritage within the coastal unit.

17 Signage

- 17.1 Audit all beach access signs across the unit and update or install:
 - Signage at the landward end of each beach access point that clearly identifies the beach access number, restricted activities, hazards present, and provides information on the appropriate first aid treatment for marine stingers.
 - Beach access numbering signage at the seaward end of each beach access point.
- 17.2 Replace faded or vandalised signage.
- 17.3 Install pathway linkage signage that describes pathway routes and beach access tracks and include measured walking distances.
- 17.4 Accompany rehabilitation works with signage detailing its purpose and any regulatory mechanisms in place.

18 Access management

- 18.1 Install regulatory signage to protect shorebird and marine turtle populations.
- 18.2 Consider pathway linkages in neighbouring areas to improve connectivity between Parks and Reserves.
- 18.3 Investigate installation of all-ability beach access points at select locations.

19 Recreational opportunities

- 19.1 Provide bicycle racks at all recreational hot spots where appropriate.
- 19.2 Investigate installation of a swimming enclosure.

20 Tourism

- 20.1 Investigate ecotourism opportunities.
- 20.2 Encourage private tourism operators to apply to the State Government for permits to manage vegetation in front of tourism resorts.

21 Vegetation management

- 21.1 Continue to protect and enhance well-vegetated dune systems.
- 21.2 Implement a tree succession plan across the length of the coastal unit.

22 Community Involvement

- 22.1 Provide opportunities for community members to be involved in coastal management activities at formal Coastcare events.

23 Monitoring

- 23.1 Undertake beach profile monitoring to record and assess change over time and monitor the impacts of sea level rise and the changing dynamics of coastlines to guide future coastal planning and works.
- 23.2 Consider a regional study on the long-term sediment (sand) supply for the Mackay coastline.
- 23.3 Monitor, or in partnership with others assist with the monitoring of shorebirds and turtle.

24 Climate Change

- 24.1 Consider how to manage future predicted reduction in coastal land to retain buffer above the high tide mark (e.g. rolling boundaries).
- 24.2 Review existing revegetation list to ensure that species reflect diversity of all Regional Ecosystems present in coastal unit and in preparation for future predicted climates.

25 Stormwater Outlets

- 25.1 Assess and implement stormwater outlet upgrades throughout the coastal unit, including assessment for the need for Gross Pollutant Trap (GPT) installation as well as the need for multiple point source outlet structures to conserve mangrove mouse habitat.

26 Legislation and Local Laws

- 26.1 Use available legislation to protect existing native vegetation on Esplanade and Reserve tenure as required.
- 26.2 Using existing local laws, undertake enforcement and compliance activities across the area, particularly relating to unrestrained dogs and motor vehicles in park and beach areas.
- 26.3 Review and update this document in line with changing legislation.

27 Waste management

- 27.1 Inform residents of appropriate waste disposal methods. Follow up with education, regulation and enforcement activities.
- 27.2 Educate the community on the impacts of waste on native vegetation, dune health, and wildlife.

28 Enhancement of surrounding areas

- 28.1 Implement a tree succession plan across the length of the coastal unit.
- 28.2 Implement a roadside vegetation program to increase the amount of street trees along roads.

29 Education

- 29.1 Partner with Coastcare and others to deliver education programs about:
 - Local weed species and the use of local native species in residential gardens.
 - Garden waste and general waste disposal.
 - Responsible pet ownership including having dogs on leads at all times, unless in a designated dog off leash area, where they must still be under effective control and respond to the owner's commands.
 - The ecology and threats to native wildlife including marine turtles and shorebirds.

BUCASIA BEACH SUPPORTS PATCHES OF **CRITICALLY ENDANGERED** BEACH SCRUB



3

NEW FORMALISED PEDESTRIAN BEACH ACCESS PATHS HAVE BEEN INSTALLED SINCE 2010

SINCE 2010 MORE THAN

50



VOLUNTEER DAYS CONTRIBUTED TO PROTECTING THE BEACH

BUCASIA BEACH IS ONE OF THE

3

MOST IMPORTANT MARINE TURTLE NESTING BEACHES IN THE MACKAY REGION



THE BUCASIA BEACH AREA WAS PREVIOUSLY OCCUPIED BY TRADITIONAL OWNERS. **MIDDENS, FISH TRAPS OR OTHER ITEMS OF CULTURAL SIGNIFICANCE MAY BE PRESENT IN THE AREA**



THE SOUTHERN END, INCLUDING THE COMPLEX OF SANDBANKS AND ADJACENT FORESHORE, IS IDENTIFIED AS AN INTERTIDAL **ROOST FOR SHOREBIRDS**



OVER

200

CHILDREN HAVE ATTENDED SCHOOL HOLIDAY COASTCARE PROGRAMS AT BUCASIA BEACH IN 2015

THE LARGEST SHOREBIRD IN THE WORLD

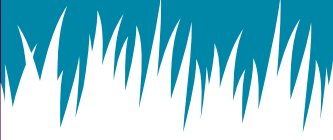
THE EASTERN CURLEW

IS KNOWN TO FREQUENT BUCASIA BEACH IN THE SUMMER MONTHS



MORE THAN 25 ha

OF WEED CONTROL AND MAINTENANCE WORKS HAVE OCCURRED SINCE 2010



SEAVIEW PARK IS A POPULAR RECREATIONAL AREA FOR FAMILIES



FENCING OF THE ESPLANADE **TO RESTRICT VEHICLE ACCESS**, DIRECT PEDESTRIANS TO OFFICIAL BEACH ACCESS PATHS AND PREVENT ENCROACHMENT INTO THE NATURAL ENVIRONMENT



SINCE 2010 REVEGETATION OF OVER

3ha

OF DUNES TO PREVENT LIGHT POLLUTION IMPACTING **NESTING AND HATCHING TURTLES**



How to view the Local Coastal Plan

Visit www.mackay.qld.gov.au

Acknowledgements: The project is supported by Reef Catchments and Mackay Regional Council through funding from the Australian Government *National Landcare Programme* and Mackay Regional Council's *Natural Environment Levy*. Coastal Plans are based on Mackay Regional Council's *Coastal Management Guidelines* (MRC 2012). Technical geomorphic assessment of the *Bucasia Beach Local Coastal Plan* area was provided by Alluvium. Images supplied by Reef Catchments, Mackay Tourism, Mackay Regional Council.