





## ACKNOWLEDGEMENT OF COUNTRY

Alexandrina Council acknowledges the Ngarrindjeri people as the Traditional Owners of the Clayton Bay area and we respect the rights, interests and obligations of Ngarrindjeri to speak and care for their traditional lands and waters in accordance with their laws, customs, beliefs and traditions.

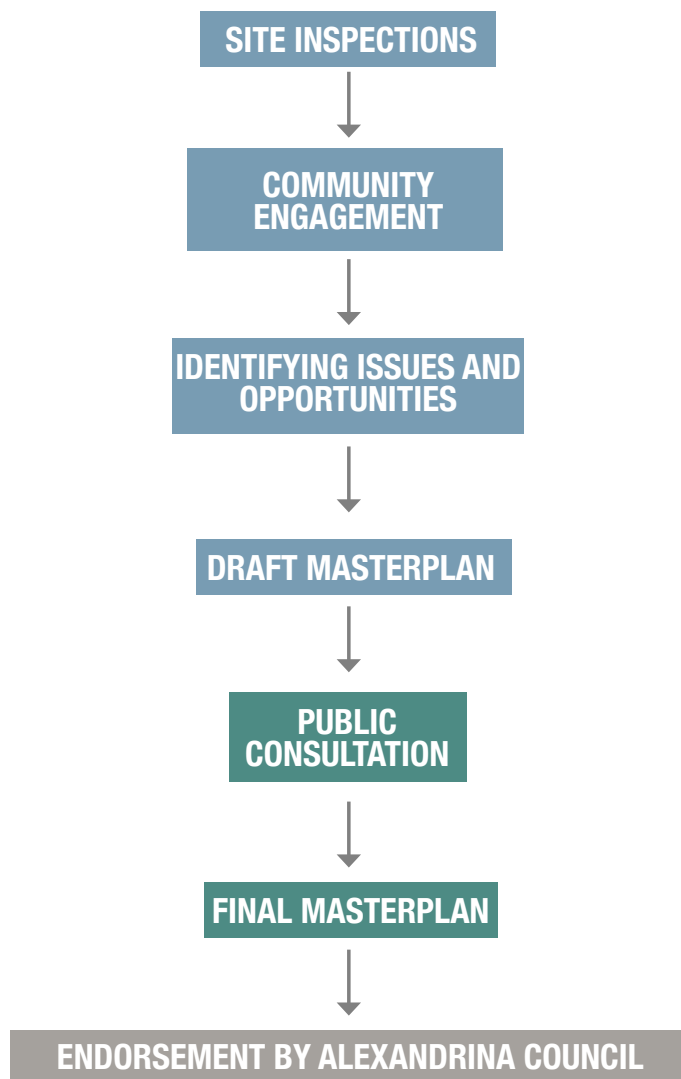
For Ngarrindjeri, the Clayton Bay area is a culturally sensitive, living landscape. In accordance with the 2002 Kungun Ngarrindjeri Yunnan Agreement signed by Alexandrina Council and the Ngarrindjeri Nation, we are committed to working together to uphold Ngarrindjeri rights and advance Ngarrindjeri interests when decisions are being made about their Ruwe (Country). This includes working together to ensure that future management actions in and around Clayton Bay seek to enhance rather than diminish the connectivity of landscape elements.

## ACKNOWLEDGEMENTS

The core project team included Shen Mann from the Alexandrina Council, Warwick Keates and Corey Brown from WAX Design and Andrew Sinel and Tonia Brown from EBS Ecology.

A special thanks is extended to all the members of the Clayton Bay community who took part in the Clayton Bay Foreshore Masterplan community surveys, workshops and drop in sessions that have guided the direction of the project and the vision for the Clayton Bay foreshore's future.

## MASTERPLAN PROCESS

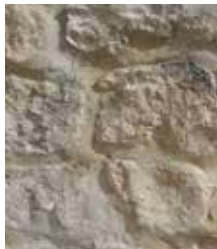


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IMAGINE IF YOU COULD....

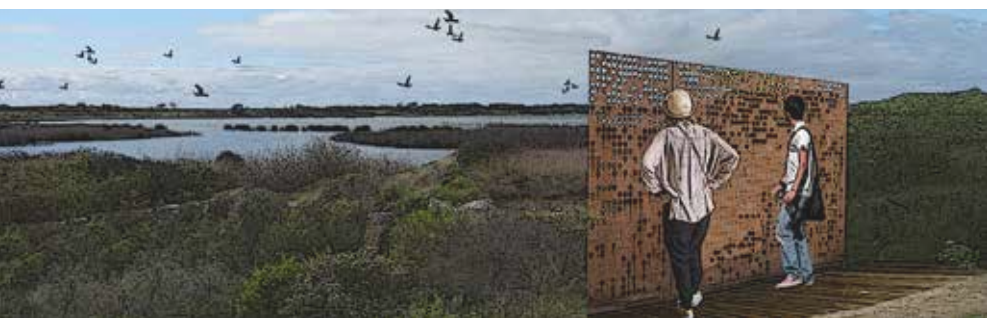


...EXPLORE THE  
NATURAL BEAUTY WHILST  
LEARNING ABOUT THE  
CULTURE AND HISTORY OF  
THE LOCAL COMMUNITIES





...ENJOY THE SPECTACULAR  
VIEWS AND CELEBRATE THE  
UNIQUE CHARACTER AND  
QUALITIES OF THE FORESHORE



...SPEND A DAY ALONG THE  
FORESHORE WITH FRIENDS AND  
FAMILY ENJOYING THE BEST  
CLAYTON BAY HAS TO OFFER



# 1. INTRODUCTION

## 1.1 PROJECT APPRECIATION

Today Clayton Bay Foreshore provides a place in which the local community, Ngarrindjeri, council, conservation groups, tourists and other stakeholders try to balance a wide variety of interests and activities. Without a robust and well considered planning and management approach for the future, the demands on the riverfront edge of Clayton Bay are likely to create conflicting social, environmental and economic impacts.

Developing a masterplan for Clayton Bay Foreshore requires an open dialogue with all those who care about Clayton Bay and its future. The consultation process described in this report aimed to establish a conversation where challenges and opportunities were heard equally and that no one voice dominated.

By considering in detail Clayton Bay, its community, visitors, traders and other stakeholders, an innovative Foreshore Masterplan has been developed that specifically meets the issues and opportunities that exist, whilst avoiding quick fixes that do not reflect the long term vision for the foreshore.



## 1.2 PROJECT OBJECTIVES

The objectives for the project aim to balance demands for recreation and nature, beauty and function, heritage and progress; creating a foreshore that continues to attract people while protecting and enhancing the natural and cultural landscapes of the area.

These include:

- To understand the existing and future issues and opportunities for the foreshore.
- To create a community and Council endorsed vision for the Clayton Bay foreshore.
- To develop a masterplan that will address issues and amplify opportunities through a holistic and balanced approach without adversely affecting the foreshore's function, amenity, natural assets or unique character.
- To promote, protect and facilitate continued maintenance of Ngarrindjeri culture and history within the Clayton Bay area.
- To develop a masterplan that reflects community aspirations and addresses community expectations and demands, whilst balancing and accommodating social, cultural, recreational, historic and environmental values.
- To develop design, planning and management proposals that will revitalise and guide future development of the Clayton Bay foreshore and its wider context.
- To identify priority works for council and the community that will guide the progressive implementation of the masterplan (based on a 10 year planning programme).
- To provide opportunities to build capacity within the foreshore while balancing natural and cultural assets and functional requirements.
- To provide a budgetary framework for the Foreshore Masterplan.



## 2.0 COMMUNITY KNOWLEDGE







## 2. COMMUNITY KNOWLEDGE

This section describes the process and results of the community engagement and public activities that were undertaken to develop this masterplan.

### 2.1 PLANNING FOR REAL CONSULTATION

In order to develop a deeper understanding of the foreshore, its community, as well as the issues and opportunities associated with Clayton Bay, a 'Planning for Real' exercise was undertaken in Clayton Bay over a 2 day period from the 10th to the 11th of October 2014.

The aim was for the project team to become immersed in the town and foreshore with a focus on engaging the community early in the master planning process.

During the 2 days in Clayton Bay, the project team also undertook extensive site analysis and mapping. By driving and walking along the foreshore, the team was able to gain an intimate knowledge of the foreshore.

Letters were sent to all rate payers and an online survey was undertaken in conjunction with the 'Planning for Real' consultation to build upon the community information.

A Facebook page was also established to support and provide information leading up to and during the 2 day event.

As with the consultation process, the survey and Facebook page provided a valuable insight into how the foreshore works. It also aided in reaching a wider audience including those that were unable to attend the consultation session.

### 2.2 PLANNING FOR REAL PROCESS

During the project team's visit, the Clayton Bay Community Hall was transformed into a mobile design studio where the community could drop in to:

- Communicate their issues and ideas
- View the translation of their ideas into opportunities and future directions
- Provide feedback on preliminary plans illustrating their ideas

The consultation process focused on building community ownership for the project, and ensuring that the strategic direction of the masterplan was driven by the unique needs of Clayton Bay's community.

Various mapping and engagement exercises were undertaken that enabled members of the community to identify and map attributes, issues and important characteristics along the foreshore.

A black and white photograph of a man standing in a room, looking at a large map or display on the wall. The room appears to be a community hall or a meeting space. There are tables and chairs visible in the background.

OVER 2 DAYS

100+ COMMUNITY MEMBERS

85 FACEBOOK 'LIKES'

14 ONLINE SURVEYS

## 2.3 CONSULTATION ON THE DRAFT MASTERPLAN

These included:

- Function and Facilities
- Character and Culture
- Big Ideas for the Foreshore
- Issues and Opportunities
- Assessing Landscape Values (natural, scenic, recreation, community and social)
- Assessing Social Landscapes (quiet spaces, places of individual activity, places of group activity and congregation)
- Community 'Big Ideas' for the Foreshore

As the 'Planning for Real' progressed, community members were able to see how their ideas were being translated into plans for the foreshore and could provide immediate feedback on the plans and proposed directions.

The consultation concluded with a presentation of the findings back to members of the community.

These activities provided the project team with a detailed understanding of how the foreshore is used, as well as what the community wants and which places are valued by people and for what reasons.

Analysis of this information is provided over the following pages.

The Planning for Real process was supplemented by a further round of public consultation on the draft masterplan held over a 4 week period during February and March 2015. The draft plan was presented to the community at a public meeting held in Clayton Bay on 7 February 2015 attended by approximately 60 community members.

A number of online and written submissions were also received during this period and the feedback received is reflected in this final report.





## 2. COMMUNITY KNOWLEDGE

### 2.4 CURRENT / FUTURE ACTIVITIES

The community were asked to note what activities they enjoyed participating in along the foreshore and what activities would they like to enjoy or experience in the future.

The activities that the community would like to enjoy or experience did not really change from those already undertaken which demonstrates the recreational diversity of Clayton Bay and that these existing activities need to be supported. The most significant addition was a request for nature play and interpretive signage.

The consultation results demonstrate that the community already enjoys a wide variety of activities. The future planning of the foreshore should not focus on filling areas with additional activities, but should aim to make small changes and adjustments that enhance capacity and increase participation.

### ACTIVITIES YOU CURRENTLY ENJOY.....

- Fishing
- Canoeing
- Bike riding
- Sailing
- Watersports
- Bird watching
- Kayaking
- Photography
- BBQ's with friends
- Walking / running
- Swimming
- Relaxing / Quiet reflection
- Cricket
- Dog walking



### ACTIVITIES YOU WOULD LIKE TO ENJOY IN THE FUTURE...

- Continued focus on the environment and diversity of Clayton Foreshore
- Improve access to the water (balancing swimming access with habitat value) increasing access to the water for sailing and kayaking
- Improve the Oval and recreation area (seating, shade, performance area)
- Improved opportunities for bird watching
- Increase opportunities for active recreation (fitness equipment, bike jumps, skate parks...also requests for no skate park...need to balance)
- Maintain and improve the trails and pathways
- Develop signage and interpretation (building understanding of Clayton Bay)



## 2. COMMUNITY KNOWLEDGE

### 2.5 CHARACTER OF THE FORESHORE

#### WHAT YOU SAID: PERSONALITY NOW . .

When asked about the personality of the Clayton Bay foreshore people described how peaceful and tranquil the foreshore is, but how rapidly this can change putting diverse and extreme pressures on the foreshore during peak times.

This depiction of Clayton Bay allowed the project team to understand how the community view the place today and how important it is to the community to retain the current character of the foreshore.

"A MULTI-DIMENSIONAL  
PERSONALITY WHO CAN BRING  
CONFLICTING ASPECTS OF HER  
PERSONALITY TOGETHER"

QUIET  
TRANQUIL  
PEACEFUL  
REJUVENATING

"...LIKE A DEAR  
GREAT AUNT.  
GENTLE  
AND RETIRING..."

"QUIET 90% OF THE TIME  
BUT VERY NOISY  
AT PEAK TIMES...  
HAS BIPOLAR"

#### WHAT YOU SAID: PERSONALITY INTO THE FUTURE . .

In the future the community stated they would like to see the foreshores personality stay the same with only minor changes.

People appreciate and value the natural and scenic settings. It is clear an abrupt change to the character of the Clayton Bay foreshore is not desired, but rather smaller interventions that add to, rather than take away from the existing character.

"IT NEEDS  
A GOOD  
SCRUB"

"...JUST A  
LITTLE  
MORE  
LIVELY..."



## 2. COMMUNITY KNOWLEDGE

### 2.6 BIG IDEAS

During the community drop-in sessions and online survey, community members were asked to share their big ideas for the Clayton Bay foreshore.

Many 'big ideas' were centred on balancing environmental concerns with recreational needs (enhancement, protection and maintenance) as well as increasing access and connections through interpretation, improved trails, establishing a connected trail network along the foreshore and through the town.

Some members of the community expressed the desire for leaving things as they are and limiting change. However, taking action to protect the character of the foreshore is not the same as doing nothing.

Detailed actions are required to ensure that the unique character and qualities of the foreshore are retained in the face of expected changes such as an increase in visitor numbers.



#### **BALANCE ENVIRONMENT**

Enhance, protect and maintain the natural environment and embrace community desire to manage the foreshore appropriately.



#### **ACCESS**

Improve water access and safety (canoe, kayak, boat, swimming, reed removal)



#### **CONNECTIONS**

Maintain trails for walking, cycling and promote connections between existing destinations



#### **ACTIVE**

Create and enhance recreation, play and fitness opportunities (nature play, skateboarding, fitness)



#### **ART + INTERPRETATION**

Build upon the communities artistic talents and develop way finding and interpretative signage that celebrates the cultural, historic and ongoing significance of the foreshore.



#### **CAPACITY**

Manage existing facilities and balance capacity with future demand (boat ramps, toilets, shelters)

## 2. COMMUNITY KNOWLEDGE

### 2.7 LANDSCAPE VALUES

Using numbered dots the community were asked to map and express where they experienced different landscape values along the foreshore. The community were asked to map the following values:

- Natural value (locations where human actions are not prominent)
- Scenic value (locations or viewpoints that are picturesque or could be seen as beautiful e.g. lookouts, rocky outcrops and lake views)
- Recreation value and community/ social value (areas used by the community for leisure, play, sport and other past times e.g. canoeing, trails, playgrounds)
- Community/Social Value (areas that promote a sense of community or allow for social gatherings e.g. picnic areas, halls)

Recognising these values and understanding the capacity of these areas is an important consideration for the development of the masterplan.

The mapping is solely based on the locations provided during the Planning for Real process (refer community mapping outcome image below). Feedback received during the subsequent public consultation process on the draft masterplan demonstrated that the cliff top and distinctive Dunn's Lagoon area are also considered to be of high natural value

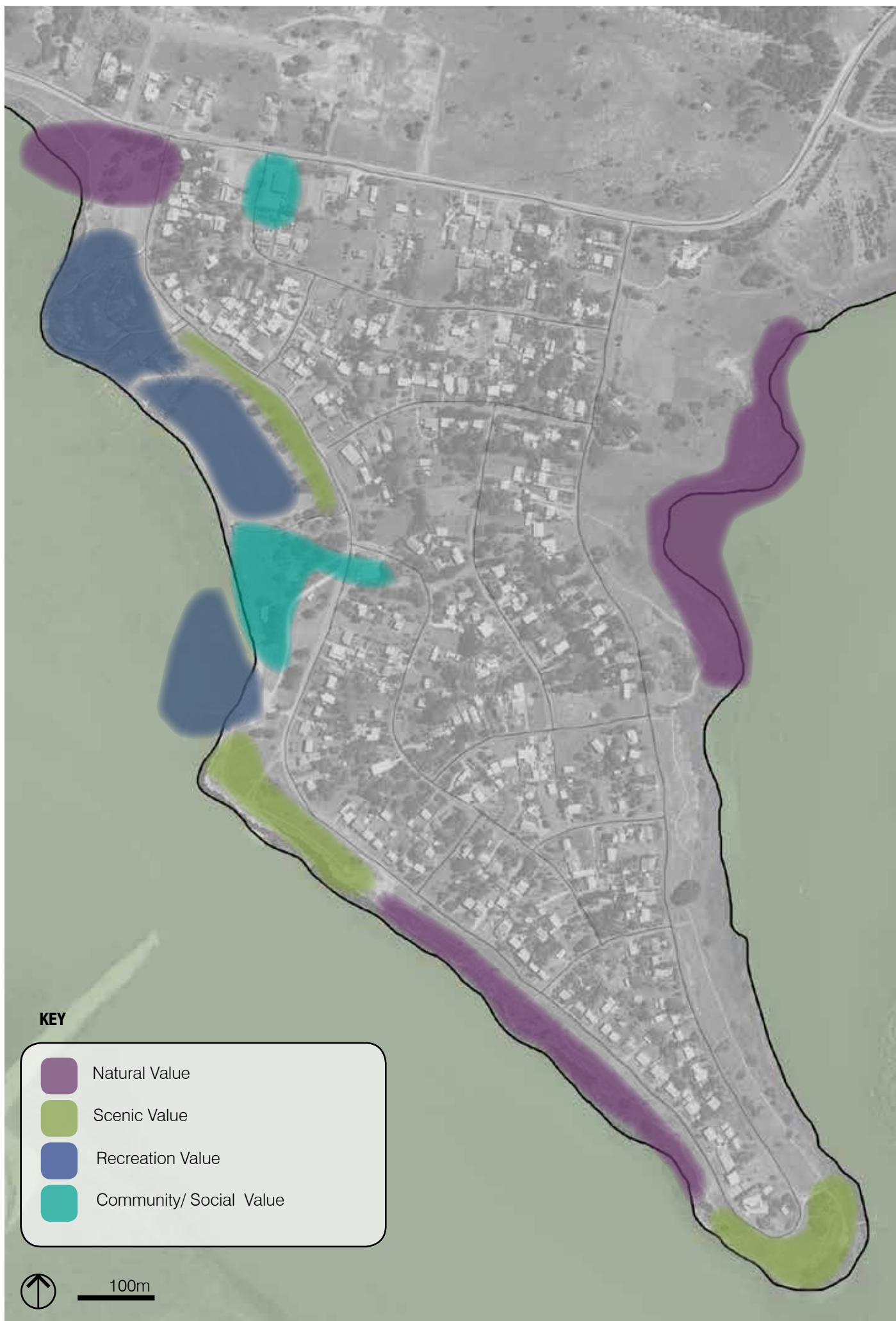
Further information regarding landscape value is demonstrated within section 3 of the report.

### COMMUNITY MAPPING OUTCOME



### KEY FINDINGS

- Eastern side of the peninsula provides areas of natural landscape value
- Western side of the peninsula provides recreational value mainly associated with the boat ramp, swimming area and oval
- Clearly defined landscape characters along the foreshore
- Defined landscape characters act as barriers, need to develop and promote transitional landscape links and connect areas
- Need to understand capacity of existing landscape areas and consider limitations of each landscape character.
- Significant landscape diversity within close proximity (100m-1km) provides an opportunity to link landscape zones and 'close the loop' around the peninsula
- Cramped areas of recreational and community/ social value. (Need to increase capacity and function to meet future demands)





## 2. COMMUNITY KNOWLEDGE

### 2.8 SOCIAL LANDSCAPES

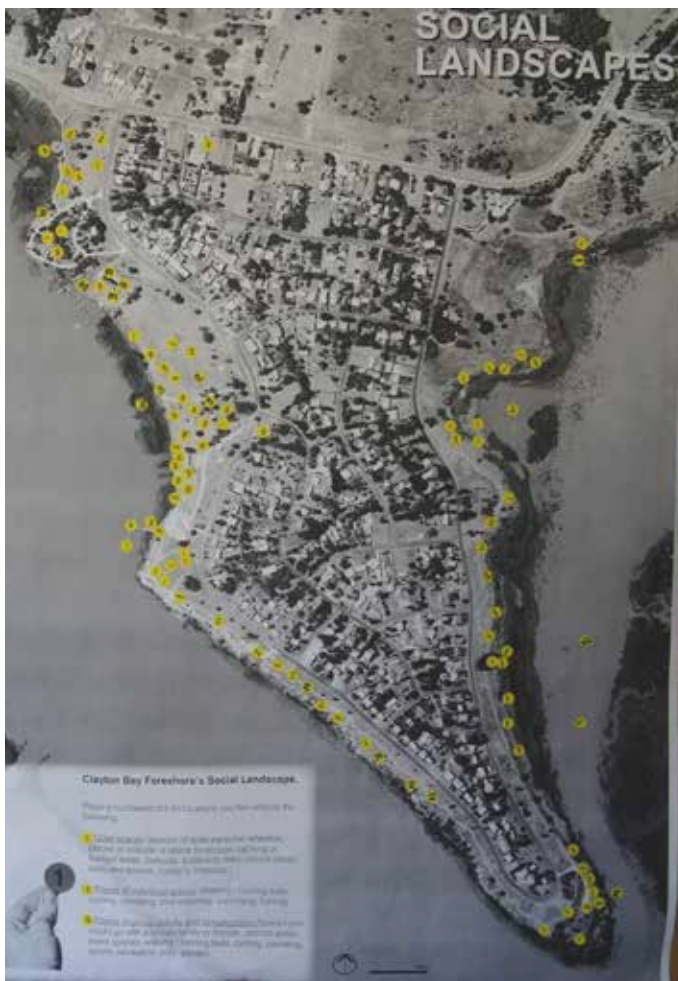
Using numbered dots mapping, the community were also asked to express their opinion on areas that provided the following:

- Quiet spaces (Places of quiet personal reflection, places of solitude, a space to escape, calming or tranquil areas, lookouts, a place to read, natural areas, secluded spaces, cubby's, hideouts)
- Places of individual activity (Walking / running trails, cycling, canoeing, bird watching, swimming, fishing)
- Places of group activity and congregation (Spaces you would go with a group/ family or friends , picnic areas, event spaces, walking / running trails, cycling, canoeing, sports, recreation, play, games)

The role of the mapping exercise aimed at developing an understanding of the connection between social activity and landscape character.

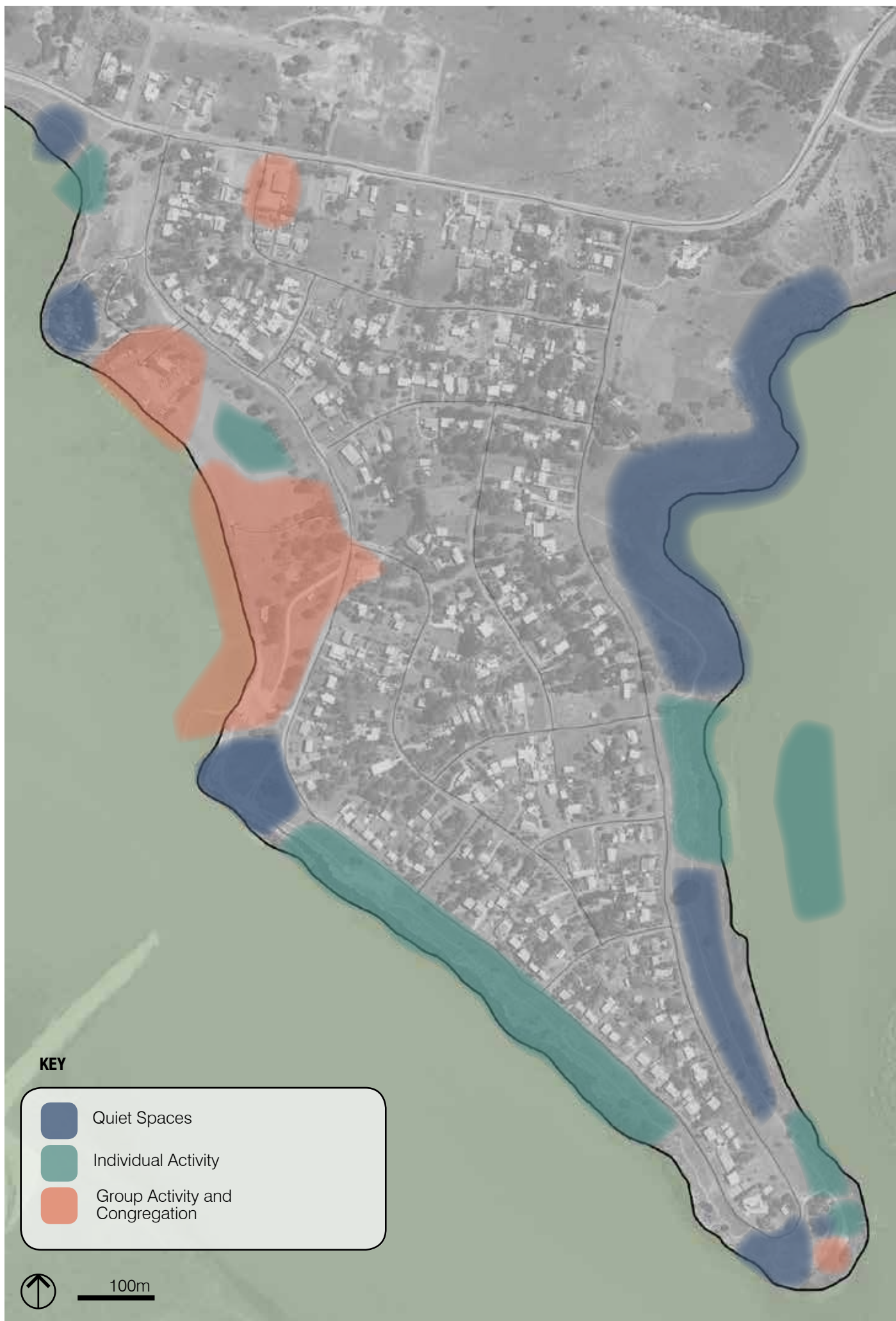
The project team were able to understand the communities perception of areas that provided a range of functions.

### COMMUNITY MAPPING OUTCOME



### KEY FINDINGS

- Alignment of social use with landscape character, reinforces importance of retaining the existing landscape character
- The boat ramp, playspace and oval facilities provide opportunities for community congregation and recreation on the western side of the peninsula. Need to balance capacity with management, maintenance and future development
- Eastern peninsula reinforces the need to maintain existing character and a sense of solitude
- Need to maintain separation between town and foreshore to reinforce foreshore landscape character
- Continue to restrict development on coastal edge outside of oval area
- The south and eastern foreshore highlights the need to balance future capacity to ensure that the unique qualities of existing spaces are maintained and that opportunities for solitude are not lost



## 2. COMMUNITY KNOWLEDGE

### 2.9 ISSUES AND OPPORTUNITIES

Using numbered dots, the community were asked to express their opinion on where they considered the issues and opportunities along the foreshore to be.

Through this mapping exercise the project team was able to identify problems, explore potential solutions and witness the debate between the community around perceived conflicts which need to be addressed in the masterplan.

Issues and opportunities centred on a number of key themes:

- **Access, Links and Function**
- **Natural Environment + Impact**
- **Amenity, Infrastructure and Future Development**
- **Art + Interpretation**
- **Maintenance + Management**
- **Conflicts to be resolved**







## 2. COMMUNITY KNOWLEDGE

### 2.10 SUMMARY OF ISSUES AND OPPORTUNITIES

● Issues    ● Opportunities

#### Access, Links and Function

- Impact of reed growth on lake edge access for water based recreation
- Impact of unrestricted vehicular access to cliff and footpaths
- Limited capacity of the boat ramp and launch facilities creating conflicts between user groups (boats and fishers)
- Need to enhance and connect the walking trails and pathways
- Potential to develop kayak/ canoe launch facilities particularly around the point
- Increasing function of oval foreshore (increased swimming beach, boat pull in and kayak launches while maintaining reeds for erosion control), as well as habitat and cultural value

#### Maintenance + Management

- Maintenance of natural areas (weed control and landscape amenity)
- Fear of snakes and the need for a management response
- Retain amenity of large trees adjacent to Dunns Lagoon as part of native vegetation regeneration
- Embrace community capacity to assist with maintenance and management

#### Natural Landscape + Environmental Impacts

- Impact of motor boats and jet skis on the environment (erosion, noise, wildlife, user conflicts)
- Stability of river cliff (collapse and undercutting)
- Amenity and safety of drainage ditches
- Protect, enhance and maintain native vegetation along southern and eastern foreshore
- Recognise the significance of Dunn's Lagoon (Part of RAMSAR site and potential sanctuary status)
- Potential for tree renewal programme ('swap and grow') within township



### **Amenity, Infrastructure and Future Development**

- Review speed limit to main road and town access
- Need for litter bins (peak times and windblown rubbish)
- Closure of the toilets at Old Clayton
- ● Expansion of existing caravan park facilities (and the potential impact on turtle hatchery area)
- Increase facilities and amenity of the oval and surrounding areas
- Upgrade boat ramp and Gloria Jones Reserve at Old Clayton to meet future demands
- Increase recreational facilities at the oval (nature play, shade, bike track, skateable area/skate park, parking and beautification)
- Potential to increase facilities such as seating, shade, walking trail, signage and bird hides

### **Art + Interpretation**

- Increase opportunities for public and community art
- Increase signage and interpretation to enhance understanding of environment, culture and heritage

### **Potential Conflicts to be Resolved**

- Reed removal
- Maintenance of views and management of landscape
- Pedestrian and vehicular conflicts
- Development demands and landscape capacity

*(Not all issues and opportunities identified by the community as part of the community consultation have been reflected in the Foreshore Precinct Plans or Potential Projects.)*





## 3.0 SITE ANALYSIS












## 3. SITE ANALYSIS

### 3.1 LANDSCAPE CHARACTER

The Clayton Bay foreshore has defined landscape characters within relatively close proximity. The diverse range of landscape character was mapped as part of a site visit and was developed based on community feedback received during the planning for real process.

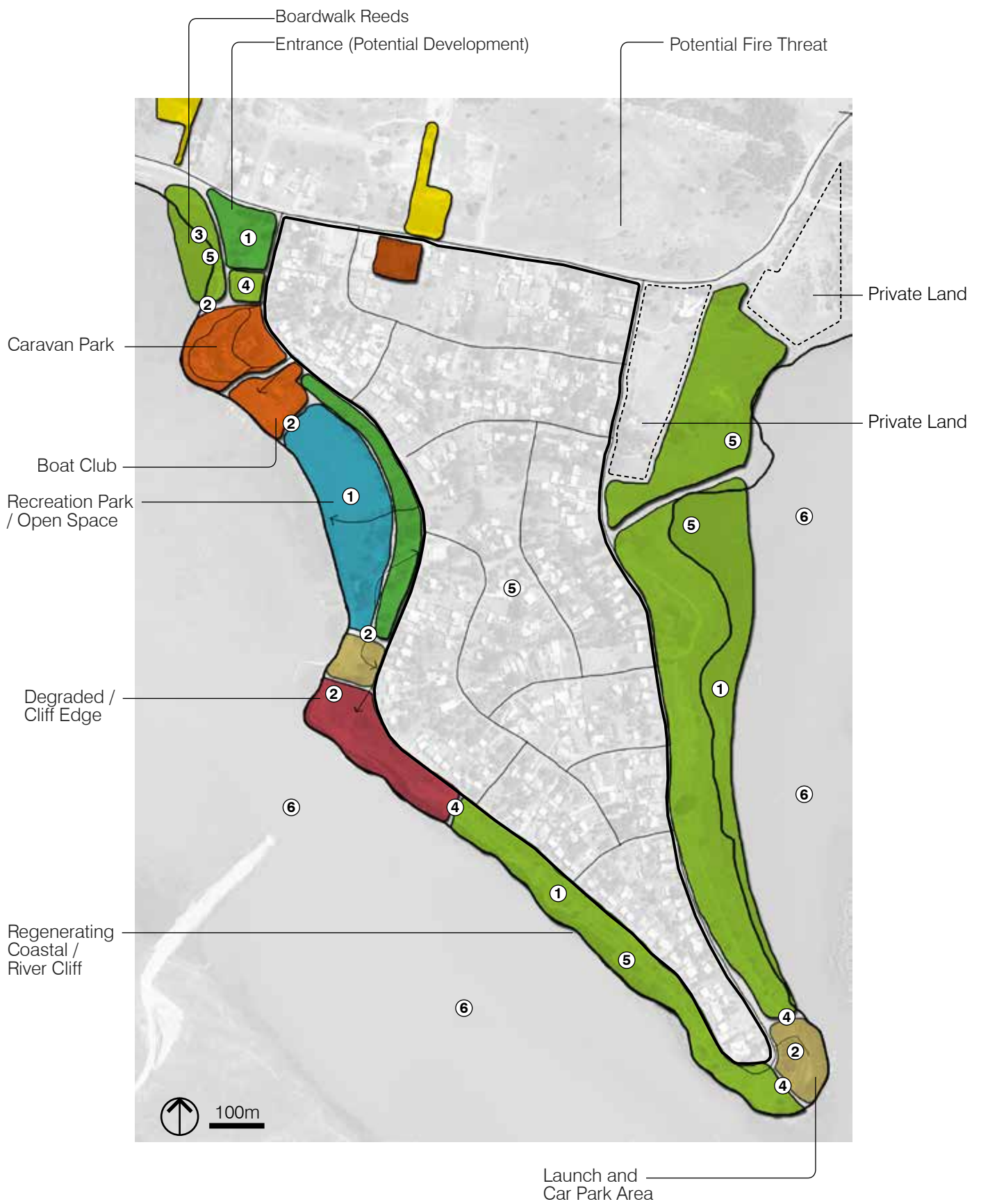
-  Amenity Landscapes
-  Recreation / Active areas
-  Recreation / Infrastructure
-  Commercial / Community Lease
-  Degraded Landscapes
-  Natural and Regenerated Landscapes
-  Council Land
-  Town

### FINDINGS

- ① Distinct landscape areas (recreation, cliff top, natural lake)
- ② Importance of transitional landscapes (buffers)
- ③ Need to develop landscape sense of arrival
- ④ Narrow strip of natural landscape character around the peninsula (potential to be impacted significantly and eroded)
- ⑤ Important habitat areas for flora and fauna
- ⑥ Acknowledge importance of Coorong and Lower Lakes as a RAMSAR site, and in particular, the ecological significance of Dunn's Lagoon including Ducks Hospital and Snug Cove.



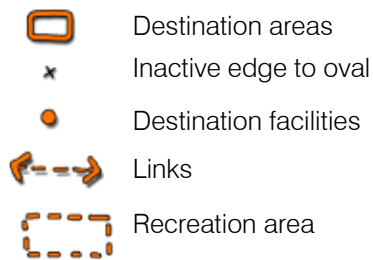




# 3. SITE ANALYSIS

## 3.2 EXISTING FACILITIES

A range of destinations and facilities are already scattered along the foreshore. However, the connection between destinations is fragmented resulting in isolated facilities. In addition, the current function of the oval is impacted by lack of active edges with restricted access to the oval as well as the waters edge.



- |                            |   |
|----------------------------|---|
| ① Boardwalk                | ⑪ Jetty and boat ramp (Public)                      |
| ② Caravan park             | ⑫ Car park  |
| ③ Boat club                | ⑬ Lookout   |
| ④ Jetty and boat ramp (BC) | ⑭ Car park  |
| ⑤ Playground               | ⑮ Jetty   |
| ⑥ Sails                    | ⑯ Canoe launch (Informal)                           |
| ⑦ Toilet block             | ⑰ Community hall, tennis courts, garden and nursery |
| ⑧ Shelter / BBQ            | ⑱ Seating nodes                                     |
| ⑨ Swim beach               |   |
| ⑩ Launch area              |   |

## FINDINGS

- Isolated destinations
- Inactive edges to oval impact on recreation value and reduce the oval's ability to function as a destination
- Need to link destinations to increase function
- Opportunities to improve facilities (seating/ signage) and build capacity throughout the foreshore





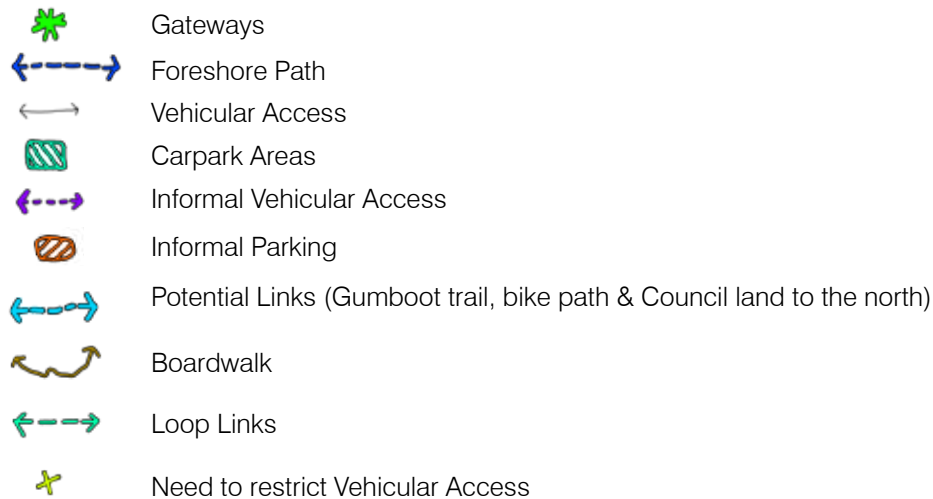


## 3. SITE ANALYSIS

### 3.3 CONNECTIONS

The existing foreshore path network provides a series of segmented trails. The rationalisation and formalisation of the existing path network will deliver a series of connected loop walks that will facilitate better access and connection to the foreshore.

The masterplan will need to consider the linking of these trails to develop a continuous loop link.



### FINDINGS

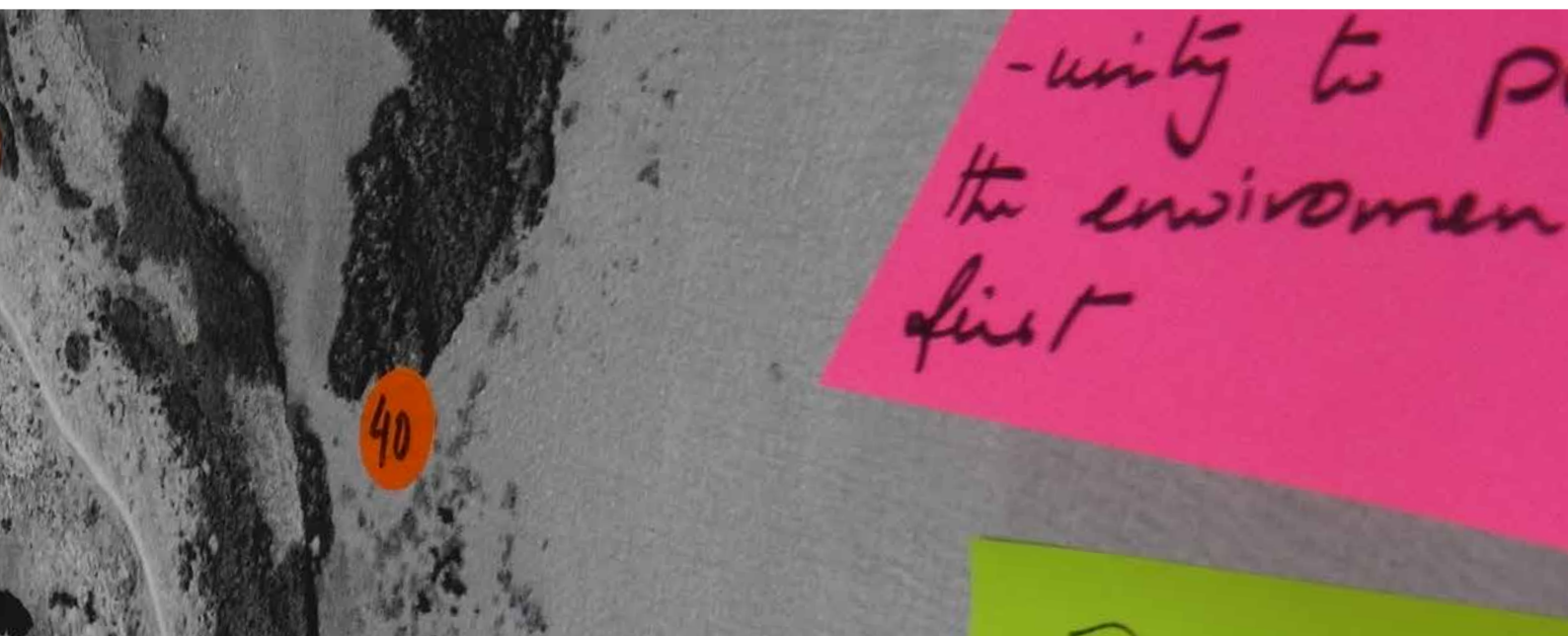
- ① Increase sense of arrival and connection to boardwalk
- ② Improve links through caravan park and boat club
- ③ Review access and conflicts to boat club boat ramp
- ④ Consider potential of cycle link (on road with increased signage)
- ⑤ Restrict informal access to cliff top (review parking demands)
- ⑥ Increase pedestrian access to cliff top
- ⑦ Review vehicular access and parking
- ⑧ Restrict vehicular access to cliff top landscape
- ⑨ Maintain footpath trail
- ⑩ Potential to reinforce and maintain Gumboot track
- ⑪ Develop and promote links across peninsula (close the loop)





## 4.0 FORESHORE PRECINCT PLANS







# 4. FORESHORE PRECINCT PLANS

## 4.1 PLANNING PRINCIPLES

In response to the community input and site analysis, a set of planning principles have been developed in order to guide future design, development and investment along the foreshore.



### CELEBRATING DIVERSITY

- Recognise the diverse destinations and landscape characters that Clayton offers (open space, cliff top promenades, natural havens)
- Understand what is required to maintain, protect and enhance this diversity



### CONNECTING PLACES

- Reinforce and create connections between places, landscapes and destinations
- Rationalise and improve pedestrian and vehicular access to destinations, facilities and places
- 'Complete the loop' – create loop walks and connections that exploit the existing links across the peninsula



### ACHIEVING BALANCE

- Achieve a balanced approach to development in Clayton Bay and understand that to achieve balance, compromise is needed
- Achieve a balanced approach to planning and design such as, locals vs visitors (community vs. tourism), environment vs infrastructure
- Protect and enhance the environment whilst maintaining views
- Protect Clayton's unique character



### ENHANCING CAPACITY

- Understand what facilities, assets and development is required to support emerging community needs
- Plan and deliver appropriate responses, infrastructure and facilities that improve future capacity while not adversely affecting the existing character of Clayton
- Embrace community capacity to care for the foreshore



### **ENCOURAGING UNDERSTANDING**

- Promote an understanding of Clayton's environment, history and culture
- Encourage visitors and locals to respect and understand the valuable work undertaken by the community
- Celebrate Clayton's unique qualities
- Provide signage and interpretation that provides knowledge and promotes understanding

## 4. FORESHORE PRECINCT PLANS

### 4.2 MASTERPLAN PRECINCTS

The development of the precinct plans for Clayton Bay has been guided by community input and site analysis. The precinct plans represent a clearly defined set of opportunities that will ensure that the detailed design of the foreshore delivers outcomes that balance the following.

1. Maintenance and improvement of existing infrastructure
2. Development of new infrastructure
3. Improvement and maintenance of vegetation and landscape amenity
4. Improvement of open space and recreation value

For the purpose of developing precinct plans, the foreshore has been broken down into six precincts as follows:

1. Boardwalk and caravan park
2. Oval foreshore and boat ramp
3. Lookout and clifftop
4. Clifftop edge and boat mooring
5. Dunns Lagoon and gumboot trail
6. Old Clayton Bay

#### KEY



Precinct Plans



Management Area\*

*\*For clarity the existing management areas are the same as those contained in the Clayton Foreshore Vegetation Management Plan (2004). Further details about the future environmental management of these areas is provided in section 5.*



200m





## 4. FORESHORE PRECINCT PLANS

### 4.3 BOARDWALK AND CARAVAN PARK PRECINCT

- The formalisation of a continuous pedestrian link will play an important role in connecting this precinct with the remainder of the Clayton Bay foreshore. The masterplan recommends a new landscape entrance to Clayton with a new car park which strengthens the connection to the existing boardwalk and avoids pedestrian and vehicle conflicts.
- The pedestrian link also focuses on improving access through the existing caravan park as well as identifying opportunities for links to connect Clayton Bay with Old Clayton.
- Improvements to the existing boardwalk, including seating and signage to strengthen its role as a key destination. Increased landscape amenity including trees and shrubs to the adjacent open space surrounding the boardwalk will increase the landscape character of the foreshore creating a greater number of spaces for the community and visitors to enjoy.
- These opportunities are balanced with environmental management of the area and the need to recognise sensitive turtle hatchery areas.

### 1.1 PRECINCT LOCATION PLAN




- An increased vegetation buffer to the corner of Alexandrina Drive and Island View Drive (selectively planted to minimise impact on views)
- The shared path link returns around the boat club to remove pedestrian conflicts as boat owners launch their boats. The pedestrian link will then make its way back to the foreshore edge.



# 4. FORESHORE PRECINCT PLANS

## 4.4 BOARDWALK AND CARAVAN PARK PRECINCT

### KEY

-  New infrastructure
-  Improvements to existing infrastructure
-  Improve/ maintain vegetation and landscape amenity
-  Improve/ maintain open space
-  Connected Foreshore walk
-  Bike way (shared space access)
-  Vehicular access and parking
-  Interpretative signage
-  Improved amenities
-  Viewing platform / lookout
-  Protect/promote natural environment
-  Boat launch
-  Improved disability access
-  Landscape plantings / revegetation
-  Cycling lane/ connection
-  Pedestrian Foreshore walk
-  Improved access links
-  Improve / maintain water access
-  Restrict vehicular access
-  Emergency access/ exit (Boat Club)
-  Vehicular access
-  Improved signage
-  Trail head

### PRECINCT PLAN ACTIONS

1. Increase facilities at existing boardwalk (signage, interpretation, seating, elevated viewing areas). Develop boardwalk as a destination which provides access to nature.
2. Develop foreshore pedestrian link with improved signage and pedestrian legibility
3. Improve connection to and through caravan park (define public and semi-private areas) and boat club
4. Establish pedestrian links to Old Clayton (explore feasibility of off road corridor)
5. Create vehicular access with parking area to increase access to boardwalk
6. Increase vegetation to reduce vehicular impact from corner cutting and increase signage to create a landscaped entrance to town
7. Improve amenity of existing open space with potential opportunities for seating and shelter
8. Provide link to boardwalk and open space (improve signage, footpath, car park and trail head)
9. Support seasonal expansion of caravan park and opportunities for informal camp sites
10. Review and manage impact of possible caravan park extension on turtle hatchery (balance against seasonal camping)
11. Improve connection from car park to boat club with a particular focus on stepped access to caravan park edge
12. Explore potential for emergency (marine rescue) access using current boat club ramp
13. Contain existing footprint of boat club
14. Maintain overflow boat parking on oval to cater for peak events
15. Develop 'on road' cycle loop
16. Maintain community focus of hall, courts, community garden
17. Explore potential to use hard stand for temporary skate facility or other recreational activity uses (temporary)
18. Improve landscape planting treatments to edge of sailing club and park edge
19. Retain grass pathway for pedestrian access only through boat club foreshore and ensure footpath through sail club does not impact on existing operational areas
20. Explore potential for revegetation of and pedestrian link to, Council land north of Alexandrina Drive

"DEVELOP A GATEWAY ENTRANCE TO THE TOWN THAT REINFORCES A SENSE OF ARRIVAL"





## 4. FORESHORE PRECINCT PLANS

### 4.5 OVAL FORESHORE PRECINCT

The design of this precinct focuses on increasing recreational opportunities, improving access and limiting vehicular conflicts.

- The improvement of the landscape surrounding the oval will provide opportunities to beautify and increase amenity (shade, revegetation, wind breaks) whilst minimising the impact on residential views
- The existing oval is to be maintained and used for sports both formalised and casual as well as community events and temporary boat parking for the sailing club
- A carpark is recommended to the southern end of the oval to provide additional access as well as improving access to the playspace and proposed amenities at the waters edge
- The potential for nature play between the existing playspace, oval and waters edge strengthens the activation of the precinct and increases opportunities for recreation.
- Improved links to existing amenities is proposed by way of new footpaths as well as increased landscape vegetation

### 1.2 PRECINCT LOCATION PLAN



- The capacity of the existing car park is increased by bituminising the surface and formalising parking spaces. In addition the entrance road will be converted into 'one way' access to improve circulation and reduce pedestrian / vehicular conflicts



## 4. FORESHORE PRECINCT PLANS

### 4.6 OVAL FORESHORE PRECINCT

#### KEY

	New infrastructure
	Improvements to existing infrastructure
	Improve/ maintain vegetation and landscape amenity
	Improve/ maintain open space
	Connected Foreshore walk
	Bike way (shared space access)
	Vehicular access and parking
	Interpretative signage
	Improved amenities
	Upgraded playspace
	Protect/promote natural environment
	Boat launch
	Improved disability access
	Landscape plantings / revegetation
	Cycling lane/ connection
	Pedestrian Foreshore walk
	Improved access links
	Improve water access
	Restrict vehicular access
	Emergency access/ exit (Boat Club)
	Vehicular access
	Improved signage
	Trail head

#### PRECINCT PLAN ACTIONS

1. Develop "on road" cycle path connection between precincts
2. Improve landscape amenity to park edge. If planting trees, develop tree grouping in east / west orientated clusters to maximise shade whilst minimising impact on views.
3. Develop shelter belt planting around existing planting areas (wind breaks, natural shade)
4. Retain reed banks to create areas that provide erosion control and natural habitats
5. Retain and manage open space for recreation and community events (including overflow parking as approved by council)
6. Improve informal access between car park, toilet, playground and recreational space
7. Develop opportunities for watercraft access (kayak, canoe, sail, boat) using dogleg access through reeds (subject to legislative approvals)
8. Improve pedestrian footpath to toilets
9. Upgrade and rationalise car park (restrict informal vehicular parking and increase trailer parking)
10. Explore potential for mooring poles for Oscar W and marine safety lighting (restricted light spill)
11. Develop one way entrance to car park
12. Maintain vehicle access to front of Sails to allow trailer turn-around access to boat ramp.
13. Allow informal trailer parking to grass verge during peak events
14. Improve quality and function of swimming area by relocating to area of sandy rather than rocky bottom (allow reeds to reclaim existing swimming area).
15. Develop nature play opportunities that build on existing value of playground.
16. Emergency access/ exit to Boat Club
17. Retain grass pathway for pedestrian access only through boat club foreshore

"BUILD THE CAPACITY OF THE FORESHORE THAT BALANCES ENVIRONMENT, INFRASTRUCTURE, CULTURAL AND COMMUNITY NEEDS "





## 4. FORESHORE PRECINCT PLANS

### 4.7 LOOKOUT CLIFF EDGE PRECINCT

- The design of this precinct focuses on the proposed formalisation of the existing lookouts, which will strengthen the amenity and function of the area while removing the potential for ongoing erosion of the fragile limestone ecosystem and cliff edge.
- The limiting of informal vehicular access is encouraged by restricting access from existing parking space as well as forming a small carpark at the lookout.
- The formalisation of parking areas will reduce vehicular impact on the fragile environmental systems.

### 1.3 PRECINCT LOCATION PLAN



- Improved signage and vehicular deterrents (rocks, landscape buffers and logs) will all play a crucial role in the preservation of the cliff edge and remove the likelihood of incidents, cliff failure or future loss of habitat.
- Interpretive and way finding signage will encourage greater awareness of the surrounding area, including nearby destinations, walking trails, information on flora and fauna as well as Indigenous and European cultures.



## 4. FORESHORE PRECINCT PLANS

### 4.8 LOOKOUT CLIFF EDGE PRECINCT

#### KEY

	New infrastructure
	Improvements to existing infrastructure
	Improve/ maintain vegetation and landscape amenity
	Improve/ maintain open space
	Connected Foreshore walk
	Vehicular access and parking
	Interpretative signage
	Increased facilities
	Viewing platform / lookout
	Protect/promote natural environment
	Improved disability access
	Landscape plantings / revegetation
	Cycling lane/ connection
	Pedestrian Foreshore walk
	Improved access links
	Restrict vehicular access
	Vehicular access
	Improved signage
	Trail head

#### PRECINCT PLAN ACTIONS

1. Reinforce walking trail (limit vehicular access) and improve signage
2. Explore potential of small car park with disabled park (limit informal vehicular access to wider area)
3. Undertake woody weed control and revegetation to improve natural landscape character of area
4. Restrict vehicular access (rocks and landscape treatments)
5. Opportunities for cliff lower area to provide pedestrian access with potential for fishing area (signage, seating, pontoon)
6. Continue development of lookout (reinforce destination) improve seating, signage, interpretative wayfinding, landscape treatment, public art.
7. Formalise car park with disabled park and additional 8 parks (reduce informal vehicular access with particular focus to cliff edge parking)
8. Footpath connection realigned to form direct link between lookouts away from cliff edge
9. Develop seating areas with focus on revegetation, signage, interpretation. Improve disabled access where possible.
10. Develop Trail Heads with focus on signage / revegetation
11. Increase landscape treatment signage to cliff edge to reduce cliff safety issues (pedestrian, vehicular)

"ENHANCE THE CAPACITY OF EXISTING LOOKOUTS TO ALLOW THE VIEWS AND VISTAS OF CLAYTON TO BE CELEBRATED "





## 4. FORESHORE PRECINCT PLANS

### 4.10 THE POINT PRECINCT

The design of this precinct focuses on the car park at the point:

- Improving access to and from the water and maintaining the ecological value
- The improved capacity for water access for canoe and kayaks enhances the port as a destination for activities to occur along the foreshore taking pressure off the main boat ramp and Ducks Hospital
- Improved links from the existing walking trail allow for interaction with the waters edge and reduce pedestrian/ vehicular conflicts
- The development of a trail head for the Snug Cove Trail reinforces the existing trail network and provides opportunities for interpretative signage, wayfinding and art that reflects the cultural, historical and environmental elements of the Clayton Bay foreshore

### 1.4 PRECINCT LOCATION PLAN























## 4. FORESHORE PRECINCT PLANS

### 4.10 THE POINT PRECINCT

#### KEY

-  New infrastructure
-  Improvements to existing infrastructure
-  Improve/ maintain vegetation and landscape amenity
-  Improve/ maintain open space
-  Connected Foreshore walk
-  Vehicular access and parking
-  Interpretative signage
-  Viewing platform / lookout
-  Protect/promote natural environment
-  Improved disability access
-  Cycling lane/ connection
-  Pedestrian Foreshore walk
-  Improved access links
-  Improve water access
-  Restrict vehicular access
-  Vehicular access
-  Improved signage
-  Trail head

#### PRECINCT PLAN ACTIONS

1. Maintain native landscape character (refer section 5 for details)
2. Review impact of existing drainage infrastructure on access, improve landscape amenity, improve drainage crossing points
3. Provide stepped access to improve pedestrian trail access to car park and point (continue trail)
4. Improve capacity for canoe, kayak access using dogleg through reeds (increase wayfinding, markers in water)
5. Maintain 24 hour jetty mooring
6. Provide emergency ladder
7. Rationalise car park layout to improve circulation
8. Develop trail head for Snug Cove and Gumboot trails, provide information on the area, develop infrastructure to limit vehicular access to entrance of trail
9. Install signage (no wash, speed limits, restrictions)
10. Reinforce return loop link (east - west links) with footpath upgrades and signage
11. Promote the significance of Dunns Lagoon as part of Coorong and Lower Lakes RAMSAR site - explore sanctuary status
12. Remove mature aleppo pine to address weed threat

[illegible]



## 4. FORESHORE PRECINCT PLANS

### 4.11 DUNNS LAGOON PRECINCT

#### KEY

-  New infrastructure
-  Improvements to existing infrastructure
-  Improve/ maintain vegetation and landscape amenity
-  Improve/ maintain open space
-  Connected Foreshore walk
-  Interpretative signage
-  Viewing platform / lookout
-  Protect/promote natural environment
-  Cycling lane/ connection
-  Pedestrian Foreshore walk
-  Improved access links
-  Improve water access
-  Restrict vehicular access
-  Drainage line
-  Vehicular access
-  Trail head

#### PRECINCT PLAN ACTIONS

1. Develop bird hides and explore seating opportunities
2. Review impact of existing drainage line, improve landscape amenity and reduce erosion
3. Maintain native vegetation (see section 5 for details)
4. Promote significance of Dunns Lagoon as part of RAMSAR Coorong site (pursue sanctuary status) for entirety of Dunns Lagoon, including Duck Hospital and Snug Cove
5. Improve maintenance of Gumbboot Trail
6. Active management of weed front north of drainage ditch
7. Management of landscape to reduce fire threat (removal of *Acacia saligna*)
8. Relocate speed limit sign east of town entrance (50kmph) to improve safety (pedestrians and vehicles)
9. Reinforce return walking/ cycle loop link (east west linkage)
10. Provide off road parking on verge to improve pedestrian access to walking trails
11. Remove mature Aleppo pines to address weed threat
12. Liaise with Crown Lands regarding ongoing maintenance and management of triangular shaped land parcel under care and control of the Minister for Sustainability, Environment and Conservation







"STRENGTHEN TRAILS THAT FACILITATE INTERACTION AND EXPERIENCES WITH THE NATURAL ENVIRONMENT "



## 4. FORESHORE PRECINCT PLANS

### 4.12 OLD CLAYTON BAY PRECINCT

#### KEY

-  New infrastructure
-  Improvements to existing infrastructure
-  Improve/ maintain vegetation and landscape amenity
-  Improve/ maintain open space
-  Restrict vehicular access
-  Improved access links

#### MASTERPLAN ACTIONS

1. Enhance open space amenity (seating, bins, landscape treatment) creation of 'Sunset Park'
2. Upgrade boat ramp and revetment (replace timber edge) to increase capacity
3. Restrict informal vehicular access to reserve / bollards
4. Formalise existing car park
5. Review use of Section 192 as part of long-term capacity planning (jetty is currently exclusively licensed to private landowner, public retains access to remainder of reserve)
6. Provide temporary toilet facilities during peak holiday periods pending recommissioning of existing public toilet block
7. Renew and re-open existing public toilet block





## 5.0 ENVIRONMENTAL MANAGEMENT





## 5. ENVIRONMENTAL ACTIONS

### 5.1 INTRODUCTION

The Clayton Bay Foreshore is a significant and diverse area of lake foreshore vegetation in public ownership. It is an important public space due to both the visibility of the site within the township and its high public use, with a number of walking trails throughout.

The Foreshore has seen a substantial investment in biodiversity values over the past ten years. This has been the result of a unique collaboration between government and the community, arising in response to the devastating impacts of the Millennium Drought (2006-2010), which saw water levels within the Coorong, Lower Lakes and Murray Mouth (CLLMM) region dramatically recede exposing an extensive area of formerly inundated land.

The Clayton Bay Foreshore is one of many sites within the CLLMM region to have benefited from inclusion in the CLLMM Recovery Project's Vegetation Program. In Clayton Bay, a 5-year (2011-2016) community revegetation project was delivered by the Goolwa to Wellington Local Action Planning Association (GWLAP) in collaboration with the Community Nurseries Network (CNN) and the Clayton Bay Nursery & Environment Group (CBNEG).

The environmental restoration works undertaken at Clayton Bay over this period included extensive herbaceous and woody weed control and the revegetation of more than 20,000 local provenance native plants. The specific nature and extent of these works are documented in a series of annual Site Action Plans developed by GWLAP.

Other environmental management documents relevant to this site are the *"Clayton Foreshore Vegetation Management Plan 2004"* by Janet A. Pedler (*"The 2004 Plan"*) and the *"Clayton Foreshore Vegetation Management Plan: Supplementary Report 2009"* by Geoffrey C. Bishop.

This section of the Masterplan acts not as a replacement, but as an addendum to the very comprehensive 2004 Plan. The 2004 Plan was itself the result of an extensive community consultation process and it is the intention of Council that all future planting and restoration works should continue to be guided by the framework it established, particularly with respect to the retention of residential views.

### 5.2 OBJECTIVES

One of the key drivers for developing the Foreshore Masterplan is that as of June 2016, Council is going to become increasingly responsible for the ongoing management of the Clayton Bay Foreshore's biodiversity values as current funding terms become redundant and the level of restoration works undertaken by NGOs reduces.

The issue that surrounds this is that maintenance of strata which are at moderate levels of rehabilitation can be inherently difficult to manage due to new weed invasions, pest management issues and intrusion by outside influences.

In seeking a solution that enables the biodiversity assets of the foreshore to be managed at lower inputs without a loss of current biodiversity values, a set of key operational principles have been developed to guide future environmental management activities:

- Protect remnant vegetation and existing plantings to promote self-sustainability and combat weed dominance
- Prevent re-establishment of woody weeds via control of regrowth and seedlings
- Maintain site in accordance with Council's amenity & fire control standards whilst implementing a mowing regime that favours the proliferation of native rather than exotic grasses
- Seek external funding opportunities to undertake further planting & removal of large woody weeds
- Embrace community capacity to assist with the protection, enhancement and maintenance of biodiversity & amenity values
- Maintain an agreed footprint for reed clearance

With these operational principles in mind, this section of the Foreshore Masterplan report briefly describes the current biodiversity values of the site, identifies key management issues and actions, and provides baseline woody weed mapping and a consolidated species list to guide future plantings.

Any future plantings or other on-ground works beyond the general maintenance actions described in this section will be detailed in future Site Action Plans to be approved and held by Council.

### 5.3 EXISTING BIODIVERSITY ASSETS

Historically, the Clayton Bay Foreshore had been largely cleared, with the resulting vegetation becoming dominated by grassy and broadleaf weeds, garden escapees, and deliberately planted shrub and tree species now considered to be pests. At the commencement of the CLLMM Community Revegetation Project, patches of remnant vegetation remained in some areas, but were in competition with environmental weeds.

To date, implementation of the 2004 Clayton Foreshore Vegetation Management Plan (via the CLLMM Community Revegetation Project) has been tremendously successful. The quantity and diversity of indigenous species in the area has increased, with many showing signs of establishment and self sustainability with the reduction of major competition from rabbits and exotic woody weeds.

Recent revegetation activities have been designed to replace a range of locally native species, predominately understorey and midstorey. Taller species have been largely avoided and shrubs have been carefully placed to avoid impacting on residents views. Weed control of grassy, broadleaf and smaller woody weeds has been implemented to maximise success of revegetation and maintain the aesthetics of this important public space. Larger woody weeds have also been removed through staged removal in consultation with the local community.

For the purpose of future environmental management activities, the foreshore has been divided into the same management areas that were used in the Clayton Foreshore Vegetation Management Plan (2004). Area B is not referenced in this section of the report as it is managed as an amenity landscape rather than as a natural reserve.

Whilst the scope of this Plan is restricted to the Clayton Bay Foreshore and adjacent waters, we acknowledge the ecological significance of Dunn's Lagoon as a whole (including Ducks Hospital and Snug Cove), and as a discrete entity of regional importance within the larger Coorong and Lower Lakes Ramsar site. The ecological values associated with Dunn's Lagoon include the diversity of aquatic vegetation, birdlife, and threatened fish species.

### 5.4 FAUNA DIVERSITY AND HABITAT VALUES

The Clayton Bay area provides habitat for a large range of species and more importantly, potential habitat for a number of species which are listed as conservation significant at national and state level. Examples of these include but are not limited to; Birds – Australian Fairy Tern, Australian Painted Snipe and numerous other migratory species, Amphibians – Southern Bell Frog and Fish – Murray Hardyhead and Yarra Pygmy Perch. Areas such as Dunns Lagoon provide a range of habitat resources for a large number of fauna species and with environmental changes such as the loss of natural tidal and hydrological processes, these sites play increased importance in the preservation of species habitat.

Reed beds provide stability in areas that are subject to wave action. The root systems of riparian and near shore species act as natural matting, helping to consolidate sand areas and reduce the ability of wave action to erode edges and create instability.

These beds also act as habitat for bird species, provide egg laying sites for frogs and fish as well as removing nutrient loads in water and acting as biological filters. The health of riparian systems relies heavily on the processes provided by this community.

Clayton Bay Foreshore also provides habitat for a number of venomous snake species including the Eastern Brown Snake, Red Bellied Black Snake and Eastern Tiger Snake, the last two of which are in decline within the Murray Lakes & Coorong region.

The proximity of residential development to these natural habitat areas introduces a number of threatening processes, including impacts associated with uncontrolled access by domestic and feral animals. Responsible pet ownership, such as keeping cats inside and dogs on a leash, reduces the risks to native wildlife as well as the risk of pets being subject to snake bites.



## 5. ENVIRONMENTAL ACTIONS

### 5.5 EXISTING LANDFORM PROFILES

The Clayton Bay area is generally comprised of two dominant landform types. These are a limestone cliff landform along the channel sections and a Riparian freshwater/saline zone in the lagoon and bay areas.

#### LAGOON / BAY LANDFORM PROFILE

The lagoon profile is typically comprised of a near shore zone which supports species requiring water or submergence such as *Schoenoplectus validus* (River Club Rush) which then merges into the freshwater edge and rising ground zone which typically supports *Typha domingensis* (Bulrush), *Phragmites australis* (Common Reed) and other herbaceous species.

Behind this is often a saline swamp zone where water continuously evaporates off leaving high residual salt levels and this supports species such as *Gahnia filum* (Chaffy Saw Sedge), *Rhagodia candolleana* (Berry Saltbush) and *Juncus kraussii* (Sea Rush). The upper slope would originally have supported low shrubs and sedges but in many cases has been converted to mown or maintained exotic grass areas.

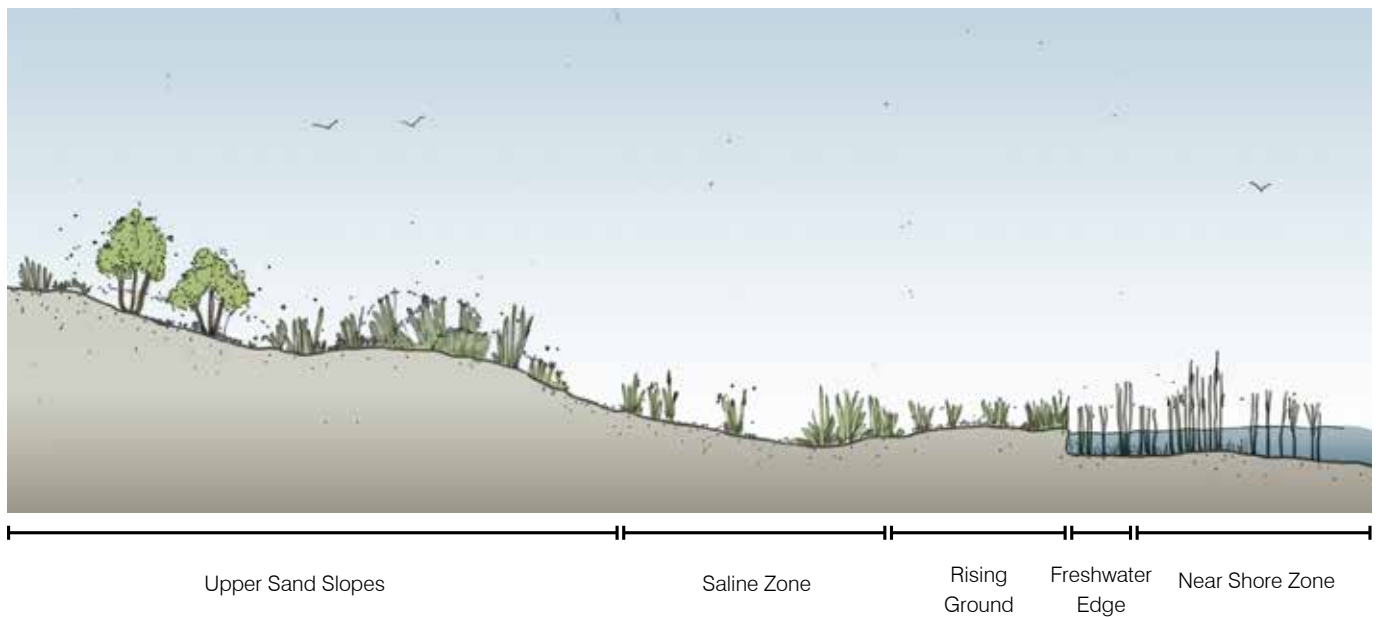
#### CHANNEL LANDFORM PROFILE

The channel landform profile is where limestone outcropping has forced the water flows to occur in a narrow width which has resulted in erosion of the limestone to form a cliff face varying from 8-15m high. This zone has a freshwater edge and near shore zone which is sharper in contour than the lagoon and bay areas.

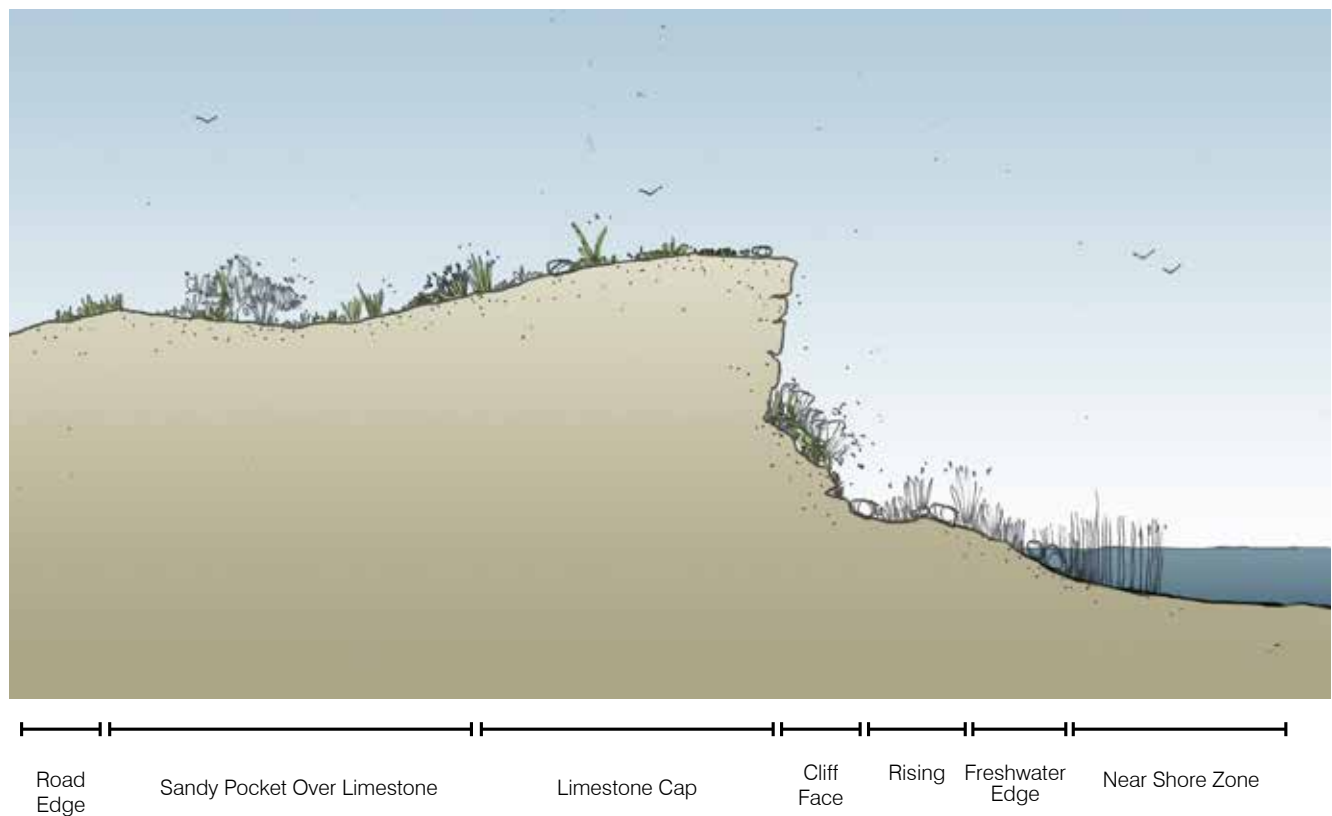
This limits the niche width of these zones. The rising ground and cliff face also occurs at short intervals and vegetation changes abruptly, dependent on the level of erosion or time since the last subsistence. The top of the cliff face has a limestone cap which usually features a shallow soil profile with small pockets which increase in depth and frequency with distance from the edge.



# LAGOON/BAY PROFILE (Adapted from Pedler and Mallen 2004)



# CHANNEL LANDFORM PROFILE (Adapted from Pedler and Mallen 2004)



## 5. ENVIRONMENTAL ACTIONS

### 5.6 MANAGEMENT AREAS

The following section provides an overview of each of the management areas, including the existing condition, management approach and future actions required.

#### AREA A

Area A contains the reed bed and adjacent land confined by Alexandrina Drive, the caravan park to the south and Island View Drive to the east. This includes a boardwalk, small boat launching area and some amenity plantings of non indigenous native species as part of the entry to Clayton Bay.

This area has a significant patch of *Gahnia filum* (Chaffy Saw Sedge) with *Cenchrus clandestinum* (Kikuyu) growth throughout. This was highlighted as a management issue in the 2004 plan and is unlikely to be rectified in the short term given it would take extensive levels of work to control and is a low priority at the current time.

The primary objective of this zone is to maintain the existing *Gahnia* sedge land without any decline to the extent or condition.



#### AREA C

Area C is comprised of the high cliff top area from the jetty car park to the old water tower which is now a lookout. It includes the cliff top, cliff face and near shore areas.

Area C has not had extensive vegetation related work undertaken in the past 10 years and currently has poor vegetation cover. The major issue in this area is uncontrolled access from vehicular traffic.

Native species are lower in density along the walking trail section of the cliff than those in Area D and condition is generally quite poor. On the cliff face zone there are scattered occurrences of *Lycium ferocissimum* (Boxthorn) and *Asparagus asparagoides* (Bridal Veil) still present in the area. Ongoing work will be required to maintain weed levels at current densities.

Overall woody weed control has been very successful, however there are still significant issues remaining in this section. The track that goes down to the pump shed in this zone has widespread weed issues and highly invasive weeds such as *Pinus halepensis* (Aleppo Pine), *Asparagus asparagoides* (Bridal Creeper), *Lycium ferocissimum* (Boxthorn) and *Euphorbia terracina* (False Caper) were commonly observed in this area.



## 5. ENVIRONMENTAL ACTIONS

### AREA D

Area D extends from the Water Tower lookout through to the tip of Clayton Point and includes the cliff top, cliff face and foot down to the near shore freshwater zone.

This area has good coverage of indigenous species, most of which are below a metre in height. This would be the relatively natural state with shallow soils in exposed areas.

The entire area has high biodiversity values with the remnant vegetation of the cliff face area only represented at one other site on Point Sturt. The cliff face zone contains some conservation significant species, including past records of *Correa calycina* (Hindmarsh Correa).

Parking is an issue, especially during the Milang-Goolwa Freshwater Classic yacht race. The area north of the walking path presents a clearly defined area for differing management strategies to those adopted south of the walking path. Any future plantings north of the walking path should specifically select native species which will tolerate trimming below 150mm. South of the walking path, previous restoration activities including extensive woody weed control have been very successful and high biodiversity values exist throughout this area.

The primary objective of this area is to maintain the excellent work achieved in returning this area to a semi natural state. Embracing the capacity of community groups to help will be critical to achieving this.

### AREA E

Area E continues from the tip of Clayton Point northwards along Dunns Lagoon to Hindmarsh Street and is largely sheltered by Goose Island.

This area has little remnant vegetation and until recently was dominated by grassy weeds. The community revegetation project has been very successful in its implementation of planting, weed control and pest management actions in this area. Issues highlighted in the 2004 Plan included erosion from lack of reed beds around the Clayton point area and the dominance of pest plants.

A priority is *Juncus acutus* (Spiny Rush) which will require ongoing control work. This species is well established in southern parts of the Coorong and once established is hard to eradicate. Veldt Grass species (*Ehrharta sp.*) have high levels of cover in the sandy rises and will require ongoing control over extended periods to reduce this.





## 5. ENVIRONMENTAL ACTIONS

### AREA F

Area F runs from Hindmarsh Street to an area of Crown land to the north of the sheltered inlet known as Ducks Hospital. There is high cover of reed species along the edge of the near shore zone and this is further protected by shallow water margins and reed beds. These are contributed to by the small island in Dunns Lagoon, effectively forming an area of higher than normal shelter.

Weed control, planting and systematic transition from a highly weedy state to a semi natural one has been successful in the area south of the Gumboot Trail but ongoing work is required to reduce the coverage of grassy and broadleaf weeds. The drainage ditch opposite 114 Island View Drive provides an obvious delineation of the weed front to the north which extends northwards into the private property on the corner block Alexandrina and Island View Drives.

### AREA G

This is the area north of Ducks Hospital and includes the road reserve on the lakeside of the private property which occupies the corner block of Alexandrina and Island View Drives. There is also a triangular sliver of crown land on the eastern side of the road reserve which is not managed by Council. There are extensive levels of native vegetation and this is primarily as a result of the saline conditions which dominate this area.

There is good cover of reeds and sedges throughout the near shore and saline swamp areas. The upper sand slopes and rising ground zones have moderate levels of weed invasion primarily from species such as Kikuyu and Saltwater Couch.



## 5.7 MAPPING

Mapping has been conducted to highlight the number and density of priority and easily controlled weeds. The weed maps also identify the planting zones from the 2004 Plan. The intention is that any future planting should accord with the intent of the 2004 Plan and remain consistent with previous planting work.

Some of the weed maps have patches which are typically amenity plantings or large outbreaks of a number of species at densities too high to map individually. The table below describes the patches in more detail.

Patch Number	Weeds present
1	Scattered <i>Pennisetum villosum</i> (Feathertop Grass), <i>Gazania</i> sp., <i>Pinus</i> sp. juveniles.
2	<i>Acacia cyclops</i> (Western Coastal Wattle), <i>Coprosma repens</i> (New Zealand Mirror Bush)
3	<i>Acacia saligna</i> (Golden Wreath Wattle), <i>Acacia cyclops</i> (Western Coastal Wattle), <i>Coprosma repens</i> (New Zealand Mirror Bush)
4	<i>Euphorbia terracina</i> (False Caper), <i>Polygala myrtifolia</i> (Myrtle-leaf Milkwort), <i>Asparagus asparagoides</i> (Bridal Creeper), <i>Asphodelus fistulosus</i> (Onion Weed), <i>Pinus</i> sp. (Pines) juveniles
5	<i>Solanum nigrum</i> (Black Nightshade), <i>Osteospermum fruticosum</i> (Shrubby Daisy bush), <i>Gazania</i> sp., <i>Stenotaphrum secundatum</i> (Buffalo Grass), <i>Acacia saligna</i> (Golden Wreath Wattle).

## 5. ENVIRONMENTAL ACTIONS

### AREA A



## OVERALL SUMMARY OF AREA A.

Landform type: near shore and rising ground with saline zone giving way to upper slope and road edge		Aspect: South west facing slope
<b>Key Objective</b>	Manage weed infestation into natural stratum to keep existing communities resilient and provide key habitat for fauna species	
<b>Management Issues</b>	<ul style="list-style-type: none"> <li>Invasive species planted for visual amenity not being controlled e.g. <i>Acacia cyclops</i></li> <li>Kikuyu encouraged as groundcover for mown area at town entry invasive into structurally important <i>Gahnia filum</i> sedge lands</li> <li>Boat launching area a potential weed invasion point</li> <li>Reed overgrowth of Boardwalk</li> </ul>	
<b>Management context</b>	Amenity maintenance on upper slope, existing levels of indigenous vegetation in near shore to saline zones are good, need for increased buffer zone to protect against weed invasion from amenity areas	
<b>Goal state</b>	Indigenous vegetation with diverse range of riparian species and low weed cover in near shore through saline zone.	

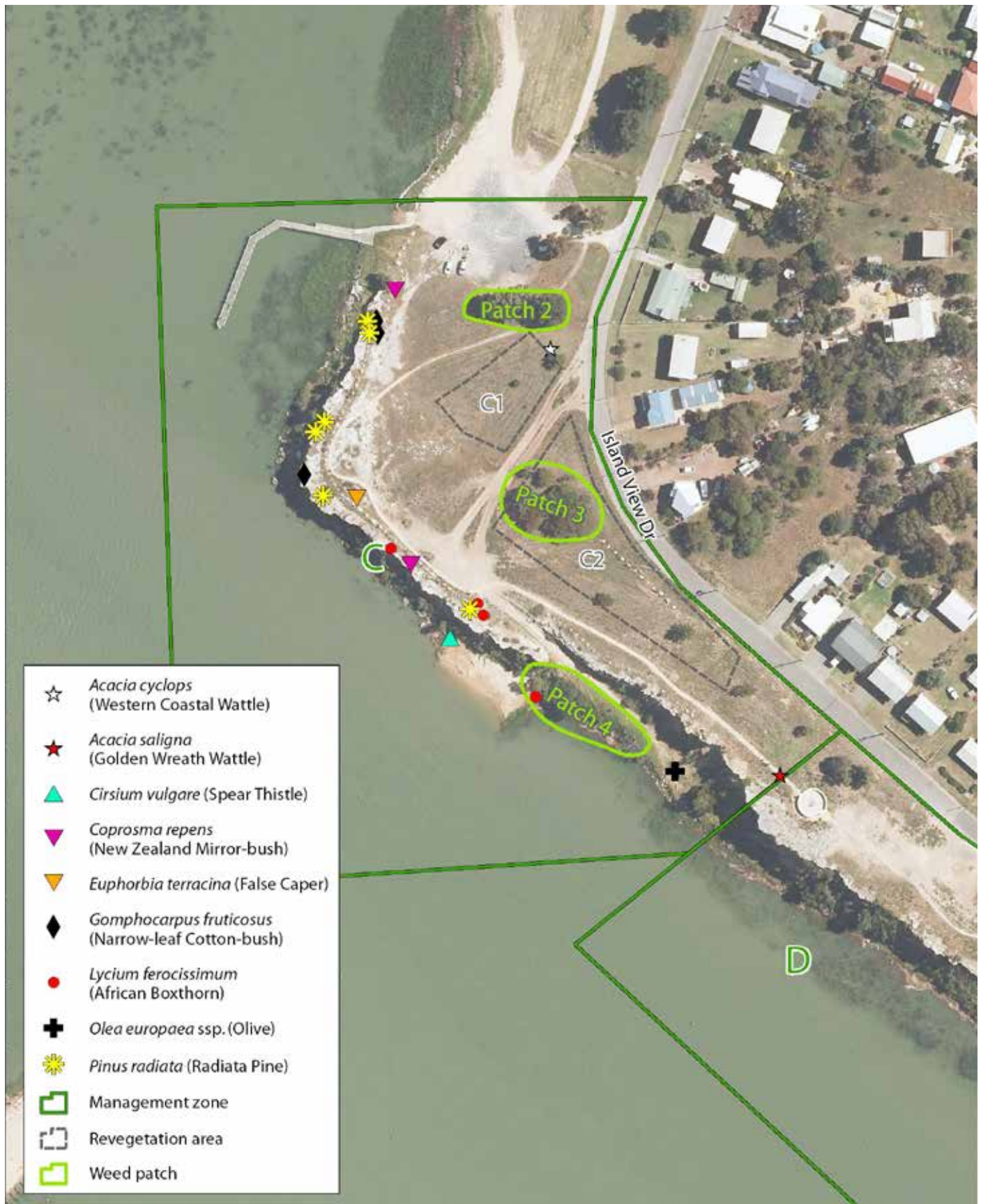
## MANAGEMENT ACTIONS

Threat/issue	Objective	Actions to date – what/who	Proposed actions – what/where/how	Timing	Responsibility
Herbaceous and grassy weed invasion	Reduce level of Kikuyu in <i>Gahnia filum</i> areas	Some spot spraying	Spot spraying and creation of a buffer zone, planting of small / low shrubs to provide competition	Ongoing	Biodiversity Team
Overgrowth of boardwalk	Allow clear passage for users	Brush cutting of reeds, Council parks & gardens (P&G), in collaboration with CBNEG	Brush cut reeds adjacent to foreshore path & boardwalk	As per P&G maintenance level	P&G
Boat launching facility	Reduce potential for weed invasion	None	Monitor weed incursion & spot spray as necessary. Brush cut reeds to maintain access	Annual, as per NVC approval	Biodiversity Team
Woody Weed invasion as part of amenity plantings	No invasion or spread of species present such as <i>Casuarina glauca</i> and <i>Acacia saligna</i>	Routine mowing around amenity patches, P&G	<p>Mow open space areas</p> <p>Ongoing monitoring &amp; control of regenerating woody weed as emergence occurs</p> <p>Control of established woody weed species accompanied by replacement plantings</p>	<p>As per P&amp;G maintenance level</p> <p>Annual</p> <p>Funding dependent</p>	<p>P&amp;G</p> <p>Biodiversity Team</p> <p>Biodiversity Team</p>



## 5. ENVIRONMENTAL ACTIONS

### 5.7 AREA C



## OVERALL SUMMARY OF AREA C.

Landform type: Sandy pockets over limestone with cliff face falling away to the freshwater edge and near shore zones		Aspect: South west
<b>Key Objective</b>	Where not impacted by infrastructure, return vegetation to natural stratum which are representative of pre European communities	
<b>Management Issues</b>	<ul style="list-style-type: none"> <li>Erosion of near shore areas</li> <li>Woody weed invasion</li> <li>Herbaceous weed invasion</li> <li>Lack of diversity</li> <li>Dumping of garden species and damage to native species through uncontrolled access</li> </ul>	
<b>Management context</b>	Highly degraded cliff top. Exclude uncontrolled vehicle access and focus on woody weed control before seeking to reinstate natural communities	
<b>Goal state</b>	Low shrub and native grass species cover replacing herbaceous weed species such as Gazania.	

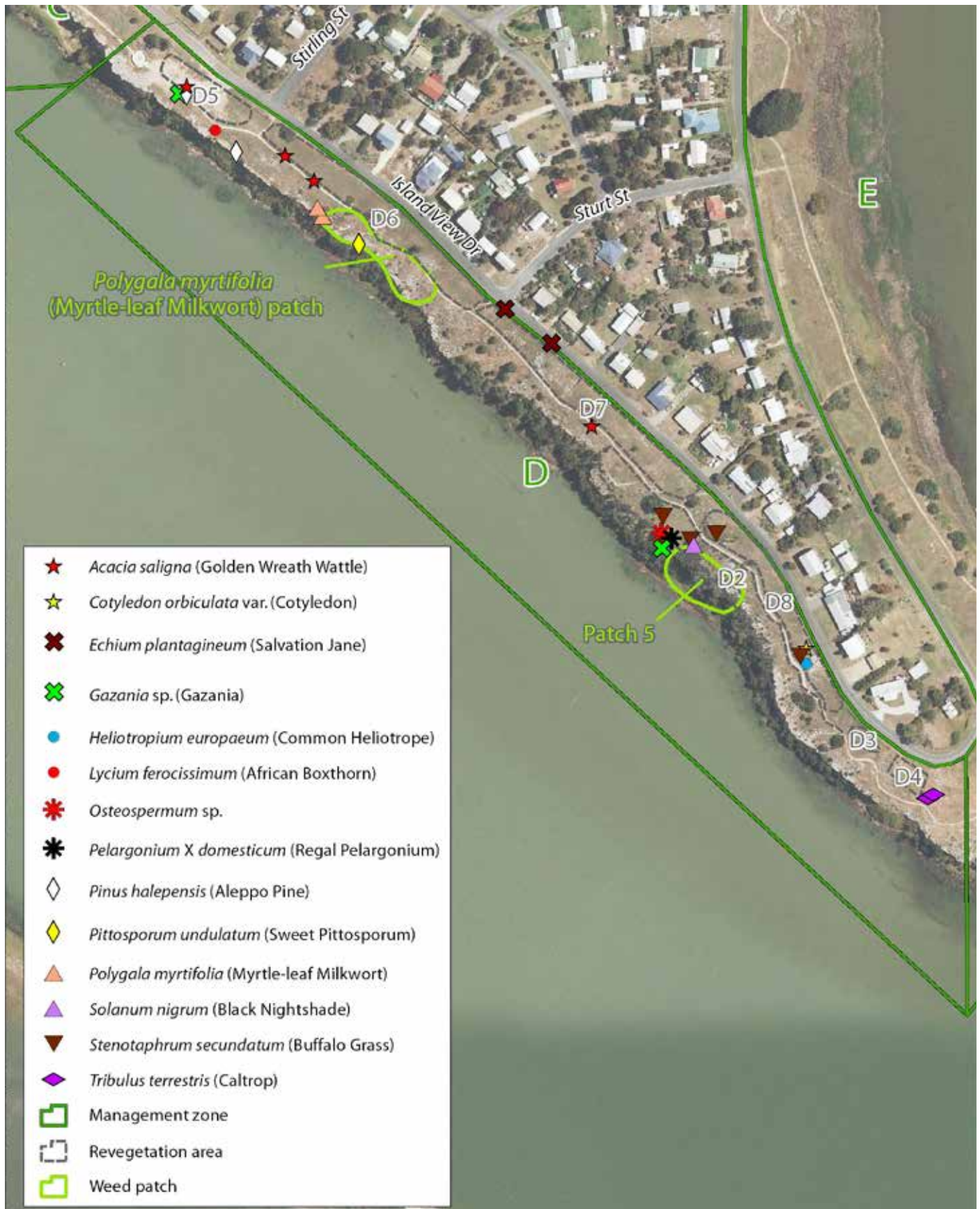
## MANAGEMENT ACTIONS

Threat/issue	Objective	Actions to date – what/who	Proposed actions – what/where/how	Timing	Responsibility
Erosion of near shore areas	Increase density and distribution of key stabilising reeds and sedges	-	Biannual spot spraying of weed outbreaks and dense infestations as required	Biannual (Low priority)	Biodiversity Team
Woody weed invasion	No woody weed incidence	Spot spraying and manual removal of woody weeds, CLLMM	Manual or chemical control of woody weed outbreaks. May need boat access to do rising ground area.  Control of established woody weeds.	Annual  Funding dependent	Biodiversity Team
Herbaceous weeds	Reduction in overall cover of herbaceous weed species	Broadleaf spraying, CLLMM	Boom spray broadleaf herbicide on area north of footpath & spot spray south of footpath	Winter/ Spring	Biodiversity Team (Level D budget)
		Slashing, CLLMM	Full mow/slash between road and walking path to maintain site amenity & minimise seed set of exotic grasses	Winter/Spring	Biodiversity Team / P&G (Level D budget)
		Hand mowing, CBNEG	Push-mow between road and walking path taking care to leave native grasses (to maximise seed set of native grasses and manage fire risk)	September-January	CBNEG
		Brush cutting, CLLMM	Brush cut heads off native grasses to maintain site amenity and manage fire risk	January prior to Goolwa Regatta Week	Biodiversity Team (Level D budget)
Path maintenance	Prevent incursion of vegetation into footprint of walking path	Spraying, P&G	Spray as required	As per P&G maintenance level	P&G
Lack of diversity	Increase level of indigenous species diversity	Some amenity plantings	Growing and planting of indigenous shrub and grass species in keeping with planting plan.	Funding dependent	Biodiversity Team/Community
Dumping of garden species and damage to native species through uncontrolled access	Reduce likelihood of dumping & vehicle access	None	Restrict vehicle access to cliff top area	TBD	Council



## 5. ENVIRONMENTAL ACTIONS

### 5.7 AREA D



## OVERALL SUMMARY OF AREA D

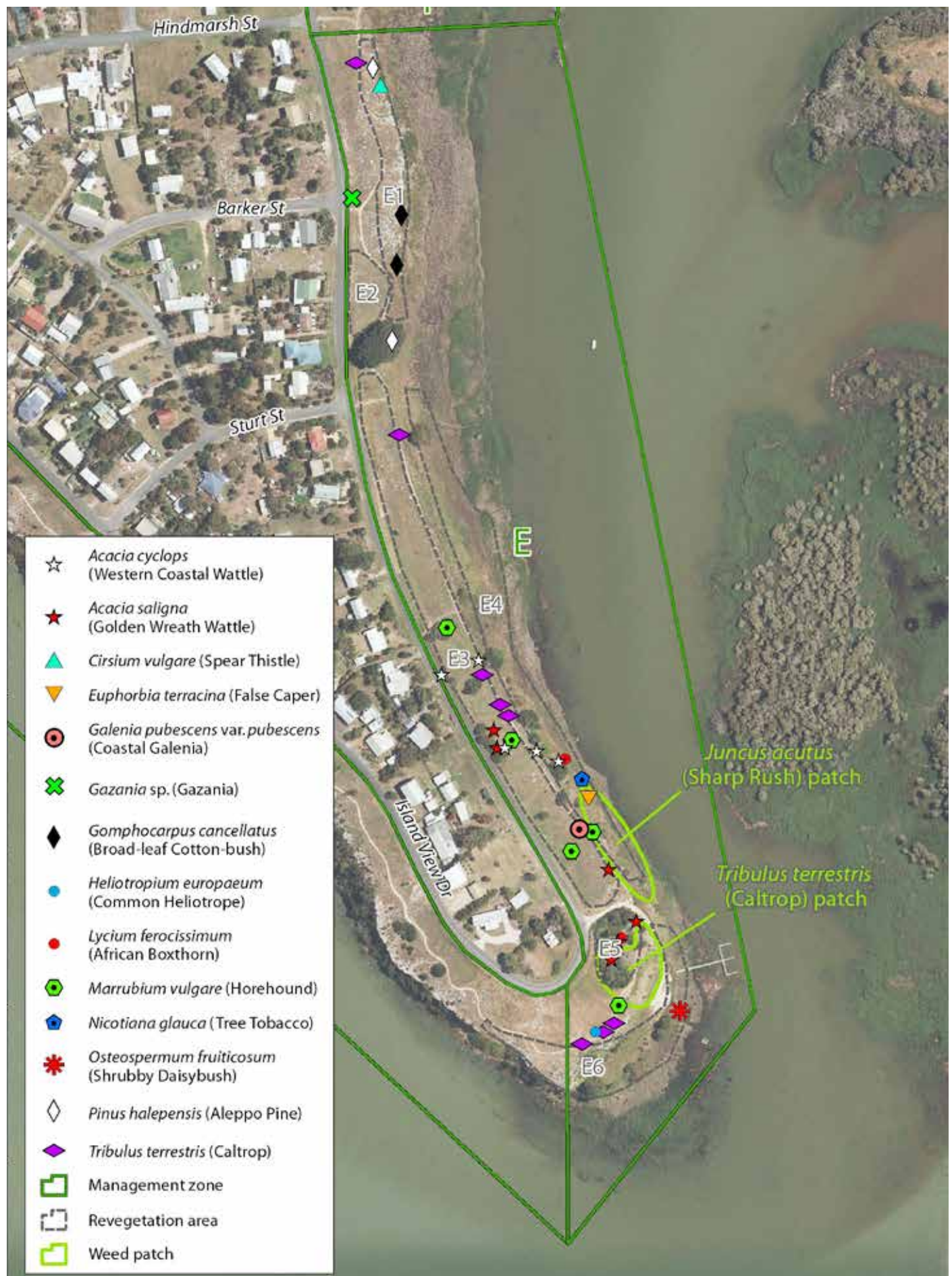
Landform type: Sandy pockets over limestone with cliff face falling away to the freshwater edge and near shore zones		Aspect: South west
<b>Key Objective</b>	<i>Maintain existing levels of native vegetation and increase the distribution of native grass species through deliberate timing of management regimes helping to provide competition for exotic herbaceous species.</i>	
<b>Management Issues</b>	<ul style="list-style-type: none"> <li>• <i>Erosion of near shore areas</i></li> <li>• <i>Woody weed invasion</i></li> <li>• <i>Herbaceous and grass weed invasion</i></li> <li>• <i>Pest fauna species such as rabbits</i></li> <li>• <i>Uncontrolled vehicle access destroying planted indigenous species</i></li> </ul>	
<b>Management context</b>	<i>Maintain above path for amenity &amp; fire prevention, using best methods to encourage increase in seeding of lower flammable native grass species and natural regeneration of existing species. Below path focus on preventing re-establishment of woody weeds. Engage with volunteer/community groups to enhance basic maintenance work undertaken by Council.</i>	
<b>Goal state</b>	<i>Low shrub and native grass species cover replacing herbaceous weed species such as Gazania.</i>	

## MANAGEMENT ACTIONS

Threat/issue	Objective	Actions to date – what/who	Proposed actions – what/where/how	Timing	Responsibility
Erosion of near shore areas	Increase density and distribution of key stabilising reeds and sedges	-	Biannual spot spraying of weed outbreaks and dense infestations as required	Biannual	Biodiversity Team (Low priority)
Woody weed invasion	No woody weed incidence	Spot spraying and manual removal of woody weeds, CLLMM	Manual or chemical control of woody weed outbreaks. May need boat access to do near shore/rising ground area.  Control of established woody weeds	Annual. Funding dependent	Biodiversity Team
Herbaceous weeds	Reduction in overall cover of herbaceous weed species	Broadleaf spraying, CLLMM	Boom spray broadleaf herbicide on area north of footpath & spot spray south of footpath	Winter/ Spring	Biodiversity Team (Level D budget)
		Slashing, CLLMM	Full mow/slash between road and walking path to maintain site amenity & minimise seed set of exotic grasses	Winter/Spring	Biodiversity Team / P&G (Level D budget)
		Hand mowing, CBNEG	Push-mow between road and walking path taking care to leave native grasses (to maximise seed set of native grasses and manage fire risk)	September-January	CBNEG
		Brush cutting, CLLMM	Brush cut heads off native grasses to maintain site amenity and manage fire risk	January prior to Goolwa Regatta Week	Biodiversity Team (Level D budget)
		Post-planting maintenance, CLLMM	Below walking path, mow/slash open areas and brush cut around plantings and along edge of walking path to maintain site safety & amenity, minimise seed set of exotic grasses and support growth of revegetation	Late winter/early spring, January prior to Goolwa Regatta Week	Biodiversity Team (Level D budget)
Path maintenance	Prevent incursion of vegetation into footprint of walking path	Spraying, P&G	Spray as required	As per P&G maintenance level	P&G
Pest fauna species	Keep rabbit levels at minimum	Rabbit control, CLLMM	Rabbit control program	Winter as required	Biodiversity Team



## 5.7 AREA E



## OVERALL SUMMARY OF AREA E

Landform type: Near shore and saline zones giving way to limestone rises and upper slopes comprised of limestone and sandy pockets		Aspect: East
<b>Key Objective</b>	Maintain existing biodiversity values and reduce the incidence of annual exotic and woody weed species.	
<b>Management Issues</b>	<ul style="list-style-type: none"> <li>Erosion of near shore areas</li> <li>Woody weed invasion</li> <li>Existing woody weeds</li> <li><i>Juncus acutus</i> (Spiny Rush) outbreaks</li> <li>Pest fauna species, particularly rabbits</li> </ul>	
<b>Management context</b>	Continue to reinstate natural communities and provide competition for weed species. Pursue opportunities to continue staged removal of woody weeds.	
<b>Goal state</b>	Native saline and freshwater riparian habitat regeneration to resemble that of native stratus. Low exotic species cover.	

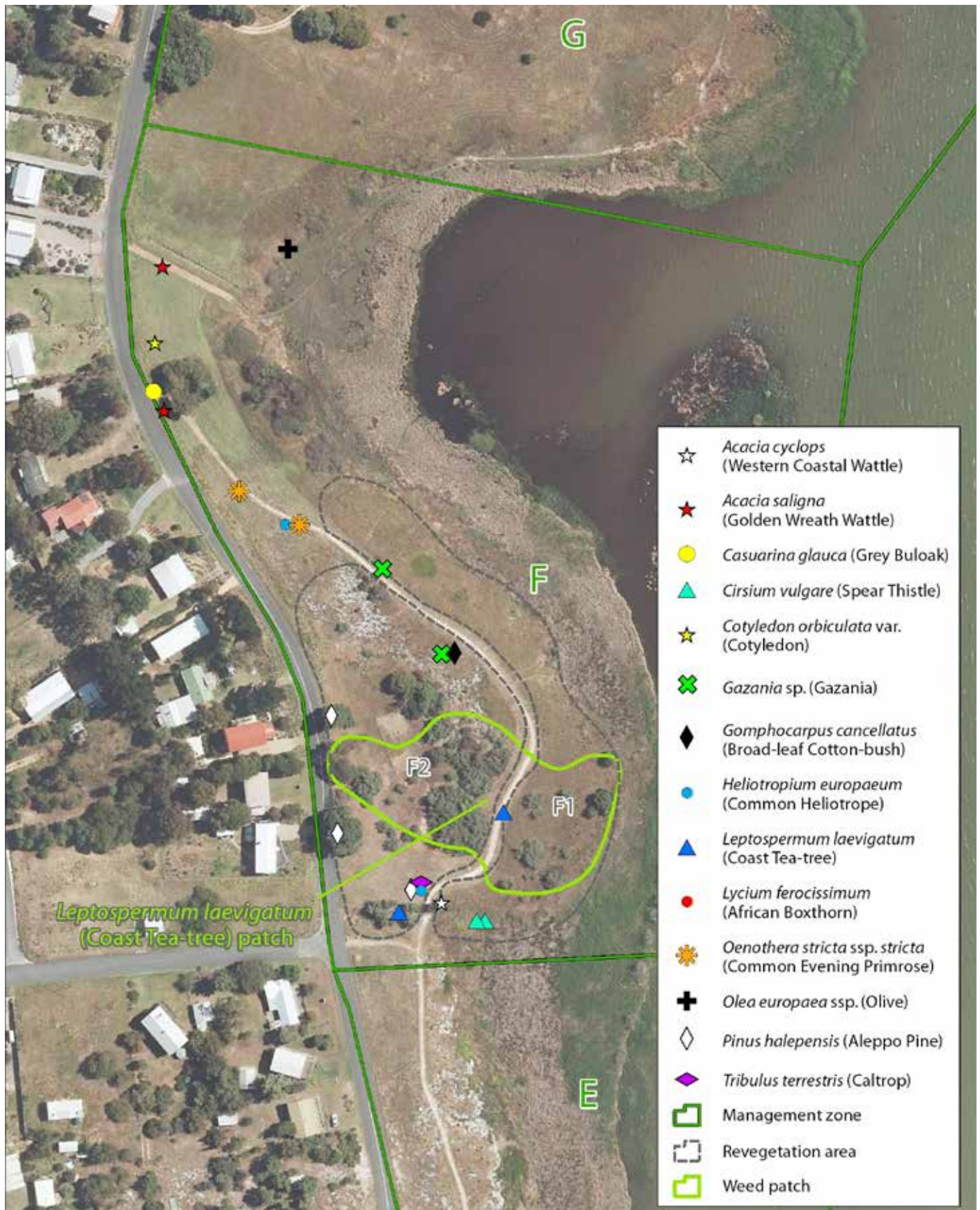
## MANAGEMENT ACTIONS

Threat/issue	Objective	Actions to date – what/who	Proposed actions – what/where/how	Timing	Responsibility
Woody weed invasion	No woody weed incidence	CLLMM removal	Follow up control of reshooting and regenerating woody weeds as emergence occurs.  Continued transition of <i>Leptospermum laevigatum</i> as planting continues and new shrubs replace old. Control of other mature woody weeds inc. Aleppo Pines	Annual, spring  Funding dependent	Biodiversity Team
<i>Juncus acutus</i> (Spiny Rush) outbreaks	Remove outbreaks of Spiny rush	CLLMM control	Follow up spot spraying in known outbreak areas. Mostly in form of re-emergence from seed bank and new seed bought in by birds.	Biannual autumn and spring	Biodiversity Team
Pest fauna species, particularly rabbits	Keep rabbit levels at minimum	Rabbit control, CLLMM	Rabbit control program	Winter as required	Biodiversity Team
Herbaceous and grassy exotic weed species	Maintain at levels which reduce spread and seed set.	Routine mowing along road verge, P&G	Mow open space areas	As per P&G Maintenance Level	P&G
		Mow/brush cutting, around plantings CLLMM	Mow / slash open areas and brush cut around plantings and along edge of walking path to maintain site safety & amenity, minimise seed set of exotic grasses and support growth of revegetation	Late winter / early spring January, prior to Goolwa Regatta Week	Biodiversity Team (Level D budget)
		Spot Spraying CLLMM	Spot Spraying infestations around plantings	Winter/ Spring	Biodiversity Team (Level D budget)
Path maintenance	Prevent incursion of vegetation into footprint of walking path	Spraying, P&G	Spray as required	As per P&G maintenance level	P&G



## 5. ENVIRONMENTAL ACTIONS

### 5.7 AREA F



## OVERALL SUMMARY OF AREA F

Landform type: Near shore and saline zones giving way to sandy pockets interspersed with limestone outcropping and low rises		Aspect: East
<b>Key Objective</b>	Maintain existing biodiversity values and reduce the incidence of annual exotic and woody weed species.	
<b>Management Issues</b>	<ul style="list-style-type: none"> <li>Existing woody weeds</li> <li><i>Juncus acutus</i> (Spiny Rush) outbreaks</li> <li>Pest fauna species, particularly rabbits</li> <li>Uncontrolled vehicle access damaging saline swamp area</li> </ul>	
<b>Management context</b>	Preventing vehicle access to Ducks Hospital a high priority. Continue to reinstate natural communities and provide competition for weed species. Pursue opportunities to continue staged removal of woody weeds.	
<b>Goal state</b>	Native saline and freshwater riparian habitat regeneration to resemble that of native stratus. Low exotic species cover.	

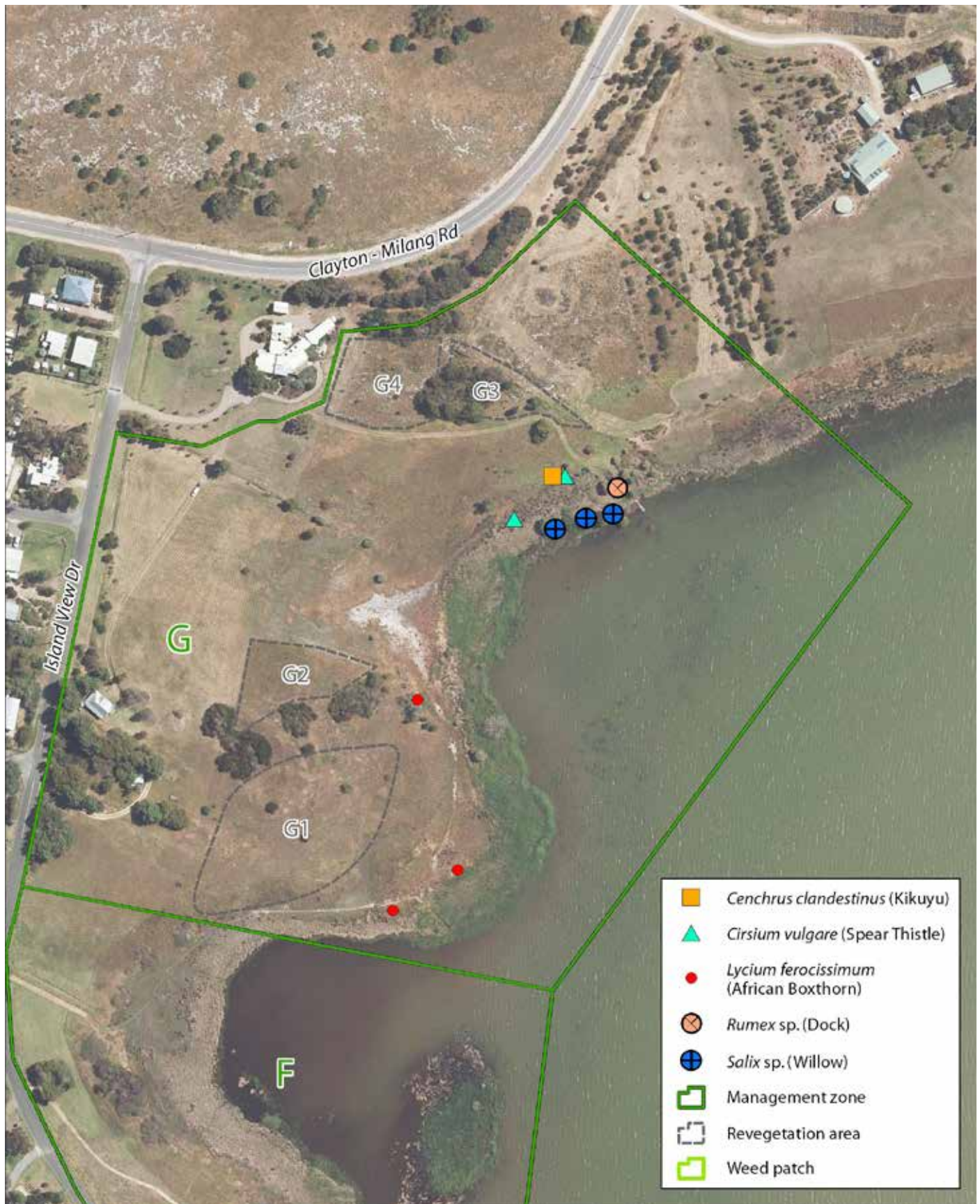
## MANAGEMENT ACTIONS

Threat/issue	Objective	Actions to date – what/who	Proposed actions – what/where/how	Timing	Responsibility
Woody weed invasion	No woody weed incidence	CLLMM removal	Follow up control of reshooting and regenerating woody weeds as emergence occurs.  Continued transition of <i>Leptospermum laevigatum</i> as planting continues and new shrubs replace old. Control of other mature woody weeds inc. Aleppo Pines	Annual, spring  Funding dependent	Biodiversity Team
<i>Juncus acutus</i> (Spiny Rush) outbreaks	Remove outbreaks of Spiny rush	CLLMM control	Follow up spot spraying in known outbreak areas. Mostly in form of re-emergence from seed bank and new seed brought in by birds.	Biannual autumn and spring	Biodiversity Team
Pest fauna species, particularly rabbits	Keep rabbit levels at minimum	Rabbit control, CLLMM	Rabbit control program	Winter as required	Biodiversity Team
Herbaceous and grassy exotic weed species	Maintain at levels which reduce spread and seed set.	Routine mowing along road verge, P&G	Mow open space areas	As per P&G Maintenance Level	P&G
		Mow/brush cutting, around plantings CLLMM	Mow / slash open areas and brush cut around plantings and along edge of walking path to maintain site safety & amenity, minimise seed set of exotic grasses and support growth of revegetation	Late winter / early spring January, prior to Goolwa Regatta Week	Biodiversity Team (Level D budget)
		Spot Spraying CLLMM	Spot Spraying infestations around plantings	Winter/ Spring	Biodiversity Team (Level D budget)
Path maintenance	Prevent incursion of vegetation into footprint of walking path	Spraying, P&G	Spray as required	As per P&G maintenance level	P&G



## 5. ENVIRONMENTAL ACTIONS

### AREA G



## OVERALL SUMMARY OF AREA G

Landform type: Near shore and saline zones giving way to a sandy low rise.		Aspect: East	
Key Objective	Maintain existing biodiversity values and reduce the incidence of annual exotic and woody weed species.		
Management Issues	<ul style="list-style-type: none"><li>Existing woody weeds</li><li>Potential <i>Juncus acutus</i> (Spiny Rush) outbreaks</li><li>Pest species such as rabbits</li></ul>		
Management context	Manage at lower inputs than Areas D, E and F. Liaise with State Government re Ministerial land. Seek opportunities to continue reinstatement of natural communities and as well as staged removal of woody weeds.		
Goal state	Native saline and freshwater riparian habitat regeneration to resemble that of native stratus. Low exotic species cover.		

## MANAGEMENT ACTIONS

Threat/issue	Objective	Actions to date – what/who	Proposed actions – what/where/how	Timing	Responsibility
Woody weed invasion	No woody weeds remain in area	-	Monitoring and removal of outbreaks either manually or as spot spraying activity, primarily willows at northern extent of area.	Annual, spring	Biodiversity Team
			Removal of existing woody weeds such as Boxthorn & Acacia Cyclops along roadside	Funding dependent	Biodiversity Team (Level D budget)
Pest fauna species, particularly rabbits	Keep rabbit levels at minimum	-	Rabbit control program	Winter as required	Biodiversity Team
Herbaceous and grassy exotic weed species	Maintain at levels which reduce spread and seed set.	Spot Spraying	Spot Spraying of areas with infestation of grass weeds in reed bed zones	Funding dependent	Biodiversity Team (Level D budget)

## 6.0 POTENTIAL PROJECTS









## 6. POTENTIAL PROJECTS

### 6.1 MASTERPLAN CONSIDERATIONS

The issues and challenges identified from the consultation process and site analysis of the Clayton Bay Foreshore have clearly identified a series of opportunities. In order to illustrate the potential of the Foreshore a number of key projects have been proposed that seek to address the challenges and maximise these opportunities. Ultimately the objective of the designs are to create successful public spaces that fulfil the objectives of the project by:

- Promoting people's health, happiness, and wellbeing
- Encouraging sustainable development to grow and flourish
- Celebrating the area's unique identity, culture and history
- Improving accessibility for both pedestrians and vehicles while increasing amenity
- Providing new levels of function and new facilities that enhance the social and environmental capacity of the town centre
- Protect and promote the natural environment

### 6.2 POTENTIAL PROJECTS

The following potential projects bring together the intent of the planning principles, illustrating a future vision for the Clayton Bay Foreshore. The projects focus on delivering best practice outcomes focusing on the needs of the community and visitors.

1. Swimming Beach and Foreshore
2. Boat Ramp and Car Park
3. Headland Lookout
4. Cliff Lookout
5. The Point





# 6. POTENTIAL PROJECTS

## 6.1 SWIMMING BEACH AND OVAL





## KEY ACTIONS

1. One way entrance road to boat ramp (3m width)
2. Pull in bay to provide short term parking and access to toilets
3. Retain and upgrade toilets to maintain quality and function. Develop public art murals to decorate external walls of toilets.
4. New timber stepped access between toilet and playscape
5. Define vehicular access to side of oval with post and rope boundary to edge of oval
6. Small car park (8 no.) to improve access to oval with timber bollards and wheel stops to restrict vehicular access
7. Service access to oval and foreshore
8. Upgrade quality of oval to increase recreational value (reseeding, irrigation and top dressing)
9. New shelter (3m x 3m) with seating
10. Sand beach edge to water
11. Established small boat access channel (reed removal required, subject to legislative approval)
12. Lawn foreshore maintained
13. Swimming area relocated away from rock shelf to create stronger connection with playspace and picnic areas (reed removal required, subject to legislative approval)
14. New shelter (3m x 3m) with seating
15. Foreshore footpath, crushed rock surface without edging (1.8m)
16. Water swale providing nature play connection between play space and swimming area
17. Nature play area as extension of existing playspace (longer term)
18. Existing playspace retained and maintained
19. Footpath connection
20. Informal picnic and recreation area
21. Earth mound to restrict vehicular access, whilst maintaining views
22. Tree planting to edge of oval. Plantings in east/west orientation to maximize shade and amenity while maintaining existing views along residential edge (final tree planting to be undertaken in consultation with residents).



New Trees



Existing Trees



# 6. POTENTIAL PROJECTS

## 6.2 BOAT RAMP AND CARPARK





## KEY ACTIONS

1. Reconfigured car park with defined areas for boat and car parking. Bitumen surface with timber post and landscape boundary treatments.
2. Existing boat ramp upgrade to meet future demands with clear signage explaining operations and restrictions
3. Boat and trailer parking with timber wheel stops and post to restrict vehicular access
4. Car parking area with wheel stops, timber bollards and landscape treatments to define vehicular access areas.
5. One way entrance road to boat ramp (road narrowed with directional signage)
6. Over flow parking area (peak usage)
7. Landscaped areas with vegetation and open grass land providing amenity
8. Landscaped areas to separate footpaths and parking areas
9. Footpath link
10. Footpath link to cliff edge walk
11. Open grass area for congregation with signage, seating and tree planting
12. Foreshore footpath connecting boardwalk, caravan park, oval and coastal edge
13. Reed revegetation program as part of swimming beach relocation and upgrade
14. Small boat launch (requires reed removal approval)
15. Safety signage at top of car park
16. Landscape area with native species providing amenity and habitat value
17. New trail head with signage and interpretation of Clayton Bay (design as vehicle barrier)
18. New mooring posts for the Oscar W (day trip opportunities)



New Trees



Existing Trees



Profiled Earth Mounding



# 6. POTENTIAL PROJECTS

## 6.3 HEAD LAND





## KEY ACTIONS

1. New car park to provide defined access to head land
2. Low earth mounds with landscaping and feature rocks to reduce impact of vehicle access and reduce visual effects of parked cars
3. Informal pull in bay for large vehicles (caravans, trailers and buses)
4. Entrance path with signage and interpretation
5. Footpath link between head land and old water tower look out
6. Rest stop with seating (typical)
7. Revegetation of limestone cliff in accordance with section 5 of the masterplan. Use landscape planting to restrict access to cliff edge
8. Informal pedestrian access to waters edge (potential for signage and small pontoon)
9. Footpath link is realigned to form direct link between two lookouts and away from cliff edge
10. Head Land Lookout with small seating area, boulders and landscape areas. Potential to consider feature public art work and land mark sculpture (further community discussions required)
11. Footpath link between head land and car park as low management landscape
12. Removal of goat tracks, revegetation and placement of logs and rocks to deter vehicular access.
13. Undertake weed control and revegetation (as per section 5)



New Trees



Existing Trees



Profiled Earth Mounding



# 6. POTENTIAL PROJECTS

## 6.4 CLIFF LOOKOUT





## KEY ACTIONS

1. Development of new car park including disabled parking to reduce damage to limestone landscape. Timber wheel stops and landscape boundary treatment to edge of car park.
2. Landscaping and timber post to edge of car park to restrict car access
3. Vehicular access to car park (separated from pedestrian access)
4. Signage to edge of car park entrance encouraging proper use of area and respect of the fragile natural environment
5. Informal pull in bay for larger vehicles and over spill parking
6. Low vegetated earth mounding with asymmetrical profile to restrict vehicular access and act as landscape buffer
7. Footpath connection to walking trail (1.5m) providing connection to residential areas
8. Footpath and cycle access around look out
9. Seating to walling to provide viewpoint and outlook over the water
10. Existing lookout and congregation area retained with interpretation to top of stone wall
11. Native garden to created setting for lookout and explain limestone ecosystem
12. Shared use path allowing pedestrian and cycle access (1.8m)
13. Revegetation landscape management area (species able to be trimmed to 150mm)
14. Weed control as per management recommendations contained in section 5
15. Potential relocation and upgrade of navigation light as public art sculpture and interpretation



New Trees



Existing Trees



# 6. POTENTIAL PROJECTS

## 6.5 THE POINT





## KEY ACTIONS

1. Development of carpark to allow trailer parking. Timber post and wheel stops to restrict vehicular access
2. Pull in bay for small vehicle parking
3. Low timber bollards (restrict vehicle access)
4. Rocks and vegetation provides boundary treatment between carpark and footpath
5. Landscape separation of footpath and access road
6. Low vegetation earth mound with swale, asymmetrical soil profile (cut and fill) and rocks to restrict vehicular access
7. Existing footpath access
8. New timber stepped access with handrail
9. Crushed rock footpath link
10. Open grass area for congregation or set up of canoes
11. Small timber ramp to improve access to the water
12. Entrance channel for canoes (reed management required)
13. Entrance mark buoys
14. Restriction signage (requiring no wake and 5 knot speed limits in Duck Lagoon)
15. Existing pontoon retained with safety ladder added
16. Development of coast loop connection
17. Trail head for Ducks Lagoon and rest of the Clayton Bay Foreshore with signage and seating
18. Key vegetation management sites (as described in section 5)



New Trees



Existing Trees



## 7.0 STYLE GUIDE



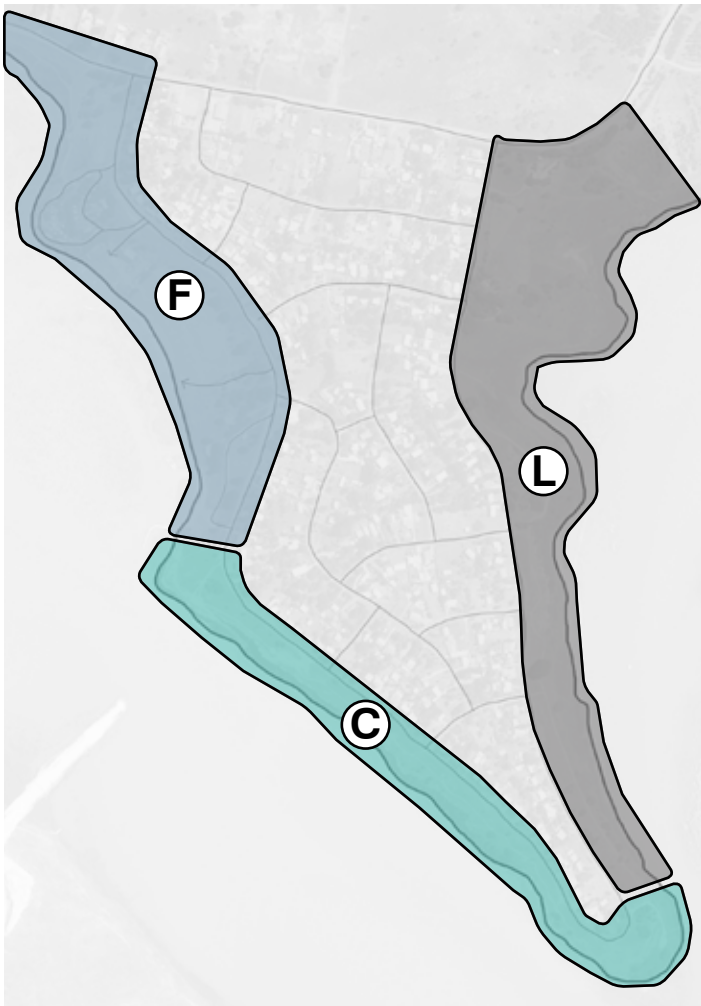


## 7.0 STYLE GUIDE

### EXISTING MATERIALS

The foreshore context needs to be reflected in the design quality. A weathered, natural or rustic aesthetic can be combined with chunky timbers, stone and steel elements. Light hues and light browns can be used in the selection of paving material, with stone banding as a highlight to create an appropriate design style for the foreshore. Local flora and fauna can be represented through landscape treatments and public art.

In order to create a style guide that responds directly to the context of the foreshore, three design pallets have been developed that reflect the recreational foreshore, cliff top and headland and lagoon.



**F** Foreshore



**C** Cliff top



**L** Lagoon

## **SURFACE TREATMENTS**

- Surface treatments should be selected for their robust quality and natural value that add to the amenity of the foreshore environment.
- Consider the combination of recycled timbers, exposed aggregate concrete, quality stone pavers and compacted cement stabilised sand paths to achieve a range of textures, contributing towards a more diverse and visual experience.
- Select natural coloured ground surfaces to blend into the natural surroundings of the region using one or two tones in line with the surrounding character with a contrasting colour incorporated in the banding (stone, brick and concrete).
- Rustic elements such as corten steel, stone and timber can be incorporated to provide connections with the historic and cultural context of the Foreshore as edging and highlight details.
- Artistic elements such as mosaic tiles, shot blasted patterns or cast in metal details can be incorporate to provide elements that help reinforce a strong cultural identity for Clayton Bay.
- Surface treatments should not aim to make a statement but blend in with the natural surroundings.

## **STRUCTURES AND FURNITURE**

- Materials should be selected for their robust nature requiring little maintenance such as stone, timber, brick and metal that are aesthetically pleasing, reinforce permanence, feature weathered textures, comprise natural features and respond to the coastal character of the surrounding landscape.
- Opportunities to acquire and reuse materials will help maintain an authentic visual aesthetic and should be considered (consider in relation to salvaged and recycled material).
- Proposed structures should be designed or selected to maximise the provision of comfort and amenity while maintaining an appropriate scale in relation to the built form views and landscape context.
- Designs should be highly functional.
- All furniture and structures should appear to belong within the foreshore landscape.
- Suggested bollards and fence posts are square recycled hardwood post (min. 100x100mm) with a corten steel capping or CNC routed design/text into timber.

## **PLAY**

- Provide play spaces that respond to the surrounding area with a focus on natural play.
- Natural play to include focus on education of the natural environment through interpretative signage.
- Maximise play opportunities and value that respond to land use and demographic demands.
- Passive surveillance from surrounding residential areas.
- Playspaces should promote challenges and risk allowing children to test the limits of their physical, intellectual and social development.
- Incorporate natural shade.
- Play equipment should consist of natural materials, such as timber, where applicable.
- Incorporate water play to strengthen foreshore connection.

## **PUBLIC ART AND SIGNAGE**

- Look to incorporate iconic, contextual and integrated public art pieces that are designed to 'value add', expand and develop culture and to see and be part of Clayton Bay's expression as a unique place.
- Well managed community involvement in public art design and implementation to foster greater ownership in the final outcome
- Develop a range of public art typologies including permanent works as well as temporal installations (such as sculptures).
- Consider the role of public art and signage in 'storytelling' to create a narrative or journey along key walking or cycling trails, relating to key destinations, features and historical events.
- Innovative reuse of local natural materials within public art.



# 7.0 STYLE GUIDE

## FORESHORE

### Furniture



### Ground Surfaces



### Bollards + Signage + Wayfinding



### Play



### Boundary Treatments + Barriers



### Structures



# 7.0 STYLE GUIDE

## CLIFFTOP

### Furniture



### Ground Surfaces



### Bollards + Signage + Wayfinding



### Boundary Treatments + Barriers



# 7.0 STYLE GUIDE

## LAGOON

### Furniture



### Ground Surfaces



### Bollards + Signage + Wayfinding



### Boundary Treatments + Barriers



### Structures

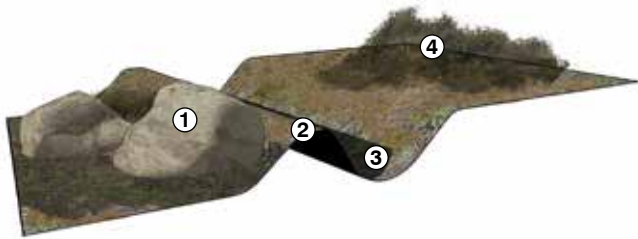


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# 7.0 STYLE GUIDE

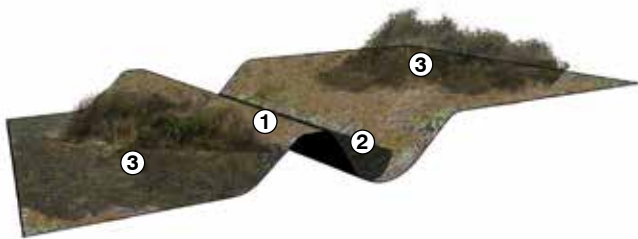
## VEHICULAR BARRIER TYPOLOGIES



### PROFILED MOUNDING WITH ROCKS (C)(L)

To be implemented where a reduction in vehicular impact is critical to safety, preservation of fragile cliff edge or landscape areas. Localised earth profiling (no new soil added) with vegetation reinstated to cover earth works. Rocks to be implemented at spacing of a minimum 1800mm in a natural (unordered) layout.

1. Locally sourced rocks (min 400mm diameter)
2. Cut and fill mounding profile (200-400mm height, 400-800mm width) with vegetation to be reinstated to mound.
3. Localised depression (100-300mm). Drainage to be assessed based on locality.
4. Revegetation to edge



### PROFILED MOUNDING (F)(C)(L)

To be implemented where vehicular impact is evident along the roadside verge. Localised earth profiling (no new soil added) with vegetation reinstated to cover earth works.

1. Cut and fill mounding profile (200-400mm height, 400-800mm width) with vegetation to be reinstated to mound.
2. Localised depression (100-300mm). Potential drainage to be assessed based on locality.
3. Revegetation to edge



### ROCK BARRIER (F)(C)(L)

Typology to be implemented where vehicular impact is evident along the roadside verge.

1. Locally sourced rocks (min 400mm diameter)
2. Revegetation to edge

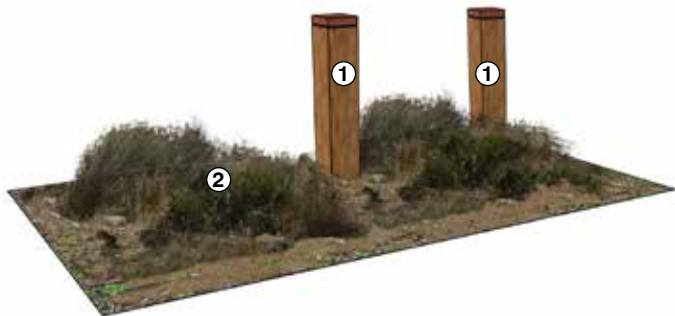
(F) Foreshore (C) Clifftop (L) Lagoon



### POST AND ROCK BARRIER (F)(C)(L)

To be implemented at demarkation of trail entrance to reduce potential vehicular impact on walking trail in conjunction with improved signage.

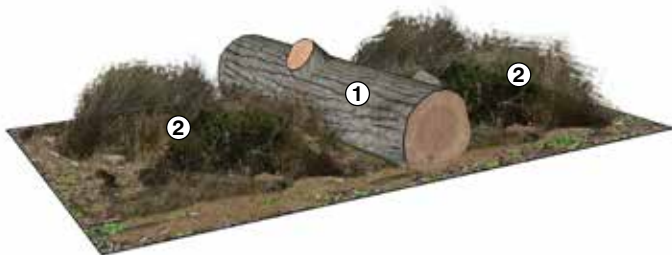
1. Hardwood square post (100x100mm)
2. Locally sourced rocks (min. 400mm diameter)
3. Revegetation to edge



### POST BARRIER (F)(C)(L)

To be implemented at trail head, carparks. To be used to reduce vehicular impact, increase pedestrian legibility, formalise trail entrance in conjunction with improved signage.

1. Hardwood timber posts (100x100mm)
2. Vegetation cover



### LOG BARRIER (L)

To be implemented at car parks where a reduction in vehicular impact is required.

1. Cut and fill localised mounding
2. Vegetation cover

All rock selection, placement and excavations should be undertaken in consultation with the Ngarrindjeri Regional Authority.



## 8.0 CONCLUSION

While Clayton Bay currently faces both opportunities and challenges in relation to tourism, social, economic and environmental impacts, what is clear from the consultation undertaken by the project team is the desire for the Clayton Bay Foreshore to strengthen and grow as a community asset into the future while maintaining it's unique character. The Clayton Bay Foreshore Masterplan provides a road map and long term strategic directions for the foreshore, ensuring that future actions and developments proposed contribute to achieving the Community's vision.

The planning directions, foreshore precinct plans, environmental action plans, potential projects and style guide provide and illustrate a progressive programme of social, economic and environmental revitalisation to occur along the foreshore. The recommendations contained within the Report will require an ongoing commitment from the Community, Council and State Government.

By creating better places for people to meet, interact and live and by promoting and protecting the unique natural character of the Clayton Bay Foreshore, the proposed projects will ultimately ensure that Clayton Bay and the community can move towards a future Foreshore that incorporates all needs while ensuring its sense of place and intrinsic beauty remains intact.



# APPENDICES





# A. ENVIRONMENTAL ACTIONS

## WEED MANAGEMENT

A wide range of weed species are present in the Clayton Bay area and most of these are not particularly invasive or alternatively, are so widespread, that control is not viable. The list below shows the weeds commonly occurring in the management areas. Woody weeds which are controllable and most likely to invade revegetated areas are shown individually on preceding maps in section 5 for each of the management areas A-G.

Form	Scientific Name	Common Name	Abbreviation	Management Area					
				A	C	D	E	F	G
ST	<i>Acacia cyclops</i>	Western Coastal Wattle	AC		✓		✓	✓	
ST	<i>Acacia saligna</i>	Golden Wreath Wattle	AS	✓	✓	✓	✓	✓	
S	<i>Artemisia sp.</i>	Wormwood	ASP	✓					
CL	<i>Asparagus asparagoides</i>	Bridal Creeper	AA		✓				
B	<i>Asphodelus fistulosus</i>	Onion Weed	AF		✓	✓	✓		
H	<i>Aster subulatus</i>	Aster-weed	ASB				✓		
G	<i>Avena barbata</i>	Bearded Oat	AB	✓		✓	✓		
H	<i>Berula erecta</i>	Water Parsnip	AE		✓	✓	✓		✓
H	<i>Brassica tournefortii</i>	Wild Turnip	BT			✓	✓		
G	<i>Bromus sp.</i>	Brome	B				✓		
T	<i>Casuarina glauca</i>	Grey Buloke	CG	✓				✓	
G	<i>Cenchrus clandestinum</i>	Kikuyu	CC			✓	✓		✓
H	<i>Chondrilla juncea</i>	Skeleton Weed	CJ		✓			✓	
S	<i>Cirsium vulgare</i>	Spear Thistle	CV		✓		✓	✓	✓
H	<i>Conyza bilbaoana</i>	Fleabane	CB		✓		✓	✓	✓
GC	<i>Coprosma repens</i>	New Zealand Mirror-bush	CR		✓				
S	<i>Cotyledon orbiculata</i> var.	Cotyledon	CO			✓		✓	
G	<i>Cynodon dactylon</i> var. <i>dactylon</i>	Couch	CD		✓		✓		✓
H	<i>Echium plantagineum</i>	Salvation Jane	EP		✓	✓	✓		
H	<i>Euphorbia terracina</i>	False Caper	ET		✓	✓	✓	✓	
GC	<i>Galenia pubescens</i> var. <i>pubescens</i>	Coastal Galenia	GP			✓	✓		
H	<i>Gazania sp.</i>	Gazania	G	✓	✓	✓	✓		
S	<i>Gomphocarpus cancellatus</i>	Broad-leaved Cotton Bush	GC		✓		✓	✓	
H	<i>Heliotropium europaeum</i>	Common Heliotrope	HE			✓	✓	✓	
H	<i>Hypochaeris radicata</i>	Rough Cat's Ear	HR	✓	✓	✓	✓	✓	✓
R	<i>Juncus acutus</i>	Sharp Rush	JA				✓		
H	<i>Lactuca serriola</i> f.	Wild lettuce	LS		✓	✓	✓		
T	<i>Lagunaria patersonii</i>	Pyramid Tree	LP						
G	<i>Lagurus ovatus</i>	Hare's Tail Grass	LO		✓	✓	✓		

Form	Scientific Name	Common Name	Abbreviation	Management Area					
				A	C	D	E	F	G
S	<i>Leptospermum laevigatum</i>	Coast Tea-tree	LL	✓				✓	
H	<i>Ludwigia peploides</i>	Water Primrose	LP					✓	
S	<i>Lycium ferocissimum</i>	African Boxthorn	LF		✓	✓	✓	✓	✓
H	<i>Marrubium vulgare</i>	Horehound	MV				✓		
H	<i>Medicago sp.</i>	Medic	MS						
T	<i>Melaleuca armillaris ssp. akineta</i>	Needle-leaf Honey-myrtle	MA						
H	<i>Mentha piperita</i>	Lemon mint	MP	✓	✓	✓			✓
S	<i>Nicotiana glauca</i>	Tree Tobacco	NG				✓		
H	<i>Oenothera stricta ssp. stricta</i>	Common Evening Primrose	OS					✓	
ST	<i>Olea europaea ssp.</i>	Olive	OE		✓			✓	
H	<i>Osteospermum fruticosum</i>	Shrubby daisy bush	OF			✓	✓		
H	<i>Pelargonium X domesticum</i>	Geranium	PD			✓			
G	<i>Pennisetum villosum</i>	Feathertop	PV	✓		✓	✓		
T	<i>Pinus halepensis</i>	Aleppo Pine	PH		✓	✓	✓	✓	
T	<i>Pinus radiata</i>	Radiata Pine	PR	✓	✓				
T	<i>Pinus sp.</i>	Norfolk Island Pine	P	✓	✓	✓	✓		
G	<i>Piptatherum miliaceum</i>	Rice Millet	PM	✓	✓	✓	✓	✓	✓
ST	<i>Pittosporum undulatum</i>	Sweet Pittosporum	PU			✓			
H	<i>Plantago sp.</i>	Plantain	PS	✓					✓
S	<i>Polygala myrtifolia</i>	Myrtle-leaf Milkwort	PMF		✓	✓			
GC	<i>Polygonum aviculare</i>	Wireweed	PA						
H	<i>Reichardia tingitana</i>	False Sowthistle	RT	✓	✓	✓	✓	✓	✓
H	<i>Rumex sp.</i>	Dock	RS				✓		✓
T	<i>Salix sp.</i>	Willow	SS						✓
H	<i>Scabiosa atropurpurea</i>	Pincushion	SA	✓	✓	✓	✓	✓	✓
H	<i>Sisymbrium officinale</i>	Hedge Mustard	SO	✓			✓		
H	<i>Solanum nigrum</i>	Black Nightshade	SN			✓			
H	<i>Sonchus oleraceus</i>	Common Sow-thistle	SOT	✓			✓		
G	<i>Stenotaphrum secundatum</i>	Buffalo Grass	SSG			✓			
H	<i>Tribulus terrestris</i>	Caltrop	TT				✓	✓	
G	<i>Vulpia sp.</i>	Fescue	VS	✓	✓	✓	✓	✓	✓

T=Tree ST= Small tree S= Scrub H= Herb B= Bulb CL= Climber GC= Groundcover G=Grass R=Rush



# A. ENVIRONMENTAL ACTIONS

## SPECIES PLANTING LISTS FOR MANAGEMENT AREAS

Strata	Species	Common name	Form & Comments
<b>Trees</b>			
1	<i>Callitris gracilis</i>	Southern Cypress Pine	Tree
1	<i>Eucalyptus fasciculosa</i>	Pink Gum	Tree
1	<i>Eucalyptus incrassata</i>	Ridge-fruited Mallee	Tree
<b>Small Trees</b>			
2	<i>Allocasuarina verticillata</i>	Drooping Sheoak	Small Tree
2	<i>Acacia pycnantha</i>	Golden Wattle	Small Tree
2	<i>Pittosporum angustifolium</i>	Native Apricot	Small Tree – sand/ limestone
<b>Large Shrubs</b>			
3	<i>Acacia longifolia ssp. sophorae</i>	Coastal Wattle	Large Sprawling Shrub
3	<i>Acacia paradoxa</i>	Kangaroo Thorn	Large Shrub – sand/heavy soil
3	<i>Banksia omata</i>	Desert Banksia	Shrub – if seed avail.
3	<i>Bursaria spinosa ssp.</i>	Bursaria	Tall Spindly Shrub
3	<i>Dodonaea viscosa ssp. spatulata</i>	Sticky Hop-bush	Tall Shrub
3	<i>Duma florulenta</i>	Lignum	Large Sprawling Shrub – assoc with water, soaks
3	<i>Hakea mitchellii</i>	Heath Needlebush	Tall Shrub – if seed avail.
3	<i>Melaleuca lanceolata</i>	Dryland Tea-tree	Tall Shrub
3	<i>Melaleuca halmaturorum</i>	Swamp Paper-bark	Tall Shrub – Plant on damp edge in front of saline edge and right up to freshwater edge. Spot spray Kikuyu or Paspalum if necessary before planting.
3	<i>Myoporum insulare</i>	Common Boobialla	Large Sprawling Shrub
3	<i>Nitraria billardiarei</i>	Nitre-bush	Large Sprawling Shrub
<b>Low &amp; Small Shrubs, Groundcovers, Tussocks, Grasses, Climbers</b>			
4	<i>Adriana quadripartita</i>	Coast Bitter-bush	Low Shrub
4	<i>Atriplex paludosa ssp. cordata</i>	Marsh Saltbush	Low Shrub
4	<i>Austrostipa flavescens</i>	Coast Spear-grass	Grass Tussock
4	<i>Banksia marginata</i>	Silver Banksia	Shrub – if seed avail.
4	<i>Cullen australasicum</i>	Tall Scurf-pea	Low Shrub
4	<i>Dianella brevicaulis</i>	Short-stem Flax-lily	Tussock
4	<i>Einadia nutans ssp.</i>	Climbing Saltbush	Very Small Shrub
4	<i>Enchylaena tomentosa var.</i>	Ruby Saltbush	Low sprawling Shrub
4	<i>Goodenia varia</i>	Sticky Goodenia	Shrub – source from Milang, cutting

A1 & A2	A3	C1	C2	D2 on Cliff top	C3, D1, D5, D6, D7, D8 on Cliff top	F2 & G3	F1, E1, E4, E5, G5 & G1	E2, E3, G2 & G4	E6	Rising ground zone*
✓		✓		✓		✓				
✓		✓		✓		✓				
				✓		✓				
✓		✓		✓		✓	✓		✓	
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		✓	✓			✓	✓			
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			✓	✓		✓	✓		✓	✓
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				✓	✓	✓	✓	✓		
✓	✓	✓	✓	✓	✓	✓	✓	✓		
						✓	✓	✓		
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
✓	✓	✓	✓	✓	✓	✓	✓	✓		
				✓	✓	✓	✓	✓		
				✓	✓	✓	✓	✓		

# A. ENVIRONMENTAL MANAGEMENT APPENDICES

## SPECIES PLANTING LISTS FOR MANAGEMENT AREAS

Strata	Species	Common name	Form & Comments
Low & Small Shrubs, Groundcovers, Tussocks, Grasses, Climbers			
4	<i>Kennedia prostrata</i>	Scarlet Runner	Ground Cover
4	<i>Kunzea pomifera</i>	Muntries	Ground Cover
4	<i>Leucopogon parviflorus</i>	Coast Beard-heath	Shrub
4	<i>Lotus australis</i>	Austral Trefoil	Low Shrub
4	<i>Lycopus australis</i>	Australian Gipsywort	Low Herb – plant right on waterline
4	<i>Malva preissiana</i>	Australian Hollyhock	Low straggly Shrub
4	<i>Muehlenbeckia gunnii</i>	Coastal Climbing Lignum	Climber
4	<i>Olearia axillaris</i>	Coast Daisy-bush	Low Shrub
4	<i>Olearia ramulosa</i>	Twiggy Daisy-bush	Low Shrub
4	<i>Pelargonium australe</i>	Austral Stork's-bill	Low Shrub
4	<i>Persicaria decipiens</i>	Slender Knotweed	Groundcover Herb – plant right on waterline
4	<i>Poa labillardieri</i> var. <i>labillardieri</i>	Common Tussock-grass	Grass Tussock
4	<i>Pomaderris paniculosa</i> ssp. <i>paniculosa</i>	Mallee Pomaderris	Low Shrub
4	<i>Rhagodia candolleana</i> ssp. <i>candolleana</i>	Sea-berry Saltbush	Low sprawling Shrub
4	<i>Rumex bidens</i>	Mud Dock	Low Herb – plant right on waterline
4	<i>Rytidosperma caespitosum</i>	Common Wallaby-grass	Grass Tussock
4	<i>Senecio odoratus</i>	Scented Groundsel	Upright Herb/Shrub
4	<i>Tetragonia implexicoma</i>	Bower Spinach	Climber – cutting
4	<i>Threlkeldia diffusa</i>	Coast Bonefruit	Sprawling Ground Cover
Riparian Rushes, Sedges, Aquatic Plants etc.			
5	<i>Baumea juncea</i>	Bare Twig-rush	Low Sedge – plant 1m back from edge
5	<i>Carex appressa</i>	Tall Sedge	Medium Sedge – plant right on waterline. Spot spray Kikuyu or Paspalum if necessary well before planting.
5	<i>Cyperus gymnocaulos</i>	Spiny Flat-sedge	Tall Sparse sedge
5	<i>Eleocharis acuta</i>	Common Spike-rush	Low Sedge – plant right on waterline where edge is bare
5	<i>Ficinia nodosa</i>	Knobby Club-rush	Low Sedge forms clumps
5	<i>Gahnia filum</i>	Thatching Grass	Low Bushy Sedge – plant in saline edge
5	<i>Juncus kraussii</i>	Sea Rush	Low Rush forms clumps

**1-** >6m Tree   
**2-** 3.5-6m Tree   
**3-** 1.5-3.5m Tree   
**4-** <1.5m Shrub- Groundcover   
**5-** 0-2m Tall: Riparian Rushes, Sedges, Reeds and Aquatic Plants

A1 & A2	A3	C1	C2	D2 on Cliff top	C3, D1, D5, D6, D7, D8 on Cliff top	F2 & G3	F1, E1, E4, E5, G5 & G1	E2, E3, G2 & G4	E6	Rising ground zone*
				✓	✓	✓	✓	✓		
		✓	✓	✓	✓	✓	✓	✓		
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
						✓	✓	✓		
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						✓	✓	✓		
			✓	✓	✓	✓	✓	✓		
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				✓	✓	✓	✓	✓		
				✓	✓	✓	✓	✓		
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						✓	✓	✓		
										✓
✓	✓	✓	✓	✓	✓	✓	✓	✓		
									✓	
						✓	✓	✓		✓



# A. ENVIRONMENTAL ACTIONS

## SPECIES PLANTING LISTS FOR MANAGEMENT AREAS

These planting lists reflect those contained in the 2004 Plan. Whilst general height restrictions to minimise the impact on residential views have been incorporated into each list, special care should still be taken to ensure that planting of tall species does not unreasonably restrict

view lines, in particular where view lines are not currently impeded. Those seeking further guidance on height restrictions for planted vegetation should refer back to the 2004 Plan.

### TREES



*Callitris gracilis*



*Eucalyptus fasciculosa*



*Eucalyptus incrassata*



*Allocasuarina verticillata*



*Acacia pycnantha*



*Pittosporum angustifolium*

### LARGE SHRUBS



*Acacia longifolia* ssp. *sophorae*



*Acacia paradoxa*



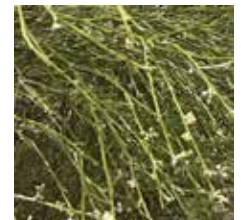
*Banksia ornata*



*Bursaria spinosa* ssp.



*Dodonaea viscosa* ssp. *spatulata*



*Duma florulenta*



*Hakea mitchellii*



*Melaleuca lanceolata*



*Melaleuca halmaturorum*



*Myoporum insulare*



*Nitraria billardierei*

### LOW & SMALL SHRUBS, GROUNDCOVERS, TUSSECKS, GRASSES, CLIMBERS



*Adriana quadripartita*



*Atriplex paludosa* ssp. *cordata*



*Austrostipa flavescens*



*Banksia marginata*



*Cullen australasicum*



*Dianella brevicaulis*



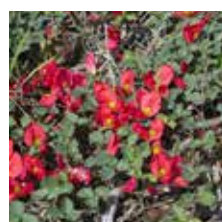
*Einadia nutans* ssp.



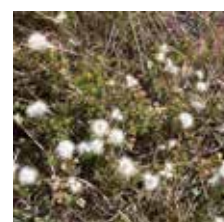
*Enchylaena tomentosa* var.



*Goodenia varia*



*Kennedia prostrata*



*Kunzea pomifera*



*Leucopogon parviflorus*



## LOW & SMALL SHRUBS, GROUNDCOVERS, TUSSOCKS, GRASSES, CLIMBERS



*Lotus australis*



*Lycopus australis*



*Malva preissiana*



*Muehlenbeckia gunnii*



*Olearia axillaris*



*Olearia ramulosa*



*Pelargonium australe*



*Persicaria decipiens*



*Poa labillardieri* var.



*Pomaderris paniculosa*  
ssp. *paniculosa*



*Rhagodia candolleana*  
ssp. *candolleana*



*Rumex bidens*



*Rytidosperma*  
*caespitosum*



*Senecio odoratus*



*Tetragonia implexicoma*



*Threlkeldia diffusa*

## RIPARIAN RUSHES, SEDGES, AQUATIC PLANTS



*Baumea juncea*



*Carex appressa*



*Cyperus gymnocaulos*



*Eleocharis acuta*



*Ficinia nodosa*



*Gahnia filum*



*Juncus kraussii*

## B. IMPLEMENTATION PLAN

This Implementation Plan is a guide only. Implementation is subject to Council's annual business planning & budget cycle in accordance with the limitations imposed by Council's long-term financial plan. Council may also pursue external funding opportunities such as State & Federal grant funding

Year	Location		Action	Indicative Costing
2015/16	Dunns Lagoon	1.1	Restrict vehicular access to Ducks Hospital and provide off road parking area	\$5,300
	The Point	1.2	Walking paths, fencing and interpretive signage	\$15,000
		1.3	Canoe access including reed removal and water-based wayfinding	\$16,000
		1.4	Redevelop unsealed parking area including seating and landscaping	\$46,000
		1.5	Timber steps	\$15,000
	Old Clayton	1.6	Public Toilet: Refurbishment including replacement of the roof and fascia boards and painting of internal walls	\$8,500
		1.7	Public Toilet: Connection to SA Water Mains <i>(Note: Ongoing maintenance is estimated at \$10,200 p/a)</i>	\$4,500
	Boat Ramp + Car Park	1.8	Tree planting and fencing to southern edge to prevent vehicular access to cliff top	\$5,000
		1.9	Interim signage (including one way signage)	\$1,600
			Total	\$116,900(*)

As of 2016/17 the CLLMM community revegetation project will no longer be funded and responsibility for the ongoing environmental management and maintenance of the Clayton Bay Foreshore from Ducks Hospital to the Lookouts will revert back to Council. Annual environmental maintenance costs for the activities described in Section 5 of the Master Plan are estimated at \$15,000 exc GST.

Year	Location		Action	Indicative Costing
2016/17	<i>Swimming area and Oval Foreshore</i>	2.1	Reed clearance including relocation of swimming area	\$40,000
		2.2	New oval car park, access road and fencing	\$26,000
		2.3	Foreshore shelters	\$30,000
		2.4	Improve toilets, provide access path and implement mural to outside walls	\$22,000
		2.5	Tree planting	\$4,000

(\*) Excludes: Design, engineering or consultant fees, detailed costs associated with surveys, escalation, development approval fees, contingencies, in-kind support and ongoing maintenance of infrastructure. Maintenance budgets allocated for new infrastructure should be set at a minimum of 5% of capital.

## B. IMPLEMENTATION PLAN

<i>Boat Ramp + Car Park</i>	2.7	Reconfigure car park with non-bitumised surface	\$72,000
	2.8	Footpath links with improved fencing and bollards to restrict vehicular access to cliff	\$20,000
	2.9	Tree Planting	\$4,000
	2.10	Signage	\$6,400
	<b>Total</b>		\$224,400(*)

(\*) Excludes: Design, engineering or consultant fees, detailed costs associated with surveys, escalation, development approval fees, contingencies, in-kind support and ongoing maintenance of infrastructure. Maintenance budgets allocated for new infrastructure should be set at a minimum of 5% of capital.

Year	Location		Action	Indicative Costing
2017/18	<i>Cliff Top Lookout</i>	3.1	Earth mounds to prevent vehicular access	\$20,000
		3.2	Formalise carpark at lookout	\$25,000
		3.3	Realign footpath between lookouts	\$15,000
		3.4	Lookout seating and signage	\$35,000
		3.5	Develop budget for public art	(\$250,000-\$350,000)
		<b>Total</b>		\$95,000 (*) + (Art Budget)

Year	Location		Action	Indicative Costing
2018/19	<i>Headland</i>	4.1	Earth mounds to prevent vehicular access	\$20,000
		4.2	Formalise carpark at lookout	\$30,000
		4.3	Lookout seating and signage	\$20,000
		4.5	Landscaping	\$25,000
	<i>Town Entrance</i>	4.6	Town entry improvements (landscape and signage and seating)	\$50,000
		4.7	New car park adjacent to boardwalk	\$30,000
		4.8	Boardwalk improvements (seating and signage)	\$20,000
		<b>Total</b>		\$195,000 (*)



## B. IMPLEMENTATION PLAN

Year	Location		Action	Indicative Costing
2019/20	Peninsula	5.1	Footpath Loop (east west) links and wayfinding signage	\$50,000
	Old Clayton	5.2	Renew revetment at Gloria Jones Reserve and car park	\$140,000
		5.3	Upgrade of Gloria Jones Reserve	\$60,000
			<b>Total</b>	\$250,000 (*)

(\*) Excludes: Design, engineering or consultant fees, detailed costs associated with surveys, escalation, development approval fees, contingencies, in-kind support and ongoing maintenance of infrastructure. Maintenance budgets allocated for new infrastructure should be set at a minimum of 5% of capital.

Year	Location		Action	Indicative Costing
2021/22	Ducks Hospital	7.1	Bird hides and signage	\$80,000
	Oval	7.2	Nature Playspace	\$150,000
		7.3	Upgrade of barbeque shelter	\$50,000
			<b>Total</b>	\$280,000 (*)

Year	Location		Action	Indicative Costing
2022/23	Entire Foreshore	8.1	No new works: Ongoing maintenance	

Year	Location		Action	Indicative Costing
2023/24	Boat Ramp	9.1	Bitumise car park and upgrade boat ramp	\$250,000
			<b>Total</b>	\$250,000 (*)

Year	Location		Action	Indicative Costing
2024/25	Entire Foreshore	10.1	No new works: Ongoing maintenance	

(\*) Excludes: Design, engineering or consultant fees, detailed costs associated with surveys, escalation, development approval fees, contingencies, in-kind support and ongoing maintenance of infrastructure. Maintenance budgets allocated for new infrastructure should be set at a minimum of 5% of capital.

